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Airan [US/US]; 1626 Trona Way, San Jose, CA 95125 (US). LENNARTSSON, Andreas [SE/US]; 3058 Ciesta Court, Manchester, MD 21102 (US). CLOUD, Glenn, M. [US/US]; 5 Parsonage Oak Court, Parkton, MD 21120 (US).

(74) Agents: SUNSTEIN, Bruce, D. et al.; Bromberg & Sunstein, LLP, 125 Summer Street, Boston, MA 02110 (US).

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[Continued on next page]

(54) Title: MPEG OBJECTS AND SYSTEMS AND METHODS FOR USING MPEG OBJECTS

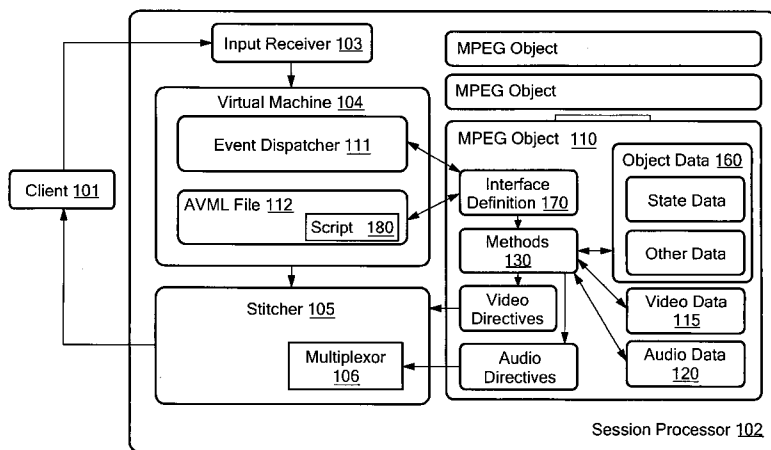


FIG. 1

(57) Abstract: An MPEG object is an object-oriented data structure that may be used in the creation of interactive MPEG video stream. The MPEG object data structure includes an MPEG object interface defining data received by the MPEG object and data output by the MPEG object. The MPEG object data structure further includes either one or more MPEG video elements or an association to one or more MPEG video elements. The MPEG video elements are preferably defined as MPEG slices that include a plurality of encoded macroblocks. Additionally, the data structure may provide a method for receiving input through the MPEG object interface and in response to input from the client device outputting an MPEG video element. In certain configurations, the MPEG object contains a method that maintains state data for the MPEG object. The state data may be used to select between a plurality of MPEG elements to output. In other configurations, the MPEG object includes a method that provides for the control of streaming MPEG content from a source external to the MPEG object.

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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		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	STOLL G ET AL: "GMF4ITV: NEUE WEGE ZUR INTERAKTIVITAET MIT BEWEGTEN OBJEKTEN BEIM DIGITALEN FERNSEHEN" FKT FERNSEH UND KINOTECHNIK, FACHVERLAG SCHIELE & SCHON GMBH., BERLIN, DE, vol. 60, no. 4, 1 January 2006 (2006-01-01), pages 171-178, XP001502993 ISSN: 1430-9947	1,3-7,9
Y	pages 172-174; figures 1-3	2
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 document 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 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 *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		Date of mailing of the international search report
16 April 2009		22/04/2009
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Güttlich, Jürgen

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	WO 95/33342 A (ICTV INC [US]) 7 December 1995 (1995-12-07)	2
A	page 1, line 33 - page 5, line 23	1
X	WO 99/66732 A (OPENTV INC [US]) 23 December 1999 (1999-12-23) page 4, line 12 - page 8, line 26 page 11, line 13 - page 12, line 35 page 14, line 8 - page 15, line 22	12-14
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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/000450

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	"MPEG-4 Overview - Overview of the MPEG-4 Standard" INTERNET CITATION, March 2001 (2001-03), XP002957993 [retrieved on 2002-01-09] page 41, paragraph 8.6 -----	1-9, 12-18, 24-30
A	"MSDL Specification Version 1.1" JOINT VIDEO TEAM (JVT) OF ISO/IEC MPEG & ITU-T VCEG(ISO/IEC JTC1/SC29/WG11 AND ITU-T SG16 Q6), XX, XX, no. N1246, 4 April 1996 (1996-04-04), XP030010199 pages 8-15 pages 40,41 -----	1-9, 12-18, 24-30

INTERNATIONAL SEARCH REPORT

International application No.
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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

1-9, 12-18, 24-30
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-9

a tool having a graphical user interface for editing/creating a scene/frame for interactive MPEG content in order to input display positions for MPEG objects forming part of that scene

2. claims: 10-11

a tool including a stitcher and a multiplexer for arranging MPEG elements of multiple MPEG objects in scan order in accordance with content layout information

3. claims: 12-14

a method for producing interactive MPEG content stitching different content each having an associated method to form a sequence of video frames in accordance with the associated methods

4. claims: 15-18,24-30

A method / an MPEG object data structure for receiving MPEG object state information from a client device and outputting an MPEG video element in accordance with the MPEG object state

5. claims: 19-23

An MPEG object data structure comprising a method for receiving a streaming request from a client device for an interactive MPEG video from a computer which requires to request content from a source external to the computer

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2008/000450
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