

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
08 July 2021 (08.07.2021)



(10) International Publication Number
WO 2021/137915 A1

(51) International Patent Classification:

H04N 19/105 (2014.01) *H04N 19/187* (2014.01)
H04N 19/159 (2014.01) *H04N 19/30* (2014.01)
H04N 19/172 (2014.01)

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

Published:

— with international search report (Art. 21(3))

(21) International Application Number:

PCT/US2020/054972

(22) International Filing Date:

09 October 2020 (09.10.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/954,880 30 December 2019 (30.12.2019) US
17/063,082 05 October 2020 (05.10.2020) US

(71) Applicant: **TENCENT AMERICA LLC** [US/US]; 2747
Park Boulevard, Palo Alto, California 94306 (US).

(72) Inventors: **CHOI, Byeongdoo**; c/o Tencent America
LLC, 2747 Park Boulevard, Palo Alto, California 94306
(US). **LIU, Shan**; c/o Tencent America LLC, 2747 Park
Boulevard, Palo Alto, California 94306 (US). **WENGER,
Stephan**; c/o Tencent America LLC, 2747 Park Boulevard,
Palo Alto, California 94306 (US).

(74) Agent: **RABENA, John, F.** et al.; Sughrue Mion, PLLC,
2000 Pennsylvania Ave., N.W., Suite 900, Washington,
District of Columbia 20006 (US).

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

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,

(54) Title: METHOD FOR LAYERWISE RANDOM ACCESS IN A CODED VIDEO STREAM

(57) Abstract: A method of generating an encoded video bitstream, including obtaining an IRAP AU from a video bitstream; determining whether the IRAP AU is a first AU in a decoding order, whether each picture is an IDR picture, or whether each picture is a first picture of a layer following an EOS NAL unit; if so, setting a first flag for the IRAP AU equal to one; if not, determining whether a second flag for the IRAP AU is externally set to an external value; if so, setting the first flag for the IRAP AU equal to the external value; and if not, setting the first flag for the IRAP AU and the second flag for the IRAP AU equal to zero; encoding the video bitstream based on the first flag and the second flag; and transmitting the encoded video bitstream.

WO 2021/137915 A1