

January 21, 1965

Identification

Slave remote consoles

ATTCON, RELEAS, SNDLIN, SNDLNA, REDLIN, SLAVE, SET6, SET12

Purpose

To allow multiple remote consoles simultaneously to serve as I/O devices for a single program.

Definitions and Conventions

The console at which a user logs in is his home console. Other consoles associated with a user have been attached by him, and they remain attached until he releases them.

A console attached to one user may not simultaneously be attached to any other user. An attached console may not simultaneously be the home console of any user.

An attached console which automatically transcribes into its output each character typed into the attacher's home console is an I@ slave. Similarly, an attached console which imitates the home console's output is an @@ slave. An attached console whose typed input appears as input at the home console is known as an !! slave.

Each console is permanently associated with a 6-character console identification word. These console I.D.'s are central to the present facilities.

Immediately after it has been dialed in, a console is in an unattachable state.

A quit signal issued from an unattachable console causes that console to become attachable.

A quit signal issued from an attachable console causes that console to become unattachable.

A quit signal issued from an attached console which is not an !! slave releases that console and leaves it unattachable.

Usage

To attach a console:

As supervisor entry:
 TSX ATTCON,4 (TIA =HATTCON)
 PZE CONSOL

CONSOL is the location containing the 6 character console identification of the console to be attached.

Upon return, the AC will be zero if the designated console is '(HOME)', attachable, or already attached to this user. The AC will be non-zero and no attachment made, if the designated console is attached to another, the home console of any user, or otherwise inaccessible.

To release a console:

As supervisor entry:
 TSX RELEAS,4 (TIA =HRELEAS)
 PZE CONSOL

Upon return, the AC will be zero if the designated console was attached (and therefore released) or was '(HOME)'. In all other cases the AC will be non-zero and no action taken.

To send a line:

As supervisor entry:
 TSX SNDLIN,4 (TIA =HSNDLIN or =HSNDLNA)
 PZE CONSOL
 PZE LOC,, 'n'
 ALPHA OPN FULL
 normal return

The line to be sent to the designated console's output buffer is n words long and begins at location LOC.

SNDLIN eliminates trailing blanks and adds the carriage return at the end of the line.

SNDLNA does not eliminate blanks and does not add the carriage return before sending the line.

CONSOL If CONSOL is '(HOME)', the line is sent to the user's home console output buffer. If the designated console is not attached to the user, return is to the normal return with the AC non-zero.

ALPHA If the output buffers at the designated console are full and ALPHA is zero, the user is placed in OUTPUT WAIT status. If ALPHA is not zero, control is immediately returned to ALPHA.

To read a line:

As supervisor entry:
 TSX REDLIN,4 (TIA =HREDLIN)
 PZE CONSOL
 PZE LOC,, 'n'
 ALPHA OPN EMPTY
 normal return

REDLIN will move n words from the designated console's input buffer to core beginning at location LOC. If the move was successful, the AC is zero.

CONSOL If CONSOL is '(HOME)', the line will be moved from the home input buffers. If the designated console is not attached, no action is taken and the normal return is taken with the AC non-zero.

ALPHA If the designated console's input buffers are empty, and ALPHA is zero, the program is put into INPUT WAIT status. If the buffers are empty and ALPHA is not zero, control is returned immediately to ALPHA.

To create a slave:

As supervisor entry:
 TSX SLAVE,4 (TIA =HSLAVE)
 PZE CONSOL
 PZE MODE
 normal return

CONSOL If the designated console is attached, it is made a slave according to MODE and normal return is made with AC zero. If it is not attached, no action is taken and the normal return is taken with non-zero AC. If CONSOL is '(HOME)', this call is ignored and AC is zero.

MODE There are three distinct slave modes (11,00,10) providing eight combinations for any single console. The word at MODE is interpreted as three pairs of letters. If any of the pairs is recognized, the console is made to slave accordingly. If MODE is zero or does not contain a recognizable pair, the console is unslaved.

To set the character mode:

As supervisor entry:

TSX SET,4 (TIA =HSET6 or =HSET12)
PZE CONSOL

SET6 sets the designated console in 6-bit mode.

SET12 sets the designated console in 12-bit mode.

If the designated console is '(HOME)', the user's console is mode-set. If the designated console is not attached, return is made with non-zero AC; otherwise, the AC is zero.