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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/055608 A1

(51) International Patent Classification[7]: H04N 7/24

(21) International Application Number:
PCT/KR2004/002989

(22) International Filing Date:
18 November 2004 (18.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/525,827	1 December 2003 (01.12.2003)	US
60/532,179	24 December 2003 (24.12.2003)	US
10-2004-0003983	19 January 2004 (19.01.2004)	KR

(71) Applicant *(for all designated States except US)*: **SAMSUNG ELECTRONICS CO., LTD.** [KR/KR]; 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 442-742 (KR).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **HAN, Woo-jin** [KR/KR]; #108-703 Jugong 2-danji APT, Hwanggol Maeul, Yeongtong-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 442-739 (KR).

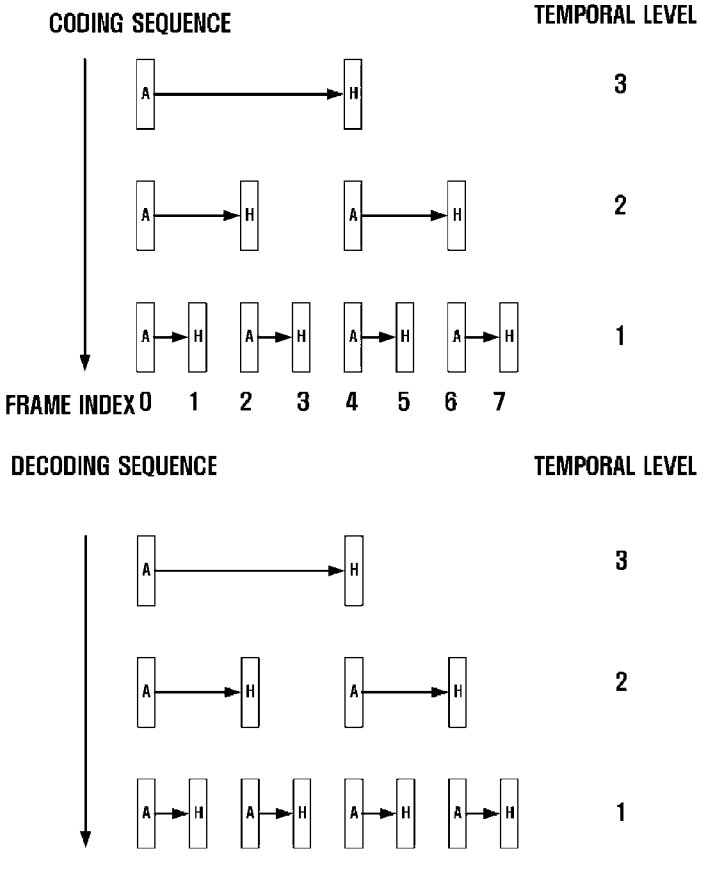
(74) Agents: **KIM, Dong-jin** et al.; 6th Fl. Youngpoong Bldg., 142, Nonhyun-dong, Gangnam-gu, Seoul 135-749 (KR).

(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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH,

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR SCALABLE VIDEO ENCODING AND DECODING



(57) Abstract: Disclosed is a scalable video coding algorithm. A method for video coding includes temporally filtering frames in the same sequence to a decoding sequence thereof to remove temporal redundancy, obtaining and quantizing transformation coefficients from frames whose temporal redundancy is removed, and generating bitstreams. A video encoder comprises a temporal transformation unit, a spatial transformation unit, a quantization unit and a bitstream generation unit to perform the method. A method for video decoding is basically reverse in sequence to the video coding. A video decoder extracts information necessary for video decoding by interpreting the received bitstream and decoding it. Thus, video streams may be generated by allowing a decoder to decode the generated bitstreams, while maintaining the temporal scalability on an encoder-side.

WO 2005/055608 A1

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, LU, 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:
— *with international search report*

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.