9805175 -8
IPDS's
copy

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : H04Q 7/36 — A1

(11) International Publication Number: WO 97/36445

(43) International Publication Date: 2 October 1997 (02.10.97)

(21) International Application Number: PCT/US97/03808

(22) International Filing Date: 12 March 1997 (12.03.97)

(30) Priority Data: 08/622,311 — 27 March 1996 (27.03.96) — US

(71) Applicant: ERICSSON INC. [US/US]; 7001 Development Drive, P.O. Box 13969, Research Triangle Park, NC 27709 (US).

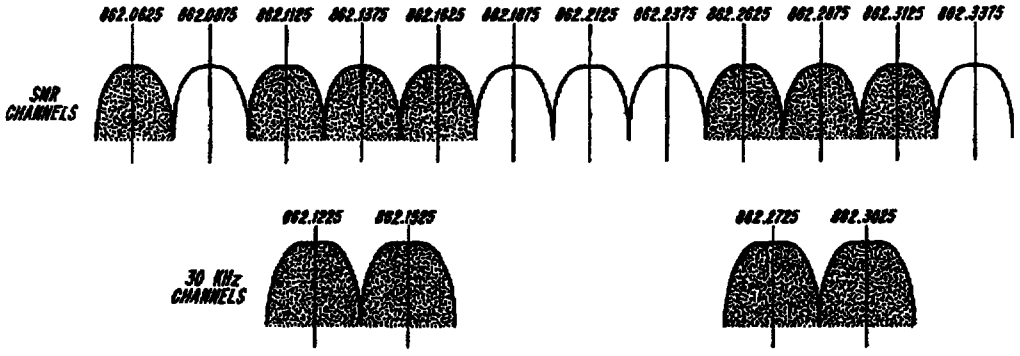
(72) Inventor: PRZELOMIEC, Thomas, A.; 5808 Rhonda Road, Lynchburg, VA 24502 (US).

(74) Agents: GRUDZIECKI, Ronald, L. et al.; Burns, Doane, Swecker & Mathis L.L.P., P.O. Box 1404, Alexandria, VA 22313-1404 (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, 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, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), 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: BAND CONVERTED CELLULAR COMMUNICATION SYSTEMS AND METHODS



(57) Abstract

The present invention provides techniques for adapting the portion of the frequency spectrum allocated to Land Mobile Radio (LMR) for use as downbanded cellular channels. These downbanded cellular channels can be employed, for example, either to supplement a cellular operator's system capacity or as a stand alone cellular-style system which can provide complementary geographic coverage which may, for example, bridge existing cellular systems. According to a first aspect of the present invention, the conventional channelization of the LMR spectrum is redefined in a manner which provides significant advantages. More specifically, for every six originally specified, 25 KHz LMR channels, five new 30 KHz DBC channels are specified. In this way, complete compatibility with cellular systems, e.g., allowing roaming between cellular and DBC systems, is achieved according to the present invention.