

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
25 July 2024 (25.07.2024)



(10) International Publication Number
WO 2024/155272 A1

- (51) International Patent Classification:
H04B 7/185 (2006.01) *H04B 7/204* (2006.01)
- (21) International Application Number:
PCT/US2023/010920
- (22) International Filing Date:
17 January 2023 (17.01.2023)
- (25) Filing Language: English
- (26) Publication Language: English
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(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, 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,

(54) Title: METHODS AND APPARATUSES FOR DIVERSITY TRANSMISSION IN A SATELLITE-BASED COMMUNICATION SYSTEM

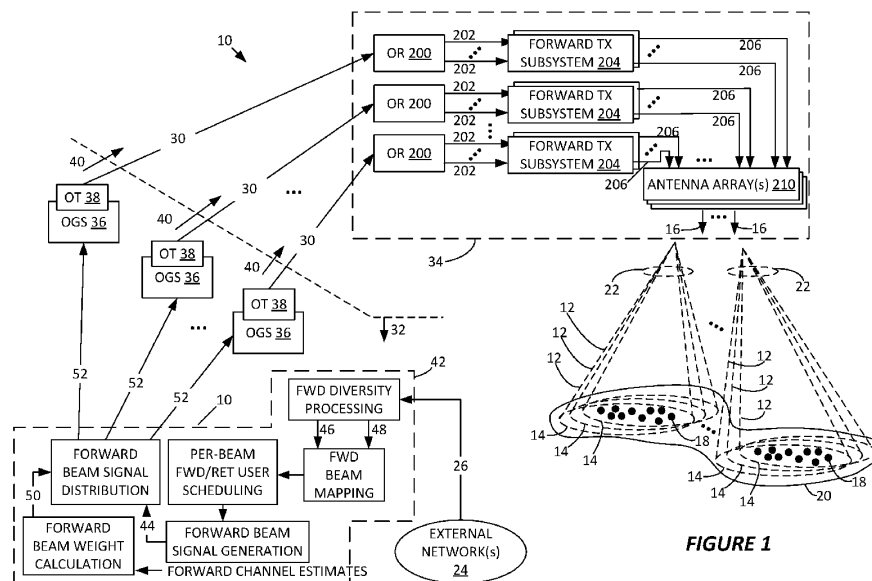


FIGURE 1

(57) Abstract: A satellite communication system uses a plurality of optical feeder links between its ground segment and its space segment and employs spatial diversity transmission, which splits individual user data streams into sub-streams sent across two or more of the optical feeder links such that recovery of the full stream at the receiving end is possible despite impairments affecting individual feeder links over which the stream is split. Further, the system applies beamforming separately with respect to the feeder links, meaning that transmission time alignment is not needed between respective ones of the sub-streams. Spatial diversity transmission occurs in the forward direction or in the return direction or both and may be employed on a conditional basis and dynamically adjusted with respect to individual user terminals, groups of user terminals, or whole populations of user terminals.

[Continued on next page]

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))