



- (51) **International Patent Classification:**
Not classified
- (21) **International Application Number:**
PCT/SG2023/050273
- (22) **International Filing Date:**
21 April 2023 (21.04.2023)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
10202204592Q 28 April 2022 (28.04.2022) SG
- (71) **Applicant:** PANASONIC INTELLECTUAL PROPERTY CORPORATION OF AMERICA [US/US]; 2050 W 190th Street, Suite 450, Torrance, CA 90504 (US).
- (72) **Inventors:** TRAN, Xuan Tuong; c/o Panasonic R&D Center Singapore, 202 Bedok South Avenue 1, #02-11, Singapore 469332 (SG). SUZUKI, Hidetoshi; c/o Panasonic Holdings Corporation, 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501 (JP). YAMAMOTO, Tetsuya;

c/o Panasonic Holdings Corporation, 1006, Oaza Kadoma, Kadoma-shi, Osaka 571-8501 (JP). **OGAWA, Yoshihiko**; c/o Panasonic Intellectual Property Management Co., Ltd., 1-6-1, Shiromi 2-chome, Chuo-ku, Osaka-shi, Osaka 540-6207 (JP). **SIM, Hong Cheng, Michael**; c/o Panasonic R&D Center Singapore, 202 Bedok South Avenue 1, #02-11, Singapore 469332 (SG). **KANG, Yang**; c/o Panasonic R&D Center Singapore, 202 Bedok South Avenue 1, #02-11, Singapore 469332 (SG).

(74) **Agent:** SPRUSON & FERGUSON (ASIA) PTE LTD; P.O. Box 1531, Robinson Road, Post Office, Singapore 903031 (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, 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,

(54) **Title:** COMMUNICATION APPARATUSES AND COMMUNICATION METHODS FOR MULTI-PRACH TRANSMISSIONS

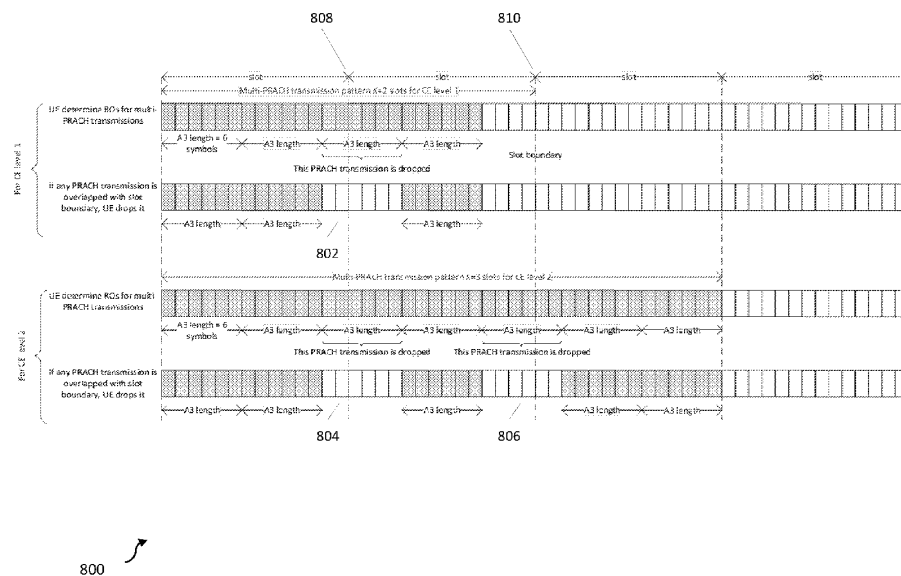


Fig. 8A

(57) **Abstract:** The present disclosure provides communication apparatuses and communication methods for multi-PRACH transmissions. The communication apparatuses include a communication apparatus comprising: a receiver, which in operation, receives control information relating to a multi-PRACH transmission, and a transmitter, which is operation, transmits a multi-PRACH transmission based on the control information, the multi-PRACH transmission comprising a plurality of PRACH transmissions.

[Continued on next page]

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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*