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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
12 September 2025 (12.09.2025)

WIPO | PCT

(10) International Publication Number
WO 2025/185827 A1

(51) International Patent Classification:
H04B 7/0417 (2017.01) *H04B 7/0456* (2017.01)
H04B 7/0426 (2017.01) *H04B 7/06* (2006.01)

(21) International Application Number:
PCT/EP2024/056164

(22) International Filing Date:
08 March 2024 (08.03.2024)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant: **HUAWEI TECHNOLOGIES CO., LTD.** [CN/CN]; Huawei Administration Building Bantian, Longgang District, Shenzhen, Guangdong 518129 (CN).

(72) Inventor; and
(71) Applicant *(for MN only)*: **BEN-ARIE, Yaron** [IL/DE]; Huawei Technologies Duesseldorf GmbH, Riesstr. 25, 80992 Munich (DE).

(72) Inventors: **BASSON, Nadav**; Huawei Technologies Duesseldorf GmbH, Riesstr. 25, 80992 Munich (DE). **SHILO, Shimon**; Huawei Technologies Duesseldorf GmbH, Riesstr. 25, 80992 Munich (DE). **EZRI, Doron**; Huawei Technologies Duesseldorf GmbH, Riesstr. 25, 80992 Munich (DE).

(74) Agent: **HUAWEI EUROPEAN IPR**; Huawei Technologies Duesseldorf GmbH, Riesstr. 25, 80992 Munich (DE).

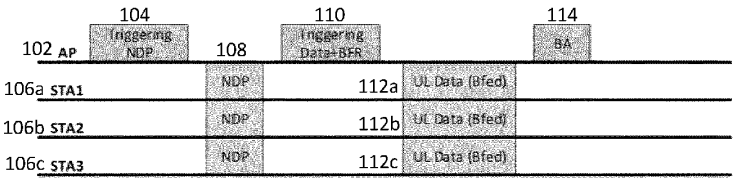
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, 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, 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).

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*

(54) **Title:** A METHOD AND APPARATUS FOR COMPRESSED UPLINK DATA TRANSMISSION

Figure 1



(57) **Abstract:** A method for providing compressed and quantized precoder data to one or more station devices as part of a trigger-based uplink data communication of a wireless network. The method comprising calculating at an access point of the network a precoding matrix for each of the one or more station devices; decomposing the precoding matrix of each station device into a plurality of submatrices; forming compressed precoder data from a selection of the plurality of submatrices; and transmitting the compressed precoder data to each of the one or more station devices. There is also provided a station device and access point configured to implement respective steps of the method.

WO 2025/185827 A1