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DECUS NO.	8-532
TITLE	OPDDT (ONE PAGE DDT)
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SOURCE LANGUAGE	MACRO-8

DECUS Program Library Write-up DECUS NO. 8-532

THIS PROGRAM OPERATES IN A MANNER SIMILAR TO ODT BUT WITH THESE DIFFERENCES:

1. IT CAN BE RUN ON ANY PAGE EXCEPT ZERO. IT MAY BE MOVED AFTER BEING LOADED BUT NOT AFTER BEING STARTED.

2. ALL ADDRESSES REQUIRE 4 OCTAL DIGITS. IF AN ERROR IS MADE KEEP TYPING: ONLY THE LAST 4 DIGITS BEFORE A COMMAND COUNT.

3. COMMANDS:

3.1 XXXXE THE CONTENTS OF ADDRESS XXXX WILL BE TYPED AFTER HITTING THE E [EXAMINE].

3.11 CARRIAGE RETURN AFTER E, WILL CAUSE THE CONTENTS OF NEXT LOCATION TO BE TYPED.

3.12 YYYYC THE E COMMAND OPENS A LOCATION. YYYYC CAUSES ITS CONTENTS TO BE CHANGED TO YYYY AFTER THE C [FOR CHANGE] IS TYPED.

3.2 XXXXB A BREAKPOINT IS SET IN FRONT OF LOCATION XXXX WHEN THE B IS TYPED. THE BREAKPOINT REMAINS UNTIL A NEW ONE IS TYPED. TO REMOVE ALL BREAKPOINTS SET ONE OUT SIDE THE PROGRAM AREA.

3.3 XXXXG TRANSFER CONTROL [GO] TO ADDRESS XXXX WITH THE INTERRUPT OFF. WHEN THE BREAKPOINT IS REACHED THE CONTENTS OF THE AC AND L ARE SAVED AND THE AC TYPED.

3.31 G REPEATS 3.3 IF NO OTHER COMMAND HAS INTERVENED. USEFUL FOR REPEATING A LOOP.

3.4 P PROCEED FROM THE LAST BREAKPOINT TO THE NEXT. THE CONTENTS OF THE AC AND L ARE FIRST RESTORED.

3.5 XXXXF LIKE G, EXCEPT THAT THE INTERRUPT IS TURNED ON BEFORE ENTERING THE TESTED PROGRAM.

4.0 STARTUP:

START THE PROGRAM AT THE FIRST LOCATION OF THE PAGE ON WHICH IT WAS LOADED: I.E. IF IT WAS LOADED AT 5000 AND MOVED TO 4000, START IT AT 4000.

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                    ~
                    /OPDDT: S,B
                    /4-15-72
                    /WF, TAPE 5, ONE PAGE DEBUGGER
                    *5000 /FOR TEST
                    /RUNS ON ANY PAGE EXCEPT ZERO
5000   4200   INI, JMS . /JMP ST AFTER INITIALIZATION
5001   7240   CLA CMA
5002   1361   TAD RESTAD
5003   0377   AND @177
5004   1200   TAD INI
5005   3201   DCA INST
5006   1302   TAD JMPST
5007   3200   DCA INI
                    /
                    INST=INI+1
                    CN=INI+2
                    PT1=INI+3
                    SAVAC=INI+4
                    T1=INI+5
                    WD=INI+6
                    L=INI+7
                    /
5010   6002   ST, IOF
5011   4213   JMS RD
5012   5211   JMP .-1
                    /
5013   0000   RD, 0
                    /IOF NOT NEEDED.
5014   4351   JMS CRLF
5015   6031   KSF
5016   5215   JMP .-1
5017   6036   KRB
5020   4343   JMS TYPE
                    /
5021   1376   TAD @-320
5022   7450   SNA
5023   5315   JMP P
5024   1375   TAD @11
5025   7450   SNA
5026   5304   JMP G /GO WITH IOF
5027   7001   IAC
5030   7450   SNA
5031   5303   JMP F /GO WITH ION
5032   7001   IAC
5033   7450   SNA
5034   5305   JMP E /EXAMINE
5035   1374   TAD @2
5036   7450   SNA
5037   5256   JMP C /CHANGE
5040   7001   IAC
5041   7450   SNA
5042   5261   JMP B
5043   1373   TAD @22
5044   7510   SPA
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5045  5613  EXIT RD /RETURN TO C ROUTINE
                /
                /ASSEMBLE OCTAL WD
5046  3205  DCA T1
5047  1206  TAD WD
5050  7104  CLL RAL
5051  7104  CLL RAL
5052  7104  CLL RAL
5053  1205  TAD T1
5054  3206  DCA WD
5055  5215  JMP RD+2 /MORE INPUT
                /
5056  1206  C, TAD WD
5057  3603  DCA I PT1
5060  5312  JMP E+5
                /
                /XXXXB--SET UP BREAK POINT, RESTORE PREVIOUS INST.
5061  1201  B, TAD INST
5062  3763  DCA I PT
5063  1363  TAD PT
5064  3364  DCA PT2
5065  1206  TAD WD
5066  3363  DCA PT
5067  1763  TAD I PT
5070  3201  DCA INST
5071  1362  TAD JMPIS
5072  3763  DCA I PT
                /
                /INSERT INDIRECT JMP RESTOR AT XXXX ETSEQ.
5073  5210  JMP ST /WAIT FOR XXXXG OR XXXXB
                /
                /ENTER RESTOR AFTER F OR G I  TYPED
5074  6002  RESTOR, IOF
5075  3204  DCA SAVAC
5076  7004  RAL
5077  3207  DCA L
                /RESTORE AC
5100  1204  TAD SAVAC
5101  4322  JMS POOW
5102  5210  JMPST, JMP ST
                /
5103  6001  F, ION
                /
                /G: XXXXG STARTS THE TESTED PROGRAM AT XXXX
5104  5606  G, JMP I WD
                /
                /XXXXE--CONTENTS OF XXXX IS TYPED. HIT RETURN AND
                /CONTENTS OF NEXT LOCATION IS TYPED.
                /
5105  1206  E, TAD WD
5106  3203  DCA PT1
5107  7300  CLA CLL
5110  1603  TAD I PT1
5111  4322  JMS POOW
5112  4213  JMS RD
5113  2203  ISZ PT1
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5114  5307  JMP E+2
              /PROCEED FROM LAST TO NEXT BREAKPOINT
5115  1207  P, TAD L
5116  7110  CLL RAR /BIT 11 TO L, CLA
5117  1204  TAD SAVAC
5120  7000  NOP /OR HLT FOR STEPPING
5121  5764  JMP I PT2
              /
5122  0000  POOW, 0
5123  7104  CLL RAL
5124  3205  DCA T1
5125  1372  TAD B-4
5126  3202  DCA CN
              /
5127  1205  LP, TAD T1
5130  7004  RAL
5131  7006  RTL
5132  3205  DCA T1
5133  1205  TAD T1
5134  0371  AND B7
5135  1370  TAD B260
5136  4343  JMS TYPE
5137  7200  CLA
5140  2202  ISZ CN /4 CHAR?
5141  5327  JMP LP /NO
5142  5722  EXIT POOW
              /
              /
5143  0000  TYPE, 0
5144  6046  TLS
5145  6041  TSF
5146  5345  JMP .-1
5147  6042  TCF
5150  5743  EXIT TYPE
              /
5151  0000  CRLF, 0
5152  7300  CLA CLL
5153  1367  TAD B215
5154  4343  JMS TYPE
5155  1366  TAD B-3
5156  4343  JMS TYPE
5157  7300  CLA CLL
5160  5751  EX, EXIT CRLF
              /
5161  5074  RESTAD, RESTOR
5162  5405  JMPI5, JMP I 5
5163  0005  PT, 5 /INITIAL ADDR, PERMITS B TO SET UP JMP ADDR
5164  0000  PT2, 0/FOR P: PROCEED
              /
5166  7775  B
5167  0215
5170  0260
5171  0007
5172  7774
5173  0022
5174  0002
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5175  0011
5176  7460
5177  0177
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