HOSTCM Tutorial

The Commodore SuperPET and the Northern Digital microWAT may be connected to a host computer system in order to access files on the host system. There must be a host communications program (HOSTCM) executing on the host to control access to these files. Currently, two versions of the host communications program are available. One runs on a PDP/11 under RSTS/E, and the other on IBM 370 like machines under VM/CMS. A technical document is available which describes how to write a HOSTCM for any machine.

1. Using HOSTCM

The following steps outline how to use the HOSTCM facility with a SuperPET or microWAT.

(1) On the SuperPET, the CPU selection switch must be set at 6809. Connect to the host machine via the RS232 port either directly or using a modem. The correct wiring of the RS232 port is described in another technical letter. Power on the SuperPET or microWAT, the disk drive, and the printer if attached. Insert the Waterloo microSystems diskette in the leftmost drive of the disk unit. The following menu should appear on the screen:

```
Waterloo microSystems

Select:

  setup
  monitor
  apl
  basic
  edit
  fortran
  pascal
  development
```

(2) From the menu, select 'setup' by entering 's'. Host computers communicate using the serial line in various ways. The SETUP program informs the microcomputer of the manner in which a host expects to communicate. When the SETUP program is invoked, the following is displayed:

```
Baud       2400
Parity     EVEN
Stopbits   1
Prompt     11
Lineend    0D
Response   13
```

These are the default options designed to be used with VM/SP on an IBM/370 computer. The options are described in the following section. A user should consult the manager of the host system for the appropriate values to be entered for the options. The values are changed by moving the cursor to the inappropriate default value and typing the new value. When all of the values have been entered, press the RETURN key to set the new options and return to the main menu.

(3) From the menu, select the Editor or the appropriate processor. When it has been loaded, enter the Editor command 't' for talk. Connect to the host machine; for example, dial the appropriate telephone number for the host machine and place the receiver in the coupler. When the host system responds, enter the logon procedure for that system.

(4) If logged on to RSTS/E, enter:

```
set fill 0
set local echo
```

This sets the number of fill characters that follow the lineend character (ie. carriage return) to zero, and 'local echo' sets half duplex so that characters will not be echoed. These characteristics cannot be set for VM/SP. To begin communications, enter the command:

```
hostcm
```

The message 'host communications started' will appear on the screen. Press the RUN/STOP key on a SuperPET (or 'cntrl x' with a microWAT) to return control to the microEditor. It is now possible to access files on the host by simply prefixing the file identification with 'host.'. Entering 'dir host' will list the directory of the user's files on the host machine.

(5) To stop communication with the host, enter 't' for talk to return to the host system. Enter 'q' for quit to stop host communications and then the appropriate logoff commands for the host system. In CMS, enter 'logoff'; in RSTS/E, enter 'bye/y'. Press the RUN/STOP key on a SuperPET or 'cntrl x' on a microWAT to return to the microcomputer.

2. SETUP Options

The SETUP program displays the various communications options, together with the default values for the options. This section describes each option.

Baud

The baud rate establishes the speed at which information is transmitted on the serial line. The following values are permissible:

50 75 110 135 150 300 600
1200 1800 2400 3600 4800 7200 9600

Parity

There are four possible entries for the parity option: even, odd, mark, space.

Stopbits

Either one or two "extra" bits are sent between characters of information. Consequently, the valid responses are 1 or 2.

Prompt

The prompt string is the character sequence sent by the host to indicate to the microprocessor to send another line of input data. The prompt string may be up to four characters in length and is entered in hexadecimal. The default value is hexadecimal 11, sometimes called the XON character.

Lineend

The lineend character is appended to each line sent to the host in order to signal the end of a line. The value of this option is a single character, entered in hexadecimal. This character is used by the host to determine the end of a line being received from the microcomputer. The default value is hexadecimal 0D, the ASCII carriage-return character.

Response

The response character is sent by a host whenever the host has received a line of data. The value of this option is entered as a single character, in hexadecimal. This is the last character of a stream received from the host, in response to a lineend character received from the microcomputer. The default value is hexadecimal 13, sometimes called the XOFF character. and outlines the valid responses.