9706212-9.
IPOS's

PCT WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : H04N 7/26 — A1

(11) International Publication Number: WO 97/01934

(43) International Publication Date: 16 January 1997 (16.01.97)

(21) International Application Number: PCT/IB96/00595

(22) International Filing Date: 4 June 1996 (04.06.96)

(30) Priority Data:
60/000,675 29 June 1995 (29.06.95) US
08/572,845 14 December 1995 (14.12.95) US

(71) Applicant: THOMSON MULTIMEDIA S.A. [FR/FR]; 9, place des Vosges, La Défense 5, F-92050 Paris-La Défense Cédex (FR).

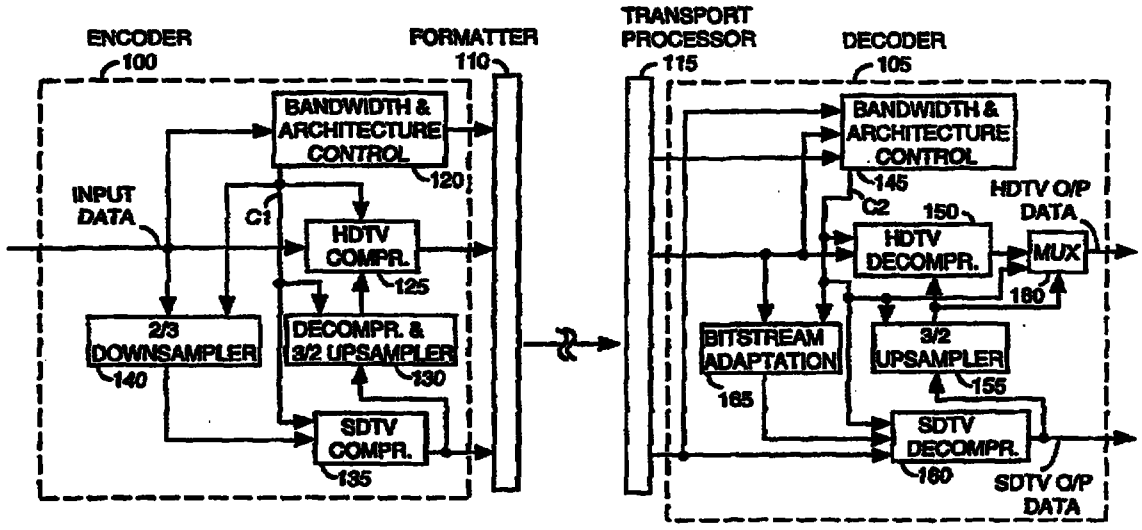
(72) Inventors: CHIANG, Tihao; 37-16 Quail Ridge Drive, Plainsboro, NY 08536 (US). SUN, Huifang; 61 Kinglet Drive South, Cranbury, NJ 08512 (US). ZDEPSKI, Joel, Walter; 470 Levin Avenue, Mountain View, CA 94040 (US).

(74) Agents: ZHANG, Jianguo et al.; Thomson multimedia S.A., 9, place des Vosges, La Défense 5, F-92050 Paris-La Défense Cédex (FR).

(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, 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, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (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: SYSTEM FOR ENCODING AND DECODING LAYERED COMPRESSED VIDEO DATA



(57) Abstract

A dynamically configurable video signal processing system processes data in the form of hierarchical layers. The system partitions data between hierarchical layers and allows variation in the number of layers employed. Data is automatically partitioned into one or more hierarchical layers as a function of one or more parameters selected from available system bandwidth, input data rate, and output signal quality. In addition, the image resolution and corresponding number of pixels per image of the data may be varied as a function of system parameters. Both encoder (100) and decoder (105; 107; 109) systems are disclosed.