

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 September 2024 (06.09.2024)



(10) International Publication Number
WO 2024/179034 A1

- (51) **International Patent Classification:**
H04W 72/21 (2023.01)
- (21) **International Application Number:**
PCT/CN2023/130980
- (22) **International Filing Date:**
10 November 2023 (10.11.2023)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (71) **Applicant:** **LENOVO (BEIJING) LIMITED** [CN/CN]; 6 Shangdi West Road, Haidian District, Beijing 100085 (CN).
- (72) **Inventors:** **YAN, Zhi**; Lenovo HQ, No.10 Xibeiwang East Road, Haidian District, Beijing 100094 (CN). **LIU, Hong-mei**; Lenovo HQ, No.10 Xibeiwang East Road, Haidian District, Beijing 100094 (CN). **ZHANG, Yuantao**; Lenovo HQ, No.10 Xibeiwang East Road, Haidian District, Beijing 100094 (CN).

- (74) **Agent:** **LEE AND LI - LEAVEN IPR AGENCY LTD.**; Unit 2202, Tower A, Beijing Pudi Hotel, No. 7 Jian Guo Men South Avenue, Dongcheng District, Beijing 100005 (CN).

- (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))
- 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))
- upon request of the applicant, before the expiration of the time limit referred to in Article 21(2)(a)

- (54) **Title:** METHOD AND APPARATUS OF UPLINK TRANSMISSIONS

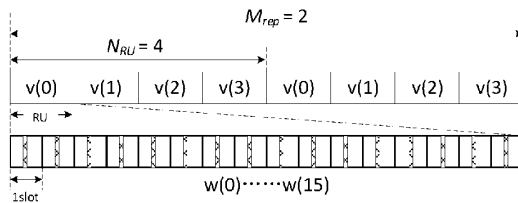


Figure 2

(57) **Abstract:** Various aspects of the present disclosure relate to a method and apparatus of uplink transmissions. An exemplary UE for wireless communication, which includes: at least one memory; and at least one processor coupled with the at least one memory and configured to cause the UE to: receive uplink transmission configuration; and transmit an uplink transmission, or a reference signal associated with the uplink transmission, or the uplink transmission and the reference signal based on the uplink transmission configuration and a multiplexing sequence, wherein, the uplink transmission is processed by the multiplexing sequence, the reference signal is generated from the multiplexing sequence, and each element of the multiplexing sequence adopted to the uplink transmission or the reference signal lasts for a time duration.

WO 2024/179034 A1