



- (51) International Patent Classification:
H04N 21/23 (2011.01) *H04N 21/234* (2011.01)
- (21) International Application Number:
PCT/US2012/043539
- (22) International Filing Date:
21 June 2012 (21.06.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/499,520 21 June 2011 (21.06.2011) US
61/568,631 8 December 2011 (08.12.2011) US
13/341,646 30 December 2011 (30.12.2011) US
13/341,661 30 December 2011 (30.12.2011) US
13/443,596 10 April 2012 (10.04.2012) US
- (71) Applicant (for all designated States except US): **THE NIELSEN COMPANY (US), LLC** [US/US]; 150 North Martingale Road, Schaumburg, Illinois 60176 (US).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **BESEHANIC, Jan** [SE/US]; 410 South Melville Avenue #C, Tampa, Florida 33606 (US). **RAMASWAMY, Arun** [US/US]; 12025 Royce Waterford Circle, Tampa, Florida 33626 (US).
- (74) Agent: **JACKLIN, William E.**; 150 S. Wacker Drive, Suite 2100, Chicago, Illinois 60606 (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, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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,

[Continued on next page]

(54) Title: METHODS AND APPARATUS TO MEASURE EXPOSURE TO STREAMING MEDIA

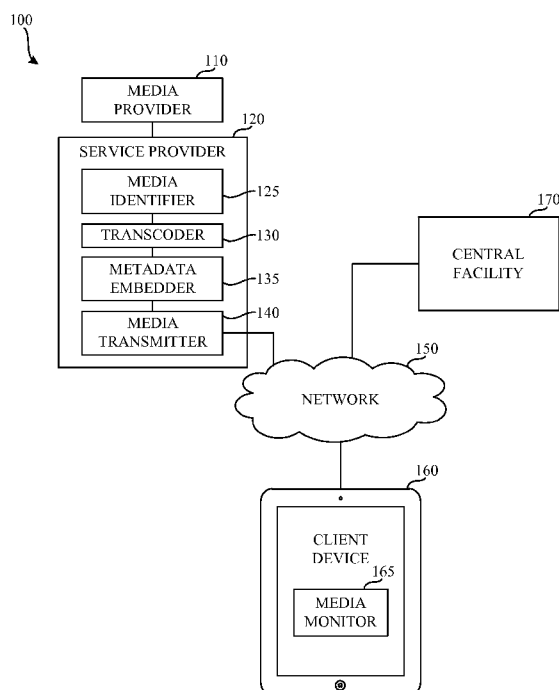


FIG. 1

(57) Abstract: Methods and apparatus to measure exposure to streaming media are described. An example method includes extracting metering data from media obtained from a media provider. Metadata identifying the media based on the extracted metering data is generated. The media is transcoded into a transport stream, the transport stream having a streaming format. The metadata is embedded in a metadata channel of the transport stream.



GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, 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, ML, MR, NE, SN, TD, TG).

— *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:

14 March 2013

Published:

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/043539**A. CLASSIFICATION OF SUBJECT MATTER*****H04N 21/23(2011.01)i, H04N 21/234(2011.01)i***

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)

H04N 21/23; G06F 15/16; H04N 7/173; G06F 17/00

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: metering, metadata, transcoding, media, server, provider, document object model

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2011-0016231 A1 (RAMASWAMY ARUN et al.) 20 January 2011 See abstract; paragraphs [0025]-[0034]; figures 4,6-7C and claim 1.	1-43
A	US 2011-0154185 A1 (KERN STEVEN M. et al.) 23 June 2011 See abstract; paragraphs [0030]-[0034]; figure 3 and claim 22.	1-43
A	US 2008-0120661 A1 (LUDVIG EDWARD A. et al.) 22 May 2008 See abstract; paragraphs [0090]-[0092]; figure 7 and claims 1,4,5.	1-43
A	US 2011-0196921 A1 (SYLTHE OLAV A.) 11 August 2011 See abstract and claims 1,7,12.	1-43

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

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of 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

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

15 JANUARY 2013 (15.01.2013)

Date of mailing of the international search report

17 JANUARY 2013 (17.01.2013)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KANG, Suk Je

Telephone No. 82-42-481-8322



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/043539

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2011-0016231 A1	20.01.2011	AR040585A1	13.04.2005
		AU 2003-234420 A1	29.07.2004
		CA 2511919 A1	22.07.2004
		CN 1745374 A	08.03.2006
		CN 1745374 C0	08.03.2006
		EP 1586045 A1	19.10.2005
		KR20050106393A	09.11.2005
		MX PA05007001A	23.11.2005
		US 2006-0242325 A1	26.10.2006
		US 7827312 B2	02.11.2010
		WO 2004-061699 A1	22.07.2004
US 2011-0154185 A1	23.06.2011	CN 102272757 A	07.12.2011
		EP 2374078 A1	12.10.2011
		JP 2012-514801 A	28.06.2012
		KR 10-2011-0107363 A	30.09.2011
		KR20110107363A	30.09.2011
		TW 201037531 A	16.10.2010
		US 2010-0174774 A1	08.07.2010
		US 7962547 B2	14.06.2011
		US 8326922 B2	04.12.2012
		WO 2010-079028 A1	15.07.2010
US 2008-0120661 A1	22.05.2008	US 2004-0073941 A1	15.04.2004
		US 2008-0141325 A1	12.06.2008
		US 8225367 B2	17.07.2012
US 2011-0196921 A1	11.08.2011	US 2002-161796 A1	31.10.2002
		US 7954055 B2	31.05.2011