MASSACHUSETTS INSTITUTE OF TECHNOLOGY

PROJECT MAC

Artificial Intelligence Project
Hardware

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Modifications to PDP-6 Teletype Logic

Tom Knight

The existing teletype logic for the PDP-6 has been modified to accomodate 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 interupts. When a one, the setting of the done flags in any of the teletypes will cause an interupt. When zero, only the selected teletype is allowed to interupt.

Typical usage:

```
CONO TTY, 400000
```

-Select Console TTY, inhibit interupts from other TTYS.

```
CONO TTY, 510000
```

-Select TTY 1, enable interupts 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.

On teletypes other than TTY0 (the console TTY) only bits 28, and 32-35 will have an effect on CONO, and only bits 32-35 are available on CONI. Bits 28-31 and 33-35 are available on CONI at all times.

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