



(51) International Patent Classification:
H04W 52/02 (2009.01)

(21) International Application Number:
PCT/US2019/047274

(22) International Filing Date:
20 August 2019 (20.08.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/731,015 13 September 2018 (13.09.2018) US
16/544,742 19 August 2019 (19.08.2019) US

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

(72) Inventors: **JIANG, Jing**; QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **ANG, Peter Pui Lok**; QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **MANTRAVADI, Ashok**; QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **KHANDEKAR, Aamod**; QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **MUKKAVILLI, Krishna Kiran**; QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **SORIAGA, Joseph Binamira**; QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **BHUSHAN, Naga**; QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **YU, Yuanning**; QUALCOMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121-1714 (US).

(54) Title: METHODS AND APPARATUS FOR SUPPORTING MULTIPLE POWER AND SPECTRUM EFFICIENT MODES FOR POWER SAVING

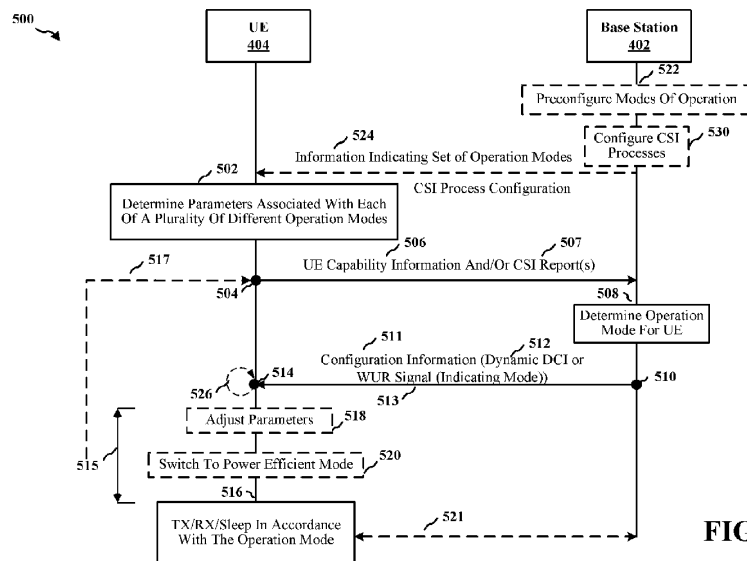


FIG. 5

(57) Abstract: In an aspect, a UE may determine a set of parameters associated with each of a plurality of different operation modes supported by the UE and transmit UE capability information including the set of parameters to a base station, where at least one operation mode comprises a power efficient mode. The UE may receive configuration information based on the UE capability information including an indication of an operation mode of the plurality of different operation modes. A base station may receive UE capability information including a set of parameters associated with each of a plurality of different operation modes supported by a UE and determine an operation mode of the plurality of different operation modes for the UE based on the UE capability information. The base station may transmit configuration information including an indication of the operation mode of the plurality of different operation modes.

[Continued on next page]

COMM INCORPORATED, 5775 Morehouse Drive, San Diego, California 92121 (US).

(74) **Agent: HODGES, Jonas J.** et al.; c/o ARENT FOX LLP, 1717 K Street NW, Washington, District of Columbia 20006-5344 (US).

(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).

Published:

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