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(54) Title: SYSTEM AND METHOD FOR DISTRIBUTING AND INDEXING COMPUTERIZED DOCUMENTS USING INDEPENDENT AGENTS

(57) Abstract

A system is provided in which autonomous agents manage the distribution of data and index information among the nodes of a computer network. The system comprises a network of computer nodes, each of which includes a data store and an agent interface for execution of the autonomous agents. The autonomous agents move independently among the network nodes, using the agent interface at each node they visit to execute their functions. Various types of agents are employed to implement different functions in the system. Index agents transfer index fields to and from the data stores of the network nodes according to a transfer criterion that is biased to aggregate index blocks into index files on one or more network nodes. Replication agents replicate index files on different nodes to make the system robust against node loss. Balance agents break large index files into smaller subfiles, to prevent overloading any node of the network, and query agents locate and retrieve index file entries that match a query criterion. The different agent types manage index and data information on the network nodes without need for a central organizing computer.

