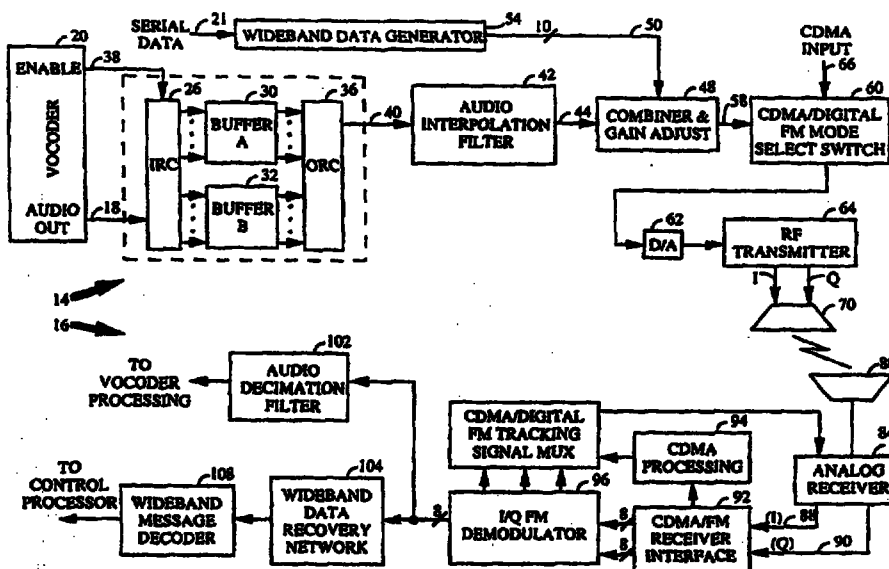




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

|                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| (51) International Patent Classification <sup>6</sup> :<br>H04B 1/40, H04J 15/00, H04L 25/49,<br>27/14                                                           |  | A2                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (11) International Publication Number: <b>WO 96/20540</b>   |
|                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | (43) International Publication Date: 4 July 1996 (04.07.96) |
| (21) International Application Number: PCT/US95/16363                                                                                                            |  | (81) Designated States: AL, AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, 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, TJ, TM, TT, UA, UG, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, 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), ARIPO patent (KE, LS, MW, SD, SZ, UG). |                                                             |
| (22) International Filing Date: 19 December 1995 (19.12.95)                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                             |
| (30) Priority Data:<br>373,122 23 December 1994 (23.12.94) US                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                             |
| (71) Applicant: QUALCOMM INCORPORATED [US/US]; 6455 Lusk Boulevard, San Diego, CA 92121 (US).                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                             |
| (72) Inventors: BLACK, Peter, J.; Apartment 13, 11 Austral Street, St. Lucia, QLD 4067 (AU). WILSON, Nathaniel, B.; 11346-8 Portobelo, San Diego, CA 92124 (US). |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                             |
| (74) Agent: MILLER, Russell, B.; Qualcomm Incorporated, 6455 Lusk Boulevard, San Diego, CA 92121 (US).                                                           |  | Published<br>Without international search report and to be republished upon receipt of that report.                                                                                                                                                                                                                                                                                                                                                                |                                                             |

## (54) Title: DUAL-MODE FM/CDMA COMMUNICATION SYSTEM



## (57) Abstract

A dual-mode digital communication system for communicating an information signal during operation in frequency-modulated (FM) and multiple-access modes is disclosed herein. The digital communication system includes a dual-mode transmitter (14) for transmitting the information signal using an FM communication signal during FM mode operation, and for transmitting the information signal using a multiple-access communication signal during multiple-access mode operation. The communication system further includes a dual-mode receiver (16) for receiving the FM communication signal during FM mode operation, and for receiving the multiple-access communication signal during multiple-access mode operation. Incorporated within the dual-mode receiver (16) is a digital demodulator (96) for recovering the information signal from the received FM signal during operation in the FM mode, and for recovering the information signal from the received multiple-access signal during multiple-access mode operation.