# PDP-8 Digital Software News August-September 1980 AA-K357A-BA



#### PDP-8 DIGITAL SOFTWARE NEWS

### Published by Corporate Administrative Systems Group, Software Services **Digital Equipment Corporation** P.O. Box F Maynard, MA 01754

The PDP-8 Digital Software News (a bi-monthly publication) complements Software Reviews for COS-310, OS/8, and OS/78. New and revised Software Product Descriptions, programming notes, software problems and solutions, and documentation corrections are published here. Much of the material is developed from Software Performance Report (SPR) answers significant to the general audience and is printed here to supplement the maintenance notebook (established by the Software Review).

#### PRODUCTS SUPPORTED in the PDP-8 DIGITAL SOFTWARE NEWS

COS-310 V8 COS-310/2780 RDCP V6.05, V7

**OS/8 V3D** 

OS/8 V3D Device Extensions

OS/8 Extension Kit V3D

OS/8 FORTRAN IV V3D

OS/8 MACREL/LINKER V2A

OS/78 V2. V3 RTS-8 V3.0

#### DISTRIBUTION

The Digital Software News is directed to one software contact for each software product. No Mailing will be made to addresses without a software contact name. Address change requests should be sent to the nearest DIGITAL field office. Include the new address and mailing label from the most recently received publication.

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> Eleanor F. Hunter, Editor Ann Owens, Associate Editor

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#### **SPR USER LETTER**

Submitted by Sheila Hatchell, 8/11 Administration

The Dispatch SPR User Letter has been revised to reflect the new SPR form which is now available. These forms can be obtained from your local DIGITAL Office or SPR Center, or by requesting them from SPR Administration.

#### How to Make the Best Use of the SPR Form

#### What We Can Do for You:

- 1. Blank SPR forms are available upon request in the desired quantities through the SPR Administration (P.O. Box F) and your local office/SPR Center.
- 2. Copies of the SPR acknowledgement and answer are sent to the appropriate DIGITAL Office/SPR Center for their information.
- STATUS FOR SUBMITTED SPRS IS PROVIDED UPON REQUEST.
- 4. SPRs marked PROBLEM/ERROR will have a response for DIGITAL SUPPORTED products. These SPRs should refer to suspected deficiencies in the software.
- 5. SPRs marked SUGGESTION are forwarded to the pertinent software group for information purposes, and are responded to at their discretion.

#### What You Can Do for Us:

- 1. Fill out the form completely either by typing or printing clearly. PLEASE INCLUDE YOUR SOFTWARE SERVICE CUSTOMER NUMBER IN THE ADDRESS BOX.
- 2. Limit only one problem per SPR form. Several problems on an SPR can lengthen the turnaround time.
- 3. WHENEVER POSSIBLE, SUBMIT AN SPR WITH ATTACHMENTS, SUCH AS MACHINE READABLE DATA, DETAILED INSTRUCTIONS ON HOW TO REPRODUCE THE PROBLEM, PROGRAM AND/OR DATA FILES, LISTINGS, AND CONSOLE LOG.
- 4. It would be helpful to all concerned if problems with patches are reported as soon as possible.
- 5. For security SPRs, it is imperative that the DO NOT PUBLISH box be marked.
- 6. It would be helpful if tapes submitted with SPRs are labeled (track and density), and have a directory attached.
- 7. Complete the questionnaire that is supplied with each SPR answer. Your feedback is essential in monitoring the quality of our responses.
- 8. SPRs should not be used for problems concerning software policy, software distribution, or hardware. The local office should be contacted in these cases.

#### GENERAL INFORMATION

PDP-8 DIGITAL SOFTWARE NEWS (GLH)

RTS/8 V3.0 (QF028) and OS/8 MACREL/LINKER V2A (QF019) are no longer offered with Digital support. We now offer these two kits as unsupported with license-only (DZ) options. A new MACREL/LINK Software Support Manual, intended for the experienced MACREL user, is scheduled to be available from the Software Distribution Center 20 July 80.

Contact your local sales office for pricing information.

OS/8 COMBINED KIT V3D FORTRAN IV

Seq 51.3.4 R

1 of 1

#### RESTRICTION WITH SUBSCRIPTED VARIABLES (KW)

Restriction: FORTRAN IV will not allow subscripting to be used on both sides of an arithmetic expression.

The following example:

DO 20 I=1,3 20 X(I)=(Y(1),I)+(Y(2),I)

Gives incorrect results.

In the above example, X(I) is treated as an arithmetic statement function, where (I) is a dummy argument, rather than a subscript.

Suggestion: Substitute a variable name for the left hand side of the expression, then move the data from this variable into the subscript desired. For example:

DO 20 I=1,3

XA = (Y(1), I) + (Y(2), I)

X(I)=XA

20 CONTINUE

OS/78 V3.Ø BASIC Seq 72.60.5 R

1 of 1

NOTES ON "FILE#" STATEMENT (KW)

Restriction: The following program will appear to "hang" at line 110:

100 FILEV#1:"SLU2:"
110 FILE#2:"SLU2:"
120 PRINT#1:"HELLO"
130 INPUT#2:X
140 END

The program is not "hung", but is waiting for a "carriage return". When the return key is typed, the program will continue. This is a restriction of the "FILE#" statement when used with non-file structured devices. However this problem does not exist with the TTY (console) device, provided "FILE# 0" is specified.

A little known feature of BASIC allows you to use "#0" for both file statements in the above example (for a TTY).

Suggestion:

- 1) Open file #2 (above) immediately prior to the input statement.
- 2) If your configuration permits, set "SLU2" to be a console device prior to execution, and use #0 for both file statements.

COS-310 V8.00 (Patch 11)

Seq 81.1.11 M

1 of 3

TIMING PROBLEMS ACCESSING RXO1 DRIVES 2 AND 3 (CW)

#### PROBLEM:

The RXO1 handler is dependent upon the speed of the processor for proper operation. Therefore, it will not always function properly on all processors.

#### SOLUTION:

The attached patch to SYSGEN corrects this problem. It also changes the version number of SYSGEN to V8.00E. SYSGEN/C must be run after the patch has been made to install the modified RX handler in the Monitor.

COS-310 V8.00 Seq 81.1.11 M (Patch 11)

1. Create a PATCH command file (PTll) using the following editor commands:

2. Check the PTll command file by running PATCH without the /C option. PATCH simulates the patching operation but does not change the file on the system device. When run without the /C option, PATCH displays CHECKSUM CORRECT--USE OPTION C TO UPDATE rather than NEW BLOCK PATCHED OK. To check the command file enter the following:

#### .R PATCH, PT11

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor. If PATCH does not return to the Monitor, check the PTll command file to ensure that it was entered correctly.

COS-310 V8.00 (Patch 11)

Seq 81.1.11 M

3 of 3

3. Install the patch by entering the following command:

.R PATCH, PT11/C

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor.

COS-310 V8.01 (Patch 7)

Seq 81.2.8 M

1 of 3

TIMING PROBLEMS ACCESSING RXO1 DRIVES 2 AND 3 (CW)

#### PROBLEM:

The RXO1 handler is dependent upon the speed of the processor for proper operation. Therefore, it will not always function properly on all processors.

#### SOLUTION:

The attached patch to SYSGEN corrects this problem. It also changes the version number of SYSGEN to V8.01D. SYSGEN/C must be run after the patch has been made to install the modified RX handler in the Monitor.

COS-310 V8.01 (Patch 7)

Seq 81.2.8 M

2 of 3

1. Create a PATCH command file (PT07) using the following editor commands:

2. Check the PT07 command file by running PATCH without the /C option. PATCH simulates the patching operation but does not change the file on the system device. When run without the /C option, PATCH displays CHECKSUM CORRECT--USE OPTION C TO UPDATE rather than NEW BLOCK PATCHED OK. To check the command file enter the following:

#### .R PATCH, PT07

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor. If PATCH does not return to the Monitor, check the PT07 command file to ensure that it was entered correctly.

COS-310 V8.01 (Patch 7)

Seq 81.2.8 M

3 of 3

3. Install the patch by entering the following command:

.R PATCH,PT07/C

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor.

COS-310 V8.02 (Patch 1)

Seq 81.3.1 M

1 of 3

TIMING PROBLEMS ACCESSING RXOL DRIVES 2 AND 3 (CW)

#### PROBLEM:

The RXO1 handler is dependent upon the speed of the processor for proper operation. Therefore, it will not always function properly on all processors.

#### SOLUTION:

The attached patch to SYSGEN corrects this problem. It also changes the version number of SYSGEN to V8.02B. SYSGEN/C must be run after the patch has been made to install the modified RX handler in the Monitor.

COS-310 V8.02 Seq 81.3.1 M (Patch 1) 2 of 3

1. Create a PATCH command file (PTO1) using the following editor commands:

2. Check the PTO1 command file by running PATCH without the /C option. PATCH simulates the patching operation but does not change the file on the system device. When run without the /C option, PATCH displays CHECKSUM CORRECT--USE OPTION C TO UPDATE rather than NEW BLOCK PATCHED OK. To check the command file enter the following:

#### .R PATCH,PT01

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor. If PATCH does not return to the Monitor, check the PT01 command file to ensure that it was entered correctly.

COS-310 V8.02 (Patch 1)

Seq 81.3.1 M

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3. Install the patch by entering the following command:

.R PATCH,PT01/C

 ${\tt PATCH}$  will respond by displaying the PATCH dialogue and returning to the  ${\tt Monitor.}$ 

#### PDP-8 DIGITAL SOFTWARE NEWS CUMULATIVE INDEX AUGUST/SEPTEMBER 1980

This is a complete listing of all articles for current products supported in the 8 Digital Software News. Missing sequence numbers may pertain to problems unique to other versions of the same product.

#### IMPORTANT!

Unassigned articles are indicated: UNASSIGNED.

Flags are currently being installed for all articles. The flags and definitions are as follows.

- M = Mandatory Patch. These patches correct errors in the software product. All users are required to apply these patches to maintain consistent "user level" unless the accompanying article specifies otherwise.
- F = Optional Feature Patch. These patches extend or configure functionality into the product. These functions will be treated as a supported part of the product for the duration of the current release and will be incorporated with any future release, unless otherwise stated.
- R = Restriction. These articles discuss areas that will not be patched in the current release because they require major modifications or because of the product. Restrictions, except those described as permanent, are reviewed and modified when possible as part of the normal release cycle.
- N = Note. These articles provide explanatory information that supplements the manual set and provide more detailed information about a program or package. They also provide procedural information to make it easier to use a program or package.

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OS/8 V3D		
*Articles dated October 1977 appeared in OS/8 V3D Software Review, October	ober 1977.	
DOCUMENTATION FAULTY DESCRIPTION FOR ERROR PERFORMANCE	·01 N*	0et 77
HANDLER CTRL/Z AND NULL	01 0#	Oct 77
NOTES/PROGRAMMING HINTS DATE ALGORITHM	01 N	Dec 77
UTILITIES ADDING A NEW CCL COMMAND DEFAULT EXTENSIONS FOR TECO HOW TO COPY LARGE FILES	01 N# 02 O# 03 O#	Oct 77 Oct 77 Oct 77
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BASIC RESTRICTION ON EXTENDED RANGE FOR-NEXT LOOPS	01 R	Oct 77
BATCH CANNOT MOVE BATCH INPUT FILE RESTARTING BATCH RUNNING BATCH IN 32K	01 R 02 N 03 O	Oct 77 Oct 77 Oct 77
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GENIOX GENIOX QUESTIONS	01 N	Oct 77

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#### WHY YOU SHOULD JOIN DECUS

- SYMPOSIA
- PROGRAM LIBRARY
- TECHNICAL PUBLICATIONS
- SPECIAL USER GROUPS

DECUS (the Digital Equipment Computer Users Society), a worldwide association of customers and employees, provides a forum for the exchange of useful information, new program packages, and other innovations among those who use and supply the products of Digital Equipment Corporation.

Founded in 1961, DECUS is one of the largest and most active associations of its type in the world. Its objectives are to advance the effective utilization of computers, computer peripheral equipment, and software manufactured and marketed by Digital Equipment Corporation, by promoting the interchange of information concerning their uses; advance the art of computation through mutual education and exchange of ideas of information; establish standards and provide channels to facilitate the exchange of computer programs among DECUS members; provide feedback to the computer industry on equipment and software needs; and to reduce the duplication of development efforts.

DECUS membership is free--upon application--to owners of DIGITAL computers and to their computer-interested employees. Membership carries important benefits and opportunities; among them are access to the program library; membership in local, regional, and national organizations; invitations to symposia dedicated to optimal use of DIGITAL equipment; opportunity to present papers and workshops on your own new ideas; and, finally, access to special interest groups dedicated to particular uses, languages, operating systems, and hardware configurations.

The program library maintained by DECUS contains over 1700 active software packages written and submitted by members and DIGITAL employees, and available to members for the media fee and reproduction cost only. Programs in the library range from enhanced editors and cross compilers to statistics packages and games. Of particular interest to college and university customers, for example, might be a package of programs for registration, class scheduling, dormitory management, and annual giving records. A laboratory user could take advantage of various statistical packages, or programs that perform Fourier transforms or least squares fitting. There are programs for circuit analysis, resonance simulation, blood-count evaluation, and stress testing, and scores of others which medical. scientific, or engineering customers could employ. Business people can find accounting packages, data analysis and

payroll programs among the library's offerings. In addition, of course, there is a wide range of text editing, display graphics, and enhanced utility programs available.

Local, regional, and national DECUS organizations give members the opportunity to meet other DIGITAL customers and employees in an informal setting. From the monthly local meeting to the semiannual national symposium, the members can discuss their ideas, can learn what others are doing, and can give DIGITAL feedback necessary in improvement and future development of important products. Often, the national meetings in the various countries also provide the stage for major new product announcements by the company, and a showplace for interesting developments in both hardware and software technology. At any meeting a member might describe ideas and programs he has implemented, or fine tuning that has been achieved for a particular application. Members give papers, participate in panel discussions, lead workshops, or conduct demonstrations for the benefit of other members.

DECUS also publishes newsletters focusing on special interest, technical books that contain the compilation of symposia presentations; and a society newsletter.

Many members derive a particular benefit from joining DECUS Special Interest Groups. Special Interest Groups often meet as subsets of regional and national meetings, or they may meet on their own, to discuss their special interest. Here, all RSTS/E users, or everyone interested in COBOL, for example, can have a chance to get together and discuss topics of mutual importance. At present there are more than 20 Special Interest Groups (SIGs) in the U.S. alone. Many of the SIGs print newsletters and disseminate valuable technical information to members. The SIGs really are the front-line of mutual help and problem solving.

DIGITAL provides DECUS with administrative personnel and office space around the world, but the organization is run by its members, who act as speakers for conferences, planners for meetings, editorial and production talent for newsletters and minutes, and the inventors of the ideas and new programs necessary to keep the library up to date. Belonging to DECUS is a valuable adjunct to owning DIGITAL equipment on both the program exchange and the information exchange fronts.

continued

o obtain a DECUS membership form, complete	the form below and return it to the appropriate chapter office.
CHAPTER	ADDRESS
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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).

Areas Covered	SPR Center	Areas Covered	SPR Center
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Canada	Digital Equipment Canada P.O. Box 11500 Ottawa, Ontario Canada K2H 8K8	New Zealand	Digital Equipment N.Z. LTD P.O. Box 17093 Greenlane, Auckland 5, New Zealand
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