(54) Title: DISTRIBUTED SQL QUERY PROCESSING USING KEY-VALUE STORAGE SYSTEM

(57) Abstract: Distributed storage systems support SQL while also providing scalability and fault tolerance by utilizing an SQL library (the SQL execution component) layered on top of a transactional key-value system (the storage component). The SQL library comprises a parser and an execution engine running at the client, while the storage component comprises a key-value system for storing the data. The SQL library parses SQL queries received from client applications and maps them to transactions on the key-value system. The key-value system stores data items identified by key and provides concurrency control mechanisms to handle concurrent transactions. The key-value system may be a distributed system with several storage servers, each attached to one or more storage devices.

Declarations under Rule 4.17:

— as to applicant’s entitlement to apply for and be granted a patent (Rule 4.17(H))

— as to the applicant’s entitlement to claim the priority of the earlier application (Rule 4.17(Hi))

Published:

— with international search report (Art. 21(3))

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2013/075171

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06F17/30
ADD.

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)
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 practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Further documents are listed in the continuation of Box C.

See patent family annex.

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Date of the actual completion of the international search: 30 July 2014

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