



- (51) **International Patent Classification:**
H01Q 3/26 (2006.01) **H04B 7/0404** (2017.01)
H04B 7/022 (2017.01) **H04B 7/0408** (2017.01)
- (21) **International Application Number:**
PCT/US2020/014044
- (22) **International Filing Date:**
17 January 2020 (17.01.2020)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
62/794,478 18 January 2019 (18.01.2019) US
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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, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, 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, 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, GH, GM, KE, LR, LS, MW, MZ, NA, RW, 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, 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: SYSTEMS AND METHODS FOR CALIBRATING PHASED ARRAY ANTENNAS

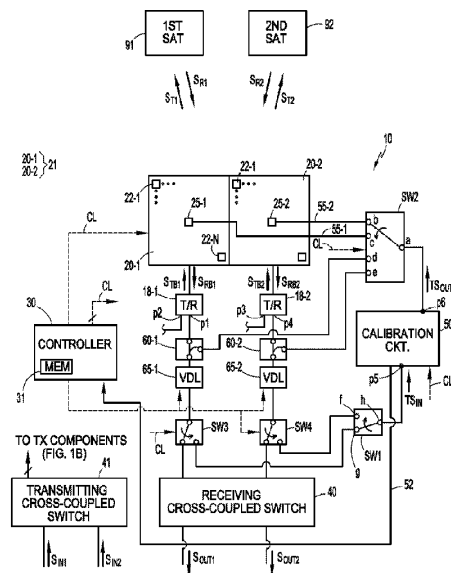


FIG. 1A

- (57) Abstract:** An antenna system having an antenna array including at least first and second phased array antennas, and a method for field-calibrating the antenna array. Before and after a handover period, communication with respective first and second external satellites or other communication systems is performed using both the first and second antennas. A first beam is formed prior to the handover period. During a first portion of the handover period: a second beam is formed for the communication with the first satellite using the first antenna; the second antenna is deactivated for external communication; and the second antenna is calibrated. During a second portion of the handover period, the second antenna is reactivated for a handed over communication with the second satellite by forming a third beam using the second antenna, while the first antenna maintains its communication with the first satellite via the second beam.