TO: MSPM Distribution
FROM: J. H. Saltzer
SUBJ: BK.5.02 Revision
DATE: 09/28/67

The calling sequence to the Connect procedure has been revised to reduce the amount of work done in the EPLBSA subprogram to the absolute minimum necessary to perform the privileged instruction. The old calling sequence required that the EPLBSA routine concatenate two EPL bit strings, an operation more appropriately performed by the EPL caller.

Published: 09/28/67
(Supersedes: BK.5.02, 06/12/67)

Identification

Connect Procedure
L. J. Lambert, Harlow Frick

Purpose

The purpose of the connect procedure is to cause a connect signal to be sent by a system controller to the active device configured on the designated system controller port. The signal is initiated when a processor issues a GE645 connect instruction (cioc y). This instruction must be executed by a processor in the master mode.

Discussion

Before attempting to read and understand this document it would be advantageous to review first the documents of Section BC.1. These documents describe the hardware configuration, hardware terminology and the hardware restrictions which are implicit in the discussion of the connect procedure.

The connect instruction is a privileged instruction in the sense that it can only be executed by a processor in the master mode. The "control processor" concept does not apply however. In other words any processor can issue a connect to any active device.

The operand word determined by the effective address of the connect instruction designates in the low order 3 bits (33, 34, 35) the system controller port (0-7) which is to receive the connect signal (sent by the system controller). The remaining bits (0-32) of this word may or may not contain information for the active device depending on the type of active device on the system controller port.

Restrictions

The prototype "fire hose drum" requires that the connect operand word be physically located in a memory location controlled by the system controller which also contains the memory location designated on the drum base address switches. All other active devices do not have this restriction.

CALLING SEQUENCE

The calling sequence is:

```
call master_mode_ut$cioc(cow);
```

where cow is a 36 bit aligned connect operand word. The connect procedure assumes that the GIM or drum dim has previously loaded cow with the required connect operand word, including the correct port number in the 3 least significant bits. (The port number must have been obtained from the GIOC, or drum, port connection table described in BK.4.01.) In addition, the drum dim must insure that cow is stored in the same system controller as the drum base address. (The hardware imposes this restriction.)

Operation

The only action taken by the connect procedure is to execute a CIOC instruction, whose effective address points to cow, and then return to the caller.