

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
12 March 2020 (12.03.2020)



(10) International Publication Number
WO 2020/050773 A1

(51) International Patent Classification:

H04W 76/10 (2006.01) *H04W* 84/12 (2009.01)
H04W 88/08 (2009.01) *H04W* 88/02 (2009.01)
H04W 48/16 (2009.01) *H04W* 72/02 (2009.01)
H04W 76/30 (2018.01) *H04W* 28/06 (2009.01)
H04W 12/06 (2009.01) *H04W* 52/02 (2009.01)

(21) International Application Number:

PCT/SG2019/050296

(22) International Filing Date:

12 June 2019 (12.06.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10201807626Y 05 September 2018 (05.09.2018) SG

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

(54) Title: COMMUNICATION APPARATUS AND COMMUNICATION METHOD FOR MULTI-BAND OPERATION

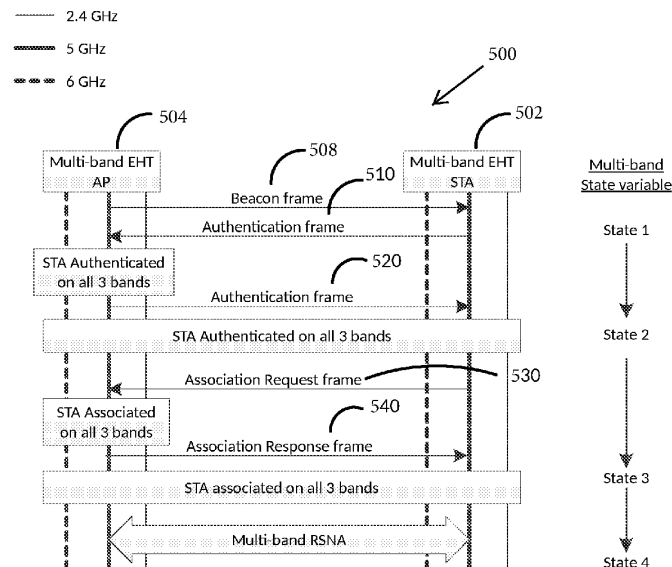


Figure 5

(57) **Abstract:** The first aspect of the application is directed to a multi-band communication apparatus including a transmitter and a receiver. The transmitter, which in operation, transmits, in a wireless network and to multi-band communication devices, frames on a frequency band that include actions related to the frequency band and to at least one other frequency band in which the multi-band communication apparatus transmits. The receiver, which in operation, receives, in the wireless network, from the multi-band communication devices, frames on the frequency band that include actions related to the frequency band and to the at least one other frequency band in which the multi-band communication apparatus receives. The second aspect of the application is directed to a multi-band AP transmitting/receiving frames to/from non-AP stations in a single wireless network that simultaneously operating on multiple frequency bands, in which the single wireless network is identified by a single Basic Service Set Identifier (BSSID).

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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).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*
— *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*
