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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

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PDP-8 Digital Software News, February/March 1980

TABLE OF CONTENTS

TABLE OF CONTENTS CONT'D.

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.
3. 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 Your 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 For security SPRs, it is imperative that the DO NOT PUBLISH box be marked.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.

OS/8 V3D
Utilities
CREF V5B

Seq 21.15.2 M

1 of 1

INPUT AND OUTPUT FILE SPECIFICATIONS (RY)

The following patch allows you to specify two non-system handlers, where previously only one non-system handler and one system handler were required.

```
.GET SYS:CREF
.ODT
264/1773  1327
327/xxxx  0000
4234/3352 3752
4352/0000 0327
2576/0302 0303
CTRL/C
.SAVE SYS:CREF.SV
```

This patch upgrades CREF.SV from V5B to V5C.

OS/8 V3D
Utilities
EDIT V12B

Seq 21.17.4 M

1 of 1

EDIT.SV "V" OPTION WILL NOT WORK WITH LPT (RY)

The "V" option of EDIT.SV will not work when the LPT interface is the parallel port of the DKC8-AA I/O option board. Install the following patch and EDIT will be upgraded from V12B to V12C.

```
.GET SYS:EDIT
.ODT
2713/6666 5374
2774/xxxx 7040;6574;5314
2714/6661 6570
2372/0302 0303
CTRL/C
.SAVE SYS:EDIT.SV
```

Underlined text is computer generated. To reverse the process, type,

```
.GET SYS:EDIT
.ODT
2713/5374 6666
2714/6570 6661
2372/0303 0302
CTRL/C
.SAVE SYS:EDIT.SV
```

OS/8 V3D
PAL8 V10C

Seq 21.22.3 M

1 of 1

EXPUNGE PATCH TO PAL8 (DBB)

Problem: A symbol definition following an EXPUNGE directive causes a symbol table exceeded (SE) error in some cases.

Diagnosis: The EXPUNGE directive code in PAL8 improperly counts the number of symbols that it deletes from the symbol table.

Solution: Install the following patch which upgrades PAL8 to V10D. All underlined text is computer generated. The "XXXX" below can be any four digit octal number.

```
.GET SYS PAL8
.ODT
1471/4572 5373;7106;7650;5307
1573/xxxx 4572;1020;5272
1533/0303 304
CTRL/C
.SAVE SYS PAL8
```

OS/8 V3D
HANDLERS
TM8E.PA VF

Seq 21.61.1 M

1 of 16

WRITE PROTECT PATCH TO TM8E.PA (DBB)

Problem: A read or space operation on a magtape via the TM8E handler causes errors when the write protect ring is removed.

Diagnosis: The write protected bit in the main status register is not masked out for read and space operations.

Patch: Install the following source patch, assemble it with PAL8 and insert in OS/8 system via BUILD. This patch upgrades the TM8E handler to VG.

```
/
/
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```

```
6701            LWCR=6701       /LOAD WORD COUNT REGISTER AND CLEAR AC
6703            LCAR=6703       /LOAD CURRENT ADDRESS REGISTER AND CLEAR AC
6705            LCMR=6705       /LOAD COMMAND REGISTER AND CLEAR AC
6706            LFGR=6706       /LOAD FUNCTION REGISTER AND CLEAR AC
6712            CLT=6712        /CLEAR TRANSPORT
6714            RMSR=6714       /CLEAR AC AND READ MAIN STATUS REGISTER
6716            RFSR=6716       /CLEAR AC AND READ STUFF
6721            SKEF=6721       /SKIP IF ERROR FLAG IS SET
6723            SKJD=6723       /SKIP IF THE JOB IS DONE (MTTF IS SET)
6724            SKTR=6724       /SKIP IF TAPE UNIT READY (TUR TRUE)
```

```
0007            MTAVERSION="G&77

        /SPECIAL CODES USED WHEN PAGE COUNT=0 (CODES IN BITS 9-11 OF FN WORD)

        /0      (CLOSE) WRITE 2 ECF'S
        /1      REWIND
        /2      SPACE FORWARD/REVERSE RECORDS
        /       IF BIT 0 OF THE FUNCTION WORD IS A 0,
        /               THIS CODE ADVANCES RECORDS.
        /               THE NEGATIVE OF THE NUMBER OF RECORDS IS SPECIFIED BY ARG 3
        /       IF BIT 0 OF THE FUNCTION WORD IS A 1,
        /               THIS CODE BACKSPACES RECORDS.
        /               THE NEGATIVE OF THE NUMBER OF RECORDS IS SPECIFIED BY ARG 3.
        /       THIS COMMAND TAKES THE ERROR RETURN WITH AC=100 IF IT ENCOUNTERS A
        /               FILE MARK AND LEAVES TAPE POSITIONED
        /                       1.  AFTER FILE MARK IF OPERATION IS SPACE FORWARD
        /                       2.  BEFORE FILE MARK IF OPERATION IS SPACE REVERSE
        /3      SPACE FORWARD/REVERSE FILES
        /       IF BIT 0 OF THE FUNCTION WORD IS A 0
        /               THEN THIS FUNCTION ADVANCES PAST FILE MARKS
        /               THE NEGATIVE OF THE NUMBER OF FILE MARKS IS SPECIFIED BY ARG3
        /               THE TAPE IS LEFT POSITIONED AFTER THIS FILE MARK
        /               BUT UNDER NO CIRCUMSTANCES DOES THE TAPE ADVANCE PAST
        /               THE SECOND MARK OF TWO CONSECUTIVE FILE MARKS
        /       IF BIT 0 OF THE FUNCTION WORD IS A 1,
        /               THIS CODE BACKSPACES PAST FILE MARKS.
        /               THE NEGATIVE OF THE NUMBER OF FILE MARKS IS SPECIFIED BY ARG 3.
        /               THE TAPE IS LEFT POSITIONED BEFORE THE LAST FILE MARK EN-
        /               COUNTERED SO THE USER MAY WANT TO DO A FORWARD RECORD NEXT.
        /4      REWIND AND PUT OFF-LINE
        /5      WRITE SINGLE ECF
        /6      PERFORM READ/WRITE OPERATION WITH SPECIFIED BLOCKSIZE
        /       THE NEGATIVE OF THE DESIRED BLOCKSIZE IS SPECIFIED BY ARG 3.
        /7      CURRENTLY UNUSED (TREATED AS A NOP)

        /NOTE: SKIP TO EOD CAN BE PERFORMED BY SKIPPING 4096 FILES

        /MAINTENANCE RELEASE CHANGES:

        /1.     MAJOR CODE OVERHAUL
        /2.     SKIP RECORDS RETURNS NON-FATAL ERROR IF IT DETECTS FILE MARK
        /3.     SKIP FORWARD FILES NEVER PASSES EOD
        /4.     SKIP FORWARD FILES RETURNS ERROR IF IT STARTS IMMEDIATELY
        /       BEFORE A FILE MARK (UNLESS IT'S AT BOT)
        /       IT THEN REMAINS BEFORE THE FILE MARK
        /5.     FIXED TIMING PROBLEM FOR TSC3
        /6.     CHANGED ORDER OF TEST FOR DATA DURING SKIP FORWARD FILES
        /7.     MADE UNUSED FUNCTION CODE 7 ACT AS A NOP
```

```
                /BUILD DESCRIPTOR BLOCK

        0000            *0

000000  7770            -10             /8 ENTRY POINTS

000001  2415  DEVICE TM8E;DEVICE MTA0;200;MTA0&177+4000;ZBLOCK 2
000002  7005
000003  1524
000004  0160
000005  0200
000006  4176
000007  0000
000011  2415  DEVICE TM8E;DEVICE MTA1;200;MTA1&177+4000;ZBLOCK 2
000012  7005
000013  1524
000014  0161
000015  0200
000016  4175
000017  0000
000021  2415  DEVICE TM8E;DEVICE MTA2;200;MTA2&177+4000;ZBLOCK 2
000022  7005
000023  1524
000024  0162
000025  0200
000026  4174
000027  0000
000031  2415  DEVICE TM8E;DEVICE MTA3;200;MTA3&177+4000;ZBLOCK 2
000032  7005
000033  1524
000034  0163
000035  0200
000036  4173
000037  0000
000041  2415  DEVICE TM8E;DEVICE MTA4;200;MTA4&177+4000;ZBLOCK 2
000042  7005
000043  1524
000044  0164
000045  0200
000046  4172
000047  0000
000051  2415  DEVICE TM8E;DEVICE MTA5;200;MTA5&177+4000;ZBLOCK 2
000052  7005
000053  1524
000054  0165
000055  0200
000056  4171
000057  0000
000061  2415  DEVICE TM8E;DEVICE MTA6;200;MTA6&177+4000;ZBLOCK 2
000062  7005
000063  1524
000064  0166
000065  0200
000066  4170
000067  0000
```

```
000071  2415  DEVICE TMAF;DEVICE MTA7;200;MTA7&177+4000;ZBLOCK 2
000072  7005
000073  1524
000074  0167
000075  0200
000076  4167
000077  0000
```

```
        0200            *200

000200  0402   PARITY,402              /CHANGE TC 2 TC HAVE EVEN PARITY
000201  0000   BLOCK0,0                /SET TO 1 TC INHIBIT REWIND CN BLOCK 0
000202  2256   MTISZ,  ISZ MTANC       /USED TC MAKE HANDLER SERIALLY REUSABLE
000203  2366   STOP,   ISZ MTHX        /NORMAL RETURN
000204  7402   MTEXIT,HLT              /CIF CDF TO USER'S FIELD
000205  5766           JMP I MTHX       /GIVE CONTROL BACK TO USER

000206  0000   MNEXT,  0               /POINTER TO 'NEXT'
000207  7200           CLA              /CLA IN CASE USER FORGOT TO
000210  1256           TAD MTANC        /GET UNIT #
000211  7041           CIA
000212  1307           TAD MTATAD       /FIND WHICH ENTRY POINT
000213  3214           DCA MTCOM        /MAKE A 'TAD MTAN'
000214  7402   MTCOM,  HLT              /AND EXECUTE IT
000215  3366           DCA MTHX         /COLLECT ARGUMENTS VIA 'MTHX'
000216  7332           CLA STL RTR      /2000
000217  1214           TAD MTCOM        /MAKE A 'DCA MTAN'
000220  3222           DCA MBLOK        /AND STORE IT AT 'MBLOK'
000221  1202           TAD MTISZ        /RESTORE DESTROYED ISZ
000222  7402   MBLOK,  HLT              /AT ENTRY POINT 'MTAN'
000223  1766           TAD I MTHX       /GET FUNCTION WORD
000224  3313           DCA MTFUN        /SAVE IT IN 'MTFUN'
000225  2366           ISZ MTHX         /POINT TO BUFFER ADDRESS
000226  7240           STA              /GET ONE LESS THAN
000227  1766           TAD I MTHX       /BUFFER ADDRESS
000230  3314           DCA MBUFF        /AND STORE AWAY
000231  2366           ISZ MTHX         /POINT TO BLOCK NUMBER
000232  1766           TAD I MTHX       /GET BLOCK NUMBER
000233  3222           DCA MBLOK        /STORE AWAY
000234  2366           ISZ MTHX         /POINT TO ERROR RETURN
000235  6214           RDF              /GET CALLING FIELD
000236  1240           TAD MTCDIF       /CREATE CIF CDF TO USER'S FIELD
000237  3204           DCA MTEXIT       /STORE AWAY WHERE WILL BE USEFUL LATER
000240  6203   MTCDIF,CIF CDF 0        /GO TO FIELD 0
000241  1256           TAD MTANC        /GET UNIT NUMBER
000242  7112           CLL RTR
000243  7012           RTR
000244  3256           DCA MTANC        /PUT IN BITS 0-2 OF 'MTAND'
000245  1313           TAD MTFUN        /RETRIEVE FUNCTION WORD
000246  0311           AND L70          /ISOLATE FIELD OF BUFFER
000247  1200           TAD PARITY       /GET PARITY BIT AND DENSITY BITS
000250  1256           TAD MTANC        /COMBINE WITH UNIT NUMBER
000251  3214           DCA MTCOM        /TO GET A USEFUL MTA COMMAND
000252  1313           TAD MTFUN        /ZERO BUFFER FOR PIP ON EOF
000253  0311           AND L70          /FIELD OF BUFFER
000254  1276           TAD MTCDF        /MAKE A CDF (BUFFER FIELD)
000255  3256           DCA USECDF       /STORE IT AWAY
                USECDF,
000256  0000   MTANC,  0               /AND EXECUTE IT
000257  1313           TAD MTFUN        /RETRIEVE FUNCTION WORD
000260  7004           RAI              /GET READ/WRITE BIT INTO LINK
000261  0275           AND P7600        /GET # OF WORDS IN BUFFER
000262  7470           SNA SZL          /ZERO BUFFER IF NORMAL READ
```

```
000263  5275            JMP P7600       /USER WANTS SOME OTHER FUNCTION
000264  7041            CIA             /A NORMAL READ.  GET NEGATIVE NUMBER OF WORDS
000265  3315            DCA MTW         /AND STORE IN LOOP COUNTER 'MTW'
000266  1314            TAD NBUFF       /GET ONE LESS THAN ADDRESS OF BUFFER
000267  3256            DCA MTAND       /AND STORE IT AWAY IN POINTER 'MTAND'
000270  2256  MCLRLP,   ISZ MTAND       /INCREMENT POINTER
000271  0100  L100,     100             /THE PREVIOUS 'ISZ' MAY SKIP.  AC STAYS ZERO
000272  3656            DCA I MTAND     /ZERO WORD CURRENTLY POINTED TO
000273  2315            ISZ MTW         /INCREMENT LOOP COUNTER.  ARE WE DONE?
000274  5270            JMP MCLRLP      /NO
000275  7600  P7600,    7600            /YES.  CLEAR AC IN CASE NOT A NORMAL READ
000276  6201  MTDFF,    DFF 0           /POINT TO FIELD OF HANDLER
000277  3256            DCA MTAND       /RESET 'MTAND' FOR NEXT CALL
000300  1201            TAD PLOCK0
000301  7450            SNA             /OPERATE IN MULTIPLE-FILE MODE?
000302  1222            TAD NBLOK       /RETRIEVE BLOCK
000303  7640            SZA CLA         /IS IT BLOCK 0?
000304  5312            JMP RTGBLK      /NO
000305  1305  P13XX,    TAD P13XX       /YES.  REWIND (THIS LOCATION MUST CONTAIN 13XX)
000306  4315            JMS MTH         /CALL MAGTAPE ROUTINE
000307  1376  MTATAD,   TAD MTA0              /USED TO MAKE HANDLER SERIALLY REUSABLE
                                        /WA IMMATERIAL
000310  0175  M7603,    -7603           /WC IMMATERIAL
000311  0070  L70,      70              /NO REWIND ERRORS (THESE CAN'T occur)
000312  4606  RTGBLK,   JMS I RNEXT     /GO TO 'NEXT' AND SET UP POINTER TO 'MTFUN'
000313  0000  MTFUN,    0               /OS/8 HANDLER FUNCTION WORD
                                        /MUST BE AT LOCATION AFTER CALL TO 'NEXT'
000314  0000  NBUFF,    0               /ONE LESS THAN ADDRESS OF BUFFER
                                        /MUST BE AT LOCATION AFTER 'MTFUN'
```

```
                /       MTH

                /SET UP WC AND CA REGISTERS, LOAD FUNCTION AND GO

                /CALLING SEQUENCE:

                /       TAD (FNWORD
                /       JMS MTH
                /       BUFFER ADDRESS-1
                /       -WORD COUNT
                /       MASK FOR UNACCEPTABLE ERROR CONDITIONS
                /       <NORMAL RETURN>

                /       TAKES HANDLER ERROR RETURN ON ERRORS.
                /       IF ERROR, AC HAS ERROR CODE FROM MAIN STATUS REGISTER
                /       AC IS POSITIVE IF E.O.F. READ

000315  0000  MTH,   0                       /MUST BE AT 3RD LOC AFTER CALL TO NEXT
000316  3342          DCA ERROR             /SAVE FUNCTION TEMPORARILY
000317  6724          SKTR
000320  5317          JMP .-1               /FIX TIMING BUG
000321  6712          CLT                   /CLEAR THE WORLD
000322  1214          TAD MTCOM             /GET COMMAND
000323  6705          LCMR                  /LOAD COMMAND REGISTER
000324  1715          TAD I MTH             /GET CURRENT ADDRESS
000325  6703          LCAR                  /LOAD IT
000326  2315          ISZ MTH               /POINT TO WORD COUNT
000327  1715          TAD I MTH             /GET WORD COUNT (TWO'S COMPLEMENT THEREOF)
000330  6701          LWCR                  /LOAD IT
000331  2315          ISZ MTH               /POINT TO ERROR MASK
000332  1342          TAD ERROR             /GET FUNCTION BACK
000333  6706          LFCR                  /GO BABY GO
000334  4342          JMS ERROR             /CHECK FOR ERROR
000335  6723          SKJD                  /THROUGH?
000336  5334          JMP .-2               /NO
000337  4342          JMS ERROR             /YES, ANY ERRORS?
000340  2315  E1,     ISZ MTH               /AMAZING WE MADE IT (NO ERRORS)
000341  5715          JMP I MTH             /NORMAL RETURN

                      IFNZRO MTFUN-BIGBLK-1 <MTFERR,XXX>
                      IFNZRO NBUFF-MTFUN-1 <NBUFER,XXX>
                      IFNZRO MTH-NBUFF-1 <MTHERR,XXX>
```

```
000342  0000  ERROR, 0
000343  1275         TAD P7600        /YES
000344  6034         KRS              /IS IT CTRL/C?
000345  1310         TAD M7603        /ALLOW PARITY TELETYPES
000346  7650         SNA CLA
000347  6031         KSF
000350  5353         JMP SIFE
000351  6712         CLT              /ABORT I/O
000352  5675         JMP I P7600      /RETURN TO OS/8 KEYBOARD MONITOR
000353  6721  SIFE,  SKEF            /SKIP ON ERROR
000354  5742         JMP I ERROR      /RETURN, NO ERRORS
000355  6714         RMSR             /WHAT'S CAUSING THE ERROR?
000356  0715         AND I MTH        /IS IT A GOOD ONE? (USE ERROR MASK)
000357  7650         SNA CLA          /IS ERROR ACCEPTABLE?
000360  5340         JMP .+1          /YES
000361  6714         RMSR             /NOT ACCEPTABLE
000362  0271         AND L100         /IS IT AN E.O.F.?
000363  7450         SNA              /IF SO, LEAVE BIT 0 CLEAR
000364  6714         RMSR
000365  5204         JMP MTEXIT       /AND LEAVE WITH STATUS IN AC

                     IFZERO .-36784000 <PERR,XXX>
```

```
        0366            *366
000366  0007    MTHX,   MTAVERSION
000367  2256    MTA7,   ISZ MTANC
000370  2256    MTA6,   ISZ MTANC
000371  2256    MTA5,   ISZ MTANC
000372  2256    MTA4,   ISZ MTANC
000373  2256    MTA3,   ISZ MTANC
000374  2256    MTA2,   ISZ MTANC
000375  2256    MTA1,   ISZ MTANC
000376  2256    MTA0,   ISZ MTANC
000377  4206            JMS PNEXT       /GET ADDRESS OF FIRST LOCATION ON NEXT PAGE
        0400            PAGE

                IFNZRO PARITY-200 <PARERR,XXX>
                IFNZRO BLOCKO-201 <BLCERR,XXX>
```

```
      0400          *400

000400  0000  NEXT,  0                /AC MUST BE CLEAR
000401  1200         TAD NEXT
000402  1277         TAD KSTOP
000403  3303         DCA KSTOP        /ADDRESS OF RETURN ROUTINES
000404  1200  P12XX, TAD NEXT         /THIS LOCATION MUST CONTAIN 12XX
000405  1300         TAD KBLOK
000406  3267         DCA WC           /GET ADDRESS OF "NBLOK"
000407  1667         TAD I WC         /GET WORD COUNT FROM "NBLOK"
000410  3267         DCA WC           /STORE IN "WC"
000411  1600         TAD I NEXT
000412  3301         DCA COUNT        /GET CS/8 FUNCTION WORD
000413  2200         ISZ NEXT         /POINT TO "NBUFF"
000414  1600         TAD I NEXT
000415  3266         DCA BUFFER       /GET BUFFER ADDRESS - 1
000416  2200         ISZ NEXT         /POINT TO "MTH"
000417  1377         TAD (3673
000420  3270         DCA ERFLAG       /DEFALLT IS REPORT ALL ERRORS EXCEPT ECF
000421  1301         TAD COUNT
000422  7104         CLL RAL          /LINK SPECIFIES READ OR WRITE
000423  0376         AND (7600        /-(# OF BLOCKS)*200
000424  7450         SNA
000425  5272         JMP ZERO         /0 PAGE COUNT!
000426  3301         DCA COUNT
000427  1376         TAD (7600
000430  3267         DCA WC           /CS/8 USES 128 WORD BLOCKS
000431  1375  RDWR,  TAD (7773       /READ WITH WRITE RING OUT OK
000432  7430         SZL
000433  1374         TAD (4           /WRITE ERRORS IF WRITE RING OUT
000434  3270         DCA ERFLAG
000435  7430         SZL              /READ OR WRITE?
000436  7332         STL CLA RTR      /WRITE.   +2000 TO CONVERT READ CODE TO WRITE CODE
000437  1373         TAD (2000        /READ (OR WRITE)
000440  3276         DCA FN           /SAVE THIS COMMAND
000441  1276  RL1,   TAD FN           /GET FUNCTION BACK
000442  4263         JMS GO           /DO FUNCTION
000443  1266         TAD BUFFER       /NEXT 128 WORDS
000444  1372         TAD (200
000445  3266         DCA BUFFER
000446  1301         TAD COUNT        /ANY MORE?
000447  1376         TAD (7600
000450  7450         SNA
000451  5703         JMP I KSTOP      /NO.  GIVE NORMAL RETURN
000452  3301         DCA COUNT        /YES.  LOOP
000453  5241         JMP RL1          /DO I/O FOR NEXT 128 WORD RECORD
```

```
000454  1371  EFL2,  TAD (5000       /WRITE EOF
000455  4263         JMS GO          /DO FUNCTION
000456  1371  EFL1,  TAD (5000       /WRITE EOF
000457  5353         JMP UNLOAD      /DO FUNCTION AND RETURN
000460  3270  REW,   DCA ERFLAG      /REWIND NEVER ERRORS
000461  1204         TAD P12XX
000462  5353         JMP UNLOAD      /DO FUNCTION AND RETURN TO USER

000463  0000  GO,    0
000464  1370         TAD (100        /ADD IN "GO" BIT
000465  4600         JMS I NEXT      /CALL MTM (NEXT NOW POINTS TO MTM)
000466  7402  BUFFER,HLT
000467  0000  WC,    0
000470  7777  ERFLAG,-1
000471  5663         JMP I GO

000472  1301  ZERO,  TAD COUNT       /RETRIEVE FN WORD (MUST PRESERVE LINK)
000473  0367         AND (7          /ISOLATE SPECIAL CODE
000474  1304         TAD PJUMP
000475  3276         DCA FN
000476  7402  FN,    HLT             /BRANCH THROUGH JUMP TABLE

000477  7670  KSTOP, STOP-MTFUN      /USED TO RELOCATE "STOP"
000500  7707  KRLOK, RLOK-MTFUN      /USED TO RELOCATE "RLOK"
000501  0000  COUNT, 0
000502  0000  FLAG,  0
000503  0000  KSTOP, 0
000504  5305  PJUMP, JMP TABLE       /USED TO CREATE JMP INTO JUMP TABLE
000505  5254  TABLE, JMP EFL2        /0      CLOSE, WRITE TWO EOF'S
000506  5260         JMP REW         /1      REWIND
000507  5347         JMP SPACE       /2      SPACE FORWARD/REVERSE RECORDS
000510  5315         JMP SEOF        /3      SPACE FORWARD/REVERSE FILES
000511  5353         JMP UNLOAD      /4      REWIND AND OFF-LINE
000512  5256         JMP EFL1        /5      WRITE EOF
000513  5355         JMP SPEC        /6      READ OR WRITE WITH SPECIAL BLOCKSIZE
000514  5703         JMP I KSTOP     /7      UNUSED (FOR NOW IT IS A NOP)
```

```
000515  7010  SEOF,  RAR              /LINK ON MEANS REVERSE
000516  3276         DCA FN           /GET DIRECTION BIT TO BIT 0 OF 'FN'
000517  1267         TAD WC
000520  3301         DCA COUNT        /NEGATIVE # OF FILES TO SKIP
000521  7240         STA
000522  3267         DCA WC           /SKIP 1 RECORD AT A TIME
000523  6714         RMSR
000524  0366         AND (3000        /CHECK BOT AND REWINDING BITS
000525  7640         SZA CLA          /SIMULATE DATA IF AT BOT (OR REWINDING)
000526  7201  FILE,  CLA IAC          /WE'VE SEEN DATA
000527  3302  FILE2, DCA FLAG         /WE'RE IMMEDIATELY PAST FILE MARK IF FLAG=0
000530  1276         TAD FN           /GET DIRECTION IN BIT 0
000531  7133         STL IAC RTR      /FORWARD (6000) OR REVERSE (7000)
000532  4263         JMS GO           /DO FUNCTION
000533  6714         RMSR             /GET STATUS BACK FOR SPACE RECORD OPERATION
000534  0370         AND (100         /JUST INTERESTED IN EOF BIT
000535  7650         SNA CLA          /SKIP IF FILE MARK FOUND
000536  5326         JMP FILE         /SKIP ANOTHER RECORD
000537  1276         TAD FN
000540  1302         TAD FLAG
000541  7650         SNA CLA          /WAS THERE NO DATA AND DIRECTION FORWARD?
000542  5346         JMP BSPACE       /YES.  BACKSPACE 1 RECORD
000543  2301         ISZ COUNT        /NO.  EITHER SAW DATA OR WAS GOING IN REVERSE
000544  5327         JMP FILE2        /GO SPACE PAST NEXT FILE
000545  5703         JMP I .+STOP     /GIVE NORMAL RETURN

              /FLAG .NE.  0 MEANS SAW DATA

000546  7120  BSPACE,STL              /NO.  SET DIRECTION BIT TO REVERSE
000547  1375  SPACE,  TAD (7773      /MUST NOT CHANGE LINK
000550  3270         DCA ERFLAG       /ALL ERRORS ARE FATAL
000551  7010         RAR              /LINK ON MEANS REVERSE (READ BIT)
000552  7133         STL IAC RTR      /FORWARD (6000) OR REVERSE (7000)
000553  4263  UNLOAD,JMS GO           /DO FUNCTION
000554  5703         JMP I .+STOP     /GIVE NORMAL RETURN

000555  1372  SPEC,  TAD (200        /ALLOW ONLY ONE RECORD FOR SPECIAL I/O
000556  3301         DCA COUNT        /'WC' IS ALREADY SET UP FOR SPECIAL RECORD LENGTH
000557  5231         JMP RDWR
000566  3000
000567  0007
000570  0100
000571  5000
000572  0200
000573  2000
000574  0004
000575  7773
000576  7600
000577  3673
```

$

```
BIGBLK 0312     RDWR   0431
BLOCKO 0201     REW    0460
BSPACE 0546     RFSR   6716
BUFFER 0466     RL1    0441
CLT    6712     RMSR   6714
COUNT  0501     SECF   0515
EFL1   0456     SIFE   0353
EFL2   0454     SKEF   6721
ERFLAG 0470     SKJC   6723
ERROR  0342     SKTR   6724
F1     0340     SPACF  0547
FILE   0526     SPEC   0555
FILE2  0527     STOP   0203
FLAG   0502     TAPLF  0505
FN     0476     UNLOAD 0553
GO     0463     USRCDF 0256
KBLCK  0500     WC     0467
KSTOP  0477     ZERO   0472
ICAF   6703
ICMF   6705
IFGF   6706
IWCF   6701
I10C   0271
I70    0311
MCLFLP 0270
MTANC  0256
MTATAD 0307
MTAVFP 0007
MTAC   0376
MTA1   0375
MTA2   0374
MTA3   0373
MTA4   0372
MTA5   0371
MTA6   0370
MTA7   0367
MTCDF  0276
MTCDIF 0240
MTCOM  0214
MTEXIT 0204
MTFLN  0317
MTH    0315
MTHX   0366
MTISZ  0202
M7603  0310
NBLCK  0222
NBUFF  0314
NEXT   0400
NSTOP  0503
PARITY 0200
PJUMP  0504
PNEXT  0206
P12XX  0404
P13XX  0305
P7600  0275
```

```
ERRORS DETECTED: 0
LINKS GENERATED: 0
```

OS/8 V3D Extension Kit
BASIC
BLOAD V5A

Seq 31.10.1 M

1 of 1

BLOAD WILL NOT BUILD CCB PROPERLY (JR)

On some very large programs, BLOAD will not build the CCB properly when the /K option is used. The following patch corrects this:

```
.GET SYS BLOAD
.ODT
2155/xxxx       0000
2156/xxxx       6203
2157/xxxx       7000
2160/xxxx       1000

2775/2534       2154
3027/6501       6502
CTRL/C
SA SYS BLOAD
```

This patch upgrades BLOAD to V5B.

OS/8 V3D Device Extensions Kit
UTILITIES
PAL8 V13A

Seq 35.14.1 M

1 of 1

EXPUNGE PATCH TO PAL8 (DBB)

Problem: A symbol definition following an EXPUNGE directive causes a symbol table exceeded (SE) error in some cases.

Diagnosis: The EXPUNGE directive code in PAL8 improperly counts the number of symbols that it deletes from the symbol table.

Solution: Install the following patch which upgrades PAL8 to V13B. All underlined text is computer generated. The "XXXX" below can be any four digit octal number.

```
.GET SYS PAL8
.ODT
1471/4573 5373;7106;7650;5307
1573/xxxx 4573;1020;5272
1533/0301 302
CTRL/C
.SAVE SYS PAL8
```

OS/8 V3D Device Extension Kit — Seq 35.51.1 M
BASIC
BLOAD V5B — 1 of 1

BLOAD WILL NOT BUILD CCB PROPERLY (JR)

On some very large programs, BLOAD will not build the CCB properly when the /K option is used. The following patch corrects this:

```
.GET SYS BLOAD
.ODT
2155/xxxx       0000
2156/xxxx       6203
2157/xxxx       7000
2160/xxxx       1000

2775/2520       2154
3027/6502       6503
CTRL/C
SA SYS BLOAD
```

This patch upgrades BLOAD to V5C.

MACREL/LINKER V2A
Notes & Documentation

ERROR IN .MCALL MACRO EXAMPLE (DBB)

Problem: The definition of the .MCALL macro in Section 10.7, page 10-14 of the MACREL/LINK User's Manual (AA-5664B-TA), is in error.

Solution: Each of the eight lines beginning with "IF NB" should contain an apostrophe (single quote) immediately following the dollar sign ($). For example, the line,

```
.IF NB A <$A=1>
```

should be changed to read:

```
.IF NB A <$'A=1>
```

OS/8 FORTRAN IV V3D
FORLIB

Seq 51.10.1 M

1 of 1

FORTRAN IV DLOG PATCH (JR)

There is a problem with DLOG where it could not handle numbers smaller than 1.E-018 correctly. The following patch fixes this problem.

Make a source change to DLOG.RA using either EDIT or TECO. Replace this line:

```
DALA,     EADD      DAL1      /ADD BACK
```

with:

```
DALA,     FLDA%     BPDAL     /GET ARGUMENT BACK
```

```
.R RALF
*DLOG.RL<DLOG.RA

.R LIBRA
*FORLIB.RL<FORLIB.RL,DLOG.RL/Z/R
```

OS/78 V3.0
UTILITIES
PAL8 V13A

Seq 72.19.1 M

1 of 1

EXPUNGE PATCH TO PAL8 (DBB)

Problem: A symbol definition following an EXPUNGE directive causes a symbol table exceeded (SE) error in some cases.

Diagnosis: The EXPUNGE directive code in PAL8 improperly counts the number of symbols that it deletes from the symbol table.

Solution: Install the following patch which upgrades PAL8 to V13B. All underlined text is computer generated. The "XXXX" below can be any four digit octal number.

```
.GET SYS PAL8
.ODT
1471/4573 5373;7106;7650;5307
1573/xxxx 4573;1020;5272
1533/0301 302
CTRL/C
.SAVE SYS PAL8
```

OS/78 V3.0
BASIC
Notes & Documentation

Seq 72.6Ø.4 M

1 of 1

BRTS ERROR MESSAGE EXPLANATION (JR)

The error messages from BRTS are self-explanatory with the exception of "DRIVER ERROR". Unlike "NO MORE ROOM FOR DRIVERS", "DRIVER ERROR" usually implies that an illegal device was specified.

OS/78 V3.0
FORTRAN IV V4A
Notes & Documentation

Seq 72.90.1 M

1 of 1

MISSING PATCHES BETWEEN V2.0 AND V3.0 FOR OS/78 (JR)

The following patches to FORTRAN IV were not installed in either OS/78 V2.0 or OS/78 V3.0.

A. The following patch is for the correct operation of the EQUIVALENCE statement.

```
.LOAD F4.SV/I
.ODT
2067/1471       1367
2070/1071       5363
2163/xxxx       2071
2164/xxxx       7000
2165/xxxx       1071
2166/xxxx       5271
2167/xxxx       2
1130/6401       6402
CTRL/C
SA SYS F4.SV

.LOAD PASS3.SV/I
.ODT
712/6401        6402
CTRL/C
.SA SYS PASS3.SV
```

This patch upgrades F4.SV to V4B.

B. The following patch corrects the failure of F4 to recognize (") as illegal character in a subroutine call argument:

```
.LOAD F4.SV/I
.ODT
3343/7440       7640
1130/6402       6403
CTRL/C
.SA SYS F4.SV
```

This patch upgrades F4.SV to V4C.

COS-310 V8.00
(Patch 8)

Seq 81.1.8 M

1 of 3

TIMING PROBLEMS WITH RX01 HANDLER (CW)

PROBLEM:

The RX01 handler is dependent upon the speed of the processor for proper operation. Therefore, it will not always function properly on all processors.

SOLUTION:

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

1. Creates a PATCH command file (PT08) using the following editor commands:

```
.ER
.LN
.0100 /N
.0110 13
.0120 274
.0130 6753
.0140 275
.0150 5274
.0160 276
.0170 6752
.0180 277
.0190 5673
.0200 END
.0210 0146
.0220 26
.0230 266
.0240 2143
.0250 END
.0260 0001
.0270 END
.0280 SYSGEN
.0290 2
.0300 377
.0310 7674
.0320 END
.0330 0552
.0340 3
.0350 017
.0360 7676
.0370 235
.0380 4731
.0390 240
.0400 1361
.0410 241
.0420 7041
.0430 242
.0440 4731
.0450 243
.0460 7410
.0470 244
.0480 7673
.0490 246
.0500 5332
```

```
.0510 END
.0520 2355
.0530 20
.0540 314
.0550 2145
.0560 END
.0570 0001
.0580 END
.0590 /X
.0600  <ctrl/z>
.WR PT08
```

2. Check the PT08 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,PT08
```

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor. If PATCH does not return to the Monitor, check the PT08 command file to ensure that it was entered correctly.

3. Install the patch by entering the following command:

```
.R PATCH,PT08/C
```

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

COS-310 V8.00
(Patch 9)

Seq 81.1.9 M

1 of 3

FILEX Conversion Problem (CW)

PROBLEM:

FILEX changes tabs to spaces when copying files. This increases the size of the file and may result in the FULL error message even though the whole file hasn't been copied.

SOLUTION:

The following patch to FILEX corrects this problem. (A tab will no longer be changed to spaces.) It changes the version number of FILEX to V8.00A.

1. Creates a PATCH command file (PT09) using the following editor commands:

```
.ER
.LN
.0100 FILEX
.0110 15
.0120 151
.0130 1357
.0140 153
.0150 5646
.0160 157
.0170 0075
.0180 END
.0190 0631
.0200 7
.0210 246
.0220 2142
.0230 END
.0240 0041
.0250 END
.0260 /X
.0270 <ctrl/z>
.WR PT09
```

COS-310 V8.00
(Patch 9)

Seq 81.1.9 M

3 of 3

2. Check the PT09 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,PT09
```

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor. If PATCH does not return to the Monitor, check the PT09 command file to ensure that it was entered correctly.

3. Install the patch by entering the following command:

```
.R PATCH,PT09/C
```

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

COS-310 V8.01
(Patch 4)

Seq 81.2.4 M

1 of 3

TIMING PROBLEMS WITH RX01 HANDLER (CW)

PROBLEM:

The RX01 handler is dependent upon the speed of the processor for proper operation. Therefore, it will not always function properly on all processors.

SOLUTION:

The following patch to SYSGEN and the Monitor corrects this problem. It also changes the version number of SYSGEN and the Monitor to V8.01C. 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 4)

Seq 81.2.4 M

2 of 3

1. Creates a PATCH command file (PT04) using the following editor commands:

```
.ER
.LN
.0100 /N
.0110 13
.0120 274
.0130 6753
.0140 275
.0150 5274
.0160 276
.0170 6752
.0180 277
.0190 5673
.0200 END
.0210 0146
.0220 26
.0230 266
.0240 2244
.0250 END
.0260 0001
.0270 END
.0280 SYSGEN
.0290 2
.0300 377
.0310 7674
.0320 END
.0330 0552
.0340 3
.0350 017
.0360 7676
.0370 235
.0380 4731
.0390 240
.0400 1361
.0410 241
.0420 7041
.0430 242
.0440 4731
.0450 243
.0460 7410
.0470 244
.0480 7673
.0490 246
.0500 5332
```

```
.0510 END
.0520 2355
.0530 20
.0540 314
.0550 2244
.0560 END
.0570 0001
.0580 END
.0590 /X
.0600  <ctrl/z>
.WR PT04
```

2. Check the PT04 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,PT04
```

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor. If PATCH does not return to the Monitor, check the PT04 command file to ensure that it was entered correctly.

3. Install the patch by entering the following command:

```
.R PATCH,PT04/C
```

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

COS-310 V8.01
(Patch 5)

Seq 81.2.5 M

1 of 3

FILEX Conversion Problem (CW)

PROBLEM:

FILEX changes tabs to spaces when copying files. This increases the size of the file and may result in the FULL error message even though the whole file hasn't been copied.

SOLUTION:

The following patch to FILEX corrects this problem. (A tab will no longer be changed to spaces.) It changes the version number of FILEX to V8.01B.

COS-310 V8.01
(Patch 5)

Seq 81.2.5 M

2 of 3

1. Creates a PATCH command file (PT05) using the following editor commands:

```
.ER
.LN
.0100 FILEX
.0110 15
.0120 151
.0130 1357
.0140 153
.0150 5646
.0160 157
.0170 0075
.0180 END
.0190 0631
.0200 7
.0210 246
.0220 2243
.0230 END
.0240 0001
.0250 END
.0260 /X
.0270 <ctrl/z>
.WR PT05
```

COS-310 V8.01
(Patch 5)

Seq 81.2.5 M

3 of 3

2. Check the PT05 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,PT05
```

PATCH will respond by displaying the PATCH dialogue and returning to the Monitor. If PATCH does not return to the Monitor, check the PT05 command file to ensure that it was entered correctly.

3. Install the patch by entering the following command:

```
.R PATCH,PT05/C
```

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

COS-31Ø V8.Ø1A
DIBOL-8

This article is applicable to all versions of COS-31Ø.

XMITs INTERSPERSED WITH DIRECT ACCESS OPERATIONS

In the past, there have been several questions concerning XMITs interspersed with READs and WRITEs when a data file is opened in update mode. Appendix D of the COS-310 System Reference Manual includes a short discussion of this technique, as well as the three most useful applications (truncating a file, appending to a file, and rewriting a file). The three examples shown in the manual all work as described. However, the manual fails to contain enough information to allow programmers to intersperse XMITs with direct access operations in other situations.

Normally, the mode of the XMIT (read or write) is determined by the last direct access operation that was performed on the file. However, in cases such as the following, the XMIT will be treated as a sequential WRITE even though the last direct access operation was a READ.

```
INIT (1,U,FLNAME,LU)
WRITE (1,RECORD,NUM)
READ (1,RECORD,NUM2)
XMIT (1,RECORD)
```

The COS-310 record management subsystem optimizes input/output operations by keeping a portion of the data file in memory at all times. When a WRITE operation is performed, the updated record is not written to disk immediately. Instead, it is moved into the memory resident portion of the data file and a bit is set as a reminder to write the record to disk at a later time. The mode for an XMIT is determined by checking this bit. If there is a WRITE pending, then the mode is sequential output. Therefore, in most cases if a WRITE is done on a file, all subsequent XMITs to that file will be treated as sequential output operations even when preceeded by a READ. In cases where the READ operation was to a non-memory resident portion of the file the mode will be reset to sequential input.

The INIT / WRITE / READ / XMIT sequence of operations should be avoided. If the sequence of operations must be used it should be changed to INIT / WRITE / FINI / INIT / READ / XMIT. The FINI will force any pending disk writes to be performed.

PDP-8 DIGITAL SOFTWARE NEWS
CUMULATIVE INDEX
FEBRUARY/MARCH 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 orr 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.

Component	Sequence	Mon/Yr
OS/8 FORTRAN IV PLOTTER V3C		
FORTRAN IV PLOTTER ROUTINE, PSCALE, HANGS IN ENDLESS LOOP	01	Apr 77
PLOTTER OUTPUT PROBLEM	02	Aug 77
OS/8 V3D		
*Articles dated October 1977 appeared in OS/8 V3D Software Review, October 1977.		
DOCUMENTATION		
FAULTY DESCRIPTION FOR ERROR PERFORMANCE	01 N*	Oct 77
HANDLER		
CTRL/Z AND NULL	01 O*	Oct 77
NOTES/PROGRAMMING HINTS		
DATE ALGORITHM	01 N	Dec 77
UTILITIES		
ADDING A NEW CCL COMMAND	01 N*	Oct 77
DEFAULT EXTENSIONS FOR TECO	02 O*	Oct 77
HOW TO COPY LARGE FILES	03 O*	Oct 77
OS/8 EXTENSION KIT V3D		
BASIC		
RESTRICTION ON EXTENDED RANGE FOR-NEXT LOOPS	01 R	Oct 77
BATCH		
CANNOT MOVE BATCH INPUT FILE	01 R	Oct 77
RESTARTING BATCH	02 N	Oct 77
RUNNING BATCH IN 32K	03 O	Oct 77
MSBAT		
MARK SENSE BATCH FORTRAN II READS THROUGH DOLLAR SIGNS	01 O	Oct 77
GENIOX		
GENIOX QUESTIONS	01 N	Oct 77

Component	Sequence	Mon/Yr
OS/8 FORTRAN IV V3D		
FORLIB.RL V5A		
PLOT, ADC, AND REALTM MODULES	01 N	Oct 77
F4.SV V4A		
PASSING ARGUMENTS	01 R	Oct 77
EQUIVALENCE STATEMENT	02 M	Oct 77
COMPILER VERSION NUMBERS	03 N	Oct 77
COMPILER GENERATES WRONG LENGTH	04 O	Oct 77
QUESTIONS CONCERNING ARRAY SIZES	05	Oct 77
FRTS V5A		
USE OF EAE MODE A	01 R	Oct 77
FORMATTED INPUT RECORDS LONGER THAN 132 CHARACTERS	02 O	Oct 77
RUNNING FORTRAN IV UNDER BATCH IN 32K	03 O	Oct 77
FPP-8A	04 O	Oct 77
OS/8 V3D		
MONITOR		
NOTES & DOCUMENTATION		
USING THE PDP-8/A PARALLEL PORT FOR A LINEPRINTER	21.1.1 N	Mar 78
SOFTWARE REVIEW CORRECTION	21.1.2 N	Dec/Jan 80
PROBLEM WHEN YOU DESTROY BATCH	21.1.3 N	Aug/Sep 78
COMPONENTS, SUBCOMPONENTS, AND MODULES FOR OS/8 V3D COMBINED KIT	21.1.4 N	Dec/Jan 80
ALPHABETIZED LIST OF OS/8 V3D COMBINED KIT ELEMENTS	21.1.5 N	Dec/Jan 80
HOW TO GET VERSION NUMBERS	21.1.6 N	Dec/Jan 80
CCL		
DEFAULT EXTENSIONS TO TECO	21.3.1 O	May 78
UTILITIES		
NOTES & DOCUMENTATION		
DOCUMENTATION EXAMPLE FOR SET BLOCK	21.10.1 N	Jun/Jul 79
CREF		
BUG WITH FIXTAB	21.15.1 M	May 78
INPUT AND OUTPUT FILE SPECIFICATIONS	21.15.2 M	Feb/Mar 80
EDIT		
`EDIT PROBLEM WITH NO FORMFEED AT END OF THE INPUT FILE	21.17.1 M	Mar 78
EDIT Q COMMAND AFTER L COMMAND	21.17.2 M	Jun/Jul 79
EDIT Q COMMAND PATCH	21.17.3 M	Jun/Jul 79
EDIT.SV "V" OPTION WILL NOT WORK WITH LPT	21.17.4 M	Feb/Mar 80
FOTP		
INCORRECT DIRECTORY VALIDATION	21.19.1 M	Jun/Jul 79
MCPIP		
DATE-78 PATCH FOR MCPIP	21.21.1 M	Mar 78
PAL8		
INCORRECT CORE SIZE ROUTINE	21.22.1 M	Aug/Sep 78
ERRONEOUS LINK GENERATION NOTED ON PAGE DIRECTIVE	21.22.2 M	Aug/Sep 78
EXPUNGE PATCH TO PAL8	21.22.3 M	Feb/Mar 80
PIP		
PIP /Y OPTION DOES NOT WORK PROPERLY WHEN TRANSFERRING A SYSTEM HEAD FROM A DEVICE WHICH IS NOT CO-RESIDENT WITH SYS.	21.23.1 M	Aug/Sep 78
USE OF PIP'S /Y OPTION	21.23.2 N	Aug/Sep 79
PIP10		
DATE '78 PATCH TO PIP10	21.24.1 M	Jun/Jul 79
SET		
USING SET WITH TWO-PAGE SYSTEM HANDLERS	21.26.1 M	May 78
SCOPE RUBOUTS FAIL IN SET	21.26.2 M	May 78
PARSING OF = IN TTY WIDTH OPTION	21.26.3 M	Aug/Sep 78

Component	Sequence	Mon/Yr
HANDLERS		
ASR33		
HOW TO WRITE TWO-PAGE SYSTEM HANDLERS	21.40.1 N	May 78
LPQ		
LDP01 HANDLER FAILS TO RECOGNIZE TABS	21.49.1 M	Jan 80
TM8E		
WRITE PROTECT PATCH TO TM8E.PA	21.61.1 M	Feb/Mar 80
FORTRAN II & SABR		
SABR		
LINE BUFFER PROBLEM IN SABR	21.91.1 M	Oct/Nov 79
OS/8 EXTENSION KIT V3D		
BASIC		
GOOD RANDOM NUMBERS FOR OS/8 BASIC	31.1.1 N	May 78
BASIC EDITOR HAS A FIELD BOUNDARY BUG	31.1.2 N	Aug/Sep 78
BASIC.UF		
BASIC.UF INCOMPATIBLE FROM OS/8 V3C	31.5.1 M	Aug/Sep 78
BLOAD		
BLOAD WILL NOT BUILD CCB PROPERLY	31.10.1 M	Feb/Mar 80
BRTS		
IOTABLE OVERFLOW	31.11.1 M	Mar 78
BASIC PNT FUNCTION	31.11.2 M	Jul 78
LINE SIZE ON OUTPUT OF BASIC	31.11.3 O	Jul 78
PATCH TO CHANGE LINE PRINTER WIDTH	31.11.4 F	Oct/Nov 79
PATCH TO BRTS FOR ADDRESSING LAB 8/E FUNCTIONS	31.11.5 M	Oct/Nov 79
TECO & OTHERS		
TECO		
CHANGING THE DEFAULT EU VALUE	31.20.1 O	Mar 78
CHANGING THE DEFAULT EH VALUE	31.20.2 O	Mar 78
REMOVING YANK PROTECTION	31.20.3 O	Mar 78
SCOPE SUPPORT FOR VT05 USERS	31.20.4 O	Mar 78
PROBLEM WITH AY COMMAND	31.20.5 M	Mar 78
CONDITIONALS INSIDE ITERATIONS	31.20.6 M	Mar 78
ECHOING OF WARNING BELLS	31.20.7 M	Mar 78
CTRL/U SOMETIMES FAILS AFTER *	31.20.8 M	May 78
MULTIPLYING BY 0 IN TECO	31.20.10 M	May 78
Q-REGISTERS DON'T WORK IN 8K	31.20.11 M	MAY 78
CAN'T SKIP OVER A "W"	31.20.12 M	May 78
UNSPECIFIED ITERATIONS AFTER INSERTS	31.20.13 M	Jul 78
NEW FEATURES IN TECO V5	31.20.14 N	Aug/Sep 78
FUTIL		
FUTIL PATCH	31.21.1 M	May 78
PATCH TO FIX 'SHOW CCB' AND MAPPING OF 'CD' MODULES	31.21.2 M	Aug/Sep 78
-237 PATCH	31.21.3 O	Aug/Sep 78
FUTIL PATCH TO MACREL/LINK OVERLAYS	31.21.4 N	Jun/Jul 79
MSBAT		
DIM STATEMENT NOT WORKING IN MSBAT	31.22.1 M	Dec 78/Jan 79
BATCH		
MANUAL INTERVENTION REQUIRED ERRONEOUSLY	31.23.1 M	Aug/Sep 78
OS/8 V3D DEVICE EXTENSIONS		
MONITOR		
NOTES & DOCUMENTATION		
NOTES ON VERSION NUMBERS	35.1.1 N	Apr/May 79
NOTES ABOUT OS/8 V3D DEVICE EXTENSIONS	35.1.2 N	Apr/May 79
FRTS PATCH	35.1.3 M	Apr/May 79
BUILD DOCUMENTATION	35.1.4 N	Apr/May 79

Component	Sequence	Mon/Yr
MONITOR		
MONITOR V3S PATCH	35.2.1 M	Apr/May 79
UTILITIES		
FUTIL		
FUTIL UNDER BATCH PATCH	35.13.1 M	Apr/May 79
PAL8		
EXPUNGE PATCH TO PAL8	35.14.1 M	Feb/Mar 80
ABSLDR		
ABSLDR PATCH	35.18.1 M	Apr/May 79
BASIC		
NOTES & DOCUMENTATION		
OS/8 DEVICE EXTENSIONS BASIC DOCUMENTATION	35.50.1 N	Apr/May 79
BLOAD		
BLOAD WILL NOT BUILD CCB PROPERLY	35.51.1 M	Feb/Mar 80
OS/8 MACREL/LINKER V2A		
NOTES & DOCUMENTATION		
EXPUNGE DOCUMENTATION ERROR	41.1.1 N	Jun/Jul 79
MACREL VERSION NUMBERS	41.1.2 N	Jun/Jul 79
MACRO RESTRICTION IN MACREL	41.1.3 N	Aug/Sep 79
ERROR IN .MCALL MACRO EXAMPLE	41.1.4 N	Feb/Mar 80
MACREL		
EXPUNGE PATCH TO MACREL	41.4.1 F	Jun/Jul 79
INCONSISTENCIES IN MACREL ERROR REPORTING	41.4.2 N	Aug/Sep 79
FORWARD REFERENCE PATCH TO MACREL	41.4.3 M	Aug/Sep 79
OVRDRV		
PATCH TO OVRDRV TO CORRECT CDF PROBLEM	41.5.1 M	Dec/Jan 80
OS/8 FORTRAN IV V3D		
F4		
FORTRAN COMPILER FAILS TO RECOGNIZE " AS AN ERROR	51.3.1 M	Jul 78
FORTRAN COMPILER NOT RECOGNIZING SYNTAX ERROR	51.3.2 M	Jul 78
FORTRAN RUNTIME SYSTEM 2-PAGE HANDLER	51.3.3 O	Aug/Sep 78
FORLIB		
FORTRAN IV DLOG PATCH	51.10.1 M	Feb/Mar 80
RTS-8 V3		
SYSGEN		
RTS-8 V3 NUMERICAL COMPARE SKIP FUNCTIONS	62.25.1 F	Jun/Jul 79
COS-310 V7.00		
COMP		
MAXIMUM SIZE OF DATA DIVISION	70.0 N	Dec/Jan 80
OS/78 V3.0		
MONITOR		
NOTES & DOCUMENTATION		
UPDATE TO OS/78 USER'S MANUAL	72.1.1 N	Dec/Jan 80
UTILITIES		
PAL8		
EXPUNGE PATCH TO PAL8	72.19.1 M	Feb/Mar 80

Component	Sequence	Mon/Yr
BASIC		
NOTES & DOCUMENTATION		
PRINT USING STATEMENT	72.60.1 N	Oct/Nov 79
RL01 DOCUMENTATION ERROR	72.60.2 M	Oct/Nov 79
BASIC AND SLU2 DOCUMENTATION	72.60.3 N	Oct/Nov 79
BRTS ERROR MESSAGE EXPLANATION	72.60.4 M	Feb/Mar 80
BRTS		
PATCH TO CHANGE TTY WIDTH	72.64.1 F	Oct/Nov 79
FORTRAN		
NOTES & DOCUMENTATION		
MISSING PATCHES BETWEEN V2.0 AND V3.0 FOR OS/78	72.90.1 M	Feb/Mar 80
COS-310 V7.00		
COMP		
MAXIMUM SIZE OF DATA DIVISION	70.0 N	Dec/Jan 80
COS-310 V8.00		
COPYING FILES USING SYSGEN/B	81.1.1 M	Dec/Jan 80
HALF/BLOCK TRANSFERS USING RX HANDLER	81.1.2 M	Dec/Jan 80
USING COMMAND FILES WITH PIP	81.1.3 M	Dec/Jan 80
INCORRECT PARSING OF MENU COMMAND FILE	81.1.4 M	Dec/Jan 80
MENU BUFFER PROBLEM	81.1.5 M	Dec/Jan 80
ACCESSING RX01 DRIVES 2 AND 3	81.1.6 M	Dec/Jan 80
DATE COMMAND - ACCEPTS INVALID DAY	81.1.7 M	Dec/Jan 80
TIMING PROBLEMS WITH RX01 HANDLER	81.1.8 M	Feb/Mar 80
FILEX CONVERSION PROBLEM	81.1.9 M	Feb/Mar 80
COS-310 V8.01A		
MENU BUFFER PROBLEM	81.2.1 M	Dec/Jan 80
ACCESSING RX01 DRIVES 2 AND 3	81.2.2 M	Dec/Jan 80
DATE COMMAND - ACCEPTS INVALID DAY	81.2.3 M	Dec/Jan 80
TIMING PROBLEMS WITH RX01 HANDLER	81.2.4 M	Feb/Mar 80
FILEX CONVERSION PROBLEM	81.2.5 M	Feb/Mar 80
XMITs INTERSPERSED WITH DIRECT ACCESS OPERATIONS	81.2.6 M	Feb/Mar 80

DIGITAL EQUIPMENT COMPUTER USERS SOCIETY

INTRODUCTION

DECUS, the Digital Equipment Computer Users Society, was established in March of 1961 to advance the effective use of DIGITAL computers. It is a not-for-profit users group supported in part by Digital Equipment Corporation.

OBJECTIVES

The objectives of the Society 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 and 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.

ORGANIZATION

The Digital Equipment Computer Users Society is a federation of chapters, whose membership is determined by geographic location. The membership is organized to meet the specific needs of members in its area such as Symposia and Special User Group activities. The DECUS chapters are:

- *AUSTRALIAN CHAPTER (Australia, Indonesia, Malaysia, New Zealand, PNG, Singapore,)*
- *EUROPEAN CHAPTER (Europe, Middle East, North Africa, Russia)*
- *CANADIAN CHAPTER (Canada)*
- *U.S. CHAPTER (U.S. and All Others)*

ACTIVITIES

1. SYMPOSIA

Symposia are sponsored throughout the year by each of the DECUS Chapters and Regional/National User Groups. These meetings provide an opportunity for users of DIGITAL computers to meet with other users and with DIGITAL management, engineers, and customer service representatives. They provide a forum for users to exchange information on technique and approaches to issues of common interest and to provide feedback to DIGITAL on existing and future products and services. Sessions at the symposia include user-driven workshops, tutorials, product panels, as well as application/system-specific presentations.

The technical papers and presentations from each symposium are published as DECUS Proceedings.

2. SPECIAL USER GROUPS

DECUS encourages subgrouping of users with common interests and/or geographical proximity.

Special Interest Groups (SIGs) promote the interchange of specialized information for application areas, subject areas (such as languages), or specific operating systems. A group of users must petition the Chapter Executive Board for recognition as a Special Interest Group. The group must have a chairman, a DIGITAL representative, and its organization must meet the guidelines of the Chapter Executive Board.

Geographic subgroupings are formed to service the DECUS members within a specific area although they may also be based on interests as in SIGs. There are four types of geographic subgroupings:

1. *LUGs — Local User Groups*
2. *NUGs — National User Groups*
3. *RUGS — Regional User Groups*
4. *SLUGs — Student Local User Groups*

3. STANDARDS

DECUS promotes user activity in reviewing DIGITAL standards. Users are given the opportunity to comment on DIGITAL standards prior to their finalization.

4. PROGRAM LIBRARY

One of the major activities of the users group is the DECUS Program Library. The Library contains programs written and submitted by users and is maintained and operated separate from the Digital Software Distribution Center. A wide range of software is available, including languages, editors, numerical functions, utilities, display routines, and various other types of application software.

MEMBERSHIP

Membership in DECUS is voluntary and is not subject to membership fee. Members are invited to take an active interest in the Society by contributing to the Program Library, to newsletters, and by participating in its Special User Groups and Symposia. There are two types of membership: Installation Membership and Association Membership.

INSTALLATION MEMBERSHIP

An organization, institution, or individual that has purchased, leased or has on order a computer manufactured by Digital Equipment Corporation is eligible for Installation Membership in DECUS.

An Installation should appoint a person immediately concerned with the use of the computer to act as delegate to the Society. A delegate receives all official communications and has a vote on DECUS policies and elections. An organization or company is eligible for as many voting delegates as it has DIGITAL computers. Each delegate must file an application for Installation Membership.

ASSOCIATE MEMBERSHIP

Any person who is not an appointed Installation Delegate, who has a bona fide interest in DECUS is eligible for Associate Membership.

Membership status is acquired by submitting the enclosed application to the appropriate Chapter Executive Secretary for approval by the Chapter Executive Board.

To obtain a membership form for DECUS, please return this form to the appropriate Chapter office listed below.

NAME: _____
(First) (Last/Family Name)

COMPANY: (INSTALLATION) _____

ADDRESS 1: _____

2: _____

3: _____

4: _____
(City Town,State Province, and Zip Postal Code)

COUNTRY: _____

TELEPHONE: _____ **TELEX** _____

I obtained this form from _____

DECUS OFFICES

DECUS Australia
P.O. Box 384
Chatswood
NSW 2067
Australia

DECUS Canada
P.O. Box 11500
Ottawa, Ontario K2H 8K8
Canada

DECUS Europe
P.O. Box 510
12, avenue des Morgines
CH-1213 Petit-Lancy 1/GE
Switzerland

DECUS U.S. and
Office of the Executive Director
One Iron Way
Marlboro, Massachusetts 01752
USA

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).*

Areas Covered	SPR Center
United States; remainder of Far East, Middle East, Africa Latin America	Administrative Services Group, SWS P.O. Box F Maynard, Ma 01754
Canada	Digital Equipment Canada P.O. Box 11500 Ottawa, Ontario Canada K2H 8K8
United Kingdom, Bahraine, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Qatar, Oman, Saudi Arabia, Syria, United Arab Emirates, Yemen, Arab Republic.	Digital Equipment Corp. LTD Fountain House Butts Centre GB - Reading RG17QN England
Australia-Melbourne	Digital Equipment Aust. PTY. LTD 60 Park Street So. Melbourne Victoria Australia 3205
Australia-Sydney	Digital Equipment Aust. PTY. LTD 123 125 Willoughby Rd. P. O. Box 491 Crows Nest NSW Australia 2065
Brazil	Digital Equipment Comercio Ind. Rua Batatais 429 Esq AL Campin 01423 Jardim Paulista Sao Paulo 0100 Brazil
Caribbean	De Latin America P. O. Box 11038 Fernando Juncos Sta. Santurce PR 00910
France	Digital Equipment France 18, rue Saarinen France Silic 225 F - 94528 Rungis - Cedex France
Italy	Digital Equipment S.P.A. Viale Fulvio Testi 117 I-20092 Cinisillo Balsamo Milan, Italy

Areas Covered	SPR Center
Japan	Digital Equipment Corp. INTL 3rd Floor Kowa Bldg. 8-7 Sanban Cho Chiyoda Ku Tokyo 102 Japan
New Zealand	Digital Equipment N.Z. LTD P.O. Box 17093 Greenlane, Auckland 5, New Zealand
Belgium, Holland, Luxemburg	Digital Equipment B.V. KAAP Horndreef 38 NL - Utrecht/Overvecht Holland
Sweden	Digital Equipment Corp. AB Englundavägen 7 S-171 24 Solna, Sweden
Denmark	Digital Equipment Corp. APS Kristineberg 3 DK-2100 Copenhagen Ø Denmark
Finland	Digital Equipment Corp. OY PL16 SF - 02201 ESPOO 20 Finland
Norway	Digital Equipment Corp. A/S Pottenmakerveien 8 N - Oslo 5 Norway
Austria, East Germany, West Germany, Poland, Hungary, Rumania, Czechoslovakia, Russia, Bulgaria	Digital Equipment Corp. GMBH Wallsteinplatz 2 D - 8 Munich 40 West Germany
Israël	DECSYS Computers LTD. 4, Yirmiyahou Str. P.O. Box 6359 IL - Tel-Aviv 63505 Israël

Areas Covered	SPR Center
Greece, Portugal, Spain, Switzerland, Yugoslavia & Sina (Morocco, Algeria, Tunisia, Cyprus, Turkey, Malta)	Digital Equipment Corp. SA 9, route des Jeunes 1211 Geneva 26 Switzerland

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