

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
23 May 2019 (23.05.2019)



(10) International Publication Number
WO 2019/095784 A1

(51) International Patent Classification:
H04W 28/00 (2009.01)

(21) International Application Number:
PCT/CN2018/103208

(22) International Filing Date:
30 August 2018 (30.08.2018)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PCT/CN2017/111308
16 November 2017 (16.11.2017) CN

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

(72) Inventors; and

(71) Applicants (*for US only*): **WEI, Chao** [CN/CN]; 5775
Morehouse Drive, San Diego, California 92121-1714 (US).
RICO ALVARINO, Alberto [ES/US]; 5775 Morehouse
Drive, San Diego, California 92121-1714 (US). **LIU, Le**
[CN/US]; 5775 Morehouse Drive, San Diego, Califor-
nia 92121-1714 (US). **CHEN, Wanshi** [CN/US]; 5775
Morehouse Drive, San Diego, California 92121-1714 (US).
WANG, Xiao Feng [CA/US]; 5775 Morehouse Drive, San
Diego, California 92121-1714 (US). **XU, Hao** [US/CN];
5775 Morehouse Drive, San Diego, California 92121-1714
(US).

(74) Agent: **NTD PATENT & TRADEMARK AGENCY
LTD.**; 10th Floor, Tower C, Beijing Global Trade Center,
36 North Third Ring Road East, Dongcheng District, Bei-
jing 100013 (CN).

(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,

(54) Title: TECHNIQUES AND APPARATUSES FOR CARRIER MANAGEMENT

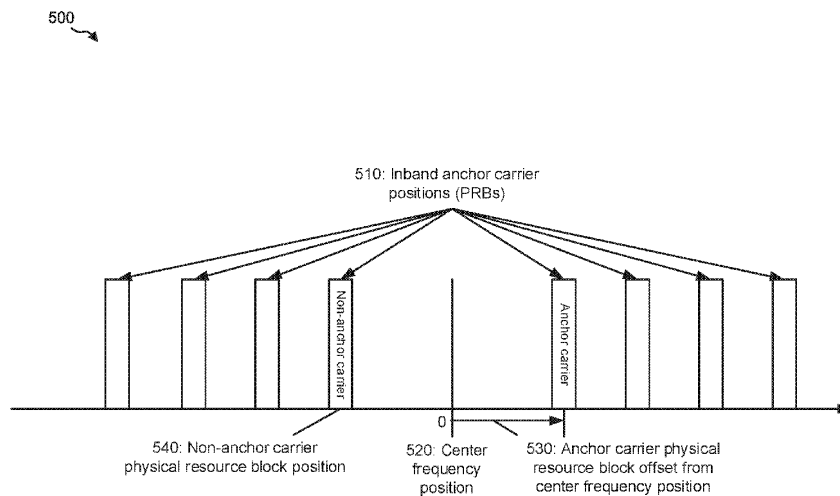


FIG. 5

(57) Abstract: A method, base station (BS), user equipment (UE), apparatus, and computer program product for wireless communication are provided. A BS and a UE may communicate using a narrowband Internet of Things (NB-IoT) communication system. However, a frequency, time, and/or power associated with transmission of a SIB1-NB on a non-anchor carrier may not be configured for NB-IoT. In some aspects, the BS may determine parameters, such as a time domain location parameter, a frequency domain location parameter, a quantity of repetitions, a power boosting parameter, and/or the like for a transmission in NB-IoT. In some aspects, a UE may determine to transmit a connection request message on a different carrier than a random access channel message.

[Continued on next page]



WO 2019/095784 A1

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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

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