

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
18 October 2018 (18.10.2018)



(10) International Publication Number
WO 2018/190982 A1

(51) International Patent Classification:

H04W 4/02 (2018.01) *H04W* 72/04 (2009.01)
H04W 4/46 (2018.01) *H04W* 4/40 (2018.01)
H04W 4/44 (2018.01) *G01S* 5/00 (2006.01)

Georgios; 5775 Morehouse Drive, San Diego, California 92121-1714 (US).

(74) Agent: **KARREN, J. Scott**; Holland & Hart LLP, P.O. Box 11583, Salt Lake City, Utah 84147 (US).

(21) International Application Number:

PCT/US2018/022700

(22) International Filing Date:

15 March 2018 (15.03.2018)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20170100177 13 April 2017 (13.04.2017) GR
15/917,424 09 March 2018 (09.03.2018) US

(71) Applicant: **QUALCOMM INCORPORATED** [US/US];
ATTN: International IP Administration, 5775 Morehouse
Drive, San Diego, California 92121-1714 (US).

(72) Inventors: **JIANG, Libin**; 5775 Morehouse Drive, San
Diego, California 92121-1714 (US). **JOSE, Jubin**; 5775
Morehouse Drive, San Diego, California 92121-1714 (US).
PATIL, Shailesh; 5775 Morehouse Drive, San Diego, Cal-
ifornia 92121-1714 (US). **LI, Junyi**; 5775 Morehouse Drive,
San Diego, California 92121-1714 (US). **TSIRTISIS,**

(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, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
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, ST, SZ, TZ,
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,
KM, ML, MR, NE, SN, TD, TG).

(54) Title: CONFIGURING MULTI-CHANNEL TRANSMISSION FOR RANGING ACCURACY

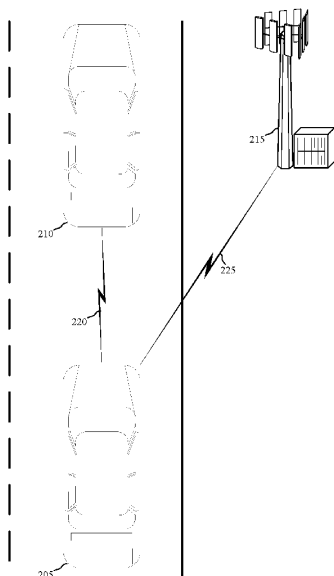


FIG. 2

(57) Abstract: Methods, systems, and devices for wireless communication are described. A wireless device may identify a configuration for transmitting ranging signals in a vehicle-based communication system. The configuration may identify a plurality of channels to be used for the ranging signals and timing for the ranging signals. The wireless device may transmit the configuration to a receiver and transmit ranging signals based at least in part on the configuration. The receiver may use the ranging signals to determine a distance between the receiver and the wireless device. The receiver may use the determined distance to update positioning information or operate a motor vehicle.

WO 2018/190982 A1

[Continued on next page]

Published:

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