



(51) International Patent Classification:

H04N 19/70 (2014.01) H04N 13/183 (2018.01)
G06T 19/00 (2011.01) H04N 19/167 (2014.01)
H04N 19/30 (2014.01) H04N 21/81 (2011.01)
H04N 21/4725 (2011.01) H04N 21/431 (2011.01)
H04N 21/4728 (2011.01) H04N 21/472 (2011.01)
H04N 13/178 (2018.01) G06F 3/0481 (2013.01)

(21) International Application Number:

PCT/FI2019/050418

(22) International Filing Date:

31 May 2019 (31.05.2019)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/679,240 01 June 2018 (01.06.2018) US
62/694,459 06 July 2018 (06.07.2018) US

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

(72) Inventors: KAMMACHI-SREEDHAR, Kashyap; Vaa-
jakatu 5 B 25, 33720 Tampere (FI). CURCIO, Igor;
Hatanpään valtatie 12 C 57, 33100 Tampere (FI). HAN-
NUKSELA, Miska; Rusthollinrinne 2, 33610 Tampere
(FI). MATE, Sujeet Shyamsundar; Nosturinraitti 2 A 1,
33720 Tampere (FI). AKSU, Emre; Virrenkatu 3 D 20,
33800 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,

(54) Title: METHOD AND APPARATUS FOR SIGNALING USER INTERACTIONS ON OVERLAY AND GROUPING OVER-
LAYS TO BACKGROUND FOR OMNIDIRECTIONAL CONTENT

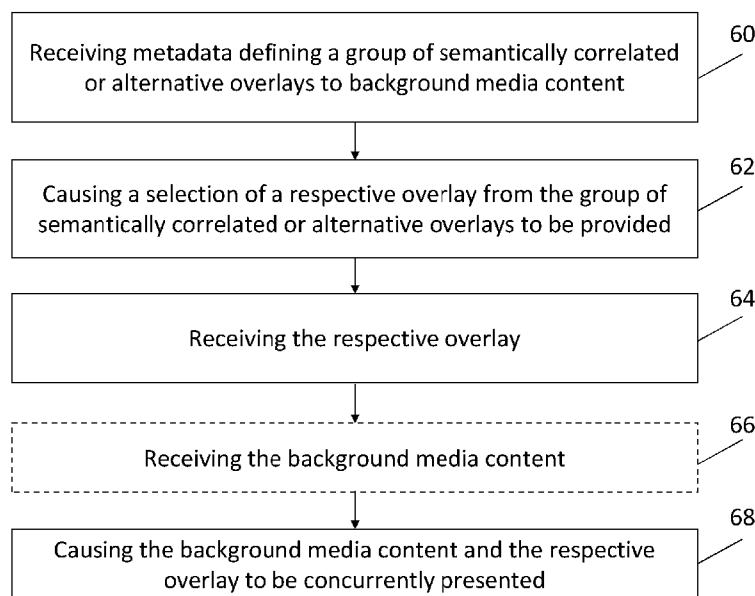


Figure 6

(57) Abstract: A method, apparatus and computer program product describing groups of overlays, such as semantically correlated overlays, to background media content. In the context of a method, a group of overlays to background media content is defined by metadata (60). The overlays include semantically correlated overlays having alternative overlays representing content with different levels of detail or overlays providing different choices of content. The method also includes receiving client selection of a respective overlay from a group of overlays (62). In response to the client selection, the method causes the respective overlay to be provided. The respective overlay is received (64) for presentation concurrent with background media content (68).



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:

16 January 2020 (16.01.2020)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI2019/050418

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, G06T

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, Full-text translation databases from Asian languages, WPIAP, COMPDX, INSPEC, TDB, NPL, MPEG Document Management System, Internet (Google Search, Espacenet)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SALMIMAA, M. et al. Live delivery of neurosurgical operating theater experience in virtual reality. In: Journal of the Society for Information Display. [online], 2018-03-30, Vol. 26, No. 2, pp. 98-104, [retrieved on 2019-11-20]. Retrieved from <https://helda.helsinki.fi/handle/10138/302417>, <DOI:10.1002/jsid.636>, XP055471413	1-6, 8-13, 15-20, 22-27
Y	ibid.	7, 14, 21, 28
Y	KAMMACHI-SREEDHAR, K. et al. [OMAF] A framework for overlays. ISO/IEC JTC1/SC29/WG11 document m42495. MPEG Document Management System [online], 2018-04-06, [retrieved on 2019-11-20]. Retrieved from <http://wg11.sc29.org/>, XP030070834 Abstract; sections 1, 2.3, 2.4.1	7, 14, 21, 28

☒ 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
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"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

05 December 2019 (05.12.2019)

Date of mailing of the international search report

13 December 2019 (13.12.2019)

 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

Mikko Flykt

Telephone No. +358 29 509 5000

INTERNATIONAL SEARCH REPORT

International application No.

PCT/FI2019/050418

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2015271553 A1 (POMEROY JOHN [CA] et al.) 24 September 2015 (24.09.2015) abstract; paragraphs [0030], [0033], [0048], [0086]; Fig. 24	1, 8, 15, 22
A	WIJNANTS, M. et al. Web-mediated Augmentation and Interactivity Enhancement of Omni-directional Video in Both 2D and 3D. In: 11th International Conference on Web Information Systems and Technologies. [online], 2015, pp. 21-34, [retrieved on 2019-11-20]. Retrieved from < https://www.semanticscholar.org/paper/Web-mediated-Augmentation-and-Interactivity-of-in-Wijnants-Erum/e9038a3917ce0b848027eb559e40d5414d1278ac >, <DOI:10.5220/0005442900210034>, INSPEC 15592844 Abstract; section 4.1	1-28
A	WO 2016183251 A1 (MEDIAMELON INC [US]) 17 November 2016 (17.11.2016) abstract; paragraphs [0071]-[0076]	1-28

INTERNATIONAL SEARCH REPORT
Information on Patent Family Members

International application No.
PCT/FI2019/050418

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		US 10298985 B2	21/05/2019
		US 2019327510 A1	24/10/2019

CLASSIFICATION OF SUBJECT MATTER

IPC

H04N 19/70 (2014.01)**G06T 19/00** (2011.01)**H04N 19/30** (2014.01)**H04N 21/4725** (2011.01)**H04N 21/4728** (2011.01)**H04N 13/178** (2018.01)**H04N 13/183** (2018.01)**H04N 19/167** (2014.01)**H04N 21/81** (2011.01)**H04N 21/431** (2011.01)**H04N 21/472** (2011.01)**G06F 3/0481** (2013.01)