

(19) World Intellectual Property
Organization
International Bureau



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

PCT

(10) International Publication Number
WO 2005/055618 A1

(51) International Patent Classification⁷: **H04N 17/00**

(21) International Application Number:
PCT/SG2004/000393

(22) International Filing Date: 2 December 2004 (02.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/526,249 2 December 2003 (02.12.2003) US

(71) Applicant (for all designated States except US): **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 20 Biopolis Way, #07-01 Centros, Singapore 138668 (SG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ONG, Ee Ping**

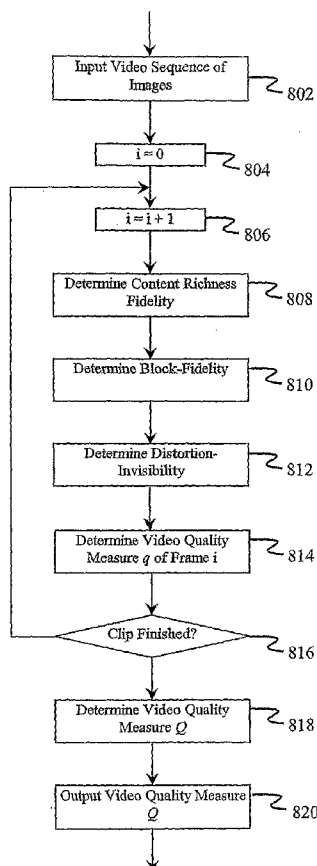
[SG/SG]; 21 Heng Mui Keng Terrace, Singapore 119613 (SG). **YANG, Xiaokang** [CN/SG]; 21 Heng Mui Keng Terrace, Singapore 119613 (SG). **LIN, Weisi** [SG/SG]; 21 Heng Mui Keng Terrace, Singapore 119613 (SG). **LU, Zhongkang** [CN/SG]; 21 Heng Mui Keng Terrace, Singapore 119613 (SG). **YAO, Susu** [SG/SG]; 21 Heng Mui Keng Terrace, Singapore 119613 (SG).

(74) Agent: **ELLA CHEONG SPRUSON & FERGUSON (SINGAPORE) PTE LTD**; P.O. Box 1531, Robinson Road Post Office, Singapore 903031 (SG).

(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, KR, 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,

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR VIDEO QUALITY MEASUREMENTS



(57) Abstract: A method of measuring a quality of a test video stream, the method comprising measuring a content richness fidelity feature of the test video stream based on occurrences of color values in image frames of the test video stream; measuring a block-fidelity feature of the test video stream based on distortion at block-boundaries in the image frames of the test video stream; measuring a distortion-invisibility feature of the test video stream based on distortion at pixels of the image frames of the test video stream; and determining a quality rating for the test video stream based on the content richness fidelity feature, the block-fidelity feature and the distortion-invisibility feature measured.

WO 2005/055618 A1



TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(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, MC, NL, PL, PT, RO,

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.