

ABSTRACT OF THE DISCLOSURE

In summary, the present invention is a multithreaded computer system having a memory that stores a plurality of objects and a plurality of procedures. Each object
5 has a lock status of locked or unlocked, and includes a data pointer to a data structure. The system uses a global object locking procedure to service lock requests on objects that have never been locked as well as objects that have not recently been locked, and uses a local object-specific locking procedure to service lock requests on
10 locked objects and objects that have been recently locked. The global object locking procedure has instructions for changing a specified unlocked object's lock status to locked, and for creating for each specified object a local object locking procedure. The local object locking procedure includes a lock data subarray for storing the object's lock data and instructions for updating a specified object's stored lock data. A lock data cleanup procedure, executed when the system's garbage collection
15 procedure is executed, releases the local object locking procedure of a specified object if the object has not been recently locked.

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