

Draft for approval  
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### Identification

Locking and Blocking in the Basic File System  
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### Purpose

Most of the file system procedures rely on shared data bases. In order to avoid confusion, a procedure must be able to use a stable (i.e., one that no other process is currently modifying) copy of the data base. Since only one copy of a common data base exists, it is necessary that one process be able to prohibit all other processes from using the data base (i.e., lock the base) when this process is modifying it. It is also necessary that a process which wishes to read a stable copy can be sure that no other process is currently modifying the base. The method and details of the locking and checking procedures are discussed in section BG.16.02.

When a process finds that it is unable to use a data base in the manner that it desires, it normally wants to go blocked and wait until the data base is free. The freeing of the data base is called the event for which the process is waiting. When such an event occurs, the process that knows of it must initiate a procedure that will notify all the processes waiting for the event and cause them to be re-scheduled. The waiting and notifying procedures are described in BG.16.01.