

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
31 January 2002 (31.01.2002)

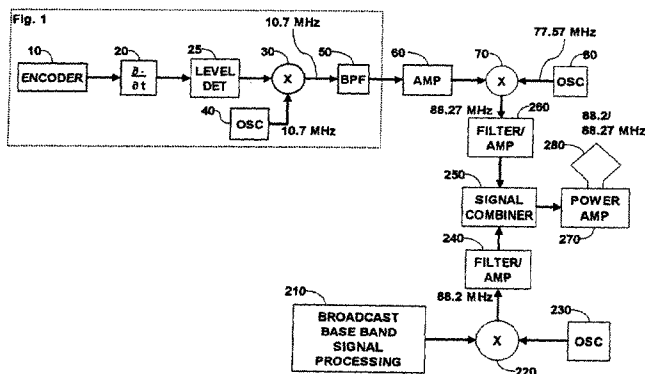
PCT

(10) International Publication Number
WO 02/009329 A3

- (51) International Patent Classification⁷: **H04H 1/00**, **H03M 5/08** (74) Agents: **TRIPOLI, Joseph, S.** et al.; Thomson multimedia Licensing Inc., P.O. Box 5312, Princeton, NJ 08540 (US).
- (21) International Application Number: PCT/US01/22850 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (22) International Filing Date: 20 July 2001 (20.07.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 09/626,295 25 July 2000 (25.07.2000) US (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, 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, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
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- Published: — with international search report
- (88) Date of publication of the international search report: 27 March 2003

[Continued on next page]

(54) Title: AN IN-BAND-ON-CHANNEL BROADCAST SYSTEM FOR DIGITAL DATA



(57) Abstract: An FM broadcast transmitter (Fig. 5) transmits a broadcast signal having a carrier at a broadcast frequency and sidebands, able to be transmitted at full power, within a transmission bandwidth around the carrier. It includes a source of a modulated FM stereo signal having a carrier at the broadcast frequency and having sidebands with a bandwidth less than the transmission bandwidth representing a stereo signal. It also includes a source of a modulated IBOC signal, having carrier pulses spaced relative to each other to represent the IBOC digital data signal encoded as a variable pulse width encoded signal, and a bandwidth within the transmission bandwidth not overlapping the FM stereo signal sidebands. A signal combiner combines the modulated FM stereo signal and the modulated IBOC signal to form the broadcast signal. An FM broadcast receiver (Fig. 6) receives a broadcast signal including a first modulated signal representing an FM stereo signal, and a second modulated signal, having carrier pulses spaced relative to each other to represent an in-band-on-channel (IBOC) digital data signal encoded as a variable pulse width encoded signal. It includes a signal separator for generating a first separated signal representing the FM stereo signal and a second separated signal representing the IBOC digital data signal. An FM signal processor generates a stereo audio signal represented by the FM stereo signal. An IBOC signal processor generates a digital data signal represented by the IBOC digital data signal.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.