

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
17 November 2022 (17.11.2022)



(10) International Publication Number
WO 2022/241016 A1

- (51) **International Patent Classification:**
H04L 5/00 (2006.01) *H04W 72/00* (2009.01)
- (21) **International Application Number:**
PCT/US2022/028808
- (22) **International Filing Date:**
11 May 2022 (11.05.2022)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
20210100318 11 May 2021 (11.05.2021) GR
- (71) **Applicant: QUALCOMM INCORPORATED** [US/US];
Attn: International IP Administration, 5775 Morehouse Drive,
San Diego, California 92121-1714 (US).
- (72) **Inventors: HUANG, Yi;** 5775 Morehouse Drive, San
Diego, California 92121 (US). **SUN, Jing;** 5775 More-
house Drive, San Diego, California 92121 (US). **DIMOU,**
Konstantinos; 5775 Morehouse Drive, San Diego, Cal-
ifornia 92121 (US). **HOSSEINI, Seyedkianoush;** 5775
Morehouse Drive, San Diego, California 92121 (US). **JL,**
- Tingfang;** 5775 Morehouse Drive, San Diego, California
92121 (US).
- (74) **Agent: RUDNICK, Holly;** Loza & Loza LLP, 305 North
second Avenue, #127, Upland, California 91786 (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, IQ, IR, IS, IT, JM, 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, 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, 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,

(54) **Title:** UPLINK CONTROL INFORMATION CARRIER SWITCH

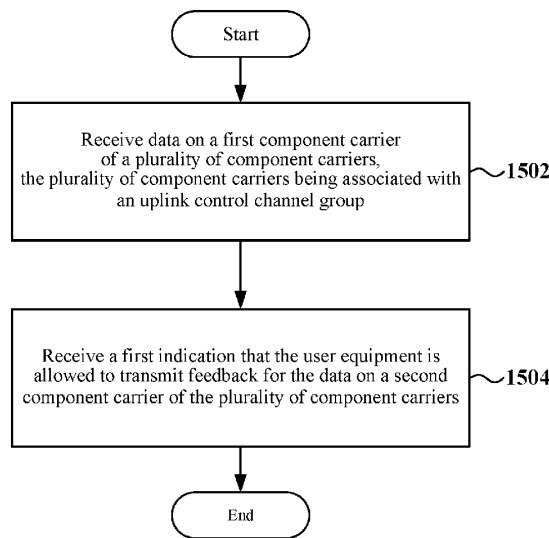


FIG. 15

(57) **Abstract:** Aspects relate to component carriers that are associated with an uplink control channel group. In some examples, data may be communicated on one of the component carriers and feedback for the data may be communicated on another one of the component carriers.

[Continued on next page]

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))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*