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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 February 2001 (22.02.2001)

PCT

(10) International Publication Number
WO 01/13630 A1

(51) International Patent Classification[7]: H04N 5/445

(21) International Application Number: PCT/US00/22384

(22) International Filing Date: 14 August 2000 (14.08.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/148,486 12 August 1999 (12.08.1999) US

(71) Applicant *(for all designated States except US)*: INDEX SYSTEMS, INC. [—/—]; P.O. Box 71, Craigmuir Chambers, Road Town, Tortola (VG).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: O'CONNOR, Daniel, C. [US/US]; 1757 Casa Grande Street, Pasadena, CA 91104 (US).

(74) Agent: IKEHARA, Patrick, Y.; Christie, Parker & Hale, LLP, P.O. Box 7068, Pasadena, CA 91109-7068 (US).

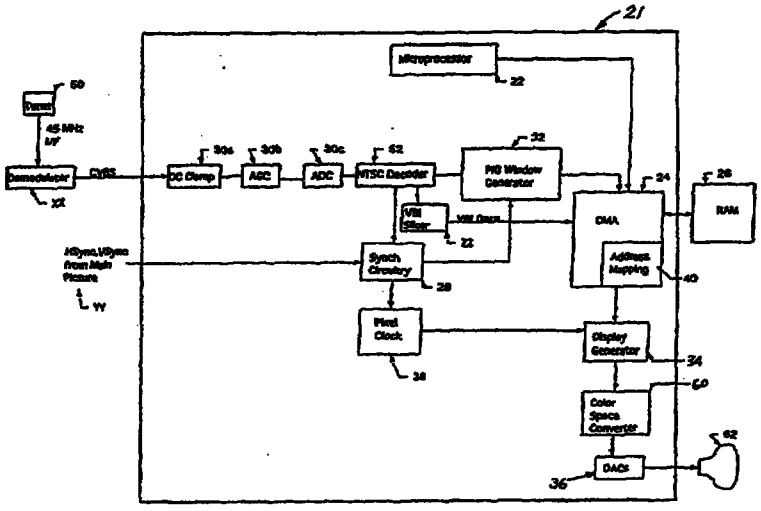
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *With international search report.*
— *Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.*

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.

(54) Title: PICTURE-IN-GUIDE GENERATOR WITH DIGITAL TUNER



(57) Abstract: A picture-in-guide generator has an output adapted to drive a television monitor and an input adapted to receive a television signal. A display generator feeds drive signals to the output synchronized to the television monitor. EPG information is extracted from the television signal and stored in memory. The number of pixels used to represent the television signal is reduced. The reduced number of pixels television signal is stored in memory. The EPG data and the television signal are retrieved from memory and stored in the display generator. The EPG data and the television signal are fed from the display generator to the output in a continuous data stream ordered to produce a picture-in-guide display on the monitor. The picture-in-guide generator is implemented on a single integrated circuit chip along with the circuitry generating the graphics. The addition of a digital tuner to the PIG generator chip allows the PIG generator to capture VBI data at any time whether the viewer is watching the television or not.

WO 01/13630 A1