Modifications to PDP-6 Teletype Logic

Tom Knight

The existing teletype logic for the PDP-6 has been modified to accommodate up to four additional teletypes. These were added with a minimum of change to the existing logic, and are easily removable by taking out the cable in 4M2 and replacing the cable in 4M1 with the jumper module.

The additional hardware was designed to cause a minimum of change to existing programs. After pressing the console I-O reset key, current programs should behave exactly as they did previously. (Note: A CONO APR, 200000 does not have this effect.)

Access to the additional teletypes is provided by five more bits in the CONO to device 120 (Console TTY). Bit 18 enables the setting of the selection register from the other four bit (e.g. CONO TTY, 400000 clears this register). Bits 21-23 specify which teletype is to be selected. Until this register is again changed, all I-O to device 120 is directed to the selected teletype. Bit 20 determines the ability of the various teletypes to cause interrupts. When a one, the setting of the done flags in any of the teletypes will cause an interrupt. When zero, only the selected teletype is allowed to interrupt.

Typical usage:

CONO TTY, 400000
-Select Console TTY, inhibit interrupts from other TTYS.

CONO TTY, 510000
-Select TTY 1, enable interrupts from all teletypes.

A CONO which attempts to change the state of flags while also attempting to change the teletype number will reference the newly selected teletype with, hopefully, no timing errors.
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