162162

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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 October 2008 (23.10.2008)

PCT

(10) International Publication Number
WO 2008/127217 A2

(51) International Patent Classification:
H04N 11/02 (2006.01)

(21) International Application Number:
PCT/US2006/027477

(22) International Filing Date: 12 July 2006 (12.07.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/456,505 10 July 2006 (10.07.2006) US

(71) Applicant *(for all designated States except US)*: **SYMMETRICOM, INC.** [US/US]; 2300 Orchard Parkway, San Jose, California 95131 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **MOHANDAS, Praveen, A.** [US/US]; 2003 Seabreeze Street, Thousand Oaks, California 91320 (US).

(74) Agent: **KELLEY, Scott, W.**; KELLY LOWRY & KELLEY, LLP, 6320 Canoga Avenue, Suite 1650, Woodland Hills, CA 91367 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*
— *the filing date of the international application is within two months from the date of expiration of the priority period*
— *with information concerning one or more priority claims considered void*

(54) Title: IMAGE COMPLEXITY COMPUTATION IN PACKET BASED VIDEO BROADCAST SYSTEMS

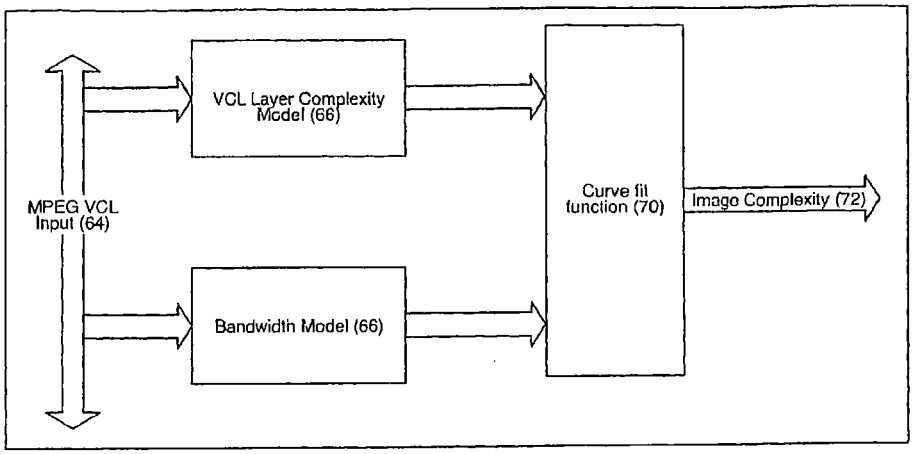


FIG. 3

(57) Abstract: A method to determine real time image complexity in video streaming, IPTV and broadcast applications using a statistical model representing channel bandwidth variation and image complexity that considers scene content changes. Available channel bandwidth is distributed unevenly among multiple video streams in proportion to bandwidth variation and image complexity of the broadcast video stream. The distribution of available channel bandwidth is determined based upon an image complexity factor of each video stream as determined from probability matrices considering bandwidth variations and image complexity.

WO 2008/127217 A2

ACTION