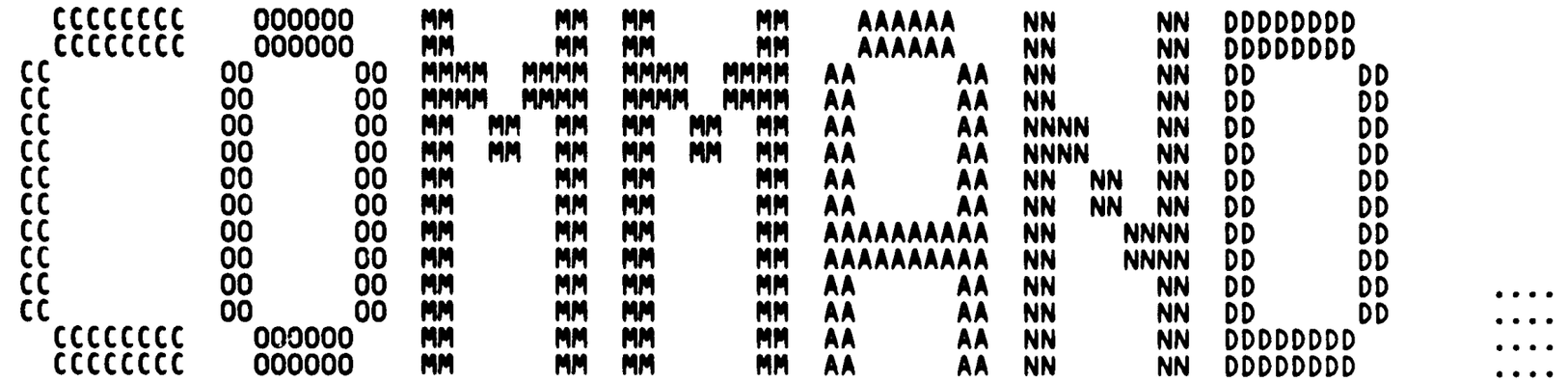
```
DDDDDDDDDDD         CCCCCCCCCCC  LLL
DDDDDDDDDDDD        CCCCCCCCCCCC LLL
DDDDDDDDDDDD        CCCCCCCCCCCC LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDD          DDD  CCC           LLL
DDDDDDDDDDDD        CCCCCCCCCCCC LLLLLLLLLLLLLLL
DDDDDDDDDDDD        CCCCCCCCCCCC LLLLLLLLLLLLLLL
DDDDDDDDDDDD        CCCCCCCCCCCC LLLLLLLLLLLLLLL
```


CCCCCCCC OOOOOO MM MM MM MM AAAAAA NN NN DDDDDDDD
CCCCCCCC OOOOOO MM MM MM MM AAAAAA NN NN DDDDDDDD
CC OO OO MMMM MMMM MMMM MMMM AA AA NN NN DD DD
CC OO OO MMMM MMMM MMMM MMMM AA AA NN NN DD DD
CC OO OO MM MM MM MM MM MM AA AA NNNN NN DD DD
CC OO OO MM MM MM MM MM MM AA AA NNNN NN DD DD
CC OO OO MM MM MM MM AA AA NN NN NN DD DD
CC OO OO MM MM MM MM AA AA NN NN NN DD DD
CC OO OO MM MM MM MM AAAAAAAAAA NN NNNN DD DD
CC OO OO MM MM MM MM AAAAAAAAAA NN NNNN DD DD
CC OO OO MM MM MM MM AA AA NN NN DD DD
CC OO OO MM MM MM MM AA AA NN NN DD DD
CCCCCCCC OOOOOO MM MM MM MM AA AA NN NN DDDDDDDD
CCCCCCCC OOOOOO MM MM MM MM AA AA NN NN DDDDDDDD

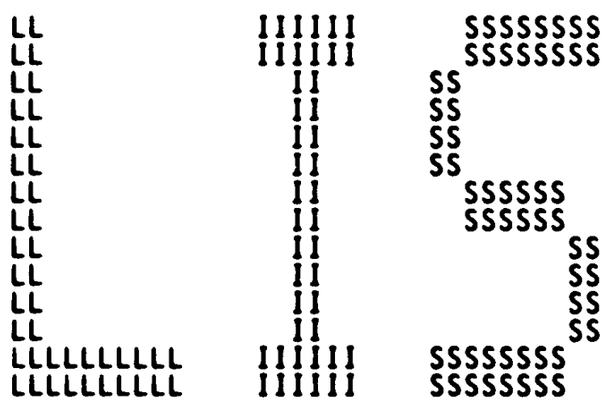

LL IIIIII SSSSSSS
LL IIIIII SSSSSSS
LL II SS
LL II SS
LL II SS
LL II SS
LL II SSSSS
LL II SSSSS
LL II SS
LL II SS
LL II SS
LL II SS
LLLLLLLLLL IIIIII SSSSSSS
LLLLLLLLLL IIIIII SSSSSSS

Table of contents

```
0000     1          .TITLE  COMMAND - PROCESS NEXT COMMAND
0000     2          .IDENT  'V04-000'
0000     3
0000     4  ;
0000     5  ;*****************************************************************************
0000     6  ;*                                                                           *
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0000    24  ;*                                                                           *
0000    25  ;*                                                                           *
0000    26  ;*****************************************************************************
0000    27  ;
0000    28  ; PROCESS NEXT COMMAND
0000    29  ;
0000    30  ; D. N. CUTLER  22-MAR-77
0000    31  ;
0000    32  ;  MODIFIED BY:
0000    33  ;
0000    34  ;       V03-018 CWH3018         CW Hobbs                28-Jul-1984
0000    35  ;               Fix HWS0093 to avoid loop on a control/y.
0000    36  ;
0000    37  ;       V03-017 HWS0093         Harold Schultz          23-Jul-1984
0000    38  ;               If interactive and at indirect level zero, unconditionally
0000    39  ;               clear the execute-only procedure flag.
0000    40  ;
0000    41  ;       V03-016 HWS0061         Harold Schultz          19-Apr-1984
0000    42  ;               Restore locked keypad state only after PRC_V_CNTRLY
0000    43  ;               is cleared.
0000    44  ;
0000    45  ;       V03-015 HWS0020         Harold Schultz          06-Mar-1984
0000    46  ;               When parsing a command which begins with a verb, ignore
0000    47  ;               leading blanks when expanding a symbol definition.
0000    48  ;
0000    49  ;       V03-014 HWS0008         Harold Schultz          13-Feb-1984
0000    50  ;               Remove obsolete code for setting up prompt block in PRC.
0000    51  ;
0000    52  ;       V03-013 PCG0015         Peter George            06-Feb-1984
0000    53  ;               Fix EOJ so that it works even if LOGOUT is deleted.
0000    54  ;               Fix bug in force exiting a privileged image.
0000    55  ;
0000    56  ;       V03-012 PCG0014         Peter George            12-Jan-1984
0000    57  ;               Fix typo.
```

```
0000     58 ;
0000     59 ;       V03-011 PCG0013         Peter George            03-Jan-1984
0000     60 ;               Set FLUSH bit in flush routine.
0000     61 ;
0000     62 ;       V03-010 PCG0012         Peter George            16-Aug-1983
0000     63 ;               Disable indirection when looking ahead for null nodes.
0000     64 ;
0000     65 ;       V03-009 PCG0011         Peter George            20-Jul-1983
0000     66 ;               Support null node names.
0000     67 ;
0000     68 ;       V03-008 PCG0010         Peter George            15-Jun-1983
0000     69 ;               Fix broken branch.
0000     70 ;               Remove extraneous labels.
0000     71 ;               Remove references to PRC_L_TAB_VEC.
0000     72 ;
0000     73 ;       V03-007 PCG0009         Peter George            27-May-1983
0000     74 ;               Have command dispatch table branch to JMP's.
0000     75 ;
0000     76 ;       V03-006 PCG0008         Peter George            30-Apr-1983
0000     77 ;               Move token sorting routine to DESCRVAL.
0000     78 ;               Clear WRK_B_PARMSUM.
0000     79 ;
0000     80 ;       V03-005 PCG0007         Peter George            01-Apr-1983
0000     81 ;               Move GOTO scanning to GOTO module.
0000     82 ;
0000     83 ;       V03-004 PCG0006         Peter George            15-Feb-1983
0000     84 ;               Update to new structure level.
0000     85 ;               Remove SETBIT WRK_V_NOSTAT in EOD.
0000     86 ;               Clear PTR_L_ENTITY and PTR_B_NUMBER when doing DCL$GENDESCR.
0000     87 ;               Sort new larger PTR blocks.
0000     88 ;               Add DCL$LOOKUP_INTERNAL.
0000     89 ;               Init recall and keypad fields in WRK block.
0000     90 ;
0000     91 ;       V03-003 PCG0005         Peter George            16-Nov-1982
0000     92 ;               Use WRK_C_SCRSTKSIZ and WRK prompt string descriptor.
0000     93 ;
0000     94 ;       V03-002 PCG0004         Peter George            28-Oct-1982
0000     95 ;               Use PRC data structure for prompt string.
0000     96 ;
0000     97 ;       V03-002 PCG0003         Peter George            19-Oct-1982
0000     98 ;               Fix batch logout accvio caused by DCL$ABORT.
0000     99 ;               Use DCL$ABORT for DCL$EOJ.
0000    100 ;
0000    101 ;       V03-001 PCG0002         Peter George            30-Sep-1982
0000    102 ;               Move common command parsing code to DCL$PARSE_COMMAND
0000    103 ;               in PARSENT.  Initialize WRK_L_PROMPTRTN, WRK_B_VALLEV,
0000    104 ;               and WRK_B_CMDOPT.
0000    105 ;--
```

```
                        0000   107 ;
                        0000   108 ; MACRO LIBRARY CALLS
                        0000   109 ;
                        0000   110
                        0000   111         $$CLITABDEF                     ; DEFINE TABLE STRUCTURES
                        0000   112         PTRDEF                          ; DEFINE RESULT PARSE DESCRIPTOR FORMAT
                        0000   113         SYMDEF                          ; DEFINE SYMBOL ENTRY OFFSETS
                        0000   114         PRCDEF                          ; DEFINE PROCESS WORK AREA
                        0000   115         WRKDEF                          ; DEFINE COMMAND WORK AREA
                        0000   116         $CLIMSGDEF                      ; DEFINE ERROR/STATUS VALUES
                        0000   117         $DEVDEF                         ; DEFINE DEVICE CHARACTERISTIC BITS
                        0000   118         $PSLDEF                         ; DEFINE PROCESSOR STATUS FIELDS
                        0000   119         $RABDEF                         ; DEFINE RAB OFFSETS
                        0000   120
                    00000000   121         .PSECT  DCL$ZDATA,BYTE,RD,NOWRT
                        0000   122
54 55 4F 47 4F 4C 00'   0000   123 LOGOUT: .ASCIC  'LOGOUT'
                          06   0000
                        0007   124
                    00000000    0007   125 ROUTINES_LEN = 0
                        0007   126
                        0007   127         .MACRO  INTIMAGE NAME
                        0007   128 $NAM1$ = ^A/%EXTRACT(0,4,NAME)/!^X80
                        0007   129 $NAM2$ = ^A/%EXTRACT(4,4,NAME)/
                        0007   130         .LONG   $NAM1$
                        0007   131         .LONG   $NAM2$
                        0007   132 ROUTINES_LEN = ROUTINES_LEN + 8
                        0007   133         .ENDM
                        0007   134
                        0007   135 ROUTINES:
                        0007   136         INTIMAGES                       ; GENERATE TABLE OF ROUTINE NAMES
                        01B7   137
                    00000000   138         .PSECT  DCL$ZCODE,BYTE,RD,NOWRT
                        0000   139
```

```
                     0000   141          .SBTTL  PROCESS NEXT COMMAND
                     0000   142 ;+
                     0000   143 ; DCL$RESTART - PROCESS NEXT COMMAND
                     0000   144 ;
                     0000   145 ; THIS ROUTINE IS THE CENTRAL COMMAND PARSE AND DISPATCH ROUTINE FOR THE
                     0000   146 ; STARLET DCLS COMMAND LANGUAGE INTERPRETER. IT INITIALIZES FOR THE NEXT
                     0000   147 ; COMMAND, READS AND PARSES THE COMMAND FOR SYNTACTIC CORRECTNESS, AND THEN
                     0000   148 ; EXECUTES THE APPROPRIATE IMAGE.
                     0000   149 ;
                     0000   150 ; INPUTS:
                     0000   151 ;
                     0000   152 ;       FP =    ADDRESS OF WRK STRUCTURE
                     0000   153 ;       R11 =   ADDRESS OF PRC STRUCTURE
                     0000   154 ;
                     0000   155 ; OUTPUTS:
                     0000   156 ;
                     0000   157 ;       COMMAND IS READ, PARSED, AND AN IMAGE IS ACTIVATED.
                     0000   158 ;-
                     0000   159          .ENABL  LSB
                     0000   160
                     0000   161 DCL$RESTART::                                ;RESTART ENTRY POINT
          5E   F486 CD  9E  0000   162          MOVAB   WRK_K_LENGTH(FP),SP     ;ALLOCATE COMMAND IMPURE AREA
                     0005   163                                                 ;  AND RESET STACK POINTER
               5A   5D  D0  0005   164          MOVL    FP,R10                  ;SET BASE ADDRESS OF WRK
               FrFF'CF  9E  0008   165          MOVAB   W^DCL$HYPHEN-1,-        ;SET TO FORCE INPUT ON NEXT GET
               F48E CA      000C   166                  WRK_L_CHARPTR(R10)
                    08  11  000F   167          BRB     1$                      ;PROCESS COMMAND
                        0011   168
```

```
                     0011   170          .SBTTL  PROCESS REST OF COMMAND
                     0011   171 ;+
                     0011   172 ; DCL$CMDSTART - PROCESS REST OF COMMAND
                     0011   173 ;
                     0011   174 ; THIS ROUTINE IS THE CENTRAL COMMAND PARSE AND DISPATCH ROUTINE FOR THE
                     0011   175 ; STARLET DCLS COMMAND LANGUAGE INTERPRETER. IT INITIALIZES FOR THE COMPLETION
                     0011   176 ; OF THE CURRENT COMMAND LINE, READS AND PARSES THE COMMAND FOR SYNTACTIC
                     0011   177 ; CORRECTNESS, AND THEN EXECUTES THE APPROPRIATE IMAGE.
                     0011   178 ;
                     0011   179 ; INPUTS:
                     0011   180 ;
                     0011   181 ;       FP =    ADDRESS OF WRK STRUCTURE
                     0011   182 ;       R11 =   ADDRESS OF PRC STRUCTURE
                     0011   183 ;       WRK_L_CHARPTR(FP) =     POINTER INTO COMMAND INPUT BUFFER
                     0011   184 ;       WRK_G_BUFFER(FP) =      COMMAND EXPANSION BUFFER
                     0011   185 ;       WRK_G_INPBUF(FP) =      COMMAND INPUT BUFFER
                     0011   186 ;
                     0011   187 ; OUTPUTS:
                     0011   188 ;
                     0011   189 ;       COMMAND IS READ, PARSED, AND AN IMAGE IS ACTIVATED.
                     0011   190 ;-
                     0011   191
                     0011   192 DCL$CMDSTART::                          ;COMMAND PROCESSING ENTRY POINT
                     0011   193 ;
                     0011   194 ; ALLOCATE AND INITIALIZE COMMAND SCRATCH WORK AREA
                     0011   195 ;
           5E   F486 CD   9E 0011   196          MOVAB   WRK_K_LENGTH(FP),SP             ;ALLOCATE COMMAND IMPURE AREA
                     0016   197                                                  ;  AND RESET STACK POINTER
                5A   5D   D0 0016   198          MOVL    FP,R10                  ;SET BASE ADDRESS OF WRK
                00F0 CB   9B 0019   199 1$:      MOVZBW  PRC_B_PROMPTLEN(R11),-  ;SET PROMPT LENGTH
                F99E CA      001D   200                  WRK_W_PMPTLEN(R10)      ;
                00F1 CB   9E 0020   201          MOVAB   PRC_W_PMPTCTRL(R11),-   ;SET PROMPT ADDRESS
                F9A2 CA      0024   202                  WRK_L_PMPTADDR(R10)     ;
                00F3 CB   94 0027   203          CLRB    PRC_B_CONTINUE(R11)     ;SET REGULAR PROMPT
                  5C AB   D5 002B   204          TSTL    PRC_L_INDEPTH(R11)      ;ARE WE AT COMMAND LEVEL 0?
                     0B   12 002E   205          BNEQ    2$                      ;NO, CHECK CRTL-Y FLAGS
                          0030   206
          16 68 AB    06   E0 0030   207          BBS     #PRC_V_MODE,PRC_W_FLAGS(R11),5$ ;SKIP IF BATCH MODE
                012D CB   94 0035   208          CLRB    PRC_B_EXONLYL(R11)      ;CLEAR EX-ONLY FLAG
                     10   11 0039   209          BRB     5$                      ;USE '$ ' PROMPT
          0B 68 AB    0B   E0 003B   210 2$:      BBS     #PRC_V_YLEVEL,PRC_W_FLAGS(R11),5$ ;USE '$ ' IF CONTROL/Y LEVEL
          06 68 AB    01   E0 0040   211          BBS     #PRC_V_CNTRLY,PRC_W_FLAGS(R11),5$ ;  (ALSO IF CTRL/Y JUST HIT)
        00F3 CB    5F   8F 90 0045   212          MOVB    #^A/-/,PRC_B_CONTINUE(R11)      ;NO -- PROMPT STRING = ' $'
      F486 CA    F492 CA   9E 004B   213 5$:      MOVAB   WRK_G_BUFFER(R10),WRK_L_EXPANDPTR(R10) ;SET ADDRESS OF EXPANSION BUF
        BA AA    F9B6 CA   9E 0052   214          MOVAB   WRK_G_RESULT(R10),WRK_L_RSLNXT(R10) ;SET ADDRESS OF RESULT PARSE TAB
    F9AA CA    00000000'EF   9E 0058   215          MOVAB   DCL$INPUT,WRK_L_READRTN(R10)    ;SET RECORD INPUT ROUTINE
    F9A6 CA    00000000'EF   9E 0061   216          MOVAB   DCL$INPUT,WRK_L_PROMPTRTN(R10)  ;SET PROMPT ROUTINE
    F9B2 CA    00000000'EF   9E 006A   217          MOVAB   DCL$SPECIAL,WRK_L_SPECRTN(R10)  ;SET SPECIAL PROCESSING ROUTINE
    F9AE CA    00000000'EF   9E 0073   218          MOVAB   DCL$CHARERROR,WRK_L_ERRORRTN(R10) ;SET ERROR HANDLER ROUTINE
      D6 AA    00000000'EF   9E 007C   219          MOVAB   DCL$ERRORMSG,WRK_L_SIGNALRTN(R10) ;SET ERROR SIGNALING ROUTINE
                     F0 AA   B4 0084   220          CLRW    WRK_W_FLAGS(R10)        ;RESET COMMAND FLAGS
                     C4 AA   94 0087   221          CLRB    WRK_B_VALLEV(R10)       ;RESET VALUE LEVEL
                     C3 AA   94 008A   222          CLRB    WRK_B_CMDOPT(R10)       ;RESET OPTION NUMBER
                     B6 AA   D4 008D   223          CLRL    WRK_L_RSLEND(R10)       ;ZERO ADDR OF LAST TOKEN DESC
                     CA AA   D4 0090   224          CLRL    WRK_L_QUABLK(R10)       ;ZERO QUABLK
                     C6 AA   D4 0093   225          CLRL    WRK_L_PROPTR(R10)       ;ZERO PROPTR
                     E2 AA   D4 0096   226          CLRL    WRK_L_IMAGE(R10)        ;ZERO ADDRESS OF IMAGE NAME
```

```
                D2 AA    D4  0099   227          CLRL    WRK_L_PAROUT(R10)                ;ZERO PAROUT
                D1 AA    94  009C   228          CLRB    WRK_B_MINPARM(R10)               ;ZERO MINPARM
                D0 AA    94  009F   229          CLRB    WRK_B_MAXPARM(R10)               ;ZERO MAXPARM
                CE AA    94  00A2   230          CLRB    WRK_B_PARMCNT(R10)               ;ZERO PARMCNT
                CF AA    94  00A5   231          CLRB    WRK_B_PARMSUM(R10)               ;ZERO PARMSUM
          68 AB    24     AA  00A8   232          BICW    #PRC_M_DISABL!-                  ;RE-ENABLE CONTROL Y/C'S
                                    00AC   233                  PRC_M_IND,PRC_W_FLAGS(R11)       ;RE-ENABLE @ PROCESSING
       00AF CB    44 8F    8A  00AC   234          BICB    #PRC_M_RUNDEF!-                  ;CLEAR IMAGE RUN DEFAULT FLAG
                                    00B2   235                  PRC_M_FLUSH,PRC_B_FLAGS2(R11)    ;RESET FLUSH IN PROGRESS FLAG
                                    00B2   236
                                    00B2   237 ;
                                    00B2   238 ; RESET INTERACTIVE INPUT CONTROL FIELDS.
                                    00B2   239 ;
                C5 AA    94  00B2   240          CLRB    WRK_B_RECALLCNT(R10)             ;ZERO RECALL COMMAND COUNT
             012F CB     D0  00B5   241          MOVL    PRC_L_RECALLPTR(R11),-           ;COPY RECALL PTR
                EA AA        00B9   242                  WRK_L_RECALLPTR(R10)             ;
                                    00BB   243
                                    00BB   244 ;
                                    00BB   245 ; CHECK FOR SPECIAL COMMAND PROCESSING CASES
                                    00BB   246 ;       PENDING CONTROL/Y
                                    00BB   247 ;       CHAINED COMMAND FROM CALLBACK
                                    00BB   248 ;       CHAINED IMAGE FROM CALLBACK
                                    00BB   249 ;       PENDING HANGUP
                                    00BB   250 ;
                                    00BB   251 ; IF CONTROL/Y PENDING, EXECUTE "ON CONTROLY" STATEMENT
                                    00BB   252 ;
          20 68 AB    01    E5  00BB   253          BBCC    #PRC_V_CNTRLY,PRC_W_FLAGS(R11),11$ ;BRANCH IF NOT CONTROL Y/C
                   FF3D'    30  00C0   254          BSBW    DCL$LOCKED_STATE                 ;RESTORE LOCKED KEYPAD STATE
                F896 CA     94  00C3   255          CLRB    WRK_G_INPBUF(R10)                ;ABORT TWO-PART COMMAND IN PROGRESS
           51   00B8 CB     D0  00C7   256          MOVL    PRC_L_ONCTLY(R11),R1             ;GET ADDRESS OF ACTION COMMAND
                    0B     13  00CC   257          BEQL    10$                              ;BR IF NO ACTION OUTSTANDING
                50  81     9A  00CE   258          MOVZBL  (R1)+,R0                         ;GET THE ADDRESS AND CC'NT
             F896 CA 61     50  28  00D1   259          MOVC    R0,(R1),WRK_G_INPBUF(R10)        ;MOVE COMMAND INTO BUFFER
                    2F     11  00D7   260          BRB     15$                              ;CLEAR GOTO, THEN PROCESS COMMAND
                                    00D9   261 10$:     SETBIT  PRC_V_YLEVEL,PRC_W_FLAGS(R11)    ;SET CONTROL Y/C LEVEL
                    37     11  00DE   262          BRB     20$
                                    00E0   263
                                    00E0   264 ;
                                    00E0   265 ; IF CHAINED COMMAND OR CHAINED IMAGE, COPY COMMAND INTO COMMAND BUFFER
                                    00E0   266 ; AND DEALLOCATE STORAGE USED BY THE CALLBACK TO HOLD THE COMMAND.
                                    00E0   267 ;
                   FF1D'    30  00E0   268 11$:     BSBW    DCL$LOCKED_STATE                 ;RESTORE LOCKED KEYPAD STATE
             56    00E0 CB     7E  00E3   269          MOVAQ   PRC_Q_COMMAND(R11),R6            ;GET DESCRIPTOR OF COMMAND LINE
          10 00AF CB     00    E4  00E8   270          BBSC    #PRC_V_CMD,PRC_B_FLAGS2(R11),13$ ;BRANCH IF USER COMMAND SETUP
          23 00AF CB     01    E5  00EE   271          BBCC    #PRC_V_CHAIN,PRC_B_FLAGS2(R11),20$ ;BRANCH IF NOT USER CHAIN
             56    00D8 CB     7E  00F4   272          MOVAQ   PRC_Q_IMAGENAME(R11),R6 ;GET DESCRIPTOR OF IMAGE TO INVOKE
                                    00F9   273          SETBIT  PRC_V_RUNDEF,PRC_B_FLAGS2(R11)   ;SET RUN DEFAULT
       F896 CA    04 B6    66  28  00FE   274 13$:     MOVC    (R6),4(R6),WRK_G_INPBUF(R10)     ;SET STRING IN BUFFER
                   FEF8'    30  0105   275          BSBW    DCL$ALLDEACMD                    ;GO DEALLOCATE THE SPACE
                                    0108   276
                                    0108   277 ;
                                    0108   278 ; IF CONTROL IS TO BE TRANSFERED TO AN ON-CONTROLY CONDITION OR A CHAINED
                                    0108   279 ; COMMAND, THEN TERMINATE ANY FORWARD GOTO IN PROGRESS.
                                    0108   280 ;
                F895 CA     9E  0108   281 15$:     MOVAB   WRK_G_INPBUF-1(R10),-            ;SET POINTER BEFORE RECORD
                F48E CA         010C   282                 WRK_L_CHARPTR(R10)
          03 68 AB    04    E5  010F   283          BBCC    #PRC_V_GOTO,PRC_W_FLAGS(R11),20$;CLEAR GOTO FLAG
```

```
                FEE9'  30   0114    284          BSBW    DCL$DEALGOTO                    ;DEALLOCATE GOTO SYMBOL
                       0117    285
                       0117    286 ;
                       0117    287 ; IF A HANGUP PENDING, THEN ABORT THE PROCESS.
                       0117    288 ;
      03 68 AB    0C   E1   0117    289 20$:     BBC     #PRC_V_HANGUP,PRC_W_FLAGS(R11),22$ ;IF SET, HANGUP PENDING
                  03E5   31   011C    290          BRW     DCL$ABORT                       ; LOG THE PROCESS OUT
                       011F    291
                       011F    292 ;
                       011F    293 ; IF A CHAINED IMAGE WAS SPECIFED, THEN PROCESS THE IMAGE IMMEDIATELY AND
                       011F    294 ; AS A FOREIGN COMMAND.
                       011F    295 ;
    06 00AF CB    02   E1   011F    296 22$:     BBC     #PRC_V_RUNDEF,PRC_B_FLAGS2(R11),30$ ;BRANCH IF NOT CHAIN IMAGE
                  FED8'  30   0125    297          BSBW    DCL$MARK                        ;MARK CURRENT PARSE POSITION
                  012A   31   0128    298          BRW     FORVERB                         ;PARSE AS FOREIGN COMMAND
                       012B    299
                       012B    300 ;
                       012B    301 ; BEGIN PARSING INPUT
                       012B    302 ;
                       012B    303 ; IF WE DON'T HAVE A COMMAND LINE YET, THEN FORCE AN INPUT TO HAPPEN.
                       012B    304 ; LOOP TO RESTART IF THE INPUT IS NULL.  STRIP OFF THE LEADING '$'
                       012B    305 ; IF IT IS PRESENT.
                       012B    306 ;
                FED2'  30   012B    307 30$:     BSBW    DCL$SETNBLK                 ;POINT TO NEXT NONBLANK CHARACTER
                   4E  13   012E    308          BEQL    50$                         ;IF EQL NULL LINE
              50   24  91   0130    309 35$:     CMPB    #^A/$/,R0                   ;DOLLAR SIGN?
                   18  12   0133    310          BNEQ    40$                         ;IF NEQ NO-PROCESS THE COMMAND
    F486 CA   F492 CA  9E   0135    311          MOVAB   WRK_G_BUFFER(R10),WRK_L_EXPANDPTR(R10) ;RESET EXPANSION BUFFER POINT
                FEC1'  30   013C    312          BSBW    DCL$MOVCHAR                 ;PUT DOLLAR SIGN IN BUFFER
                7C AB  DD   013F    313          PUSHL   PRC_L_INDCLOCK(R11)         ;SAVE CURRENT INDIRECT CHANGE COUNT
                FEBB'  30   0142    314          BSBW    DCL$SETNBLK                 ;POINT AT NEXT NON-BLANK CHARACTER
                   37  13   0145    315          BEQL    50$                         ;BRANCH IF NULL LINE TO DCL$RESTART
           8E   7C AB  D1   0147    316          CMPL    PRC_L_INDCLOCK(R11),(SP)+   ;INDIRECT LEVEL CHANGE?
                   E3  12   014B    317          BNEQ    35$                         ;IF YES-LOOK FOR LEADING DOLLAR SIGN
                       014D    318
                       014D    319 ;
                       014D    320 ; GET THE FIRST TOKEN FROM THE COMMAND LINE.  IT SHOULD BE EITHER A VERB,
                       014D    321 ; A SYMBOL, OR A LABEL.
                       014D    322 ;
                FEB0'  30   014D    323 40$:     BSBW    DCL$MARK                    ;MARK CURRENT PARSE POSITION
                FEAD'  30   0150    324          BSBW    DCL$GETOKEN                 ;GET COMMAND VERB, SYMBOL, OR LABEL
                   03  12   0153    325          BNEQ    41$                         ;IF EQL NO TOKEN WAS FOUND
                0123   31   0155    326          BRW     NOCOMD                      ;SIGNAL BAD COMMAND LINE SYNTAX
                       0158    327
                       0158    328 ;
                       0158    329 ; CHECK FOR COLON TERMINATOR.  IT COULD INDICATE EITHER A LABEL OR A NULL
                       0158    330 ; NODE.
                       0158    331 ;
                   7E  D4   0158    332 41$:     CLRL    -(SP)                       ;ASSUME TERMINATOR IS NOT A BLANK
              50   20  91   015A    333          CMPB    #^A' ',R0                   ;IS TERMINATOR A BLANK?
                   0D  12   015D    334          BNEQ    42$                         ;NO, THEN BRANCH
                   6E  D6   015F    335          INCL    (SP)                        ;SET BLANK SEEN FLAG
                       0161    336          SETBIT  PRC_V_IND,PRC_W_FLAGS(R11) ;TEMPORARILY DISALLOW INDIRECTION
                FE98'  30   0165    337          BSBW    DCL$SETNBLK                 ;PEEK AT NEXT NON-BLANK
                       0168    338          CLRBIT  PRC_V_IND,PRC_W_FLAGS(R11) ;RESTORE INDIRECTION
              50   3A  91   016C    339 42$:     CMPB    #^A':',R0                   ;LABEL OR STRING EQUATE TERMINATOR?
                   10  13   016F    340          BEQL    60$                         ;BRANCH IF SO
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                8E   D5  0171   341          TSTL    (SP)+                           ;WAS BLANK SEEN?
                06   13  0173   342          BEQL    43$                             ;BRANCH IF NO BLANK SEEN
            50  20   90  0175   343          MOVB    #^A' ',R0                       ;RESTORE THE BLANK
               FE85' 30  0178   344          BSBW    DCL$BACKUPCHAR                  ;
               005D  31  017B   345 43$:     BRW     SYMBOL                          ;ELSE, VERB OR ASSIGNMENT STATEMENT
                         017E   346
                         017E   347 ;
                         017E   348 ; IF NULL LINE, THEN GET NEXT COMMAND.
                         017E   349 ;
               FE7F  31  017E   350 50$:     BRW     DCL$RESTART                     ;GET NEXT COMMAND
                         0181   351
                         0181   352 ;
                         0181   353 ; LABEL OR STRING ASSIGNMENT
                         0181   354 ;
                         0181   355 ; THE FIRST TOKEN WAS TERMINATED BY A ":".  IF IT IS NOT IMMEDIATELY FOLLOWED
                         0181   356 ; BY A SECOND COLON, I.E., IS A NULL NODE SPEC, IT MUST BE EITHER A
                         0181   357 ; LABEL OR THE SYMBOL NAME IN A STRING ASSIGNMENT.  WE TEMPORARILY DISALLOW
                         0181   358 ; INDIRECTION WHEN PEEKING AT THE NEXT CHARACTER AFTER THE COLON, SO THAT IF
                         0181   359 ; AN "@" APPEARS JUST AFTER THE LABEL, WE DON'T GET SHIFTED TO THE NEXT LEVEL
                         0181   360 ; BEFORE WE GET A CHANCE TO PUT THE LABEL ENTRY IN THE RIGHT TABLE.
                         0181   361 ;
               FE7C' 30  0181   362 60$:     BSBW    DCL$MOVCHAR                     ;MOVE CHARACTER TO COMMAND BUFFER
                         0184   363          SETBIT  PRC_V_IND,PRC_W_FLAGS(R11)      ;TEMPORARILY DISALLOW INDIRECTION
               FE75' 30  0188   364          BSBW    DCL$SETCHAR                     ;PEEK AT NEXT CHARACTER IN INPUT BUF
                         018B   365          CLRBIT  PRC_V_IND,PRC_W_FLAGS(R11)      ;RESTORE INDIRECTION
            50  3A   91  018F   366          CMPB    #^A7:7,R0                       ;COLON?
                3A   13  0192   367          BEQL    NULLNODE                        ;IF EQL YES
                8E   D5  0194   368          TSTL    (SP)+                           ;RESTORE THE STACK
            50  3D   91  0196   369          CMPB    #^A/=/,R0                       ;EQUAL SIGN?
                2E   13  0199   370          BEQL    80$                             ;IF EQL YES
                         019B   371
                         019B   372 ;
                         019B   373 ; LABEL
                         019B   374 ;
                         019B   375 ; SAVE THE LABEL IN THE SYMBOL TABLE.  IF THE A LABEL OF THE SAME NAME WAS
                         019B   376 ; ALREADY FOUND, REPLACE IT WITH THE ONE WE HAVE JUST FOUND.
                         019B   377 ;
                   0B    E0  019B   378          BBS     #PRC_V_YLEVEL,-                 ;IF SET, AT CONTROL Y/C LEVEL
                1A 68 AB         019D   379                  PRC_W_FLAGS(R11),69$            ;
                50   14 AB   D0  01A0   380          MOVL    PRC_L_INDINPRAB(R11),R0         ;DEVICE CHAR SAVED IN CURRENT RAB
             14 18 A0   02   E0  01A4   381          BBS     #DEV$V_TRM,RAB$L_CTX(R0),65$    ;IF TRM, ISSUE WARNING MESSAGE
             0C 18 A0   1C   E1  01A9   382          BBC     #DEV$V_RND,RAB$L_CTX(R0),69$    ;IF NOT RANDOM DEVICE, IGNORE IT
                         01AE   383          DISABLE                                 ;DISABLE CONTROL Y/C AST'S
                     FE49' 30   01B4   384          BSBW    DCL$ALLOC_LABEL                 ;ALLOCATE AND INSERT LABEL IN TABLE
                   34 50   E9   01B7   385          BLBC    R0,130$                         ;IF LBC ALLOCATION FAILURE
                     FE54  31   01BA   386 69$:     BRW     DCL$CMDSTART                    ;START COMMAND OVER
                         01BD   387 65$:     ERRMSG  NOLBLS                          ;SIGNAL LABEL NOT ALLOWED HERE
                       F1  11   01C7   388          BRB     69$                             ;
                         01C9   389
                         01C9   390 ;
                         01C9   391 ; STRING ASSIGNMENT
                         01C9   392 ;
                         01C9   393 ; WE HAVE DETECTED A ":=" FOLLOWING THE FIRST TOKEN ON THE LINE.
                         01C9   394 ; THEREFORE WE MUST BE PROCESSING A STRING ASSIGNMENT.
                         01C9   395 ;
                     FE34' 30   01C9   396 80$:     BSBW    DCL$EQUATE              ;PROCESS STRING EQUATE STATEMENT
                       20  11   01CC   397          BRB     130$                    ;
```

```
                          01CE    398
                          01CE    399 ;
                          01CE    400 ; NULL NODE SPECIFICATION WAS FOUND.  BACK UP PAST DOUBLE COLONS AND PROCESS
                          01CE    401 ; AS A VERB.
                          01CE    402 ;
                          01CE    403 NULLNODE:
      FE2F'   30          01CE    404         BSBW    DCL$BACKUPMOVE          ;BACK UP TO END OF VERB NAME
        8E    D5          01D1    405         TSTL    (SP)+                   ;WAS BLANK SEEN?
        06    13          01D3    406         BEQL    SYMBOL                  ;BRANCH IF NO BLANK SEEN
  50    20    90          01D5    407         MOVB    #^A' ',R0               ;RESTORE THE BLANK
      FE25'   30          01D8    408         BSBW    DCL$BACKUPCHAR          ;
                          01DB    409
                          01DB    410 ;
                          01DB    411 ; COMMAND VERB, INTEGER ASSIGNMENT, SUBSTRING ASSIGNMENT, OR BITFIELD ASSIGNMENT
                          01DB    412 ;
                          01DB    413 ; THE FIRST TOKEN WAS NOT TERMINATED BY A ":", IT MUST BE EITHER A COMMAND VERB
                          01DB    414 ; OR THE SYMBOL NAME IN AN INTEGER, SUBSTRING, OR BITFIELD ASSIGNMENT.
                          01DB    415 ;
                          01DB    416 ; PROCESS INTEGER, SUBSTRING, OR BITFIELD ASSIGNMENT
                          01DB    417 ;
  50  5B 8F     91        01DB    418 SYMBOL: CMPB    #^A/[/,R0               ;SUBSTRING OF BIT FIELD SUBSTRING ASSIGNMENT
        05      12        01DF    419         BNEQ    120$                    ;IF NEQ NO
      FE1C'     30        01E1    420         BSBW    DCL$SUBASSIGN           ;PROCESS SUBSTRING OR BIT FIELD ASSIGNMENT
        08      11        01E4    421         BRB     130$                    ;
  50    3D      91        01E6    422 120$:   CMPB    #^A/=/,R0               ;SYMBOL ASSIGNMENT?
        06      12        01E9    423         BNEQ    COMMAND                 ;IF NEQ NO
      FE12'     30        01EB    424         BSBW    DCL$EVALUATE            ;EVALUATE ARITHMETIC ASSIGNMENT STATEMENT
      0146      31        01EE    425 130$:   BRW     ERROR_EXIT              ;
                          01F1    426
                          01F1    427 ;
                          01F1    428 ; COMMAND VERB
                          01F1    429 ;
                          01F1    430 ; WE HAVE DETERMINED THAT WE ARE PARSING A COMMAND THAT BEGINS WITH A VERB.
                          01F1    431 ; TRANSLATE THE FIRST TOKEN ON THE COMMAND LINE (IF POSSIBLE).
                          01F1    432 ;
        06      BB        01F1    433 COMMAND:PUSHR   #^M<R1,R2>              ;SAVE COMMAND VERB PARAMETERS
      FE0A'     30        01F3    434         BSBW    DCL$SYM_STRING          ;SEARCH FOR SYMBOL DEFINITION
  54    51      7D        01F6    435         MOVQ    R1,R4                   ;SAVE VALUE PARAMETERS
        06      BA        01F9    436         POPR    #^M<R1,R2>              ;RESTORE COMMAND VERB PARAMETERS
        54      D5        01FB    437         TSTL    R4                      ;SYMBOL DEFINED AND HAVE VALUE?
        03      12        01FD    438         BNEQ    135$                    ;IF NEQ YES
      0083      31        01FF    439         BRW     PRCVERB                 ;IF NOT SYMBOL, SEARCH VERB TABLE
                          0202    440
                          0202    441 ;
                          0202    442 ; THE FIRST TOKEN IS A SYMBOL.  GET ITS VALUE.
                          0202    443 ;
F486 CA   F492 CA   9E    0202    444 135$:   MOVAB   WRK_G_BUFFER(R10),WRK_L_EXPANDPTR(R10) ;RESET EXPANSION BUFFER POINT
56  F48E CA   01    C1    0209    445         ADDL3   #1,WRK_L_CHARPTR(R10),R6  ;GET CHARACTER POINTER
        66      20  91    020F    446         CMPB    #^A/ /,(R6)             ;ALREADY A BLANK HERE?
        03      13        0212    447         BEQL    140$                    ;IF EQL YES
        76      20  90    0214    448         MOVB    #^A/ /,-(R6)            ;ELSE INSERT A TRAILING BLANK
     FF A544    27  91    0217    449 140$:   CMPB    #^A/'/,-1(R5)[R4]       ;DOES THE SYMBOL END WITH '?
        04      12        021C    450         BNEQ    150$                    ;IF NEQ NO
        54      D7        021E    451         DECL    R4                      ;ELSE REMOVE THE ' FROM THE SYMBOL
        56      D6        0220    452         INCL    R6                      ; AND REMOVE THE ADDED TRAILING BLANK
      56  54    C2        0222    453 150$:   SUBL    R4,R6                   ;BACK UP OVER SYMBOL'S LENGTH
F48E CA   56    01  C3    0225    454         SUBL3   #1,R6,WRK_L_CHARPTR(R10) ;STORE NEW CHARACTER POINTER
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                                022B   455          MOVC    R4,(R5),(R6)                    ;MOVE TRANSLATED COMMAND TO INPUT BUFFER
                                022F   456          SETBIT  PRC_V_IND,PRC_W_FLAGS(R11)      ;TEMPORARILY DISALLOW INDIRECTION
                            FDCA'  30   0233   457          BSBW    DCL$SETNBLK             ;SKIP OVER LEADING BLANKS
                                0236   458          CLRBIT  PRC_V_IND,PRC_W_FLAGS(R11)      ;ENABLE INDIRECTION
                              50   95   023A   459          TSTB    R0                      ;COMMAND NOP'D?
                              03   12   023C   460          BNEQ    152$                    ;BR IF NOT
                            FDBF   31   023E   461          BRW     DCL$RESTART             ;
                         50   40 8F   91   0241   462 152$:    CMPB    #^A/@/,R0               ;PROCEDURE FILE?
                              03   12   0245   463          BNEQ    155$                    ;IF NEQ NO
                            FDC7   31   0247   464          BRW     DCL$CMDSTART            ;READ FROM THE COMMAND FILE
                                024A   465
                                024A   466 ;
                                024A   467 ; IF THE SYMBOL DEFINES A FOREIGN COMMAND, THEN PROCESS IT AS SUCH.
                                024A   468 ; OTHERWISE, SEARCH THE VERB TABLE FOR THE VERB.
                                024A   469 ;
                            FDB3'  30   024A   470 155$:    BSBW    DCL$MARK                ;MARK CURRENT PARSE POSITION
                            FDB0'  30   024D   471          BSBW    DCL$SETNBLK             ;POINT TO NEXT NONBLANK CHARACTER
                         50   24   91   0250   472          CMPB    #^A/$/,R0               ;DOLLAR SIGN?
                              21   12   0253   473          BNEQ    CMDVERB                 ;IF NEQ NO
                                0255   474
                                0255   475          .DSABL  LSB
                                0255   476
                                0255   477 ;
                                0255   478 ; FOREIGN COMMAND
                                0255   479 ;
                                0255   480 ; PROCESS THE FILE SPECIFICATION AND THEN PROCESS THE REST OF THE COMMAND
                                0255   481 ; LINE.
                                0255   482 ;
                                0255   483 FORVERB:                                       ;COME HERE FOR FOREIGN VERBS
                         53   03   9A   0255   484          MOVZBL  #PTR_K_PARAMETR,R3      ;SET TOKEN CONTEXT OF FILESPEC
                            FDA5'  30   0258   485          BSBW    DCL$PROCFILE            ;PROCESS FILE SPECIFICATION
                           24 50   E9   025B   486          BLBC    R0,ERROR                ;IF LBC FILE SPECIFICATION ERROR
                      BA AA   0C   C2   025E   487          SUBL    #PTR_C_LENGTH,WRK_L_RSLNXT(R10) ;UNDO RESULT TOKEN DESCRIPTOR
                         7E   51   7D   0262   488          MOVQ    R1,-(SP)                ;SAVE FILENAME DESCRIPTOR PARAMETERS
                            0347   30   0265   489          BSBW    PROCFORN                ;PROCESS FOREIGN COMMAND
                    C2 AA   00'8F   90   0268   490          MOVB    #CLI$K_VERB_FORE,WRK_B_VERBTYP(R10) ;SET FOREIGN COMMAND
                              06   BA   026D   491          POPR    #^M<R1,R2>              ;RESTORE FILENAME DESCRIPTOR PARAMETERS
                         53   0E'8F   9A   026F   492          MOVZBL  #IMG_K_EXTIMAGE&^X7F,R3 ;SET EXTERNAL IMAGE INDEX
                            007A   31   0273   493          BRW     EXECEXT                 ;
                                0276   494
                                0276   495 ;
                                0276   496 ; GET THE TRANSLATED COMMAND VERB
                                0276   497 ;
                                0276   498 CMDVERB:
                            FD87'  30   0276   499          BSBW    DCL$GETOKEN             ;GET COMMAND VERB TOKEN
                              0A   12   0279   500          BNEQ    PRCVERB                 ;PROCEED IF VALID
                                027B   501 NOCOMD:  STATUS  NOCOMD                         ;ERROR IF NULL LINE
                            00B2   31   0282   502 ERROR:   BRW     ERROR_EXIT
                                0285   503
                                0285   504 ;
                                0285   505 ; LOOK THE VERB UP IN THE COMMAND TABLES.
                                0285   506 ;
                                0285   507 PRCVERB:
                   09 68 AB   0B   E1   0285   508          BBC     #PRC_V_YLEVEL,PRC_W_FLAGS(R11),10$ ;BR IF NOT AT ^Y LEVEL
                   04 00 BB   18   E1   028A   509          BBC     #PSL$V_CURMOD,@PRC_L_SAVAP(R11),10$ ;IF CLR PREVIOUS MODE SUPER
                                028F   510          SETBIT  PRC_V_IND,PRC_W_FLAGS(R11) ;DISABLE "@" FILE RECOGNITION
               58   00000000'GF   D0   0293   511 10$:     MOVL    G^CTL$AG_CLITABLE,R8    ;GET ADDRESS OF DATA BASE VECTOR
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                FD63'   30   029A   512          BSBW    DCL$SEARCH_VERB          ;SEARCH VERB TABLE FOR VERB
              E2 50     E9   029D   513          BLBC    R0,ERROR                 ;BRANCH IF ERROR
                              02A0   514
                              02A0   515 ;
                              02A0   516 ; IF THE COMMAND IS DEFINED IN THE TABLES AS FOREIGN THEN PERFORM THE SPECIAL
                              02A0   517 ; COMMAND LINE PROCESSING.
                              02A0   518 ;
                              02A0   519 ; IF IT IS DEFINED AS IMMEDIATE MODE AND THEREFORE, SHOULD BE DISPATCHED
                              02A0   520 ; IMMEDIATELY, DO IT NOW.
                              02A0   521 ;
                              02A0   522 ; OTHERWISE, PARSE THE COMMAND PARAMETERS AND QUALIFIERS.
                              02A0   523 ;
                   02   E1   02A0   524          BBC     #CMD_V_FOREIGN,-         ;BRANCH IF NOT FOREIGN
                05 04 A8        02A2   525                  CMD_W_FLAGS(R8),20$      ;
                    0307   30   02A5   526          BSBW    PROCFORN                 ;PROCESS FOREIGN COMMAND
                      26   11   02A8   527          BRB     BUILD_IMAGE              ;PROCESS THE IMAGE NAME
                              02AA   528
             0F 04 A8   03   E1   02AA   529 20$:    BBC     #CMD_V_IMMED,CMD_W_FLAGS(R8),30$;BR IF NOT IMMEDIATE
                52   E2 AA   D0   02AF   530          MOVL    WRK_L_IMAGE(R10),R2      ;GET ADDR OF ASCIC ROUTINE NAME
                     51   82   9A   02B3   531          MOVZBL  (R2)+,R1                 ;GET COUNT IN R1, ADDRESS IN R2
                    0336   30   02B6   532          BSBW    DCL$LOCATE_INTERNAL      ;LOCATE INTERNAL ROUTINE INDEX
                  C6 50    E9   02B9   533          BLBC    R0,ERROR                 ;BRANCH IF ERROR
                      3C   11   02BC   534          BRB     IMMED                    ;DISPATCH THE IMMEDIATE COMMAND
                              02BE   535
                FD3F'   30   02BE   536 30$:    BSBW    DCL$PARSE_COMMAND        ;PARSE THE COMMAND QUALS AND PARMS
          000380B0 8F   50   D1   02C1   537          CMPL    R0,#CLI$_NOCOMD          ;IF CTRL/Z WAS ENTERED,
                      03   12   02C8   538          BNEQ    40$                      ;THEN GET A NEW COMMAND
                  FD33   31   02CA   539          BRW     DCL$RESTART              ;
                B2 50    E9   02CD   540 40$:    BLBC    R0,ERROR                 ;SIGNAL ANY SYNTAX ERRORS
                              02D0   541
                              02D0   542 ;
                              02D0   543 ; BUILD THE IMAGE/ROUTINE NAME DESCRIPTOR
                              02D0   544 ;
                              02D0   545 BUILD_IMAGE:
              52   E2 AA   D0   02D0   546          MOVL    WRK_L_IMAGE(R10),R2      ;GET IMAGE/ROUTINE ASCIC NAME ADDRES
                   51   82   9A   02D4   547          MOVZBL  (R2)+,R1                 ;GET COUNT IN R1, ADDRESS IN R2
              53   0E'8F   9A   02D7   548          MOVZBL  #IMG_K_EXTIMAGE&^X7F,R3  ;ASSUME EXTERNAL IMAGE
                      00   E0   02DB   549          BBS     #WRK_V_CLIRTN,-          ;BRANCH IF INTERNAL ROUTINE
                02 F2 AA        02DD   550                  WRK_W_FLAGS2(R10),5$     ;
                      0E   11   02E0   551          BRB     EXECEXT                  ;EXECUTE EXTERNAL COMMAND
                    030A   30   02E2   552 5$:     BSBW    DCL$LOCATE_INTERNAL      ;LOCATE INTERNAL ROUTINE INDEX
                  9A 50    E9   02E5   553          BLBC    R0,ERROR                 ;BRANCH IF ERROR
                              02E8   554
                              02E8   555 ;
                              02E8   556 ; SORT TOKEN DESCRIPTOR TABLE INTO CMDQUAL,PARM,PARMQUAL ORDER
                              02E8   557 ; FOR INTERNAL CLI ROUTINES TO MAKE GETDVAL PROCESSING EASIER.
                              02E8   558 ;
                   53   DD   02E8   559          PUSHL   R3                       ;SAVE COMMAND INDEX
                FD13'   30   02EA   560          BSBW    DCL$SORT_TOKENS          ;SORT DESCRIPTOR TABLE
                  53 8ED0    02ED   561          POPL    R3                       ;RESTORE COMMAND INDEX
                              02F0   562
                              02F0   563 EXECEXT:
                              02F0   564          SETBIT  WRK_V_COMMAND,WRK_W_FLAGS(R10) ;SET COMMAND EXECUTION IN PROGRESS
          BA AA   F9B6 CA   9E   02F4   565          MOVAB   WRK_G_RESULT(R10),WRK_L_RSLNXT(R10) ;RESET NEXT TOKEN TO RETRIEVE
                              02FA   566
                              02FA   567 ;
                              02FA   568 ; INTERNAL COMMAND PARAMETERS:
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                        02FA   569 ;
                        02FA   570 ;       R1 = LENGTH OF IMAGE FILENAME (IF ANY).
                        02FA   571 ;       R2 = ADDRESS OF IMAGE FILENAME (IF ANY).
                        02FA   572 ;
                        02FA   573 ;    R8 AND R9 ARE SET UP AFTER THE CONDITIONAL RUNDOWN CALL BELOW
                        02FA   574 ;
                        02FA   575 ;       R8 = ADDRESS OF SCRATCH BUFFER DESCRIPTOR.
                        02FA   576 ;       R9 = ADDRESS OF SCRATCH STACK.
                        02FA   577 ;       R10 = BASE ADDRESS OF COMMAND WORK AREA.
                        02FA   578 ;       R11 = BASE ADDRESS OF PROCESS WORK AREA.
                        02FA   579 ;
                        02FA   580 ; IMMEDIATE COMMAND PARAMETERS:
                        02FA   581 ;
                        02FA   582 ;       R10 = BASE ADDRESS OF COMMAND WORK AREA.
                        02FA   583 ;       R11 = BASE ADDRESS OF PROCESS WORK AREA.
                        02FA   584 ;
                        02FA   585
                        02FA   586 IMMED:                                       ;IMMEDIATE COMMAND EXECUTION
      23 00AF CB   04   E1  02FA   587          BBC     #PRC_V_PRIV,PRC_B_FLAGS2(R11),10$  ;BR IF UNPRIVILEGED IMAGE
                        0300   588
                        0300   589 ;
                        0300   590 ; NEED TO RUN DOWN PRIVILEGED IMAGE, BUT ALLOW THE FOLLOWING COMMANDS
                        0300   591 ;
           53   03'8F   91  0300   592          CMPB    #IMG_K_CONTINUE & ^X7F,R3       ;CONTINUE COMMAND?
                  1D    13  0304   593          BEQL    10$                             ;BR IF YES
           53   28'8F   91  0306   594          CMPB    #IMG_K_SPAWN & ^X7F,R3  ;SPAWN COMMAND?
                  17    13  030A   595          BEQL    10$                             ;BR IF YES
           53   29'8F   91  030C   596          CMPB    #IMG_K_ATTACH & ^X7F,R3 ;ATTACH COMMAND?
                  11    13  0310   597          BEQL    10$                             ;BR IF YES
        05 F0 AA   01    E3  0312   598          BBCS    #WRK_V_COMMAND,WRK_W_FLAGS(R10),2$
                FCE6'   30  0317   599          BSBW    DCL$FORCEXIT                    ;RUN DOWN THE PRIVILEGED IMAGE
                  07    11  031A   600          BRB     10$                             ;
                        031C   601
                FCE1'   30  031C   602 2$:      BSBW    DCL$FORCEXIT                    ;RUN DOWN THE PRIVILEGED IMAGE
                        031F   603          CLRBIT  WRK_V_COMMAND,WRK_W_FLAGS(R10)
                        0323   604
                        0323   605 ;
                        0323   606 ; SETUP SCRATCH STORAGE FOR USE BY INTERNAL ROUTINES
                        0323   607 ;
           59   5E   D0  0323   608 10$:      MOVL    SP,R9                           ;SET ADDRESS OF SCRATCH STACK
      5E   FE00 CE   9E  0326   609          MOVAB   -WRK_C_SCRSTKSIZ(SP),SP ;ALLOCATE SCRATCH AREA BEFORE STACK
                6E   9F  032B   610          PUSHAB  (SP)                            ;BUILD SCRATCH BUFFER DESCRIPTOR
      7E   0200 8F   3C  032D   611          MOVZWL  #WRK_C_SCRSTKSIZ,-(SP)
           58   5E   D0  0332   612          MOVL    SP,R8                           ;SET ADDRESS OF SCRATCH BUFFER DESCRIPTOR
                12    10  0335   613          BSBB    IMAGECASE                       ;EXECUTE INTERNAL IMAGE
                        0337   614
                        0337   615 ;
                        0337   616 ; THE FOLLOWING CODE IS DUPLICATED IN IMAGEXECT FOR EXTERNAL IMAGES
                        0337   617 ; BECAUSE IT MUST BE DONE BEFORE IMAGE RUNDOWN, NOT AFTERWARDS.
                        0337   618 ;
                        0337   619 ERROR_EXIT:                                   ;ERROR EXIT
              03 50   E8  0337   620          BLBS    R0,10$                          ;IF LBS SUCCESSFUL COMPLETION
                FCC3'   30  033A   621          BSBW    DCL$ERRORMSG                    ;OUTPUT SYSTEM ERROR MESSAGE
     00000000'EF    16  033D   622 10$:      JSB     DCL$SET_STATUS                  ;SET COMPLETION STATUS
                023A    30  0343   623          BSBW    DCL$FLUSH                       ;FLUSH COMMAND BUFFER
                FCB7    31  0346   624          BRW     DCL$RESTART                     ;
                        0349   625
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                        0349   627          .MACRO  INTIMAGE NAME
                        0349   628          .WORD   XXX$'NAME'-10$
                        0349   629 IMG_K 'NAME = $INTIMAGE$
                        0349   630 $INTIMAGE$ = $INTIMAGE$ + 1
                        0349   631          .ENDM
                        0349   632
                        0349   633 IMAGECASE:
      35'8F    00   53   8F   0349   634          CASEB   R3,#0,#<90$-10$>/2-1
                        034E   635 10$:                                    ;BASE ADDRESS OF CASE TABLE
                        034E   636          .LIST   MEB
                        034E   637          INTIMAGES                      ;GENERATE INTERNAL IMAGE CASE TABLE
                0072'   034E               .WORD   XXX$ALLOCATE-10$
                0078'   0350               .WORD   XXX$ASSIGN-10$
                007E'   0352               .WORD   XXX$CLOSE-10$
                0084'   0354               .WORD   XXX$CONTINUE-10$
                008A'   0356               .WORD   XXX$DEALLOCAT-10$
                0090'   0358               .WORD   XXX$DEASSIGN-10$
                0096'   035A               .WORD   XXX$DEBUG-10$
                009C'   035C               .WORD   XXX$DECK-10$
                00A2'   035E               .WORD   XXX$DEFINE-10$
                00A8'   0360               .WORD   XXX$DEPOSIT-10$
                00AE'   0362               .WORD   XXX$DELSYM-10$
                00B4'   0364               .WORD   XXX$EOD-10$
                00BA'   0366               .WORD   XXX$EXAMINE-10$
                00C0'   0368               .WORD   XXX$EXIT-10$
                00C6'   036A               .WORD   XXX$EXTIMAGE-10$
                00CC'   036C               .WORD   XXX$GOTO-10$
                00D2'   036E               .WORD   XXX$IF-10$
                00D8'   0370               .WORD   XXX$INQUIRE-10$
                00DE'   0372               .WORD   XXX$LOGOUT-10$
                00E4'   0374               .WORD   XXX$MCR-10$
                00EA'   0376               .WORD   XXX$ON-10$
                00F0'   0378               .WORD   XXX$OPEN-10$
                00F6'   037A               .WORD   XXX$READ-10$
                00FC'   037C               .WORD   XXX$RUN-10$
                0102'   037E               .WORD   XXX$SETCTLY-10$
                0108'   0380               .WORD   XXX$SETDEFALT-10$
                010E'   0382               .WORD   XXX$SETON-10$
                0114'   0384               .WORD   XXX$SETPROT-10$
                011A'   0386               .WORD   XXX$SETUIC-10$
                0120'   0388               .WORD   XXX$SETVERIFY-10$
                0126'   038A               .WORD   XXX$SHOWDEF-10$
                012C'   038C               .WORD   XXX$SHOWPROT-10$
                0132'   038E               .WORD   XXX$SHOWQUOTA-10$
                0138'   0390               .WORD   XXX$SHOWSTAT-10$
                013E'   0392               .WORD   XXX$SHOWSYMBL-10$
                0144'   0394               .WORD   XXX$SHOWTIME-10$
                014A'   0396               .WORD   XXX$SHOWTRAN-10$
                0150'   0398               .WORD   XXX$STOP-10$
                0156'   039A               .WORD   XXX$WAIT-10$
                015C'   039C               .WORD   XXX$WRITE-10$
                0162'   039E               .WORD   XXX$SPAWN-10$
                0168'   03A0               .WORD   XXX$ATTACH-10$
                016E'   03A2               .WORD   XXX$EOJ-10$
                0174'   03A4               .WORD   XXX$CANCEL-10$
                017A'   03A6               .WORD   XXX$SETPROMPT-10$
                0180'   03A8               .WORD   XXX$RECALL-10$
```

```
                    0186' 03AA                  .WORD   XXX$DEFKEY-10$
                    018C' 03AC                  .WORD   XXX$SHOWKEY-10$
                    0192' 03AE                  .WORD   XXX$DELKEY-10$
                    0198' 03B0                  .WORD   XXX$SETKEY-10$
                    019E' 03B2                  .WORD   XXX$SETFLUSH-10$
                    01A4' 03B4                  .WORD   XXX$CRETABLE-10$
                    01AA' 03B6                  .WORD   XXX$CONNECT-10$
                    01B0' 03B8                  .WORD   XXX$DISCONNECT-10$
                          03BA    638           .NLIST  MEB
                          03BA    639
          50  0000'8F    3C   03BA    640 90$:    MOVZWL  #SS$_ILLSER,R0          ;SET SERVICE ERROR
                          05   03BF    641         RSB
                               03C0    642
                               03C0    643         .MACRO  INTIMAGE NAME
                               03C0    644 XXX$'NAME':     JMP     DCL$'NAME'
                               03C0    645 IMG_K_'NAME = $INTIMAGE$
                               03C0    646 $INTIMAGE$ = $INTIMAGE$ + 1
                               03C0    647         .ENDM
                               03C0    648
                               03C0    649         .LIST   MEB
                               03C0    650         INTIMAGES                       ;GENERATE INTERNAL IMAGE CASE TABLE
 00000000'EF    17   03C0        XXX$ALLOCATE:   JMP     DCL$ALLOCATE
 00000000'EF    17   03C6        XXX$ASSIGN:     JMP     DCL$ASSIGN
 00000000'EF    17   03CC        XXX$CLOSE:      JMP     DCL$CLOSE
 00000000'EF    17   03D2        XXX$CONTINUE:   JMP     DCL$CONTINUE
 00000000'EF    17   03D8        XXX$DEALLOCAT:  JMP     DCL$DEALLOCAT
 00000000'EF    17   03DE        XXX$DEASSIGN:   JMP     DCL$DEASSIGN
 00000000'EF    17   03E4        XXX$DEBUG:      JMP     DCL$DEBUG
 00000547'EF    17   03EA        XXX$DECK:       JMP     DCL$DECK
 00000000'EF    17   03F0        XXX$DEFINE:     JMP     DCL$DEFINE
 00000000'EF    17   03F6        XXX$DEPOSIT:    JMP     DCL$DEPOSIT
 00000000'EF    17   03FC        XXX$DELSYM:     JMP     DCL$DELSYM
 0000053A'EF    17   0402        XXX$EOD:        JMP     DCL$EOD
 00000000'EF    17   0408        XXX$EXAMINE:    JMP     DCL$EXAMINE
 00000000'EF    17   040E        XXX$EXIT:       JMP     DCL$EXIT
 00000000'EF    17   0414        XXX$EXTIMAGE:   JMP     DCL$EXTIMAGE
 00000000'EF    17   041A        XXX$GOTO:       JMP     DCL$GOTO
 00000000'EF    17   0420        XXX$IF: JMP     DCL$IF
 00000000'EF    17   0426        XXX$INQUIRE:    JMP     DCL$INQUIRE
 00000000'EF    17   042C        XXX$LOGOUT:     JMP     DCL$LOGOUT
 00000000'EF    17   0432        XXX$MCR:        JMP     DCL$MCR
 00000000'EF    17   0438        XXX$ON: JMP     DCL$ON
 00000000'EF    17   043E        XXX$OPEN:       JMP     DCL$OPEN
 00000000'EF    17   0444        XXX$READ:       JMP     DCL$READ
 00000000'EF    17   044A        XXX$RUN:        JMP     DCL$RUN
 00000000'EF    17   0450        XXX$SETCTLY:    JMP     DCL$SETCTLY
 00000000'EF    17   0456        XXX$SETDEFALT:  JMP     DCL$SETDEFALT
 00000000'EF    17   045C        XXX$SETON:      JMP     DCL$SETON
 00000000'EF    17   0462        XXX$SETPROT:    JMP     DCL$SETPROT
 00000000'EF    17   0468        XXX$SETUIC:     JMP     DCL$SETUIC
 00000000'EF    17   046E        XXX$SETVERIFY:  JMP     DCL$SETVERIFY
 00000000'EF    17   0474        XXX$SHOWDEF:    JMP     DCL$SHOWDEF
 00000000'EF    17   047A        XXX$SHOWPROT:   JMP     DCL$SHOWPROT
 00000000'EF    17   0480        XXX$SHOWQUOTA:  JMP     DCL$SHOWQUOTA
 00000000'EF    17   0486        XXX$SHOWSTAT:   JMP     DCL$SHOWSTAT
 00000000'EF    17   048C        XXX$SHOWSYMBL:  JMP     DCL$SHOWSYMBL
 00000000'EF    17   0492        XXX$SHOWTIME:   JMP     DCL$SHOWTIME
```

```
00000000'EF   17  0498        XXX$SHOWTRAN:   JMP     DCL$SHOWTRAN
00000000'EF   17  049E        XXX$STOP:       JMP     DCL$STOP
00000000'EF   17  04A4        XXX$WAIT:       JMP     DCL$WAIT
00000000'EF   17  04AA        XXX$WRITE:      JMP     DCL$WRITE
00000000'EF   17  04B0        XXX$SPAWN:      JMP     DCL$SPAWN
00000000'EF   17  04B6        XXX$ATTACH:     JMP     DCL$ATTACH
00000504'EF   17  04BC        XXX$EOJ:        JMP     DCL$EOJ
00000000'EF   17  04C2        XXX$CANCEL:     JMP     DCL$CANCEL
00000000'EF   17  04C8        XXX$SETPROMPT:  JMP     DCL$SETPROMPT
00000000'EF   17  04CE        XXX$RECALL:     JMP     DCL$RECALL
00000000'EF   17  04D4        XXX$DEFKEY:     JMP     DCL$DEFKEY
00000000'EF   17  04DA        XXX$SHOWKEY:    JMP     DCL$SHOWKEY
00000000'EF   17  04E0        XXX$DELKEY:     JMP     DCL$DELKEY
00000000'EF   17  04E6        XXX$SETKEY:     JMP     DCL$SETKEY
00000000'EF   17  04EC        XXX$SETFLUSH:   JMP     DCL$SETFLUSH
00000000'EF   17  04F2        XXX$CRETABLE:   JMP     DCL$CRETABLE
00000000'EF   17  04F8        XXX$CONNECT:    JMP     DCL$CONNECT
00000000'EF   17  04FE        XXX$DISCONNECT: JMP     DCL$DISCONNECT
                  0504   651          .NLIST  MEB
```

```
                     0504   653          .SBTTL  CALL LOGINOUT TO ABORT THE PROCESS
                     0504   654 ;----
                     0504   655 ; DCL$ABORT
                     0504   656 ;
                     0504   657 ; CONTROL IS TRANSFERRED HERE TO ABORT THE PROCESS BY CALLING
                     0504   658 ; THE LOGINOUT IMAGE.  CARE IS TAKEN TO SETUP THE RESULT
                     0504   659 ; PARSE DESCRIPTORS SO THAT LOGINOUT CAN USE RESULT PARSING
                     0504   660 ; AS IF LOGOUT WAS GIVEN AS A COMMAND LINE.
                     0504   661 ;
                     0504   662 ; INPUTS:
                     0504   663 ;
                     0504   664 ;       NONE
                     0504   665 ;----
                     0504   666
                     0504   667 DCL$EOJ::
                     0504   668 DCL$ABORT::
          F9B6 CA    9E   0504   669          MOVAB   WRK_G_RESULT(R10),-     ;RESET RESULT ARRAY PTR
            BA AA         0508   670                  WRK_L_RSLNXT(R10)       ;
       52   F492 CA    9E   050A   671          MOVAB   WRK_G_BUFFER(R10),R2    ;GET ADDRESS OF EXPANSION BUFFER
      F486 CA   52    D0   050F   672          MOVL    R2,WRK_L_EXPANDPTR(R10) ;RESET EXPANSION PTR
   62  4F474F4C 8F    D0   0514   673          MOVL    #^A'LOGO',(R2)          ;STORE VERB INTO BUFFER
         51   04    D0   051B   674          MOVL    #4,R1                   ;SET LENGTH OF VERB
E2 AA  00000000'EF    9E   051E   675          MOVAB   LOGOUT,WRK_L_IMAGE(R10) ;SET ROUTINE IN CASE NOT FOUND
                     0526   676          SETBIT  WRK_V_CLIRTN,WRK_W_FLAGS2(R10)
   58  00000000'GF    D0   052A   677          MOVL    G^CTL$AG_CLITABLE,R8    ;GET ADDRESS OF DATA BASE VECTOR
             FACC'    30   0531   678          BSBW    DCL$SEARCH_VERB         ;LOCATE COMMAND DEFINITION FOR
                     0534   679                                                  ;LOGOUT CLI INTERFACE (IGNORE ERRORS)
             FAC9'    30   0534   680          BSBW    DCL$GENEOL              ;CREATE AN EOL TOKEN
             FD96     31   0537   681          BRW     BUILD_IMAGE             ;PROCESS LOGOUT COMMAND
```

```
                     053A   683          .SBTTL  EOD/DECK COMMANDS
                     053A   684 ;+
                     053A   685 ; DCL$EOD/DCL$DECK
                     053A   686 ;
                     053A   687 ; THESE COMMANDS ARE PROCESSED BY RMS AND SHOULD NOT BE SEEN BY THE CLI.
                     053A   688 ; RMS PASSES THEM THROUGH IF THE SYNTAX OR VALUE IS BAD.  ONE CASE IS
                     053A   689 ; NOT TREATED AS AN ERROR, THAT IS "EOD" ALONE ON A LINE.  THIS COULD
                     053A   690 ; HAPPEN IF THE STATEMENT WAS ENTERED WITHOUT AN IMAGE RUN.
                     053A   691 ;-
                     053A   692
                     053A   693 DCL$EOD::                                    ;
FAC3'  30            053A   694          BSBW    DCL$SETNBLK                ;LOOK FOR NEXT CHARATER IN LINE
  08   12            053D   695          BNEQ    DCL$DECK                   ;BR IF NOT A NULL LINE
                     053F   696          STATUS  NORMAL                     ;SET OK STATUS
       05            0546   697          RSB                                ;
                     0547   698
                     0547   699 DCL$DECK::                                   ;
                     0547   700          STATUS  IVVALU                     ; ASSUME ERROR WAS INVALID VALUE
       05            054E   701          RSB
```

```
                          054F    703          .SBTTL  CHECK FOR CONTROL Y/C AST PENDING
                          054F    704 ;+
                          054F    705 ; DCL$CHECK_AST - CHECK FOR CONTROL Y/C AST PENDING
                          054F    706 ;
                          054F    707 ; THIS ROUTINE IS CALLED TO CHECK FOR A PENDING CONTROL Y/C AST.
                          054F    708 ;
                          054F    709 ; INPUTS:
                          054F    710 ;
                          054F    711 ;       NONE.
                          054F    712 ;
                          054F    713 ; OUTPUTS:
                          054F    714 ;
                          054F    715 ;       IF A CONTROL Y/C AST IS PENDING, THEN CONTROL IS TRANSFERED TO THE COMMAND
                          054F    716 ;       RESTART ENTRY POINT. OTHERWISE CONTROL IS RETURNED TO THE CALLER.
                          054F    717 ;-
                          054F    718
                          054F    719          .ENABL  LSB
                          054F    720 DCL$CHECK_AST::                             ;CHECK FOR PENDING CONTROL Y/C AST
 2B 68 AB   01    E1      054F    721          BBC     #PRC_V_CNTRLY,PRC_W_FLAGS(R11),50$ ;IF CLR, NO CONTROL Y/C REQUEST
          FAA9    31      0554    722 10$:     BRW     DCL$RESTART                ;
```

```
                          0557   724          .SBTTL  ENABLE/DISABLE CONTROL Y/C AST'S
                          0557   725 ;+
                          0557   726 ; DCL$DISABLE - DISABLE CONTROL Y/C AST'S
                          0557   727 ;
                          0557   728 ; THIS ROUTINE IS CALLED TO DISABLE/ENABLE CONTROL Y/C AST'S.
                          0557   729 ;
                          0557   730 ; INPUTS:
                          0557   731 ;
                          0557   732 ;       NONE.
                          0557   733 ;
                          0557   734 ; OUTPUTS:
                          0557   735 ;
                          0557   736 ;       CONTROL Y/C AST'S ARE DISABLED, THE PREVIOUS ENABLE STATE IS SAVED, AND
                          0557   737 ;       A CO-ROUTINE CALL IS MADE BACK TO THE CALLER. WHEN CONTROL RETURNS, THE
                          0557   738 ;       AST STATE IS RESTORED TO ITS VALUE BEFORE THE DISABLE.
                          0557   739 ;
                          0557   740 ;       ALL REGISTERS ARE PRESERVED ACROSS CALL
                          0557   741 ;-
                          0557   742
                          0557   743 DCL$DISABLE::                                ;DISABLE CONTROL Y/C AST'S
                   6E     DD     0557   744          PUSHL   (SP)                 ;COPY RETURN ADDRESS
04 AE        68   AB     3C     0559   745          MOVZWL  PRC_W_FLAGS(R11),4(SP) ;SAVE PREVIOUS DISABLE STATE
                          055E   746          SETBIT  PRC_V_DISABL,PRC_W_FLAGS(R11) ;DISABLE CONTROL Y/C AST'S
                   9E     16     0562   747          JSB     @(SP)+               ;CALL THE CALLER BACK
13 04 AE           02     E0     0564   748          BBS     #PRC_V_DISABL,4(SP),40$ ;IF SET, AST'S PREVIOUSLY DISABLED
05 68 AB           08     E0     0569   749          BBS     #PRC_V_YLEVEL,PRC_W_FLAGS(R11),20$ ;IF SET, AT CONTROL Y/C LEVEL
            5C     AB     D5     056E   750          TSTL    PRC_L_INDEPTH(R11)   ;INDIRECT LEVEL ZERO?
                   05     12     0571   751          BNEQ    30$                  ;IF NEQ NO
DC 68 AB           01     E0     0573   752 20$:     BBS     #PRC_V_CNTRLY,PRC_W_FLAGS(R11),10$ ;IF SET, CONTROL Y/C REQUEST
                          0578   753 30$:     CLRBIT  PRC_V_DISABL,PRC_W_FLAGS(R11) ;ENABLE CONTROL Y/C AST'S
                6E 8ED0   057C   754 40$:     POPL    (SP)+                ;REMOVE PREVIOUS STATE FROM STACK
                     05   057F   755 50$:     RSB                          ;
                          0580   756          .DSABL  LSB
```

```
                     0580   758          .SBTTL  FLUSH COMMAND BUFFER
                     0580   759 ;+
                     0580   760 ; DCL$FLUSH - FLUSH COMMAND BUFFER
                     0580   761 ;
                     0580   762 ; THIS ROUTINE IS CALLED TO READ CHARACTERS FROM THE COMMAND BUFFER UNTIL AN
                     0580   763 ; END OF LINE IS ENCOUNTERED.
                     0580   764 ;
                     0580   765 ; INPUTS:
                     0580   766 ;
                     0580   767 ;       NONE.
                     0580   768 ;
                     0580   769 ; OUTPUTS:
                     0580   770 ;
                     0580   771 ;       INDIRECT FILE RECOGNITION IS DISABLED AND CHARACTERS ARE READ FROM THE
                     0580   772 ;       INPUT BUFFER UNTIL AN END OF LINE IS ENCOUNTERED.
                     0580   773 ;-
                     0580   774
                     0580   775 DCL$FLUSH::                                ;FLUSH COMMAND BUFFER
     29 68 AB    0B  E0  0580   776          BBS     #PRC_V_YLEVEL,PRC_W_FLAGS(R11),20$ ; IF AT ^Y LEVEL DON'T FLUSH
        50    14 AB  D0  0585   777          MOVL    PRC_L_INDINPRAB(R11),R0 ; GET CURRENT INPUT RAB
     20 18 A0    02  E0  0589   778          BBS     #DEV$V_TRM,RAB$L_CTX(R0),20$ ; LIKEWISE FOR TERMINALS
 F486 CA   F492 CA   9E  058E   779          MOVAB   WRK_G_BUFFER(R10),WRK_L_EXPANDPTR(R10) ;SET BUFFER TO RECEIVE ANY CO
                     0595   780          SETBIT  PRC_V_IND,PRC_W_FLAGS(R11) ;DISABLE INDIRECT FILE RECOGNITION
                     0599   781          SETBIT  PRC_V_FLUSH,PRC_B_FLAGS2(R11) ;SET FLUSH IN PROGRESS
           FA5E'     30  059F   782 10$:     BSBW    DCL$GETCHAR             ;GET CHARACTER FROM INPUT BUFFER
             FB      12  05A2   783          BNEQ    10$                     ;IF NEQ NOT END OF LINE
                     05A4   784          CLRBIT  PRC_V_FLUSH,PRC_B_FLAGS2(R11) ;RESET FLUSH IN PROGRESS FLAG
                     05AA   785          CLRBIT  PRC_V_IND,PRC_W_FLAGS(R11) ;ENABLE INDIRECT FILE RECOGNITION
                  05 05AE   786 20$:     RSB                             ;
```

```
                     05AF    788          .SBTTL  PROCESS FOREIGN COMMAND
                     05AF    789 ;---
                     05AF    790 ; PROCFORN - GENERATE RESULT DESCRIPTOR FOR FOREIGN COMMAND LINE
                     05AF    791 ;
                     05AF    792 ; PROCESS FOREIGN COMMAND AND BUILD TOKEN DESCRIPTOR
                     05AF    793 ; FOR THE REST OF THE LINE AFTER THE VERB.
                     05AF    794 ;
                     05AF    795 ; INPUTS:
                     05AF    796 ;
                     05AF    797 ;       NONE
                     05AF    798 ;
                     05AF    799 ; OUTPUTS:
                     05AF    800 ;
                     05AF    801 ;       A TOKEN DESCRIPTOR IS GENERATED FOR THE REST OF THE LINE AND
                     05AF    802 ;       A TOKEN DESCRIPTOR IS GENERATED FOR THE END OF LINE.
                     05AF    803 ;
                     05AF    804 ;---
                     05AF    805
                     05AF    806 PROCFORN:                                   ;PROCESS FOREIGN COMMAND
                     05AF    807          SETBIT  PRC_V_IND,PRC_W_FLAGS(R11) ;DISABLE INDIRECT FILE INTERPRETATION
      FA4A'  30      05B3    808          BSBW    DCL$SETCHAR                ;PEEK AT NEXT CHARACTER IN INPUT BUFFER
20     50    91      05B6    809          CMPB    R0,#^A' '                  ;BLANK?
       03    12      05B9    810          BNEQ    5$                         ;BRANCH IF NO LEADING BLANK
      FA42'  30      05BB    811          BSBW    DCL$MOVCHAR                ;MOVE BLANK BEFORE MARK
      FA3F'  30      05BE    812 5$:      BSBW    DCL$MARK                   ;MARK POSITION AFTER FILESPEC & BLANK
      FA3C'  30      05C1    813 10$:     BSBW    DCL$MOVCHAR                ;MOVE CHARACTER TO COMMAND BUFFER
       FB    12      05C4    814          BNEQ    10$                        ;UNTIL END OF LINE
F486 CA      D7      05C6    815          DECL    WRK_L_EXPANDPTR(R10)       ;BACKUP OVER EOL CHARACTER
      FA33'  30      05CA    816          BSBW    DCL$MARKEDTOKEN            ;GET DESCRIPTOR OF REST OF LINE
57     51    7D      05CD    817          MOVQ    R1,R7                      ;COPY DESCRIPTOR
       54    D4      05D0    818          CLRL    R4                         ;CLEAR ITEM NUMBER
       56    D4      05D2    819          CLRL    R6                         ;CLEAR FLAGS
       59    D4      05D4    820          CLRL    R9                         ;CLEAR ENTITY BLOCK ADDRESS
55     03    9A      05D6    821          MOVZBL  #PTR_K_PARAMETR,R5         ;SET ITEM TYPE TO PARAMETER
      FA24'  30      05D9    822          BSBW    DCL$GENDESCR               ;GENERATE RESULT PARSE TABLE DESCRIPTOR
55     04    9A      05DC    823          MOVZBL  #PTR_K_ENDLINE,R5          ;SET ITEM TYPE TO END OF LINE
57     01    9A      05DF    824          MOVZBL  #1,R7                      ;SET LENGTH OF ITEM
58   F486 CA  D0      05E2    825          MOVL    WRK_L_EXPANDPTR(R10),R8    ;SET STARTING ADDRESS OF ITEM
      FA16'  30      05E7    826          BSBW    DCL$GENDESCR               ;GENERATE RESULT PARSE DESCRIPTOR
                     05EA    827          CLRBIT  PRC_V_IND,PRC_W_FLAGS(R11) ;ENABLE INDIRECT FILE INTERPRETATION
             05      05EE    828          RSB                                ;
                     05EF    829
```

```
                                05EF    831          .SBTTL  GET INTERNAL ROUTINE INDEX
                                05EF    832 ;---
                                05EF    833 ; DCL$LOCATE_INTERNAL - GET INDEX FROM INTERNAL ROUTINE TABLE
                                05EF    834 ;
                                05EF    835 ; THIS ROUTINE SEARCHES THE TABLE OF INTERNAL ROUTINES FOR A SPECIFIED STRING.
                                05EF    836 ; IF FOUND, THE INDEX OF THAT STRING IS RETURNED.
                                05EF    837 ;
                                05EF    838 ; INPUTS:
                                05EF    839 ;
                                05EF    840 ;       R1/R2 = ROUTINE NAME DESCRIPTOR
                                05EF    841 ;
                                05EF    842 ; OUTPUTS:
                                05EF    843 ;
                                05EF    844 ;       R0 = STATUS
                                05EF    845 ;       R3 = INDEX NUMBER
                                05EF    846 ;       R4 IS DESTROYED
                                05EF    847 ;---
                                05EF    848
                                05EF    849 DCL$LOCATE_INTERNAL:
                    7E    51    7D  05EF    850          MOVQ    R1,-(SP)                ; SAVE R1/R2
                    7E    62    7D  05F2    851          MOVQ    (R2),-(SP)              ; GET ROUTINE NAME
                6E    80  8F    88  05F5    852          BISB    #^X80,(SP)              ; SET HIGH ORDER BIT TO FORCE ROUTINE MATCH
                    08    51    D1  05F9    853          CMPL    R1,#8                   ; ROUTINE LENGTH GREATER THAN 8?
                          03    15  05FC    854          BLEQ    5$                      ; BRANCH IF NOT
                    51    08    D0  05FE    855          MOVL    #8,R1                   ; SET LENGTH EQUAL 8
            54    000001B0  8F    D0  0601    856 5$:      MOVL    #ROUTINES_LEN,R4        ; SET TABLE LENGTH
00000007'EF     54    6E    51    39  0608    857          MATCHC  R1,(SP),R4,ROUTINES     ; FIND SPECIFIED ROUTINE
                          17    12  0611    858          BNEQ    20$                     ; BRANCH IF NO MATCH
                    52    07    CA  0613    859          BICL    #7,R2                   ; ROUND REMAINING LENGTH UP
                    52    08    C0  0616    860          ADDL    #8,R2                   ;
                    54    52    C2  0619    861          SUBL    R2,R4                   ; CALCULATE RELATIVE POSITION OF MATCH
          53        54      FD  8F  78  061C    862          ASHL    #-3,R4,R3               ; DIVIDE BY 8 TO GET INDEX INTO R3
                    50    01    D0  0621    863          MOVL    #1,R0                   ; SET SUCCESS
                          8E    7C  0624    864 10$:     CLRQ    (SP)+                   ; RESTORE STACK
                    51    8E    7D  0626    865          MOVQ    (SP)+,R1                ; RESTORE R1/R2
                                05  0629    866          RSB
                                    062A    867
          50    00038912    8F    D0  062A    868 20$:     MOVL    #CLI$_INVROUT,R0        ; SET INVALID ROUTINE STATUS
                          F1    11  0631    869          BRB     10$                     ; RETURN
                                    0633    870
                                    0633    871          .END
```

```
$INTIMAGE$                = 000000B6
$NAM1$                    = 435349C4
$NAM2$                    = 454E4E4F
BUILD_IMAGE                 000002D0 R      03
CLI$K_VERB_FORE             ********   X    03
CLI$_INVROUT              = 00038912
CLI$_IVVALU               = 00038088
CLI$_NOCOMD               = 000380B0
CLI$_NOLBLS               = 000381E0
CLI$_NORMAL               = 00030001
CMDVERB                     00000276 R      03
CMD_V_FOREIGN             = 00000002
CMD_V_IMMED               = 00000003
CMD_W_FLAGS               = 00000004
COMMAND                     000001F1 R      03
CTL$AG_CLITABLE             ********   X    03
DCL$ABORT                   00000504 RG     03
DCL$ALLDEACMD               ********    X   03
DCL$ALLOCATE                ********    X   03
DCL$ALLOC_LABEL             ********    X   03
DCL$ASSIGN                  ********    X   03
DCL$ATTACH                  ********    X   03
DCL$BACKUPCHAR              ********    X   03
DCL$BACKUPMOVE              ********    X   03
DCL$CANCEL                  ********    X   03
DCL$CHARERROR               ********    X   03
DCL$CHECK_AST               0000054F RG     03
DCL$CLOSE                   ********    X   03
DCL$CMDSTART                00000011 RG     03
DCL$CONNECT                 ********    X   03
DCL$CONTINUE                ********    X   03
DCL$CRETABLE                ********    X   03
DCL$DEALGOTO                ********    X   03
DCL$DEALLOCAT               ********    X   03
DCL$DEASSIGN                ********    X   03
DCL$DEBUG                   ********    X   03
DCL$DECK                    00000547 RG     03
DCL$DEFINE                  ********    X   03
DCL$DEFKEY                  ********    X   03
DCL$DELKEY                  ********    X   03
DCL$DELSYM                  ********    X   03
DCL$DEPOSIT                 ********    X   03
DCL$DISABLE                 00000557 RG     03
DCL$DISCONNECT              ********    X   03
DCL$EOD                     0000053A RG     03
DCL$EOJ                     00000504 RG     03
DCL$EQUATE                  ********    X   03
DCL$ERRORMSG                ********    X   03
DCL$EVALUATE                ********    X   03
DCL$EXAMINE                 ********    X   03
DCL$EXIT                    ********    X   03
DCL$EXTIMAGE                ********    X   03
DCL$FLUSH                   00000580 RG     03
DCL$FORCEXIT                ********    X   03
DCL$GENDESCR                ********    X   03
DCL$GENEOL                  ********    X   03
DCL$GETCHAR                 ********    X   03
DCL$GETOKEN                 ********    X   03
DCL$GOTO                    ********    X   03
DCL$HYPHEN                  ********    X   03
DCL$IF                      ********    X   03
DCL$INPUT                   ********    X   03
DCL$INQUIRE                 ********    X   03
DCL$LOCATE_INTERNAL         000005EF R      03
DCL$LOCKED_STATE            ********    X   03
DCL$LOGOUT                  ********    X   03
DCL$MARK                    ********    X   03
DCL$MARKEDTOKEN             ********    X   03
DCL$MCR                     ********    X   03
DCL$MOVCHAR                 ********    X   03
DCL$ON                      ********    X   03
DCL$OPEN                    ********    X   03
DCL$PARSE_COMMAND           ********    X   03
DCL$PROCFILE                ********    X   03
DCL$READ                    ********    X   03
DCL$RECALL                  ********    X   03
DCL$RESTART                 00000000 RG     03
DCL$RUN                     ********     X  03
DCL$SEARCH_VERB             ********     X  03
DCL$SETCHAR                 ********     X  03
DCL$SETCTLY                 ********     X  03
DCL$SETDEFALT               ********     X  03
DCL$SETFLUSH                ********     X  03
DCL$SETKEY                  ********     X  03
DCL$SETNBLK                 ********     X  03
DCL$SETON                   ********     X  03
DCL$SETPROMPT               ********     X  03
DCL$SETPROT                 ********     X  03
DCL$SETUIC                  ********     X  03
DCL$SETVERIFY               ********     X  03
DCL$SET_STATUS              ********     X  03
DCL$SHOWDEF                 ********     X  03
DCL$SHOWKEY                 ********     X  03
DCL$SHOWPROT                ********     X  03
DCL$SHOWQUOTA               ********     X  03
DCL$SHOWSTAT                ********     X  03
DCL$SHOWSYMBL               ********     X  03
DCL$SHOWTIME                ********     X  03
DCL$SHOWTRAN                ********     X  03
DCL$SORT_TOKENS             ********     X  03
DCL$SPAWN                   ********     X  03
DCL$SPECIAL                 ********     X  03
DCL$STOP                    ********     X  03
DCL$SUBASSIGN               ********     X  03
DCL$SYM_STRING              ********     X  03
DCL$WAIT                    ********     X  03
DCL$WRITE                   ********     X  03
DEV$V_RND                 = 0000001C
DEV$V_TRM                 = 00000002
ERROR                       00000282 R      03
ERROR_EXIT                  00000337 R      03
EXECEXT                     000002F0 R      03
FORVERB                     00000255 R      03
IMAGECASE                   00000349 R      03
```

```
IMG_K_ALLOCATE          = 00000080
IMG_K_ASSIGN            = 00000081
IMG_K_ATTACH            = 000000A9
IMG_K_CANCEL            = 000000AB
IMG_K_CLOSE             = 00000082
IMG_K_CONNECT           = 000000B4
IMG_K_CONTINUE          = 00000083
IMG_K_CRETABLE          = 000000B3
IMG_K_DEALLOCAT         = 00000084
IMG_K_DEASSIGN          = 00000085
IMG_K_DEBUG             = 00000086
IMG_K_DECK              = 00000087
IMG_K_DEFINE            = 00000088
IMG_K_DEFKEY            = 000000AE
IMG_K_DELKEY            = 000000B0
IMG_K_DELSYM            = 0000008A
IMG_K_DEPOSIT           = 00000089
IMG_K_DISCONNECT        = 000000B5
IMG_K_EOD               = 0000008B
IMG_K_EOJ               = 000000AA
IMG_K_EXAMINE           = 0000008C
IMG_K_EXIT              = 0000008D
IMG_K_EXTIMAGE          = 0000008E
IMG_K_GOTO              = 0000008F
IMG_K_IF                = 00000090
IMG_K_INQUIRE           = 00000091
IMG_K_LOGOUT            = 00000092
IMG_K_MCR               = 00000093
IMG_K_ON                = 00000094
IMG_K_OPEN              = 00000095
IMG_K_READ              = 00000096
IMG_K_RECALL            = 000000AD
IMG_K_RUN               = 00000097
IMG_K_SETCTLY           = 00000098
IMG_K_SETDEFALT         = 00000099
IMG_K_SETFLUSH          = 000000B2
IMG_K_SETKEY            = 000000B1
IMG_K_SETON             = 0000009A
IMG_K_SETPROMPT         = 000000AC
IMG_K_SETPROT           = 0000009B
IMG_K_SETUIC            = 0000009C
IMG_K_SETVERIFY         = 0000009D
IMG_K_SHOWDEF           = 0000009E
IMG_K_SHOWKEY           = 000000AF
IMG_K_SHOWPROT          = 0000009F
IMG_K_SHOWQUOTA         = 000000A0
IMG_K_SHOWSTAT          = 000000A1
IMG_K_SHOWSYMBL         = 000000A2
IMG_K_SHOWTIME          = 000000A3
IMG_K_SHOWTRAN          = 000000A4
IMG_K_SPAWN             = 000000A8
IMG_K_STOP              = 000000A5
IMG_K_WAIT              = 000000A6
IMG_K_WRITE             = 000000A7
IMMED                     000002FA R      03
LOGOUT                    00000000 R      02
NOCOMD                    0000027B R      03
NULLNODE                  000001CE R      03
PRCVERB                   00000285 R      03
PRC_B_CONTINUE            000000F3
PRC_B_DEFRADIX            000000AE
PRC_B_EXMDEPMOD           000000AD
PRC_B_EXMDEPWID           000000AC
PRC_B_EXONLYL             0000012D
PRC_B_FLAGS2              000C00AF
PRC_B_IMGFLAG             00000078
PRC_B_OUTFLAGS            C000012C
PRC_B_PROMPTLEN           000000F0
PRC_C_LENGTH              00000534
PRC_G_COMMANDS            00000133
PRC_G_PROMPT              000000F4
PRC_K_LENGTH              00000534
PRC_L_CURRKEY             00000048
PRC_L_EXMDEPADR           000000A8
PRC_L_EXTARG              00000094
PRC_L_EXTBLK              0000008C
PRC_L_EXTCOD              0000009C
PRC_L_EXTHND              00000090
PRC_L_EXTPRM              00000098
PRC_L_IDFLNK              000000BC
PRC_L_IMGACTSTS           00000080
PRC_L_INDCLOCK            0000007C
PRC_L_INDEPTH             0000005C
PRC_L_INDFAB              0000001C
PRC_L_INDINPRAB           00000014
PRC_L_INDOUTRAB           00000018
PRC_L_INPRAB              00000008
PRC_L_LASTKEY             0000004C
PRC_L_LSTSTATUS           000000B0
PRC_L_ONCTLY              000000B8
PRC_L_ONERROR             0000006C
PRC_L_OUTOFBAND           000000B4
PRC_L_OUTRAB              0000000C
PRC_L_OUTRABCTX           00000118
PRC_L_PPFLIST             00000070
PRC_L_RECALLPTR           0000012F
PRC_L_RESTART             00000058
PRC_L_SAVAP               00000000
PRC_L_SAVFP               00000004
PRC_L_SEVERITY            00000050
PRC_L_SPWN                000000C0
PRC_L_STACKLM             000000A4
PRC_L_STACKPT             000000A0
PRC_L_STATUS              00000054
PRC_L_STS                 00000084
PRC_L_STV                 00000088
PRC_L_SYMBOL              00000060
PRC_L_TMBX                00000074
PRC_L_TRMLIST             00000010
PRC_M_DISABL            = 00000004
PRC_M_FLUSH             = 00000040
PRC_M_IND               = 00000020
PRC_M_RUNDEF            = 00000004
PRC_Q_ALLOCREG            00000020
```

```
PRC_Q_COMMAND                   000000E0
PRC_Q_FLUSHTIME                 000000D0
PRC_Q_GLOBAL                    00000028
PRC_Q_IMAGENAME                 000000D8
PRC_Q_KEYPAD                    00000040
PRC_Q_LABEL                     00000030
PRC_Q_LOCAL                     00000038
PRC_Q_SAVEPRIV                  000000E8
PRC_T_OUTDVI                    0000011C
PRC_V_CHAIN                   = 00000001
PRC_V_CMD                     = 00000000
PRC_V_CNTRLY                  = 00000001
PRC_V_DISABL                  = 00000002
PRC_V_FLUSH                   = 00000006
PRC_V_GOTO                    = 00000004
PRC_V_HANGUP                  = 0000000C
PRC_V_IND                     = 00000005
PRC_V_MODE                    = 00000006
PRC_V_PRIV                    = 00000004
PRC_V_RUNDEF                  = 00000002
PRC_V_YLEVEL                  = 0000000B
PRC_W_ASTIOSB                   000000C6
PRC_W_ASTRETN                   000000C8
PRC_W_ASTSTATUS                 000000C4
PRC_W_ATTMBX                    0000007A
PRC_W_FLAGS                     00000068
PRC_W_INPCHAN                   00000064
PRC_W_ONLEVEL                   0000006A
PRC_W_OUTIFI                    00000114
PRC_W_OUTISI                    00000116
PRC_W_OUTMBXCHN                 000000CA
PRC_W_OUTMBXREF                 000000CE
PRC_W_OUTMBXSIZ                 000000CC
PRC_W_PMPTCTRL                  000000F1
PRC_W_WAITIOSB                  00000066
PROCFORN                        000005AF  R      03
PSL$V_CURMOD                  = 00000018
PTR_B_LEVEL                     00000004
PTR_B_NUMBER                    00000005
PTR_B_PARMCNT                   00000006
PTR_B_VALUE                     00000000
PTR_C_LENGTH                    0000000C
PTR_K_ENDLINE                 = 00000004
PTR_K_LENGTH                    0000000C
PTR_K_PARAMETR                = 00000003
PTR_L_DESCR                     00000000
PTR_L_ENTITY                    00000008
RAB$L_CTX                     = 00000018
ROUTINES                        00000007  R      02
ROUTINES_LEN                  = 000001B0
SS$_ILLSER                      ********    X    03
SYMBOL                          000001DB  R      03
SYM_B_FLAGS                     0000000B
SYM_B_NONUNIQUE                 0000000B
SYM_B_TYPE                      0000000A
SYM_L_BL                        00000004
SYM_L_FL                        00000000
SYM_T_SYMBOL                    0000000C
SYM_W_SIZE                      00000008
WRK_B_CMDOPT                    FFFFFFC3
WRK_B_MAXPARM                   FFFFFFD0
WRK_B_MINPARM                   FFFFFFD1
WRK_B_PARMCNT                   FFFFFFCE
WRK_B_PARMSUM                   FFFFFFCF
WRK_B_RECALLCNT                 FFFFFFC5
WRK_B_VALLEV                    FFFFFFC4
WRK_B_VERBTYP                   FFFFFFC2
WRK_C_LENGTH                    FFFFF486
WRK_C_SCRSTKSIZ               = 00000200
WRK_G_BUFFER                    FFFFF492
WRK_G_INPBUF                    FFFFF896
WRK_G_RESULT                    FFFFF9B6
WRK_K_LENGTH                    FFFFF486
WRK_L_CHARPTR                   FFFFF48E
WRK_L_DISALLOW                  FFFFFFE6
WRK_L_ERRORRTN                  FFFFF9AE
WRK_L_EXPANDPTR                 FFFFF486
WRK_L_IMAGE                     FFFFFFE2
WRK_L_MARKPTR                   FFFFF48A
WRK_L_PAROUT                    FFFFFFD2
WRK_L_PMPTADDR                  FFFFF9A2
WRK_L_PROMPTRTN                 FFFFF9A6
WRK_L_PROPTR                    FFFFFFC6
WRK_L_QUABLK                    FFFFFFCA
WRK_L_READRTN                   FFFFF9AA
WRK_L_RECALLPTR                 FFFFFFEA
WRK_L_RSLEND                    FFFFFFB6
WRK_L_RSLNXT                    FFFFFFBA
WRK_L_SAVAP                     FFFFFFF8
WRK_L_SAVFP                     FFFFFFFC
WRK_L_SAVSP                     FFFFFFF4
WRK_L_SIGNALRTN                 FFFFFFD6
WRK_L_SPECRTN                   FFFFF9B2
WRK_L_TAB_VEC                   FFFFFFDE
WRK_L_VERB                      FFFFFFBE
WRK_V_CLIRTN                  = 00000000
WRK_V_COMMAND                 = 00000001
WRK_W_FLAGS                     FFFFFFF0
WRK_W_FLAGS2                    FFFFFFF2
WRK_W_IMGCHAN                   FFFFFFEE
WRK_W_PMPTLEN                   FFFFF99E
XXX$ALLOCATE                    000003C0  R      03
XXX$ASSIGN                      000003C6  R      03
XXX$ATTACH                      000004B6  R      03
XXX$CANCEL                      000004C2  R      03
XXX$CLOSE                       000003CC  R      03
XXX$CONNECT                     000004F8  R      03
XXX$CONTINUE                    000003D2  R      03
XXX$CRETABLE                    000004F2  R      03
XXX$DEALLOCAT                   000003D8  R      03
XXX$DEASSIGN                    000003DE  R      03
XXX$DEBUG                       000003E4  R      03
XXX$DECK                        000003EA  R      03
XXX$DEFINE                      000003F0  R      03
```

```
XXX$DEFKEY                      000004D4 R      03
XXX$DELKEY                      000004E0 R      03
XXX$DELSYM                      000003FC R      03
XXX$DEPOSIT                     000003F6 R      03
XXX$DISCONNECT                  000004FE R      03
XXX$EOD                         00000402 R      03
XXX$EOJ                         000004BC R      03
XXX$EXAMINE                     00000408 R      03
XXX$EXIT                        0000040E R      03
XXX$EXTIMAGE                    00000414 R      03
XXX$GOTO                        0000041A R      03
XXX$IF                          00000420 R      03
XXX$INQUIRE                     00000426 R      03
XXX$LOGOUT                      0000042C R      03
XXX$MCR                         00000432 R      03
XXX$ON                          00000438 R      03
XXX$OPEN                        0000043E R      03
XXX$READ                        00000444 R      03
XXX$RECALL                      000004CE R      03
XXX$RUN                         0000044A R      03
XXX$SETCTLY                     00000450 R      03
XXX$SETDEFALT                   00000456 R      03
XXX$SETFLUSH                    000004EC R      03
XXX$SETKEY                      000004E6 R      03
XXX$SETON                       0000045C R      03
XXX$SETPROMPT                   000004C8 R      03
XXX$SETPROT                     00000462 R      03
XXX$SETUIC                      00000468 R      03
XXX$SETVERIFY                   0000046E R      03
XXX$SHOWDEF                     00000474 R      03
XXX$SHOWKEY                     000004DA R      03
XXX$SHOWPROT                    0000047A R      03
XXX$SHOWQUOTA                   00000480 R      03
XXX$SHOWSTAT                    00000486 R      03
XXX$SHOWSYMBL                   0000048C R      03
XXX$SHOWTIME                    00000492 R      03
XXX$SHOWTRAN                    00000498 R      03
XXX$SPAWN                       000004B0 R      03
XXX$STOP                        0000049E R      03
XXX$WAIT                        000004A4 R      03
XXX$WRITE                       000004AA R      03
_$$_                        = 000000EF
```

Psect synopsis

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 (0.)	00 (0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
ABS	FFFFFFFC (0.)	01 (1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
DCL$ZDATA	000001B7 (439.)	02 (2.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE
DCL$ZCODE	00000633 (1587.)	03 (3.)	NOPIC USR CON REL LCL NOSHR EXE RD NOWRT NOVEC BYTE

```
                                    +-------------------------+
                                    ! Performance indicators !
                                    +-------------------------+

Phase                       Page faults     CPU Time        Elapsed Time
-----                       -----------     --------        ------------
Initialization                       18     00:00:00.04     00:00:01.49
Command processing                   97     00:00:00.64     00:00:06.46
Pass 1                              361     00:00:13.86     00:00:43.10
Symbol table sort                     0     00:00:01.58     00:00:04.96
Pass 2                              181     00:00:03.27     00:00:09.98
Symbol table output                  47     00:00:00.32     00:00:01.20
Psect synopsis output                 4     00:00:00.03     00:00:00.03
Cross-reference output                0     00:00:00.00     00:00:00.00
Assembler run totals                708     00:00:19.75     00:01:07.23

The working set limit was 1200 pages.
87010 bytes (170 pages) of virtual memory were used to buffer the intermediate code.
There were 60 pages of symbol table space allocated to hold 1080 non-local and 49 local symbols.
871 source lines were read in Pass 1, producing 26 object records in Pass 2.
43 pages of virtual memory were used to define 27 macros.

                                    +---------------------------+
                                    ! Macro library statistics !
                                    +---------------------------+

Macro library name                   Macros defined
------------------                   --------------
_$255$DUA28:[SYSLIB]SYSBLDMLB.MLB;1                0
_$255$DUA28:[DCL.OBJ]DCL.MLB;1                    13
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                     0
_$255$DUA28:[SYSLIB]STARLET.MLB;2                  6
TOTALS (all libraries)                            19

1101 GETS were required to define 19 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:COMMAND/OBJ=OBJ$:COMMAND MSRC$:COMMAND/UPDATE=(ENH$:COMMAND)+EXECML$/LIB+LIB$:DCL/LIB+SYS$LIBRARY:SYSBLDMLB/LIB
```

INTDEF
SDL

COMMAND
LIS

DESCRVAL
LIS

CONVERT
LIS

CLIMAC
MAR

CLIMSG
LIS

CONNECT
LIS

DCLPARSE
LIS

CHARMANIP
LIS

EXAMDEP
LIS

EXIT
LIS

INTIMAGES
MAR

DCXSTART
LIS

CLIGBL
LIS

DISALLOW
LIS

CLINT
LIS

CANCEL
LIS