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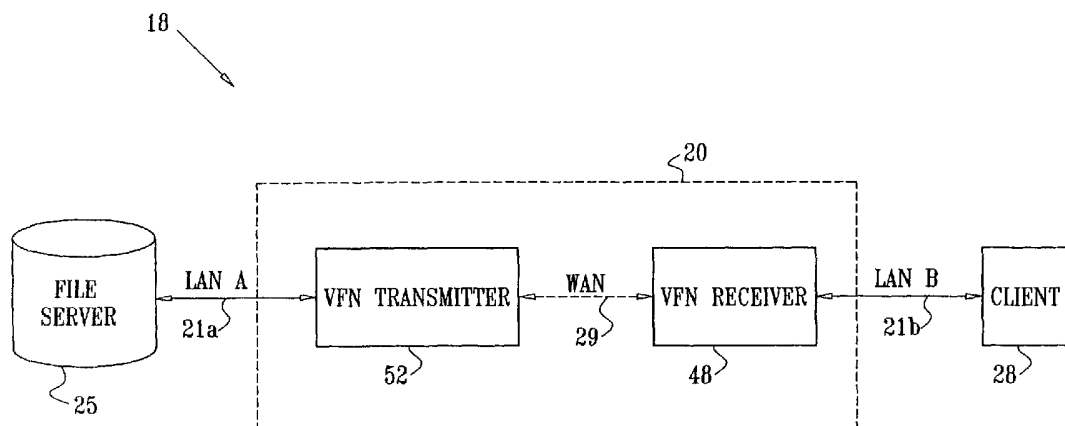
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- Published:**
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
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For two-letter codes 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: VIRTUAL FILE-SHARING NETWORK



(57) Abstract: A method for enabling access to a data resource, which is held on a file server (25) on a first local area network (LAN) (21a), by a client (28) on a second LAN (21b). A proxy receiver (48) on the second LAN (21b) intercepts a request for the data resource submitted by the client (28) and transmits a message via a wide area network (WAN) (29) to a proxy transmitter (52) on the first LAN (21a), requesting the data resource. The proxy transmitter (52) retrieves a replica of the data resource from the file server (25) and conveys the replica of the data resource over the WAN (29) to the proxy receiver (48), which serves the replica of the data resource from the proxy receiver (48) to the client (28) over the second LAN (21b).

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL02/00627

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 13/00
 US CL : 709/202, 213, 219

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)
 U.S. : 709/202, 203, 213, 214, 217, 219, 223, 226

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 practicable, search terms used)
 EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,085,234 A (PITTS et al) 4 July 2000, cols 1-17.	1-63, 124-200, 248-311, 371-372
A	US 6,032,216 A (SCHMUCK et al) 29 February 2000.	1-63, 124-200, 248-311, 371-372
A	US 5,987,506 A (CARTER et al) 16 November 1999.	1-63, 124-200, 248-311, 371-372

Further documents are listed in the continuation of Box C.

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	"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
"E"	earlier application or patent published on or after the international filing date	"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
"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)	"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
"O"	document referring to an oral disclosure, use, exhibition or other means	"&"	document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

01 April 2005 (01.04.2005)

Date of mailing of the international search report

14 APR 2005

Name and mailing address of the ISA/US

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL02/00627

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

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

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

2. Claim 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. Claim 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:
Please See Continuation 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.: 1-63,124-200,248-311,371 and 372

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

BOX II. OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

I. Claims 1-63, 124-200, 248-311 and 371-372, drawn to the use of proxy agent in remote access of data, classified in class 709, subclass 202, 216 and 219.

II. Claims 64-116, 123, 201-240, 247 and 312-364, drawn to the use cache in remote access of data, classified in class 711, subclass 130 and class 709, subclass 219.

III. Claims 117-122, 241-246 and 365-370, drawn to the use of metadata to build a shared database directory, classified in class 707, subclass 10. The inventions listed as Groups I, II and III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Invention I has a special technical feature such as use of proxy server for enabling client to access data stored at a different networks/servers. Invention II has a special technical feature such as use of cache for accessing remote data more efficiently. Invention III has a special technical feature such as the use of metadata to build a directory for enabling access of shared data stored at different servers.