



(51) International Patent Classification:

H04N 21/854 (2011.01) *H04N 19/167* (2014.01)
H04N 19/174 (2014.01) *H04N 21/4728* (2011.01)
H04N 21/845 (2011.01) *H04N 13/172* (2018.01)
H04N 19/70 (2014.01)

(21) International Application Number:

PCT/FI2019/050637

(22) International Filing Date:

05 September 2019 (05.09.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

20185759 12 September 2018 (12.09.2018) FI

(71) Applicant: **NOKIA TECHNOLOGIES OY** [FI/FI];
Karakaari 7, 02610 Espoo (FI).

(72) Inventor: **HANNUKSELA, Miska**; Rusthollinrinne 2,
33610 Tampere (FI).

(74) Agent: **NOKIA TECHNOLOGIES OY** et al.; Ari Aarnio,
IPR Department, Karakaari 7, 02610 Espoo (FI).

(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, 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, SM, ST, SV, SY, TH, 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, 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, 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))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:

23 April 2020 (23.04.2020)

(54) Title: AN APPARATUS, A METHOD AND A COMPUTER PROGRAM FOR VIDEO CODING AND DECODING

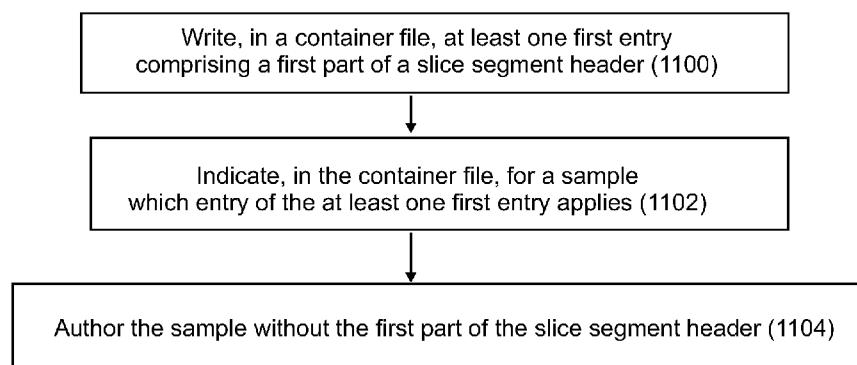


Fig. 11

(57) Abstract: A method comprising: writing, in a container file, at least one first entry comprising a first part of a slice segment header; indicating, in the container file, for a sample which entry of the at least one first entry applies; and authoring the sample without the first part of the slice segment header.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI2019/050637

A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

FI, SE, NO, DK

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used)

EPODOC, EPO-Internal full-text databases, WPIAP, Full-text translation databases from Asian languages, XP3GPP, XPAIP, XPCPVO, XPESP, XPETSI, XPI3E, XPIEE, XPIETF, XPIOP, XPIPCOM, XPJPEG, XPMISC, XPOAC, XPRD, XPTK, MPEG document management system

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2018146376 A1 (NOKIA TECHNOLOGIES OY [FI]) 16 August 2018 (16.08.2018) paragraphs [0055]-[0059], [0064], [0091]-[0092], [0151]-[0154], [0198]	1-22
X	WO 2017140945 A1 (NOKIA TECHNOLOGIES OY [FI]) 24 August 2017 (24.08.2017) paragraphs [0065]-[0066], [0068], [0105]-[0107], [0243], [0260], [0306]-[0307]; claim 9	1-2, 10-11, 19, 21
A	VAN BRANDENBURG, R. et al. Adding slice segment header length information to ISOBMFF, MPEG document m43397. In: MPEG document management system [online], 2018-07-09, [retrieved on 2020-02-20]. Retrieved from <http://wg11.sc29.org/> the whole document	1-22

☐ Further documents are listed in the continuation of Box C.
 ☒ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"D" document cited by the applicant in the international application	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"E" earlier application or patent but published on or after the international filing date	"&" document member of the same patent family
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 10 March 2020 (10.03.2020)	Date of mailing of the international search report 23 March 2020 (23.03.2020)
Name and mailing address of the ISA/FI Finnish Patent and Registration Office FI-00091 PRH, FINLAND Facsimile No. +358 29 509 5328	Authorized officer Heidi Kuismanen Telephone No. +358 29 509 5000

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI2019/050637

CLASSIFICATION OF SUBJECT MATTER

IPC

H04N 21/854 (2011.01)

H04N 19/174 (2014.01)

H04N 21/845 (2011.01)

H04N 19/70 (2014.01)

H04N 19/167 (2014.01)

H04N 21/4728 (2011.01)

H04N 13/172 (2018.01)

INTERNATIONAL SEARCH REPORT
Information on Patent Family Members

International application No.
PCT/FI2019/050637

WO 2018146376 A1	16/08/2018	EP 3580935 A1	18/12/2019
------------------	------------	---------------	------------

WO 2017140945 A1	24/08/2017	CN 108702503 A	23/10/2018
		EP 3417612 A1	26/12/2018
		FI 20165114 A	18/08/2017
		KR 20180113584 A	16/10/2018
		PH 12018501385 A1	27/02/2019
		WO 2017140948 A1	24/08/2017
