FLOW CHARTS

The following flow charts illustrate the decisions made during the execution of the PeStO file operations: p_open, p_close, p_lock, and p_unlock. The charts are not actual flow diagrams for the program (but close). The decisions are based on either simple questions that can be answered with "yes" or "no", i.e.,

Is the file cached?

or the "success" or "failure" of communication with the server, i.e.,

REQUEST STATUS FROM SERVER

Note, that an arrow pointing from a communication box, such as the one above, is not the server's reply.

When an arrow points into a solid box, such as

```
OPEN FILE FOR WRITING (2)
```

then the flow branches, and in the above case the flow is continued on one of the pages labeled **OPEN FILE FOR WRITING** at the arrow marked with the number in the brackets, i.e.,



Questions labeled in italic and bold, i.e.,

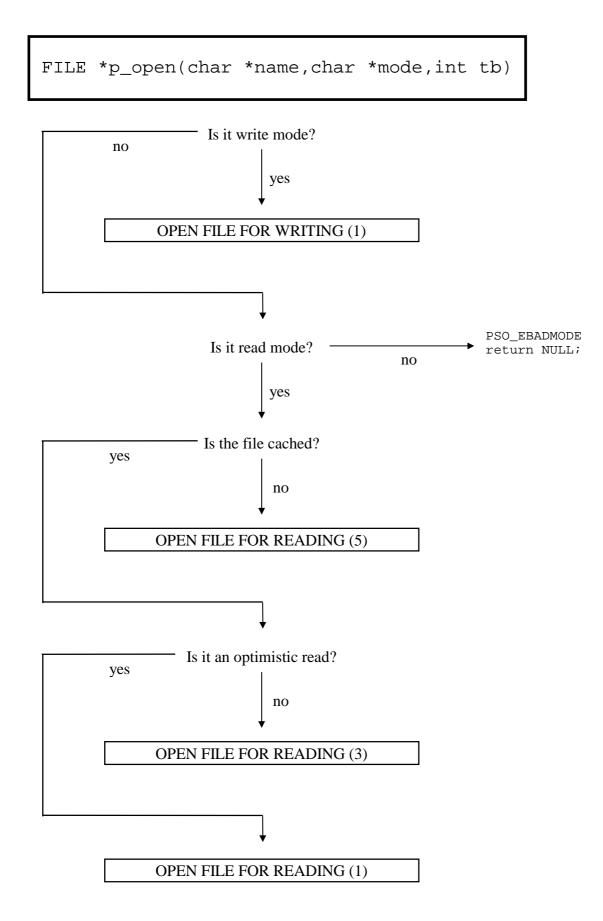
Are we (fully) CONNECTED?

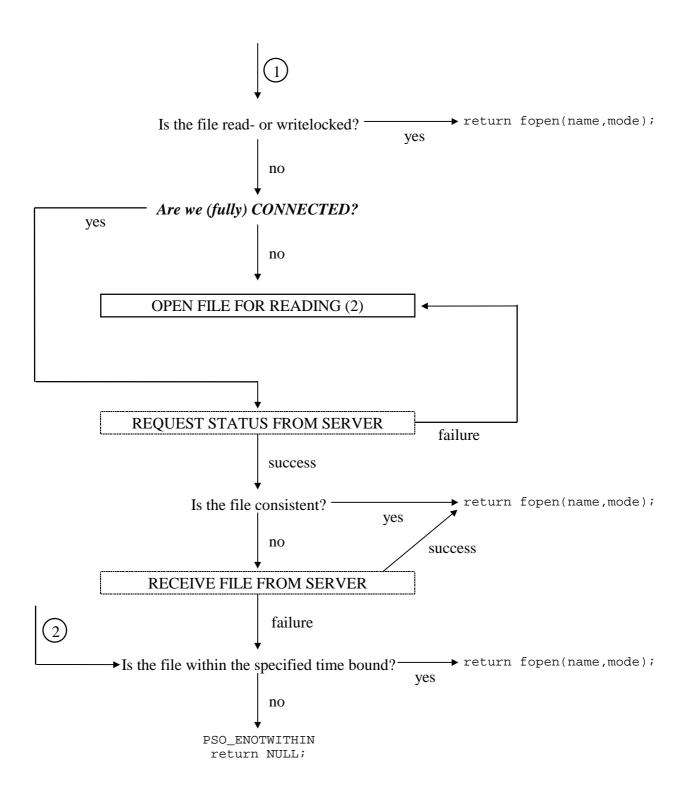
are answered by utilizing the TACO link monitoring facilities.

All flows end with a return command, that gives back control to the client application using the PeStO file operation. If an error occured, then the error number (pso_errno) is also given. Not all things are shown in the diagrams; technicalities such as what to be done when the file is not found, the fact that it is not necessary to receive the file from the server if it is going to be rewritten from scratch, and other details are **not** given.

I think the charts are quite instructive and give a good insight to what actually goes on!

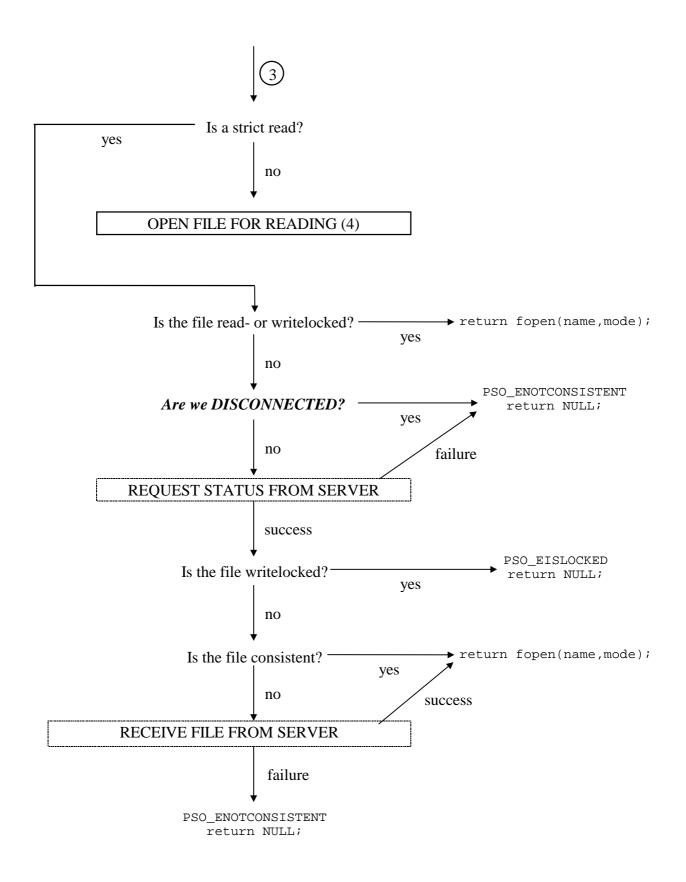
P_OPEN

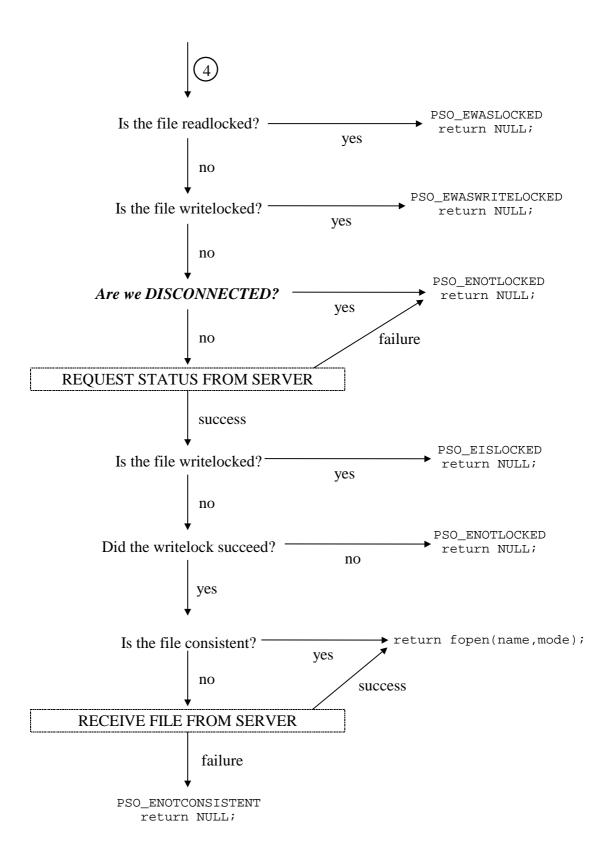




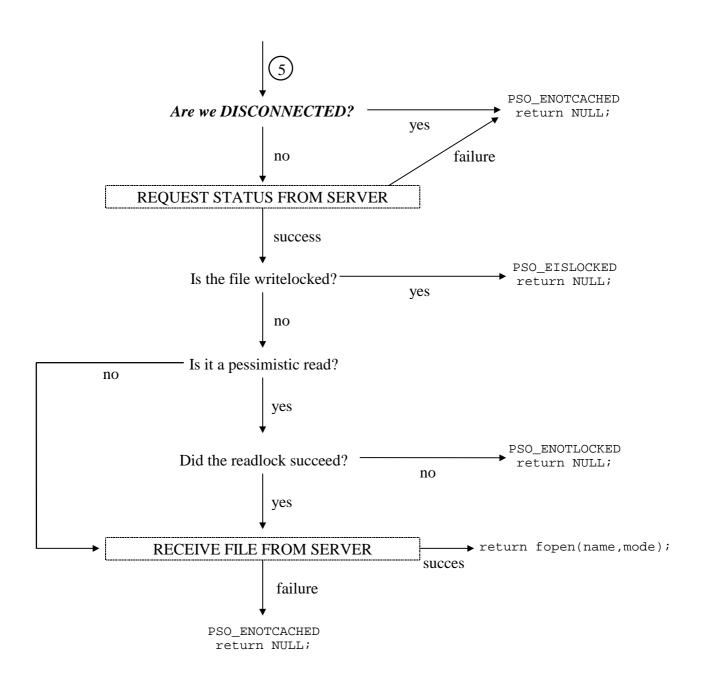
3

OPEN FILE FOR READING 2(4)

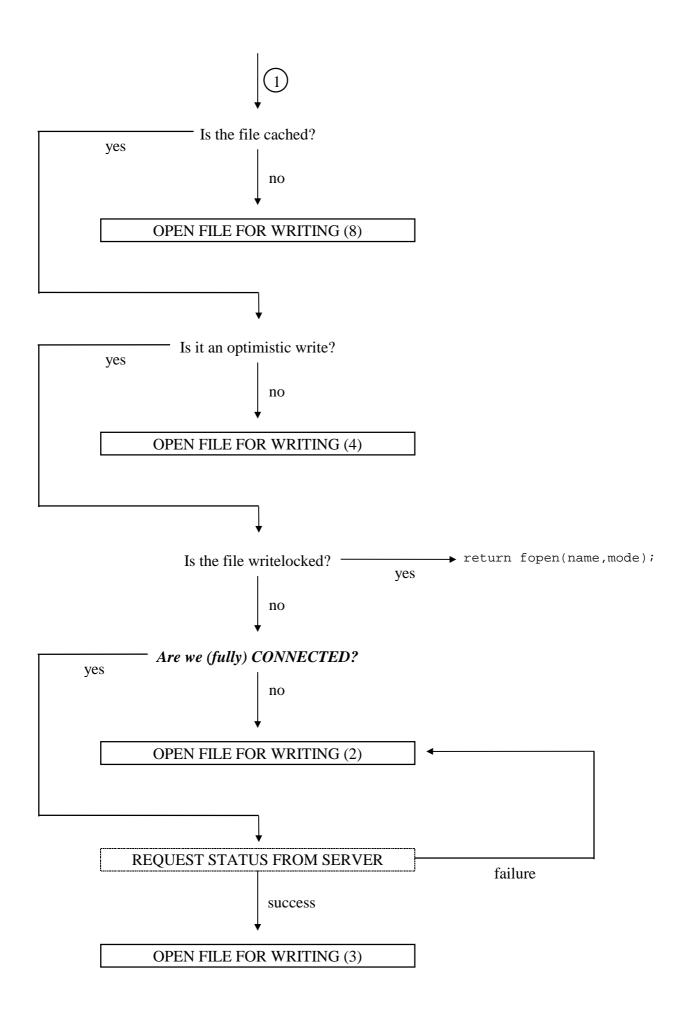




5

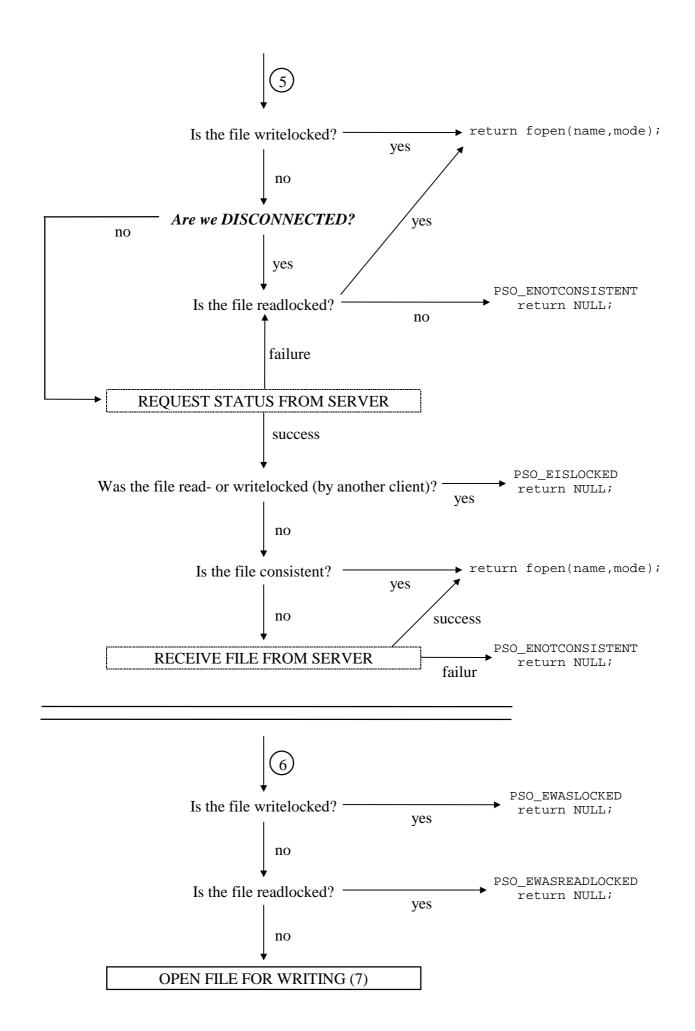


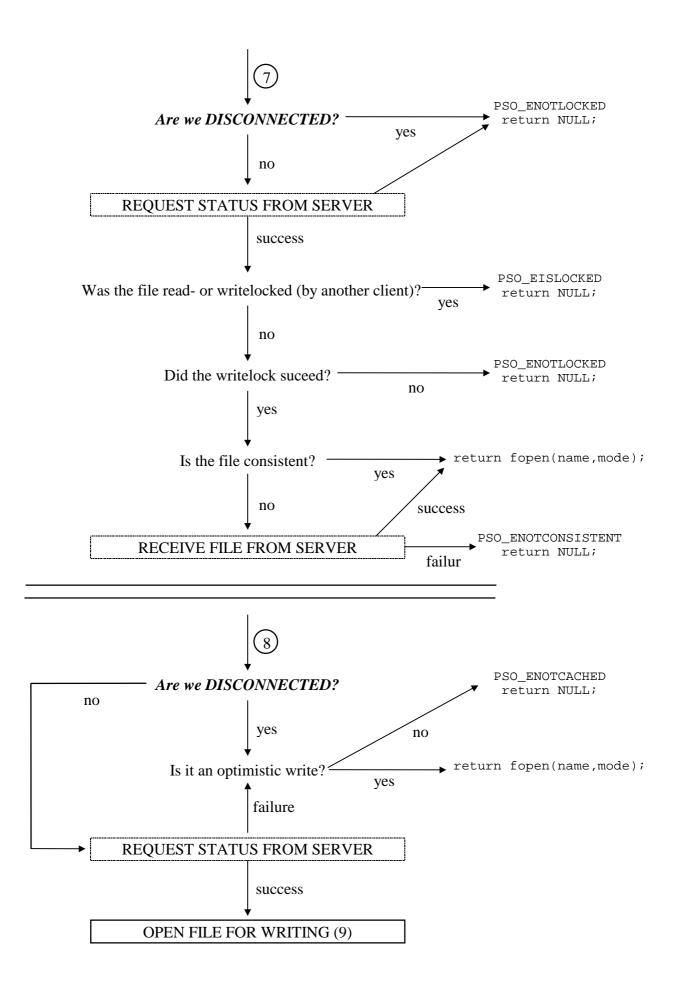
OPEN FILE FOR WRITING 1(5)

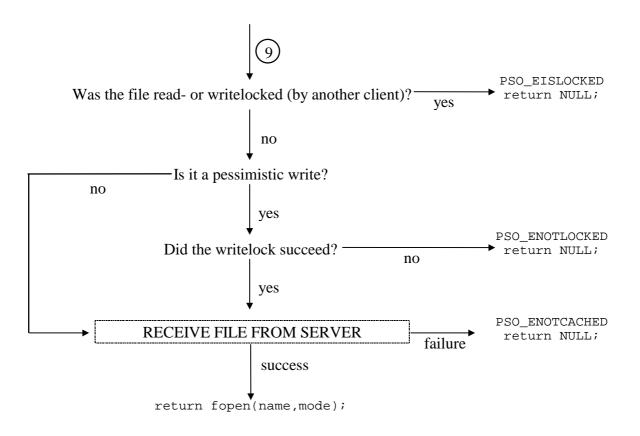


8

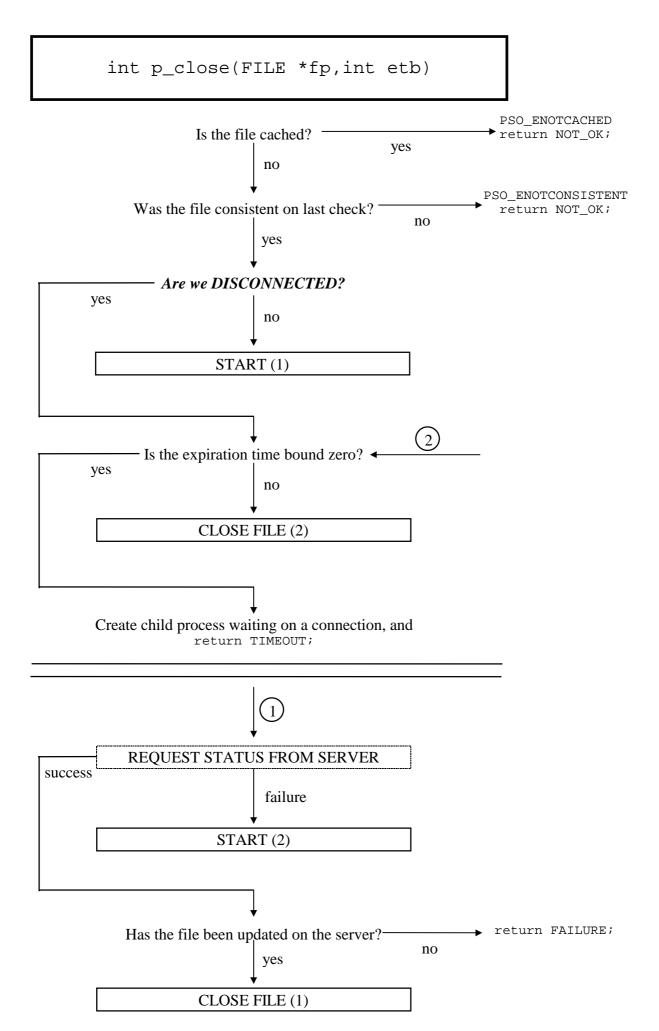
2 PSO_ENOTCONSISTENT Was the file consistent on last check? return NULL; no yes PSO_ENOTWITHIN Is the file within the specified time bound? return NULL; no yes return fopen(name,mode); 3 PSO_EISLOCKED Was the file read- or writelocked (by another client)? return NULL; yes no return fopen(name,mode); Is the file consistent? yes no success **RECEIVE FILE FROM SERVER** failure PSO_ENOTCONSITENT return NULL; 4 Is a strict write? yes no **OPEN FILE FOR WRITING (6) OPEN FILE FOR WRITING (5)**

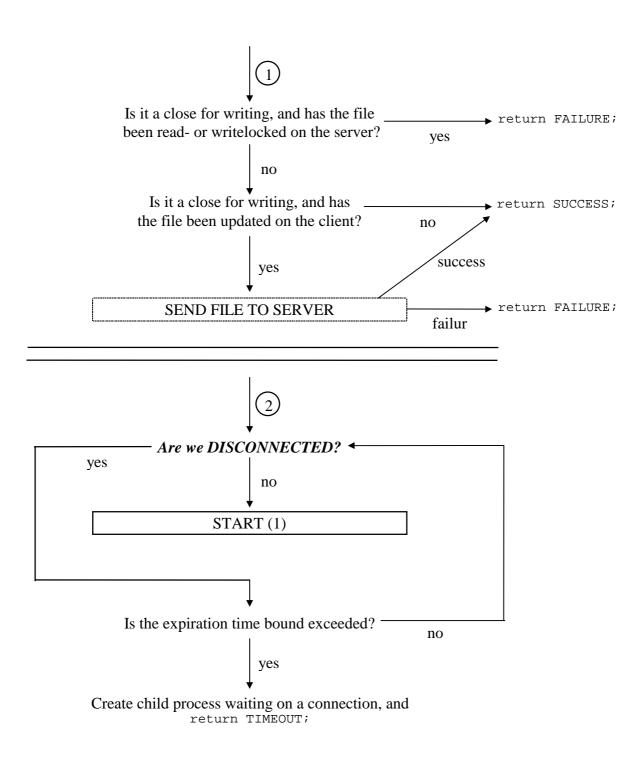






P_CLOSE





P_LOCK

