

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
06 February 2025 (06.02.2025)



(10) International Publication Number
WO 2025/029255 A1

- (51) **International Patent Classification:**
H04B 7/185 (2006.01)
- (21) **International Application Number:**
PCT/US2023/029304
- (22) **International Filing Date:**
02 August 2023 (02.08.2023)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (71) **Applicant:** VIASAT, INC. [US/US]; c/o Patent Department, 6155 El Camino Real, Carlsbad, California 92009 (US).
- (72) **Inventors:** BUER, Kenneth V.; Viasat, Inc., c/o Patent Department, 6155 El Camino Real, Carlsbad, California 92009 (US). PETRANOVICH, James E.; Viasat, Inc., c/o Patent Department, 6155 El Camino Real, Carlsbad, California 92009 (US). FABBRI, Simon; Viasat, Inc., c/o Patent Department, 6155 El Camino Real, Carlsbad, California 92009 (US).
- (74) **Agent:** PUTNAM, Jonathan et al.; Viasat, Inc., c/o Patent Department, 6155 El Camino Real, Carlsbad, California 92009 (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, 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))

- (54) **Title:** PROCESSED BROADBAND SATELLITE COMMUNICATION SYSTEM WITH SPATIALLY MULTIPLEXED OPTICAL FEEDER LINKS

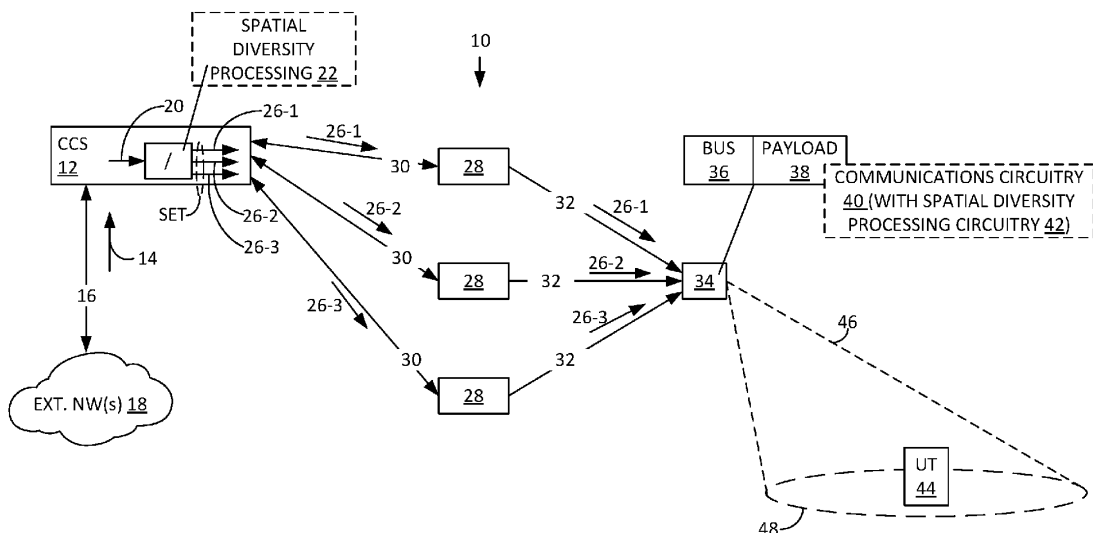


FIGURE 1

- (57) **Abstract:** Disclosed techniques apply to forward-link and/or reverse-link transmissions between a satellite and a ground segment of a satellite communications system (SCS).

WO 2025/029255 A1