Software Performance Summary

PDP-8 Paper Tape

FEBRUARY 1975

digital

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DEC-08-XSPSE-A-D

SOFTWARE COMMUNICATIONS
Digital Equipment Corporation
Maynard, MA 01754

digital

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*Article contains patch

1.Ø The Software Performance Summary (SPS) in a compendium of information which provides a customer with a maintenance notebook of documentation corrections and the status of known software problems. The notebook is supplemented with articles in the monthly Digital Software News which should be filed in the appropriate sections of the Software Performance Summary.

The customer must sign and return the registration form in his software kit to receive the monthly.

Any comments or questions about the Software Performance Summary should be directed to your local SPR Center.

2.Ø Introductory Section

This introductory material should be filed at the beginning of your notebook.

2.1 General Format of the Articles

Each article is formatted so that you can easily recognize the subject. Figure 1 shows an overall example of the format.

Date

TITLE

TEXT

The text of the article may take several forms.

1. An article of a general nature. i.e., clarification of the use of a software feature.

2. Problem description. Here the problem and its effects will be described and followed by a solution or disposition. When no solution is available, known methods of avoiding the problem will be given when possible.

CODING

(See Section 2.2.)

Figure 1. Article format.

2.2 Filing

A system has been devised to help you file each article in its proper place. The key to this system is Figure 2 below.

SOFTWARE PRODUCT (1)		VERSION (1A)	
COMPONENT (2)		VERSION (2A)	
SUBPROGRAM OR ADDITIONAL INFORMATION (2B)		SEQUENCE (3)	PAGE OF (3A)
NEW (4)	REPLACEMENT ARTICLE (5)	ORIGINAL DATE (5A)	

Figure 2. Coding block.

Each month, you should take the monthly apart and insert the pages in your notebook.

First, the article is filed by software product (1). All articles will be classified under a major heading.

Secondly, the software product is broken down by its components (2). See Section 2.3 for the list of software components.

Finally, the article is referenced by sequence number (3). As an article is added to each component, it is assigned the next higher sequence number.

All other information in the coding block is to further clarify the article and is not specifically for filing:

(1A) Version of the software product.

(2A) Version number of the component.

(2B) Other information helpful to the user.

(3A) Page number and pages in article.

(4) An "X" in this block indicates a new article.

2.2 Filing (Contd)

(5) A number in this block indicates an article republished for revision or correction and specifies the number of times the original article has been revised. For example, the second revision of an article which originally appeared in June 1973 is shown in Figure 3.

(5A) Original date of a revised article.

NEW	REPLACEMENT ARTICLE	ORIGINAL DATE
	2	June 1973

Figure 3. Coding block showing the second revision.

2.3 Components

BINARY LOADER

BINARY PUNCH

23 BIT FPP

27 BIT FPP

DECTAPE UTILITIES

DDT

FOCAL-8

MACRO-8

MEMORY DUMP

ODT

PAL III

RIM PUNCH

SELF STARTING BINARY LOADER

SYMBOLIC EDITOR

3.Ø Software Performance Reports

Each new installation is provided with Software Performance Report (SPR) forms. The SPR form enables users to report problems encountered with Digital Equipment Corporation software or documentation. When a problem is encountered, an SPR should be completed and mailed to your local SPR Center.

Responses will be sent to the name and address appearing on the form. Additional SPR forms may be obtained by writing to your local SPR Center (see back of book).

3.1 Software Performance Report (SPR) Guidelines

The following is a guideline for completing Software Performance Reports (SPRs) so that adequate information is included.

For all PDP-8 Systems, please completely fill out the SPR form. It is important that we know the machine configuration--including the CPU model, the amount of core in use, and the peripherals on the machine. An adequate and clear description of the problem is very important and will certainly speed processing of the SPR. Two of the best ways of supplementing the description are to include the Teletype printout that shows the problem as well as an actual copy of the user program that caused the problem, if one is involved.

Before submitting an SPR, the user should review the Software Performance Summary to ensure that the problem has not already been published.

February 1975

Procedures to Restore Destroyed Instructions

PROBLEM:

The current version of the Binary Loader (DEC-08-LBAA) is not compatible with any program using the DF32 DISK Data Break (locations 775Ø and 7751).

The Binary Loader also uses locations 775Ø and 7751 for instructions. These two locations are used by the DF32 Mini Disk as its word count and current address registers for 3 cycle data break I/O transfers. Any disk I/O the user may do will, therefore, destroy the two instructions of the Binary Loader contained in locations 775Ø and 7751.

SOLUTION:

To restore the Binary Loader, restore the contents of these locations as follows:

```
775Ø   1355   TAD   WORD2
7751   5743   JMP   I ASSEMB
```

The Binary Loader may then be started at 7777 and used as usual.

SOFTWARE PRODUCT	VERSION	
PAPER TAPE	N/A	
COMPONENT	VERSION	
BINARY LOADER	N/A	
SUBPROGRAM OR ADDITIONAL INFORMATION	SEQUENCE	PAGE OF
DEC-08-LBAA-PM	1	1 1
NEW ☐ REPLACEMENT ARTICLE 1	ORIGINAL DATE	
	Pre-1973	

February 1975

Failure to Punch Location 7777

PROBLEM:

The current version of the Binary Punch Program (DEC-08-YX1A-PB) fails to punch out location 7777 when it is specified as the last location in a block.

SOLUTION:

The following patch will correct this problem.

LOCATION	OLD CONTENTS	NEW CONTENTS
751Ø	7Ø41	7141
7515	71ØØ	237Ø
7516	237Ø	71ØØ

SOFTWARE PRODUCT	VERSION	
PAPER TAPE	N/A	
COMPONENT	VERSION	
BINARY PUNCH	N/A	
SUBPROGRAM OR ADDITIONAL INFORMATION	SEQUENCE	PAGE OF
DEC-08-YX1A-PB	1	1 1
NEW ☐ REPLACEMENT ARTICLE ☑ 1	ORIGINAL DATE	
	Pre-1973	

TD8E Stand-Alone Subroutine Improvement

PROBLEM:

On getting an I/O error, the stand-alone TD8E subroutine does not always retry the operation 2 more times. This decreases the probability of the I/O operation succeeding.

SOLUTION:

The following source change corrects this problem by insuring that all operations are tried 3 times before reporting a hard error.

Also, several other improvements are given which speed up the handler in crucial spots, thereby increasing the probability of being able to use marginal tapes.

At ENDØ+2: Replace SZL CLA by CLA

At TRY3: Replace
```
ISZ TRYCNT
JMP GO
CLA CLL
```
by
```
CLA CLL
ISZ TRYCNT
JMP GO
```

At C374+3: Replace CLA CLL CMA RTL by TAD NUMTRS

At DTA1X+5: Insert
```
TAD UNIT
SDLC
```
(just after DCA LEAVE)

At DTA1X+1Ø: Replace
```
SZL CLA
IAC
```
by
```
CLA RAL
```

SOFTWARE PRODUCT	VERSION	
PAPER TAPE	N/A	
COMPONENT	VERSION	
DECTAPE UTILITIES	N/A	
SUBPROGRAM OR ADDITIONAL INFORMATION	SEQUENCE #	PAGE OF
(DEC-8E-UZTA-PB)	1	1 2
NEW ☐ REPLACEMENT ARTICLE 1	ORIGINAL DATE	
	September 1974	

TD8E Stand-Alone Subroutine Improvement (Cont'd)

At C374+5: Delete TAD UNIT
SDLC

After TRYCNT Insert:
```
NUMTRS, -3
C3,3
*ORIGIN+171
FOUND,  SZL CLA
        JMP GO
XFIELD, Ø
C7Ø,    7Ø
        TAD UNIT
        CLL RAL
        TAD BUFF
```

which replaces the code between *ORIGIN+17Ø and XFIELD inclusive.

Before REVGRD Insert:
```
SDRC
SDLC
```

Also, move the two previous words

```
TAD XWCT
DCA WORDS
```

to REVGRD+7, for example, just after

```
JMP REVGRD
```

To alter the number of retries, you need only change location NUMTRS, for example, set NUMTRS to -5 to cause 5 retries.

SOFTWARE PRODUCT	VERSION
PAPER TAPE	N/A
COMPONENT	VERSION
DECTAPE UTILITIES	N/A
SUBPROGRAM OR ADDITIONAL INFORMATION	SEQUENCE # / PAGE OF
(DEC-8E-UZTA-PB)	1 / 2 2
NEW ☐ REPLACEMENT ARTICLE 1	ORIGINAL DATE
	September 1974

February 1975

Disabling High Speed Reader

PROBLEM:

The high speed reader is not being disabled after the end of tape causing "*s" to be printed across the page until interruption via CTRL/C. Also, high speed reader didn't produce error message on READER OUT OF DATA TAPE condition.

SOLUTION:

The following patch solves the problem for 4K and 8K FOCAL-8:

```
6336/763Ø  762Ø
6337/4566  5742
634Ø/4343  4566
6341/5177  5541
6342/----  Ø212
```

Note to user: Use care when entering data from the HSR, because the "*" command is a SWITCH.

SOFTWARE PRODUCT	VERSION
PAPER TAPE	N/A
COMPONENT	VERSION
FOCAL 8	N/A
SUBPROGRAM OR ADDITIONAL INFORMATION	SEQUENCE # / PAGE OF
DEC-8E-LFOCA-A-PB	1 / 1 1
NEW [ ] REPLACEMENT ARTICLE [1]	ORIGINAL DATE
	September 1974

February 1975

Incorrect Character Count on Third Pass Listings

PROBLEM:

During the third (listing) pass MACRO-8 incorrectly counts characters whenever a tab-rubout combination is encountered. This is a problem because comments will not be printed neatly in a straight line.

SOLUTION:

The problem can be corrected by the following patch.

ADDRESS,	OLD CONTENTS	NEW CONTENTS
365Ø	5271	5367
3767	unused	7Ø4Ø
377Ø	unused	5271

SOFTWARE PRODUCT	VERSION
PAPER TAPE	N/A
COMPONENT	VERSION
MACRO-8	N/A
SUBPROGRAM OR ADDITIONAL INFORMATION	SEQUENCE / PAGE OF
DEC-Ø8-LMACA-A-PB	1 / 1 OF 1
NEW / REPLACEMENT ARTICLE	ORIGINAL DATE
[ ] / [1]	Pre-1973

February 1975

Missing Line Feed

PROBLEM:

When using the Next (N) command for output to the high speed punch, a timing problem causes the final line feed (ASCII code 212) to be lost, ending the tape with a carriage return (ASCII code 215). This difficulty occurs in the current version of the Editor (DEC-Ø8-ESAC).

SOLUTION:

The problem may be corrected with the following patch:

Change COM1, JMP FORM to COM1, JMP FORM+1.

LOCATION	OLD CONTENTS	NEW CONTENTS
13ØØ	5216	5217

SOFTWARE PRODUCT	VERSION
PAPER TAPE	N/A
COMPONENT	VERSION
SYMBOLIC EDITOR	N/A
SUBPROGRAM OR ADDITIONAL INFORMATION: DEC-08-ESAC-PB	SEQUENCE: 1 / PAGE OF: 1 1
NEW: [ ] REPLACEMENT ARTICLE: [1]	ORIGINAL DATE: Pre-1973

February 1975

Rubouts Beyond the Beginning of a Line

PROBLEM:

Under certain conditions in the current library version of the Symbolic Editor, the user can delete characters from right to left past the beginning of a line. This usually results in the Editor losing track of the proper line sequence.

SOLUTION:

Making the following patch before starting the Editor will eliminate the problem.

LOCATION	OLD CONTENTS	NEW CONTENTS
ØØ57	1624	1631
Ø115	1624	1631
1324	1Ø13	5725
1325	3124	1624
1624	unused	3515
1625	"	1Ø13
1626	"	3124
1627	"	563Ø
163Ø	"	1326

SOFTWARE PRODUCT	VERSION
PAPER TAPE	N/A
COMPONENT	VERSION
SYMBOLIC EDITOR	N/A
SUBPROGRAM OR ADDITIONAL INFORMATION	SEQUENCE / PAGE OF
DEC-08-ESAC-PB	2 / 1 1
NEW [ ] REPLACEMENT ARTICLE [1]	ORIGINAL DATE
	Pre-1973

SOFTWARE PROBLEMS OR ENHANCEMENTS

Questions, problems, and enhancements to Digital software should be reported on a Software Performance Report (SPR) form and mailed to the SPR Center at one of the following Digital Offices: (SPR forms are available from the SPR Center.)

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Brazil	Digital Equipment Comercio E Industria LTDA Rua Batatais, 429 (Esq. Al. Campinas) 01423-Jardim Paulista São Paulo-SP-Brazil
Canada	Digital Equipment of Canada, Ltd. Software Services P.O. Box 11500, K2H 8K8 Ottawa, Ontario, Canada
Caribbean	Digital Equipment Latin America, Inc. 407 del Parque Street Santurce, Puerto Rico 00912
United States, Far East, Middle East, Africa, Remainder of Latin America	Software Communications P.O. Box F Maynard, MA 01754
France	Digital Equipment France 18, rue Saarinen Centre Silic - CIDEX L225 F-94533 Rungis, France
Israel	DEC-sys Computers Ltd. 7 Habakuk Street IL-Tel Aviv 63505, Israel
Italy	Digital Equipment S.P.A. Corso Garibaldi 49 I-20121 Milano, Italy
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