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Identification

RSW - Reading process data switches
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Introduction

Certain special application programs in the Multics Initializer find it necessary to read configuration and control information from the processor data switches. Examples are the MMCT initializer (BL.3.01) and the Initializer Control program, (BL.5.01). A special EPLBSA program, "rsw", has been written to allow these programs to display a selected pattern in the processor lights and to return the current setting of the processor data switches.

Implementation

To display a pattern and discover the current processor data switch settings, the following call is made:

```
call rsw (display,switches);
```

where the arguments are defined as:

```
dcl(display,                /* display for Q register */
    switches) bit(35),      /* current switch settings */
```

The bit pattern in "display" is placed in the processor's Q register where it may be displayed on the processor display panel. The display is arranged such that bit 1 of "display" is displayed in Q1, etc. Q0 is set to 0.

The pattern is displayed in the Q register and the processor enters a loop waiting for a positive response from the outside world. To respond, the programmer enters the desired switch settings in processor data switches 1-35. Moving switch 0 from the down position to the up position terminates the loop and causes "rsw" to return processor data switches 1-35 as the bit string "switches". Processor data switch 1 is returned as bit 1, etc.

Errors

If either "display" or "switches" is not an aligned, non-varying string of length 35, "rsw" calls "panic".