



(51) International Patent Classification:
G01S 3/04 (2006.01) *H01Q 21/06* (2006.01)
H01Q 21/24 (2006.01)

(21) International Application Number:
PCT/SG2023/050221

(22) International Filing Date:
31 March 2023 (31.03.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10202203290W 31 March 2022 (31.03.2022) SG

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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, 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).

(54) Title: A SYSTEM AND METHOD OF DETECTING A DIRECTION OF ARRIVAL OF ONE OR MORE TARGET SIGNALS USING AN ANTENNA ARRAY

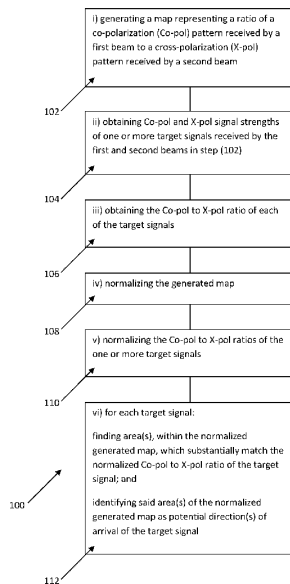


FIG. 1

(57) Abstract: There is provided a system and method of detecting a direction of arrival of one or more target signals using an antenna array, the method comprising, i) generating a map representing a ratio of a co-polarization (Co-pol) pattern received by the first beam to a cross-polarization (X-pol) pattern received by the second beam; ii) obtaining Co-pol and X-pol signal strengths of the one or more target signals received by the first and second beams in step (i); iii) obtaining the Co-pol to X-pol ratio of each of the one or more target signals; iv) normalizing the generated map; v) normalizing the Co-pol to X-pol ratios of the one or more target signals; and vi) for each target signal: finding area(s), within the normalized generated map, which substantially match the normalized Co-pol to X-pol ratio of the target signal; and identifying said area(s) of the normalized generated map as potential direction(s) of arrival of the target signal.

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