MULTICS SYSTEM-PROGRAMMERS' MANUAL

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Identification

64.5 Dumper N'Guyen VanBinh

Purpose

The Dumper performs 64.5 system close-out. The major features are:

- 1. Punching requested TEXT and LINK files resulting from assemblies.
- 2. Dumping the simulated GE645 memory.
- 3. Printing the error file which contains all messages from the 64.5 system.

Description

1. Punching Text and Link Files

The dumper scans in TX and LK files for the requested segment Text and Link and produces card decks. The type of these cards is Binary and format is as follows:

1st Card (Identification Card)

| Column | 1 | 7&9 Punches (Binary Type) |
|----------|----------|---|
| | 2~6 | Blank |
| | 7-9 | Segment Name (GE 6-bit, left justified, space-filled) |
| | 10-12 | TEXT or LINK (GE 6-bit, left justified, space-filled) |
| | 13-15 | TX or LK (file code) (GE 6-bit, justified, space-filled) |
| | 16-72 | Blank |
| | 73-80 | Segment Name with sequence number in BCD |
| 2nd or N | Ith Card | |

2nd or Nth Card Column 1

7&9 Punches (Binary type)

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| (Continued) | |
|-------------|--|
| 2 | Blank |
| 3 | Number of words in this card 22 words maximum, each word consisting of 3 columns |
| 4=5 | Check Sum |
| 7-9 | 1st word |
| 10-12 | 2nd word |
| 5 V V | |
| 70-72 | 22nd word |
| 73-80 | Segment Name with sequence numbers |

Printing the Simulated GE645 Memory Dump 2.

Using the CR file produced by the simulator as input, the dumper prints out through SYSOUT.

- 3) Registers and status words
- b) The Descriptor Segment (DSEG) and the Name Table (NAMTAB) are edited for readability. Each line consists of two parts:
 - Segment Descriptor Word 1)
 - 2) Segment Number and Name

The following abbreviations are used in describing the contents of the descriptor word:

| F0 F1 | Directed Fault O Directed Fault 1 |
|----------|--------------------------------------|
| • | |
| 0 | ų |
| 0 | Q |
| C | ¢ |
| F.7 | Directed Fault 7 |
| DATA | Data |
| SLVPRC | Slave Procedure |
| MASPRC | Master Procedure |
| EXONLY | Execute Only |
| SA | Slave Access |
| WP | Write Permit |

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c) Each segment specified in the NAMTAB in the following format:

SEGMENT NAME NNNNNN #XXXXX (Segment Number) PAGE TABLE (if segment is paged)

Absolute Add, in octal - 1st page table word.....8th PTW

PAGE or BLOCK number XXXXXX

Absolute add. in octal - Relative Add. - 8 octal words

Linkage Segment #XXXXX (Segment number of linkage segment)

(Same format as above for segment).

d) An Extra dump for the stack segment produced by the Dumper for easy interpretation.

STACK PUSHDOWN SEQUENCE

stack minus 000000 (current stack section)

Absolute Add. - Relative Add. - 8 words

STACK MINUS 000001 (previo

(previous stack section)

STACK MINUS

S XXXXXX

(1st Stack section)

3. Printing the Error File

0 0 0

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The error file (ER) was written by an activity of the 64.5 system. The dumper prints out every error message from this file and identifies itself by

Dumper

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ERROR Messages

a) The input of dumper consists of file "IN". If the request is not correct the dumper produces the follow-ing message:

NEITHER DECK NOR CORE FOUND ON IN

b) The file segment Text is not in TX file. The dumper produces the following message:

NOTEXT SEGMENT-name