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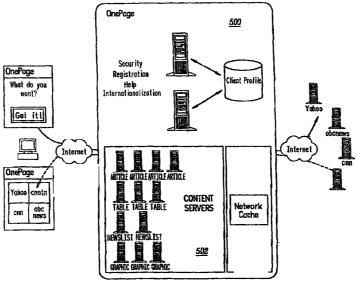
with international search report

(88) Date of publication of the international search report:

7 March 2002

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR DYNAMIC AGGREGATION OF CONTENT DISTRIBUTED OVER A COMPUTER NETWORK



(57) Abstract: Systems and methods for collecting information distributed over a computer network are described. Problems addressed by the invention include the marking of content distributed over a network, the instant display of current information distributed over a network, and the retrieval of information at a browser without an intermediary step to save the information. The invention enables customized aggregation of content distributed over a network in real-time. The invention includes a recursive scripting language. Scripts in the recursive scripting language may be used to point dynamically to web objects whose URLs have changed. Embodiments include a feature extraction object used for identifying similar information objects. Feature Extraction may use "fuzzy logic" to insure that targeted content is identified despite modifications in the source page.



O 01/50673 A3



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.

In ational Application No PCT/US 01/04331

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

 $\begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ IPC 7 & G06F \end{array}$

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, PAJ, INSPEC, COMPENDEX, IBM-TDB

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 649 186 A (FERGUSON GREGORY J) 15 July 1997 (1997-07-15) abstract; figure 3 column 5, line 38 -column 6, line 35; figures 4,5	52-54, 57,59-62
X A	US 5 761 662 A (DASAN VASANTHAN S) 2 June 1998 (1998-06-02) abstract; figure 4 column 8, line 4 - line 23; figure 11	52-54 57,59-62

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
"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
13 September 2001	2 7. 09. 01
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Authorized officer Polzer, A

Ir ational Application No PCT/US 01/04331

C.(Continua	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KISTLER T ET AL: "WebL a programming language for the Web" COMPUTER NETWORKS AND ISDN SYSTEMS, vol. 30, no. 1-7, 1 April 1998 (1998-04-01), pages 259-270, XP004121421 NORTH HOLLAND PUBLISHING, AMSTERDAM, NL ISSN: 0169-7552 page 260, right-hand column, line 4 - line 9 page 263, right-hand column, line 24 - line 32 page 265, line 3 - line 10 page 265, right-hand column, line 6 - line 10	1,2,5-13
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Α	JIMENEZ GUARIN C: "ACCESS BY CONTENT OF DOCUMENTS IN AN OFFICE INFORMATION SYSTEM" PROCEEDINGS OF THE 11TH INTERNATIONAL CONFERENCE ON RESEARCH AND DEVELOPMENT IN INFORMATION RETRIEVAL (SIGIR), GRENOBLE, JUNE 13 - 15, 1988, ACM, 13 June 1988 (1988-06-13), pages 629-649, XP000266578 NEW YORK, NY, US page 632, line 28 - line 40 page 635, line 26 -page 636, line 20 page 637, line 35 -page 638, line 2 page 639, line 35 -page 640, line 36	18,24, 26,30, 31,33, 37,38, 42,45-47
Α	TING A ET AL: "Business form classification using strings" PROCEEDINGS OF 13TH INTERNATIONAL CONFERENCE ON PATTERN RECOGNITION, VIENNA, AUSTRIA, vol. 2, 25 - 29 August 1996, pages 690-694, XP002177408 IEEE Comput. Soc. Press, Los Alamitos, CA, US ISBN: 0-8186-7282-X page 690, right-hand column, line 14 - line 25	18,24, 31,37, 38,42,43

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Ir ational Application No
PCT/US 01/04331

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Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
FERNANDEZ PANADERO M C ET AL: "Mass-customizing electronic journals" ELECTRONIC PUBLISHING '99. REDEFINING THE INFORMATION CHAIN - NEW WAYS AND VOICES. PROCEEDINGS OF AN ICCC/IFIP CONFERENCE, PROCEEDINGS OF THE 3RD CONFERENCE ON ELECTRONIC PUBLISHING, RONNEBY, SWEDEN, 'Online! 10 - 12 May 1999, pages 225-235, XP002177409 Int. Council for Comp. Commun., Washington, DC, US ISBN: 1-891365-04-5 Retrieved from the Internet: <url:http: elpub99.nsf="" www5.hk-r.se=""></url:http:> 'retrieved on 2001-09-13! page 227, line 46 -page 228, line 19	52-54, 57,59-62
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EP 0 909 070 A (MATSUSHITA ELECTRIC IND COLTD) 14 April 1999 (1999-04-14) paragraph '0036! - paragraph '0040!; figures 1-3	52-54, 57,59-62
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ternational application No. PCT/US 01/04331

INTERNATIONAL SEARCH REPORT

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:
Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
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. X 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. X 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: 1-17

a method of parsing a script, including parsing a first command and returning a retrieved network resource to a second command.

2. Claims: 18-51

a string identifier for a segment of an electronic document, a method for parsing a string identifier and a method for searching electronic documents based on comparing string identifiers.

3. Claims: 52-63

a method for retrieving web content for a user, including sending a composite web page to a client and the client sending identifiers of desired web objects to content servers, and a computer network system consisting of a client, a plurality of web servers and a collection of content servers.

Information on patent family members

In ational Application No
PCT/US 01/04331

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