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COMPUTATION CENTER
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TO: Limited Distribution

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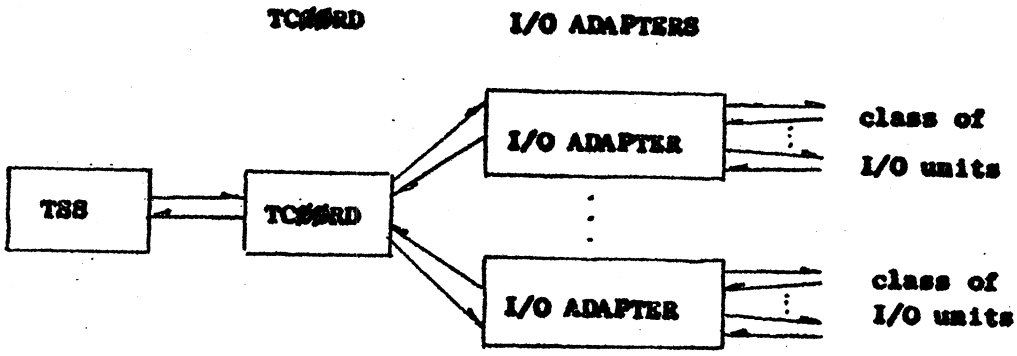
SUBJECT: Compatible Time Sharing System Supervisor Console Input-Output.

Interface Specifications

The Time-Sharing Supervisor is subdivided internally to subsections as is indicated in the schematic of figure 1. Any class of I-ø devices may be used if an I-ø adapter program is written to accommodate the hardware idiosyncracies of the device.



TSS-TC##RD INTERFACE

I. CHARACTERS will be transmitted through this interface in one of the two forms depending upon the value of FULSWT for a particular unit:

A. FULSWT = 0 Characters will be packed 6 to a word and will be represented by the normal BCD code (6 bit code).

B. FULSWT ≠ 0 Characters will be packed 3 to a word and will be represented by the full BCD code (12 bit code).

II. INPUT (TC##RD to TSS)

A. When a complete input message has been assembled by TC##RD, the location of the buffer and the number of characters will be given to TSS. This is done by storing a PZE FIRST,,N word in the ILINES buffer at the position corresponding to the logical input unit.

B. If a quit character or sequence is transmitted to TC##RD, all input buffers of that unit will be reset and a negative non-zero word will be placed in ILINES at the position corresponding to the logical unit.

III. OUTPUT (TSS-TC##RD)

A group of characters are presented to TC##RD by the following call:

```
TSX   WRFLX,4
PZE   FIRST,,N
PZE   tSER
Full buffer return      (OUTPSW ≠ 0)
Normal return
```

where FIRST,,N indicates the number of characters to be given to the logical unit specified by the contents of USER. If the message is not accepted, the full buffer return is effected and OUTPSW is set non-zero for the particular logical unit. When control is given to TC##RD and there is available space in its output buffers, OUTPSW will be set to zero for the particular logical unit. If the information is accepted the return will be to 4,4.

IV. CONTROL

TSS will give control to TC##RD periodically, possibly after every quantum of time, by use of the following calling sequence:

```
TSX   TC##RD,4
Normal return
```

It is at this point that TC##RD will process input and output characters and messages, set or reset interface switches and communicate with the I/Ø Adapters.

TC##RD-ADAPTER INTERFACE

I. CHARACTERS transmitted through the interface will be of the following form:

```
PZE  CODE,,UNIT
```

where CODE represents a 12 bit "full BCD" code. This "full" code is represented by a normal BCD character in the low order 6 bits.

The high order 6 bits represent special characteristics of the normal character, e.g. upper or lower case; UNIT represents the logical unit associated with this character.

II. INPUT (ADAPTER to TC##RD)

When the adapter has gained control via hardware interrupt facilities, any character or characters will be placed in a buffer called "P##L" in TC##RD. Control will then be returned to the interrupted program.

The character placed in the P##L will be of the form described in I , however, the character may represent a completion signal which will notify TC##RD that the particular unit specified is free to accept more output characters.

III. OUTPUT (TC##RD to ADAPTER)

A list of characters to be written on a particular unit will be transmitted to the adapter by the following calling sequence:

```
TSX  WADAPT,4
     BUFF,,N
```

where BUFF specifies the beginning of a buffer N words long containing characters in the form specified in part I .

The Adapter will remove these characters from the buffer and send them to the appropriate unit after any code conversion has taken place. When the particular unit can accept more output a completion signal will be placed in the P##L buffer in TC##RD (see section II.)