

BROOKHAVEN NATIONAL LABORATORY
Associated Universities, Inc.
Upton, New York

EP&S DIVISION TECHNICAL NOTE

No. 51

B.B. Culwick and F. Stubblefield
June 21, 1972

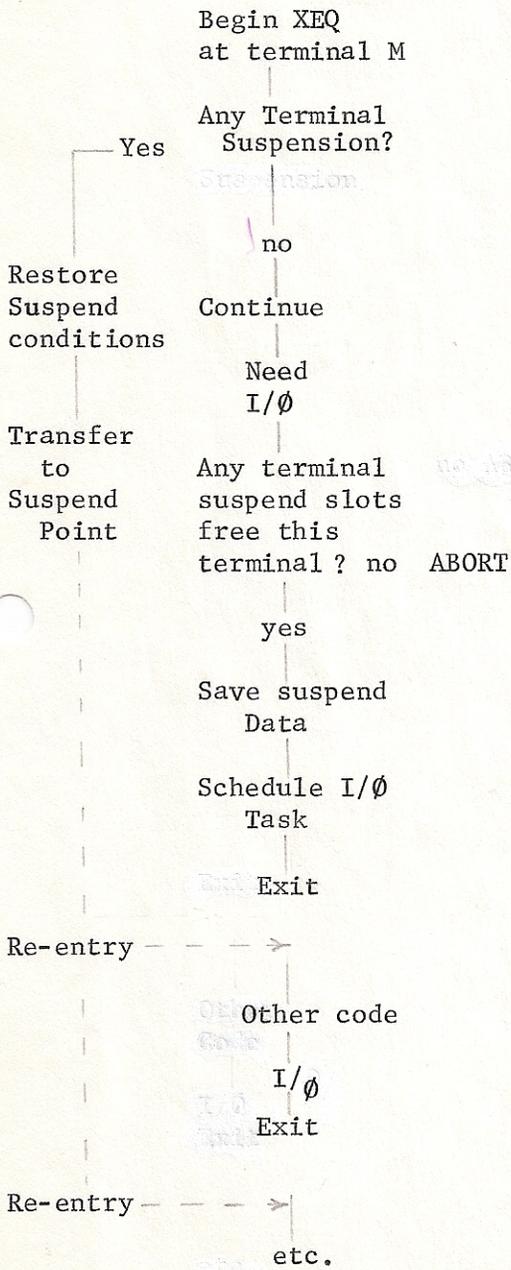
I/Ø Conflicts for Tasks and Terminals

In order that our re-entrant coded tasks can execute for other terminals when I/Ø bound at a given terminal, we require that all I/Ø be done by an I/Ø task dedicated to the given terminal. There will therefore be one of these tasks per terminal in the initial system. (At a later date, when we know RSX I/Ø and task suspension procedures, we can make this task re-entrant also, if this seems desirable).

There will, therefore, be two types of suspension in the system, TERMINAL SUSPEND or I/Ø SUSPEND for I/Ø on a terminal and SYSTEM SUSPEND or PRIORITY SUSPEND when a task is halted to allow a higher priority task to run. The I/Ø suspend data block will contain the condition of the task, the re-entry point and data to identify the I/Ø operation requested. The number of I/Ø SUSPEND data blocks for a terminal determines the number of I/Ø bound tasks which can run simultaneously for that terminal.

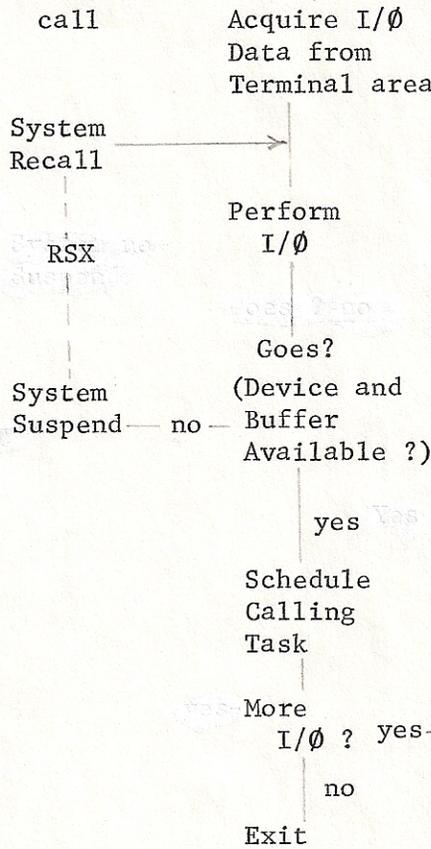
Figure 1 is an outline flow chart of the interaction between a terminal task and the I/Ø task for that terminal.

TASK 1



At next clock tick after I/φ call

I/φ TASK for terminal m



TASK N
(At arbitrary time rel TASK 1)

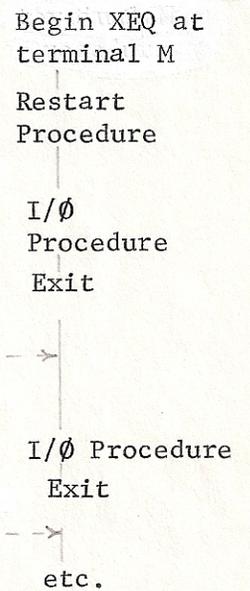


Figure 1

Distribution: Administrative Staff
Limited Distribution