DIGITAL SOFTWARE NEWS

FOR THE PDP-8 & PDP-12

Software Information Service
Digital Equipment Corporation
Maynard, Massachusetts 01754

DIGITAL EQUIPMENT CORPORATION ▫ MAYNARD, MASSACHUSETTS

DIGITAL SOFTWARE NEWS

FOR THE PDP-8 AND THE PDP-12

Digital Software News for the PDP-8 & PDP-12 is designed to provide users of PDP-8 and PDP-12 software with up to date information on software problems, programming notes, and new and revised software. Each article, other than announcements and documentation corrections, is coded sequentially by system program in the lower right corner for ease in maintaining a quick reference file. The original material for such a file is supplied in the Software Performance Summary for the PDP-8 & PDP-12. This publication which is placed in each basic software kit, is a collection of all current information on known software problems, patches, and programming notes. As new versions correct software problems and obsolete patches, and reprinted manuals include programming notes and manual corrections, new articles in the Digital Software News will announce the revised software and specify by code which article should be removed from your Software Performance Summary file. Articles may also be replaced when new information becomes available; such as, procedure to circumvent a problem may replace the original report of the problem. All articles in the Digital Software News which should be added to your file will be appropriately coded.

Any questions or problems on the articles contained in these publications or concerning the use of Digital's software should be reported to the Software Specialist or Sales Engineer at your nearest Digital Office.

Additional copies of the current Software Performance Summary and updated issues of the PDP-8 and PDP-12 software price lists are available at no charge upon request from the Program Library. As with usual orders for software, the Program Library will accept orders received directly from U.S. customers. All other customer orders must be routed through the nearest Digital Representative.

PDP-8/12 DIGITAL SOFTWARE NEWS

OCTOBER-NOVEMBER

TABLE OF CONTENTS

SOFTWARE PROBLEMS

AIPOS MONITOR

Problem on RUBOUT

In the AIPOS Monitor, on RUBOUT, the command interpreter sometimes stores information in the wrong file descriptor block. To correct this problem, the following binary patch should be implemented.

Block 1 (add 1 to the starting block) of JOB CONTROL

LOCATION	OLD CONTENTS	NEW CONTENTS
224	7ØØ1	7ØØØ

To implement a source patch, CMØ2, line 417 [IAC] should be deleted. The segment of the source should now read:

```
TAD I P1FAUX
AND P7
IAC
DCA FILCNT
JMP CMI18Ø
```

FOCAL 1969 (DEC-Ø8-AJAE)

Optimum use of the PDP-8/E

The following patch uses the KCF instruction of the PDP-8/E to eliminate input buffer overflow. The patch should be assembled with PAL III so that the binary can be loaded easily each time FOCAL is loaded.

```
                /PATCH TO FOCAL 1969 (AJAE)
                /TO CURE BUFFER OVERFLOW PROBLEM (PDP-8/E ONLY)
                /MAKES USE OF EXTRA 8/E KEYBOARD IOT (KCF)
                /SO MAKING IT IMPOSSIBLE FOR OVERFLOW TO OCCUR
                /PATCHES FOCAL INTERRUPT PROCESSOR
                /LISTING PAGE 44
                /AND FOCAL TTY INPUT ROUTINE
                /LISTING PAGE 45
                 OPATCH=2414
                 INBUF=34
                 P177= 106
                 MBREAK= 2602
                 C200= 123
                 EXIT= 2646
                 RECOVR= 2740
                 SIN=2662
                 INRET=2675
                 KCF=6030
                 *2627
                /PATCH TO INTERRUPT PROCESSOR
2627    6034             KRS                /INPUT CHARACTER
2630    6030             KCF                /CLEAR FLAG
2631    0106             AND P177           /IGNORE BIT 8
2632    7450             SNA                /BLANK?
2633    5245             JMP EXIT-1         /YES-GO INITIATE NEXT READ
2634    1123             TAD C200           /SET BIT 8 ON
2635    3262             DCA SIN
2636    1262             TAD SIN
2637    1202             TAD MBREAK
2640    7650             SNA CLA            /CTRL C?
2641    5340             JMP RECOVR         /YES
2642    1262             TAD SIN
2643    3034             DCA INBUF          /STORE CHARACTER
2644    7410             SKP
2645    6032             KCC                /INITIATE NEXT READ- CHAR. WAS A BLANK
                *2673
2673    5674             JMP I .+1          /PATCH TO INPUT ROUTINE
2674    2414             OPATCH
                *OPATCH
2414    3034    OPATCH   DCA INBUF          /CLEAR INPUT BUFFER
2415    6032             KCC                /INITIATE NEXT READ
2416    1621             TAD I XOUTL        /GET CHARACTER
2417    5620             JMP I .+1          /RETURN TO INPUT ROUTINE
2420    2675             INRET
2421    2676    XOUTL,   2676
                $
```

PDP-12 MASS SPECTROSCOPY HANDLER (MASH)

Limitations in MASH

The current library version of MASH assumes a non-quadrupole mass spectrometer and a 12-bit A/D as part of its standard hardware configuration. The following patches eliminate those restrictions.

A. For a 15-bit A/D:

BLOCK	LOCATION	NEW CONTENTS	OLD CONTENTS	SOURCE
33	122	322Ø	3221	/RESCALE PEAK
	123	1214	1215	/X-Y PARA.
	134	322Ø	3221	

B. For a quadrupole mass spectrometer of the Finnegan variety:

BLOCK	LOCATION	NEW CONTENTS	OLD CONTENTS	SOURCE
6	217	15Ø1	22Ø5	/RESOLUTION IS
	22Ø	2323	2317	/NOW MASS RANGE
	221	4Ø22	1425	
	222	Ø116	2411	
	223	Ø7Ø5	1716	
	315	2225	22Ø1	
21	331	2	7776	/FINNEGAN PEAK
	332	33ØØ	2365	/WIDTH CONSTANT
	333	Ø	6Ø5Ø	
25	15Ø	5	4	/FINNEGAN RELAY
	151	4	5	/PROBLEMS
26	166	Ø	-	/WAITM, Ø/WAITING /RELAY 2
	167	73ØØ	-	/CLA CLL
	17Ø	3Ø15	-	/DCA 15
	171	115Ø	-	/TAD STSCN1
	172	4563	-	/JMS I DOSCN1
	173	2Ø15	-	/ISZ 15
	174	5371	-	/JMP WAITM+3
	175	5766	-	/JMP I WAITM
27	46	1376	115Ø	/LOAD RELAY 2
	176	2	-	
30	13	4775	73ØØ	/JMS WAITM
	175	566	-	
34	354	0	1	/PEAK WIDTH CONSTANT
52	362	4Ø	1Ø31	/ELIMINATE 5Ø UNIT
	363	4Ø	1752	/MASS CHECK

To Replace