Identification

64.5 Driver
D.E. Joel

Purpose

This program is an alternative to the command MRGEDT in the CTSS system. It is a card driven program which produces a jobstream on magnetic tape.

Operation

Two card decks are required as the input for this job. The first is a program deck which is standard, and the second is the data deck wherein the user describes his requirements.

Additionally, it is required to use the tape library which has been set up specifically for running 6.36 and 64.5 jobs.

The Program Deck

```$ SNUMB XXXXX
$ IDENT XX,64.5,DRIVER,INPUT RUN FOR THE 64.5 SYSTEM.
$ CONVERT
$ READ IN,A1R
$ INPUT MIXED
$ DISC OT,A1S,3OL
$ LIBRARY LB
$ OPTION NOMAP
$ USE .DJ645
$ ENTRY .DJ645
$ EXECUTE
$ LIMITS 40,20222,,500
$ DISC IN,A1R,20L
$ DISC 6B,A2R,20L```
THE PROGRAM DECK (Continued)

$ DISC    F8,A3R,20L
$ DISC    F1,A4R,20L
$ DISC    F2,A5R,20L
$ DISC    F3,A6R,20L
$ DISC    F4,A7R,20L
$ DISC    F5,A8R,20L
$ DISC    F6,A9R,20L
$ DISC    F7,A10R,20L
$ DISC    F9,A11R,20L
$ DISC    FA,A12R,20L
$ DISC    FB,A13R,20L
$ TAPE    OT,A1D,,SCRATCH
$ TAPE    LB,A2S,,645.LIBRARY
$ COMMENT AFTER ENDJOB USE *SCRATCH* AS GECOS INPUT TAPE.
$ ENDJOB

***EOF

THE DATA DECK

The data deck contains control cards and 'data' cards. The control cards inform the 64.5 Driver of the functions to be performed. (A control card has $645 in columns 1-4, type starting in column 8, and parameters, if any, starting in column 16). Control cards are:

(A) Identification Card

$645    RUN    Runname,programmer-ID

This card is the first card recognized in the data deck.

Runname and programmer-ID are restricted to a maximum of 6 characters each.
(B) BSA Assembly Card

$645   BSA   Name, options

This card precedes the source deck which is to be assembled.

Name is the segment name of the assembly and is restricted to 6 characters.

The options available are:

- NLSTOU - No listing required
- NDECK  - No deck required
- NOLOAD - Not to be loaded for simulation.

In the absence of option specification deck and listing are produced and execution (via the simulator) is attempted.

(C) EPLBSA Assembly Card

$645   EPLBSA   System-name, Segment-name, options

This card precedes the source deck which is to be assembled.

'System-name' is a 6 or less character name which is used within the system to reference this segment and its associated parts.

'Segment-name' is a 31 or less character name which defines the segment uniquely.

The options available are:

- NDECK  - No deck required
- NOLOAD - Not to be loaded for simulation

In the absence of option specification, a binary deck is produced and execution (via the simulator) is attempted.

The source deck to be assembled may be in either of two formats:
(a) BCD cards with conventions described in BE.6.00
(b) Column binary 7 punch cards from CTSS of a file produced by EDA.

(D) Object Card

$645 OBJECT

This card precedes object text and link decks - as many as required. An attempt at simulation is implied.

(E) Descriptor Word Setting Card

$645 OPTION parameters

Parameters which may be specified are:

<table>
<thead>
<tr>
<th>MNEMONIC</th>
<th>MEANING</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0</td>
<td>Directed Fault 0</td>
</tr>
<tr>
<td>F1</td>
<td>Directed Fault 1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>F7</td>
<td>Directed Fault 7</td>
</tr>
</tbody>
</table>

DATA
SLVPRC Slave Procedure
MASPRC Master Procedure
EXONLY Execute Only
SLVACC Slave Access
(E) (Continued)

WPERMT          Write Permit

If no OPTION card is present, standard settings are used:

    SLVPRC, SLVACC, WPERMT

The settings specified in an OPTION card remain in effect until another OPTION card is encountered.

If no parameters are specified in an OPTION card, standard settings are reverted to.

(F) Pagesize Setter

$645 RSPGSZ Size

Page sizes are:

  0 - Unpaged
  64 - 64 word pages
  1024 - 1024 word pages

The settings specified in an RSPGSZ card remain in effect until another RSPGSZ card is encountered.

(G) GE635 Subprogram Inclusion

$645 SYSTEM Activity-name

The activity names (within the 64.5 system) are:

INITIAL - Initializer
EBSASS - EPLBSA Assembler
BSAPRE - BSA preprocessor
BSAPST - BSA post processor
PACKER - Packer
FILEMK - Filemarker
LODSIM - 645 Loader/Simulator
DUMPER - Dumper
(G) (Continued)

GE635 object decks, including octal corrections, which follow a SYSTEM card are included during the execution of the named 64.5 activity.

(H) Entry Card

$645 ENTRY Segment, symbol

This card defines the location at which simulation is to be commenced. Segment and Symbol are restricted to 31 characters each.

Default entry parameters (segment main, symbol start) are used if no ENTRY card is encountered.

(I) Foundation Cards

<table>
<thead>
<tr>
<th>$645</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSPGSZ</td>
<td>Default Descriptor Segment Page Size</td>
</tr>
<tr>
<td>NTPGSZ</td>
<td>Name Table Page Size</td>
</tr>
<tr>
<td>LSPGSZ</td>
<td>Page Size of Linkage Segments</td>
</tr>
<tr>
<td>STPGSZ</td>
<td>Stack Segment Page Size</td>
</tr>
<tr>
<td>PBLKSZ</td>
<td>Block Size of Page Tables and Other Unpaged Segments</td>
</tr>
<tr>
<td>DSGBND</td>
<td>Highest Block Number Permitted in Descriptor Segment</td>
</tr>
<tr>
<td>NMTBND</td>
<td>Highest Block Number Permitted in Name Table Segment</td>
</tr>
<tr>
<td>FLTBAS</td>
<td>Base of Fault Vector in 636</td>
</tr>
<tr>
<td>LODORG</td>
<td>Loading of Origin</td>
</tr>
<tr>
<td>TIME</td>
<td>Thousands of 636 Memory Cycles Permitted,</td>
</tr>
</tbody>
</table>
(I) (Continued)

These cards are used to set loading parameter which do not change during loading. As indicated, default values are set for all of these parameters, so that a typical user deck might not include any of these cards.

(J) Foreign File Card

$645  File  Name

Name is a 31 or less character file name.

This card precedes the deck which contains a data file for the user's program. The data deck may be in one of two formats:

a) BCD card image with convention described in BE.6.00.

When explicit line feed control is not defined as the last entry on a card, a newline character is added to the end of the data stream. A fill character (octal 000) is used to complete a partially filled word at the end of the information from each card.

b) Column binary 7-punch which is produced by CTSS (e.g., from an EDA file).

The data deck is terminated by an end-of-file card (**EOF in columns 1-6).

Requirements when Simulation Requested

A card deck is available which contains basic 645 programs (LINKER, F2CATC, INIT, SEGMENT), plus the necessary control cards described above. If simulation is to be attempted, this deck must be included as part of the data deck.