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(21) International Application Number: PCT/US98/12481 (22) International Filing Date: 16 June 1998 (16.06.98) (30) Priority Data: 08/879,297 19 June 1997 (19.06.97) US (71) Applicant: QUALCOMM INCORPORATED [US/US]; 6455 Lusk Boulevard, San Diego, CA 92121 (US). (72) Inventors: VIJAYAN, Rajiv; Apartment 6203, 3550 Lebon Drive, San Diego, CA 92122 (US). ODENWALDER, Joseph, P.; 14967 Rancho Real, Del Mar, CA 92014 (US). WOLF, Jack, K.; 8529 Prestwick Drive, La Jolla, CA 92037 (US). ZEHAVI, Ephraim; Moshe Sneh Street 3, 34987 Haifa (IL). LEE, Chong, U.; 5238 Caminito Playa Malaga, San Diego, CA 92124 (US). (74) Agents: OGROD, Gregory, D. et al.; Qualcomm Incorporated, 6455 Lusk Boulevard, San Diego, CA 92121 (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, GW, 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, 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, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: TRANSMISSION OF DIGITAL SIGNALS BY ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING		
(57) Abstract In an orthogonal frequency division multiplexing (OFDM) system (10) which uses an outer Reed-Solomon encoder and interleaver (24) and an inner convolutional encoder (26), after the inner convolutional encoding the data bits are interleaved by an inner interleaver (28), and then grouped into symbols, each symbol having "m" bits. After grouping, the symbols are mapped to a complex plane using quadrature amplitude modulation (QAM). Thus, bits, not symbols, are interleaved by the inner interleaver (28). A receiver (12) performs a soft decision regarding the value of each bit in each complex QAM symbol received. <pre> graph LR T1[TRANSMITTER 14] -- 18 --> R[RECEIVER 12] T2[TRANSMITTER 16] -- 20 --> R R -- 10 --> R </pre>		