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**(54) Title:** SYSTEM AND METHOD FOR DISCOVERING INFORMATION OBJECTS AND INFORMATION OBJECT REPOSITORIES IN COMPUTER NETWORKS

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(57) Abstract: An address of an information object repository that should service a client request for an information object is returned in response to a request therefor. The address of the information object repository which is returned is selected according to specified performance metrics regardless of whether or not the information object repository maintains a local copy of the information object that is the client request. In some cases, the address of the information object repository is further selected according to an address of a client making the client request. Further, the address of the information object repository is selected from a number of addresses of information object repositories. The specified performance metrics may include one or more of an average delay from the information object repository to the client, average processing delays at the information object repository, reliability of a path from the information object repository to the client, available bandwidth in said path, and loads on the information object repository. In some cases, the information object repository may be instructed to obtain a copy of the information object after the address of the information object repository is returned in response to the request therefore.

### INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04L29/06 H04L12/56

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

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

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.    |
|------------|---|--------------------------|
| X          | WO 99 40514 A (BALTER JAMES A ;FARBER DAVID A (US); GREER RICHARD E (US); SWART A) 12 August 1999 (1999-08-12) page 4, line 8 - line 19; claim 1 page 18, line 20 - line 28   | 1-5,<br>23-27            |
| X          | HEDRICK C: "RFC1058: Routing Information Protocol"  NETWORK WORKING GROUP,  June 1998 (1998-06), XP002233127  Retrieved from the Internet: <url:ftp: ftp.isi.edu="" in-notes="" rfc1058.tx="" t=""> 'retrieved on 2003-02-27!  page 7, paragraph 6  page 10, paragraph 4 - paragraph 6  page 11, paragraph 5 -page 12, paragraph 2  -/</url:ftp:> | 6-11,<br>18-22,<br>31-34 |

| Further documents are listed in the continuation of box C.  | X 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 | <ul> <li>'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</li> <li>'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</li> <li>'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.</li> <li>'&amp;' document member of the same patent family</li> </ul> |
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| European Patent Office, P.B. 5818 Patentlaan 2<br>NL – 2280 HV Rijswijk<br>Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,<br>Fax: (+31-70) 340-3016   | Paven, A  |

## INTERNATIONAL SEARCH REPORT

Internation No
PCT/US U1/08701

|            | ation) DOCUMENTS CONSIDERED TO BE RELEVANT  | Relevant to claim No  |  |  |
|------------|---|-----------------------|--|--|
| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |  |  |
| X          | US 5 088 032 A (BOSACK LEONARD) 11 February 1992 (1992-02-11) column 1, line 60 -column 2, line 26; claim 1 column 7, line 52 - line 60; claim 46 | 6-17                  |  |  |
| Α          | US 5 115 495 A (KIRKMAN W WORTH ET AL) 19 May 1992 (1992-05-19) column 7, line 54 -column 8, line 10  | 6-17                  |  |  |
|            |   |                       |  |  |
|            |   |                       |  |  |
|            |   |                       |  |  |
|            |   |                       |  |  |
|            |   |                       |  |  |
|            |   |                       |  |  |

## INTERNATIONAL SEARCH REPORT

nfo on patent family members

Internationa plication No
PCT/US 01/08701

| Patent document<br>cited in search report |     | Publication<br>date |      | Patent family<br>member(s) |    | Publication<br>date |
|---|-----|---------------------|------|----------------------------|----|---------------------|
| WO 9940514                                | Α . | 12-08-1999          | US   | 6185598                    | B1 | 06-02-2001          |
|   |     |                     | ΑT   | 245834                     | T  | 15-08-2003          |
|   |     |                     | ΑU   | 763539                     | B2 | 24-07-2003          |
|   |     |                     | ΑU   | 2652999                    | Α  | 23-08-1999          |
|   |     |                     | CA   | 2320261                    | A1 | 12-08-1999          |
|   |     |                     | DE   | 69909839                   | D1 | 28-08-2003          |
|   |     |                     | EP   | 1143337                    | A1 | 10-10-2001          |
|   |     |                     | EP   | 1053524                    | A1 | 22-11-2000          |
|   |     |                     | JP   | 2002503001                 | T  | 29-01-2002          |
|   |     |                     | NO   | 20004010                   | Α  | 10-10-2000          |
|   |     |                     | US   | 2002049857                 | A1 | 25-04-2002          |
|   |     |                     | US   | 2002099850                 | A1 | 25-07-2002          |
|   |     |                     | WO   | 9940514                    | A1 | 12-08-1999          |
|   |     |                     | US   | 2001056500                 | A1 | 27-12-2001          |
| US 5088032                                | Α   | 11-02-1992          | NONE |                            |    |                     |
| US 5115495                                | Α   | 19-05-1992          | NONE |                            |    |                     |