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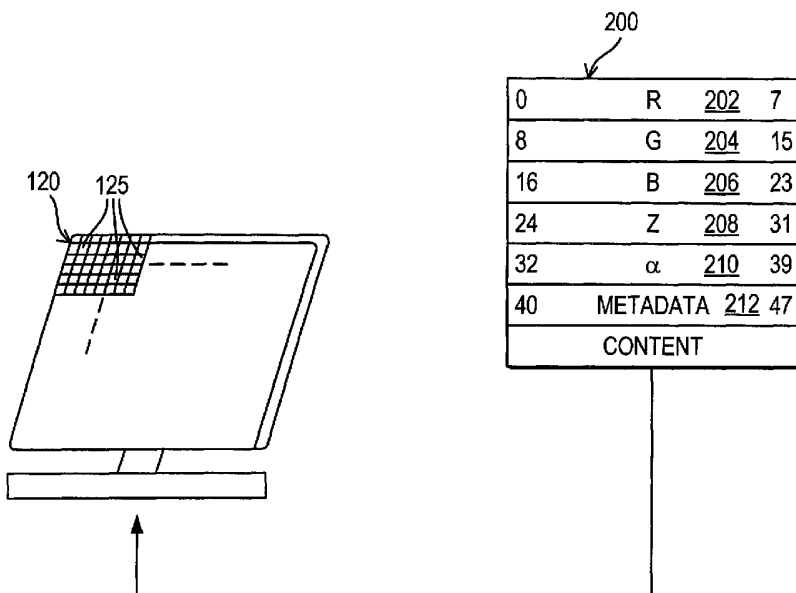
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[Continued on next page]

(54) Title: STATISTICAL METERING AND FILTERING OF CONTENT VIA PIXEL-BASE METADATA



(57) Abstract: Data supplied to a display having a plurality of pixels comprises both content to be displayed and metadata that identifies the content of the respective pixel as being of a particular type by setting the metadata for each pixel to a value that is one of a predefined set of values. The identification of the content as being of a particular type enables the classification of the pixels on a per pixel basis into one or more categories. Pixels containing data for an advertisement can be identified and metered to determine the total display space they occupy and length of time they are displayed, which are both considered measures of the effectiveness of the advertisement. This metering can therefore be used to more equitably charge for advertising on web pages because an advertiser can be charged

on the basis of what a user actually sees on the display. If only a percentage of the advertisement is visible, the advertiser pays an amount in proportion to the percentage of the advertisement that is visible. Pixels belonging to an advertisement can also be metered by a video game in a manner that gives an incentive to a game player to view advertisements. Additionally, metadata can be used to identify a pixel as containing objectionable content or some other information or type of content not desired by a user. The pixels containing objectionable or undesired content, which usually are pixels that display an object or portions thereof, can then be filtered out of the picture in a more precise way to either delete or leave a blurred image of the object or objectionable/undesirable portion thereof only, without hiding an entire screen of data.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/I...1/02629

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F17/60 H04N7/26 H04N7/24 H04N7/08 A63F9/24
A63F13/12

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 7 G06F H04N A63F

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, PAJ, 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	US 5 748 789 A (CHEN WEI-GE ET AL) 5 May 1998 (1998-05-05) abstract column 8, line 19 -column 8, line 39 ---	1-5,14, 15
X	US 5 995 671 A (NAGARAJAN RAM ET AL) 30 November 1999 (1999-11-30) abstract column 1, line 52 -column 2, line 59 column 3, line 44 -column 3, line 63 column 5, line 46 -column 6, line 8 column 9, line 35 -column 9, line 50 --- -/--	1-5,14, 15

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

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"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

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Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/I 1/02629

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>SIKORA T: "THE MPEG-4 VIDEO STANDARD VERIFICATION MODEL"</p> <p>IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, IEEE INC. NEW YORK, US,</p> <p>vol. 7, no. 1,</p> <p>1 February 1997 (1997-02-01), pages 19-31, XP000678877</p> <p>ISSN: 1051-8215</p> <p>page 19, right-hand column, line 8 -page 19, right-hand column, last line; figures 3,4</p> <p>page 24, right-hand column, line 10 -page 24, right-hand column, last line; figure 8</p> <p>---</p>	1-5,14, 15
A	<p>WO 00 52933 A (ALLAL ALAIN ;URBAN LAURENT (FR)) 8 September 2000 (2000-09-08)</p> <p>abstract</p> <p>page 1, line 22 -page 2, line 32</p> <p>page 7, line 10 -page 7, line 22</p> <p>---</p>	1-5,14, 15
X	<p>WO 98 26529 A (NIELSEN MEDIA RES INC)</p> <p>18 June 1998 (1998-06-18)</p>	6-8
Y	<p>abstract</p> <p>page 19, line 11 -page 20, line 9</p> <p>page 26, line 13 -page 27, line 7</p> <p>page 28, line 3 -page 29, line 9</p> <p>---</p>	9-13
P,X	<p>US 2001/014915 A1 (BLUMENAU TREVOR)</p> <p>16 August 2001 (2001-08-16)</p> <p>abstract</p> <p>paragraph [0020]</p> <p>paragraph [0026] - paragraph [0031]</p> <p>---</p>	6
A	<p>WO 00 54183 A (X STREAM NETWORK INC)</p> <p>14 September 2000 (2000-09-14)</p> <p>page 10, line 13 -page 11, line 14</p> <p>---</p>	6-13
A	<p>COOPER L F: "More than just hits Web advertising"</p> <p>INFORMATIONWEEK, MANHASSET, NY, US,</p> <p>no. 608, 2 December 1996 (1996-12-02),</p> <p>page 63,68,72 XP002082816</p> <p>ISSN: 8750-6874</p> <p>the whole document</p> <p>---</p>	6-13
A	<p>EP 0 967 560 A (HEWLETT PACKARD CO)</p> <p>29 December 1999 (1999-12-29)</p> <p>abstract</p> <p>paragraph [0026] - paragraph [0032]</p> <p>claims 1,8</p> <p>---</p>	6-13
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INTERNATIONAL SEARCH REPORT

International Application No

PCT/I 1/02629

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 855 008 A (GOLDHABER A NATHANIEL ET AL) 29 December 1998 (1998-12-29) abstract column 1, line 19 -column 1, line 33 column 5, line 31 -column 6, line 26 column 11, line 60 -column 12, line 14 ---	9-13
P,X	WO 01 80962 A (GUYETT IRVIN P R) 1 November 2001 (2001-11-01) page 5, line 1 -page 6, line 21 ---	9-13
Y	US 5 964 660 A (JAMES STANLEY R ET AL) 12 October 1999 (1999-10-12) abstract column 5, line 8 -column 5, line 64 -----	9-13

INTERNATIONAL SEARCH REPORT

International application No.
/IB 01/02629

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 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 all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
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.:
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.
- ☒ 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: 1-5,14,15

Independent claims 1, 3 and 14 relate to displaying data pixel wise, in which each pixel is additionally classified by meta data.

2. Claims: 6-8

Independent claim 6 relates to pixels having pixel giving additional data (meta data) which is used to meter the number of pixels which is classified as an advertisement.

3. Claims: 9-13

Independent claim 9 relates to providing rewards to a player of a game based on metadata values associated with pixels.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/I 1/02629

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5748789	A	05-05-1998	NONE	
US 5995671	A	30-11-1999	NONE	
WO 0052933	A	08-09-2000	FR 2768002 A1 WO 0052933 A1 AU 3258599 A	05-03-1999 08-09-2000 21-09-2000
WO 9826529	A	18-06-1998	AU 722754 B2 AU 5266898 A BR 9713896 A CN 1253692 A EP 0944991 A2 JP 2002505019 T WO 9826529 A2	10-08-2000 03-07-1998 13-06-2000 17-05-2000 29-09-1999 12-02-2002 18-06-1998
US 2001014915	A1	16-08-2001	US 6327619 B1	04-12-2001
WO 0054183	A	14-09-2000	EP 1082673 A1 WO 0054183 A1	14-03-2001 14-09-2000
EP 0967560	A	29-12-1999	US 6075535 A EP 0967560 A2 JP 2000105774 A	13-06-2000 29-12-1999 11-04-2000
US 5855008	A	29-12-1998	US 5794210 A AU 732860 B2 AU 1415397 A CA 2240314 A1 EP 0934570 A1 JP 2000501868 T WO 9722074 A1	11-08-1998 03-05-2001 03-07-1997 19-06-1997 11-08-1999 15-02-2000 19-06-1997
WO 0180962	A	01-11-2001	AU 5910501 A WO 0180962 A1	07-11-2001 01-11-2001
US 5964660	A	12-10-1999	US 6179713 B1	30-01-2001