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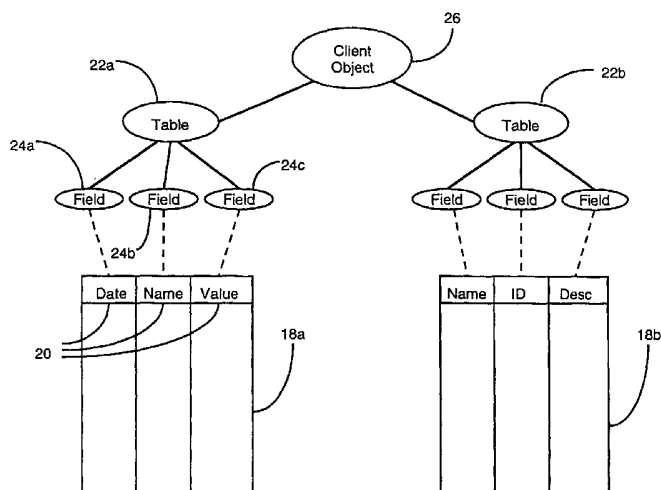
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(54) Title: OBJECT-ORIENTED DATABASE ABSTRACTION AND STATEMENT GENERATION



(57) Abstract: An interface provides a level of abstraction between the structure of a database system and application programs which access that system. The database system is represented by a model comprised of objects which correspond to the components of the database system. An object at a higher level encapsulates information contained in these other objects regarding the structure of the database. Whenever an application program requires access to the database, it sends a message to the higher level encapsulation object. The lower-level objects implement methods which automatically generate appropriate database commands. When the encapsulation object receives a call from an application program requesting data in the database, it instructs table objects to obtain the required data. In response, the table objects invoke field objects to identify how to represent data in each of the database fields to which they correspond. The table object concatenates the responses received from each of the field objects to construct a command that is presented to the database to retrieve the desired data.



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## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US 01/42848

## 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, WPI Data, PAJ, INSPEC, COMPENDEX, IBM-TDB

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 857 197 A (MULLINS WARD) 5 January 1999 (1999-01-05) abstract column 2, line 65 -column 3, line 7 column 3, line 18-25 column 3, line 65 -column 4, line 6; figure 1 column 5, line 13-48 column 7, line 55-67	1,2,5,6, 9,10
Y	-----	3,4,7,8, 11,12
Y	US 5 596 746 A (SHEN HWA N ET AL) 21 January 1997 (1997-01-21) column 2, line 54-67; figure 1 column 4, line 60 -column 5, line 4; figures 6A,6B ----- -/--	3,4,7,8, 11,12



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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\*&amp;\* document member of the same patent family

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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.
X	<p>DATABASE WPI 'Online!  DERWENT PUBLICATIONS LTD., LONDON, GB;  Accession no. 2000-639329, 2000  XP002243524  abstract</p>	1-4,9-12
X	<p>&amp; CN 1 263 314 A (INTERNATIONAL BUSINESS  MACHINES CORPORATION)  16 August 2000 (2000-08-16)</p>	
E	<p>-&amp; US 6 366 921 B1 (HANSEN ET AL.)  2 April 2002 (2002-04-02)  column 1, line 40 - line 63  column 2, line 45 - line 50; figure 1  column 4, line 10 - line 41; figure 3  -----</p>	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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