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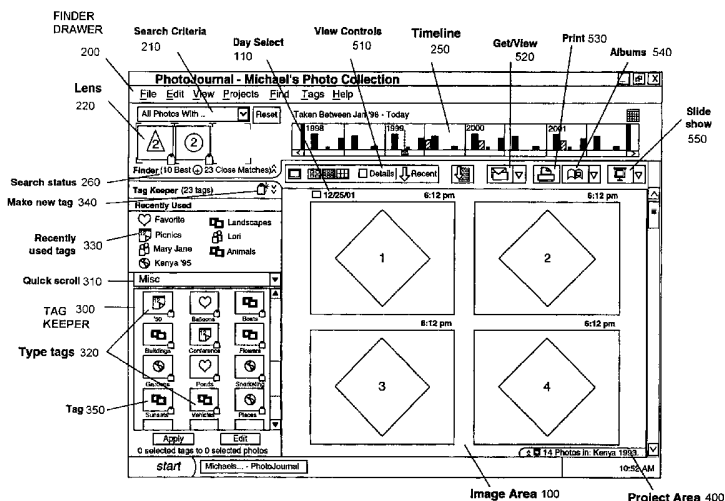
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(88) Date of publication of the international search report:  
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DIGITAL MEDIA MANAGEMENT APPARATUS AND METHODS



(57) Abstract: Methods and apparatus for managing, finding and displaying objects such as digital images. Objects are tagged ("associated") with descriptive textual and numeric data ("metadata"), and stored in a relational database from which they can be selected, sorted, and found. Tags can be defined by name, tag type, and associated attributes. Objects can be tagged by dropping a tag onto the object, or relating a database record for the tag to a database record for the object. Tagged objects can be searched for and displayed according to the degree to which their metadata matches the search criteria. Visual cues can indicate whether displayed objects match all, some but not all, or none of the search criteria. Database object distributions can be displayed as histograms or scatter plots, including timelines, calendars or maps. Object distributions can be used to search for objects or to limit search results for a previous search.



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## INTERNATIONAL SEARCH REPORT

International Application No  
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A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 G06F17/30

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

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, INSPEC, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SHNEIDERMAN, BEN: "Designing the user interface: Strategies for effective human-computer interaction", ADDISON WESLEY, USA XP002210867 ISBN: 0-201-69497-2 * Chapter 15: Information Search and Visualization page 519, line 1 -page 521, last line page 526, line 3 -page 541, line 8 figures B2-B6 --- -/--	1-11, 24-26, 29-42, 55-57, 60-62

Further documents are listed in the continuation of box C.

Patent family members are listed in 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

26 August 2002

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05.12.02

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 02/01530

## 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 5 241 671 A (CARLTON RON ET AL) 31 August 1993 (1993-08-31)  column 2, line 30 -column 5, line 6; figures 1,16-18,23 column 18, line 49 -column 20, line 25 ---	1-11, 24-26, 29-42, 55-57, 60-62
X	US 5 734 888 A (LI SHIH-GONG ET AL) 31 March 1998 (1998-03-31)  the whole document ---	3,4,6,9, 26,30, 34,35, 37,40, 57,61
A	AHLBERG C: "SPOTFIRE: AN INFORMATION EXPLORATION ENVIRONMENT" SIGMOD RECORD, ASSOCIATION FOR COMPUTING MACHINERY, NEW YORK, US, vol. 25, no. 4, 1 December 1996 (1996-12-01), pages 25-29, XP000702066 page 25, left-hand column, paragraph 1 -page 28, right-hand column, paragraph 3; figure 1 ---	5,7,8, 31,36, 38,39,62
A	BEAZA-YATES, R., RIBEIRO-NETO, B. (EDS.): "Modern Information retrieval", ADDISON WESLEY, USA XP002210866 ISBN: 0-201-39829-X  * Chapter 10: User Interfaces and Visualization by Marti A. Hearst page 257, line 1 -page 339, last line ---	1-11, 24-26, 29-42, 55-57, 60-62
A	HEARST, MARTI A.: "Next Generation Web Search: Setting Our Sites" BULLETIN OF THE TECHNICAL COMMITTEE ON DATA ENGINEERING, vol. 23, no. 3, September 2000 (2000-09), pages 38-48, XP002210864 USA the whole document ---	1,24,32, 55
A	ROTH S F ET AL: "Toward an information visualization workspace: combining multiple means of expression" HUMAN-COMPUTER INTERACTION, 1997, LAWRENCE ERLBAUM ASSOCIATES, USA, vol. 12, no. 1-2, pages 131-185, XP002210865 ISSN: 0737-0024 the whole document ---	1-11, 24-26, 29-42, 55-57, 60-62

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## INTERNATIONAL SEARCH REPORT

International Application No  
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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.
A	<p>US 5 844 572 A (SCHOTT ERIC G) 1 December 1998 (1998-12-01)</p> <p>abstract; figure 19A</p>	<p>3,4,6,9, 26,30, 34,35, 37,40, 57,61</p>
A	<p>US 5 898 431 A (HOLT BAYLES ET AL) 27 April 1999 (1999-04-27)</p> <p>abstract; figure 4</p>	<p>3,4,6,9, 26,30, 34,35, 37,40, 57,61</p>
A	<p>US 6 085 205 A (PEAIRS MARK ET AL) 4 July 2000 (2000-07-04)</p> <p>column 3, last line -column 6, line 4; figure 5</p>	<p>3,4,6,9, 26,30, 34,35, 37,40, 57,61</p>
A	<p>PATENT ABSTRACTS OF JAPAN vol. 1996, no. 06, 28 June 1996 (1996-06-28) &amp; JP 08 030763 A (CANON INC), 2 February 1996 (1996-02-02) abstract</p>	<p>1,24,32, 55</p>
E	<p>US 6 408 301 B1 (ASHE PHILIP R ET AL) 18 June 2002 (2002-06-18) the whole document</p>	<p>1,24,32, 55</p>

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 02/01530

## 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.:  
1-11, 24-26, 29-42, 55-57, 60-62

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

International Application No. PCT/US 02/01530

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. Claims: 1-11,24-26,29-42,55-57,60-62

The first group of claims is directed to a visual representation of a distribution of objects as a function of metadata associated with these objects and receiving user input for visually defining a query using this distribution.

2. Claims: 12-23,27,28,43-54,58,59

This group of claims is directed to the visualization of different data categories in a database based on the result of a search tag query which selects objects using their metadata search tags; in particular, there is a categorization of the objects in a best match and a no match group.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 02/01530

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5241671	A	31-08-1993	AU 6908891 A WO 9106916 A1 US 2002124004 A1	31-05-1991 16-05-1991 05-09-2002
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