

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
02 November 2023 (02.11.2023)



(10) International Publication Number
WO 2023/211905 A1

(51) International Patent Classification:

H04W 64/00 (2009.01) *H04L 5/00* (2006.01)
G01S 5/02 (2010.01) *H04W 92/18* (2009.01)
H04W 72/40 (2023.01)

(21) International Application Number:

PCT/US2023/019768

(22) International Filing Date:

25 April 2023 (25.04.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

63/334,809	26 April 2022 (26.04.2022)	US
63/395,406	05 August 2022 (05.08.2022)	US
63/421,669	02 November 2022 (02.11.2022)	US
63/445,340	14 February 2023 (14.02.2023)	US

(71) Applicant: **INTERDIGITAL PATENT HOLDINGS, INC.** [US/US]; 200 Bellevue Parkway, Suite 300, Wilmington, Delaware 19809 (US).

(72) Inventors: **HOANG, Tuong**; 1000 Sherbrooke Street, 10th Floor, Montreal, Québec H3A 3G4 (CA). **HASEGAWA, Fumihito**; 1000 Sherbrooke Street, 10th Floor, Montreal, Québec H3A 3G4 (CA). **DENG, Tao**; 111 West 33rd Street, Suite 1420, New York, New York 10120 (US). **RAO, Jaya**; 1000 Sherbrooke Street, 10th Floor, Montreal, Québec H3A 3G4 (CA). **LEE, Moon IL**; 111 West 33rd Street, Suite 1420, New York, New York 10120 (US). **MARINIER, Paul**; 1000 Sherbrooke Street, 10th Floor, Montreal, Québec H3A 3G4 (CA). **SHAH, Kunjan**; 64 Great Eastern Street, London Greater London EC2A 3QR (GB).

(74) Agent: **GORDON, Robert E.** et al.; Flaster Greenberg, P.C., 1717 Arch Street, Suite 3300, Philadelphia, Pennsylvania 19103 (US).

(54) Title: NEW RADIO (NR) POSITIONING METHODS FOR IN COVERAGE SIDELINK POSITIONING

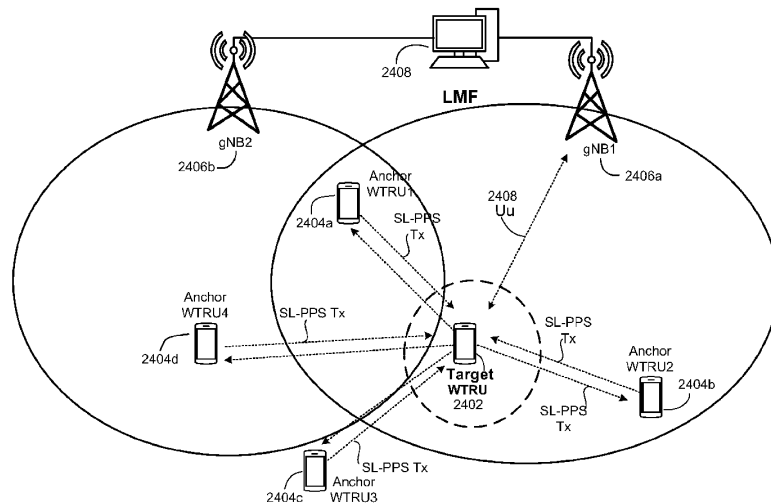


FIG. 24

(57) Abstract: Sidelink positioning may be accomplished by a wireless transmit/receive unit (WTRU). The WTRU may be configured to transmit a first message comprising sidelink positioning information associated with a group of WTRUs. The sidelink positioning information may comprise an indication of a sidelink positioning method for determining positions of the WTRUs in the group of WTRUs. The WTRU may be configured to transmit a second message comprising a request for sidelink positioning reference signal (SL-PRS) resources for the group of WTRUs. The WTRU may be configured to receive an indication of allocated SL-PRS resources for the group of WTRUs. The WTRU may be configured to send an indication of the allocated SL-PRS resources to the group of WTRUs.

[Continued on next page]

WO 2023/211905 A1

(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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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).

Published:

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