TO: Limited Distribution

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Interface Specifications

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

![Diagram of TOS and I/O Adapters]
II. Output (TEQ-353MD)

III. High-Order 8-Bit

IV. Format

V. Characters are transmitted in the following order:

1. Characters are transmitted in the order of their positions in the logical input unit.
2. If a gate is open to the logical input unit, the characters at the position corresponding to the logical input unit will be transmitted. If a gate is closed, the characters at the position corresponding to the logical input unit will not be transmitted. If a character is being transmitted, its location in the buffer and the number of characters have been accessed by TOFFM.

VI. Characters will be transmitted through the interface in one of the following codes:

A. Characters will be transmitted in the ASCII code (7-bit code).
B. Characters will be transmitted in the EBCDIC code (8-bit code).
TCSSRD-ADAPTER INTERFACE

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

```
FZE  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 TCSSRD).

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

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

III. **OUTPUT** (TCSSRD 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 FOOL buffer in TCSSRD (see section II.)