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(21) International Application Number: PCT/US98/20760 (22) International Filing Date: 2 October 1998 (02.10.98) (30) Priority Data: 08/943,810 3 October 1997 (03.10.97) US (71) Applicant (for all designated States except US): MOTOROLA, INC. [US/US]; 1303 East Algonquin Road, Schaumburg, IL 60196 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): BUER, Kenneth, Vern [US/US]; 907 North Granite Street, Gilbert, AZ 85234 (US). CORMAN, David, Warren [US/US]; 882 S. Coral Key Avenue, Gilbert, AZ 85233 (US). COOK, Dean, L. [US/US]; 848 E. 10th Street, Mesa, AZ 85203 (US). DENDY, Deborah, Sue [US/US]; 1822 E. Citation Lane, Tempe, AZ 85284 (US). (74) Agents: INGRASSIA, Vincent, B. et al.; Motorola Inc., Intellectual Property Dept., P.O. Box 10219, Scottsdale, AZ 85271-0219 (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, GM, HR, HU, ID, 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, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report.	
(54) Title: ELECTRONIC SCANNING REFLECTOR ANTENNA AND METHOD THEREFOR		
(57) Abstract		
An antenna subsystem (120) which comprises an electronic scanning reflector antenna (400) is used for the formation of single and multiple beams. Reflecting surface (420) is covered with at least one dielectric layer (430) which is used to simultaneously and independently steer multiple beams. Electronic scanning reflector antenna (400) operates similar to a phased array antenna. ESRA (400) comprises a number of independent controllable reflecting surfaces (450) which are combined together in close proximity. Each one of the individual regions is covered by a dielectric layer, and the dielectric constant for each can be independently controlled. Electronic scanning reflector antennas (400, 600) are used in both space-based and terrestrial-based applications. Electronic scanning reflector antennas (400, 600) are used for both transmission and reception of electromagnetic signals. The diagram illustrates an electronic scanning reflector antenna (400). It features a horizontal reflecting surface (420) which is covered with a dielectric layer (430). A beam of electromagnetic radiation is shown reflecting off the surface, labeled 410. The antenna (400) is positioned above the surface, and the dielectric layer (430) is shown as a thin layer on the surface.		