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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 September 2003 (25.09.2003)

PCT

(10) International Publication Number
WO 03/079681 A1

(51) International Patent Classification[7]: H04N 5/91

(21) International Application Number: PCT/IB03/00944

(22) International Filing Date: 14 March 2003 (14.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/365,072 15 March 2002 (15.03.2002) US

(71) Applicant: **NOKIA CORPORATION** [FI/FI]; Keilalahdentie 4, FIN-02150 Espoo (FI).

(71) Applicant *(for LC only)*: **NOKIA INC.** [US/US]; 6000 Connection Drive, Irving, TX 75039 (US).

(72) Inventor: **LAINEMA, Jani**; 6219 Love Drive, Apt. 2226, Irving, TX 75039 (US).

(74) Agents: **MAGUIRE, Francis, J.** et al.; Ware, Fressola, Van Der Sluys & Adolphson LLP, 755 Main Street, P.O. Box 224, Monroe, CT 06468 (US).

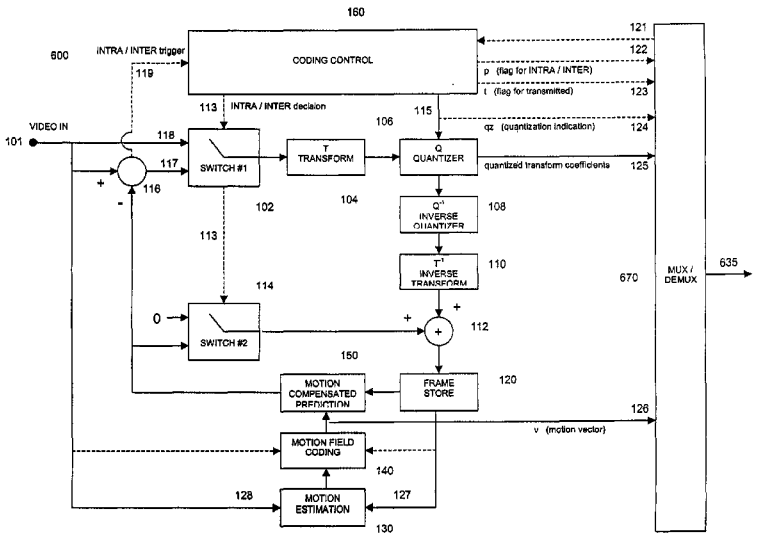
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT,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

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, 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: METHOD FOR CODING MOTION IN A VIDEO SEQUENCE




(57) Abstract: A method of motion-compensated video encoding that enables a video sequence with a global motion component to be encoded in an efficient manner. A video encoder (600) is arranged to assign macroblocks to be coded to specific coding modes including a skip mode, which is used to indicate one of two possible types of macroblock motion: (a) zero motion, or (b) global or regional motion. As each macroblock is encoded, a previously encoded region surrounding the macroblock is examined and the characteristics of motion in that region determined. With the skip mode, the macroblock to be coded and a motion vector describing the global motion or regional motion is associated with the macroblock if the motion in the region is characteristic of global motion or regional motion. If the region exhibits an insignificant level of motion, a zero valued motion vector is associated with the macroblock.

WO 03/079681 A1