## Identification

Foreign Files (EFS)
L. B. Ratcliff

## Purpose

Foreign files provide the 6.36/64.5 user the capability of preparing input
files to be read by his process and of obtaining copies of files generated
by his process.  In particular, the CTSS user may retain his permanent files
(or copies of his permanent files) within the CTSS file system for his own
perusal.

## Foreign Input Files

The 6.36 user must make available to his process all foreign input files
which he expects to open within the process.  The control file must con-
tain a statement of the form

> FILE          NAME6          NAME31

for each foreign file.  The Merge-Editor makes the file NAME6 F.FILE avail-
able as a foreign file with name NAME31.  (See BE.5.02.)  If the user wishes
to create a multi-record file to be read by his process via EFS, he must
include EFS logical record control information in the file.  This involves
the inclusion of 1 word preceding each logical record.  Bits 0 through 17
of this word contain a value (binary) which is the number of words in the
logical record.  The control word for the first logical record must have
bits 18 and 19 each set to 1.  If the file consists of a single record,
the control word is required only if the field consisting of bits 18 and
19 of the first word is non-zero.  Thus, an ASCII string requires no control
information.

The 64.5 user may include each foreign file in one of two forms: (See BE.6.01)

  1.  Cards containing foreign files punched in 7PUNCH format.

  2.  Cards containing a single record file punched in GE character set
      with escape conventions specified in BE.6.00.

In each form the foreign file is preceded by the control card

> $645          FILE          filename

in which filename is the name of the foreign file.  It must consist of no
more than 31 characters and must contain no blanks.

Files in the second form appear to EFS as a single record and must be processed by the user as such.

Foreign Output Files

Each file designated by a process as foreign output is returned by the 6.36 or 64.5 Dumper to the user.  The 6.36 Dumper places all foreign files on the return tape in 7PUNCH format.  The 64.5 Dumper provides only printer output of foreign files.

The user must be aware that multi-record files will contain the control information described above for foreign input (multi-record) files.  These files may be recirculated into EFS if desired; however, control information is considered to be data outside of EFS.

The 64.5 Dumper prints characters on a line until it encounters a new line feed character which it interprets or until 120 characters have been printed in which case it prints \c* to indicate a local carriage return and continues the string on the following line.