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(21) International Application Number: ☒ PCT/US97/14783 (22) International Filing Date: ☒ 22 August 1997 (22.08.97) (30) Priority Data: 60/024,525 ☒ 23 August 1996 (23.08.96) ☒ US (71) Applicant: DATA FUSION CORPORATION [US/US]; Suite 1260, 9035 Wadsworth Parkway, Westminster, CO 80021 (US). (72) Inventors: KOBER, Wolfgang; 7017 South Richfield, Aurora, CO 80016 (US). THOMAS, John, K.; 569 West Street, Louisville, CO 80027 (US). (74) Agents: SWARTZ, Douglas, W. et al.; Sheridan Ross P.C., Suite 3500, 1700 Lincoln Street, Denver, CO 80203-4501 (US).			(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, <u>SG</u> , SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published With international search report.

(54) Title: RAKE RECEIVER FOR SPREAD SPECTRUM SIGNAL DEMODULATION

(57) Abstract

The architecture (54, 58, 60, 62, 66, 70, 74, 78, 82, 86, 90) of the present invention is premised upon an algorithm involving integration of oblique correlators (70) and RAKE filtering (62, 66, 82) to null interference from other spread spectrum signals. The oblique correlators (70) are, based on non-orthogonal projections that are optimum for nulling structured signals such as spread spectrum signals. RAKE filtering (62, 66, 82) is used to rapidly steer the beam of multi-antenna system to mitigate the effects of multipath.

