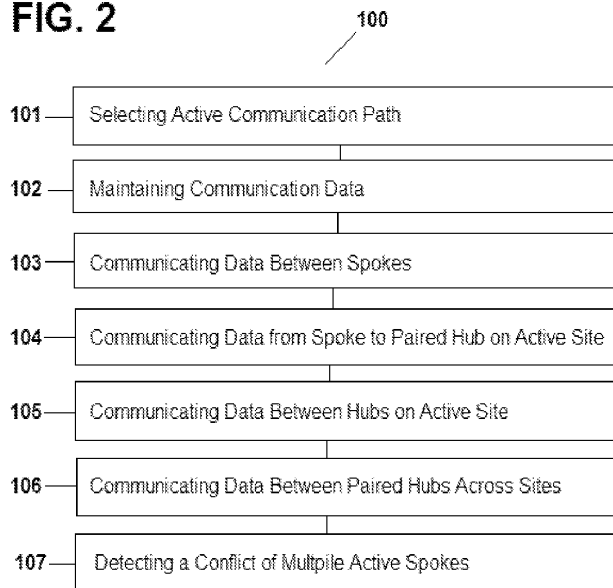




- (51) **International Patent Classification:**
H04L 69/00 (2022.01) *H04L 12/00* (2006.01)
H04L 67/00 (2022.01) *H04W 74/00* (2009.01)
- (21) **International Application Number:**
PCT/US2024/034129
- (22) **International Filing Date:**
14 June 2024 (14.06.2024)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/521,008 14 June 2023 (14.06.2023) US
- (71) **Applicant:** **ESPACE NETWORK, INC.** [US/US]; 850
New Burton Rd., Suite 201, Dover, DE 19904 (US).
- (72) **Inventors; and**
- (71) **Applicants:** **KERSEY, Brian, Scott**; 302 Cutty Sark Way,
Kodambakkam, Alpharetta, GA 30005 (US). **MANOHARAN, Paul, Vijay**; 18 Andavar Nagar 3rd St, Chennai
600024 (IN).
- (74) **Agent:** **WEAVER, A., Rober** et al.; The Brickell IP Group,
PLLC, South Tower, Ste. 800, 1101 Brickell Ave., Miami,
FL 33131 (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,

(54) **Title:** COMMUNICATION GRID REDUNDANCY PROTOCOL

FIG. 2



(57) **Abstract:** A communication system having plurality of access-point sites, each having a plurality of hubs, and a first vessel having a plurality of spokes, where each spoke is paired with a hub from the plurality of hubs such that a first spoke is paired with a first hub of each of the sites, and a second spoke is paired with the second hub of each of the sites. The first spoke is an active spoke and each other spoke is a backup spoke, such that a communication pathway from first spoke to the first hub of a first site is an active communication pathway, and such that the first hub of the first site is an active hub and the first site is an active site. The system may further include a communications protocol wherein each spoke maintains a communication data set relating to communications parameters, which are communicated throughout the system.

[Continued on next page]

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))

(88) Date of publication of the international search report:

03 April 2025 (03.04.2025)