J 5

```
   CCCCCCCCCCC  DDDDDDDDDDD     UUU        UUU
   CCCCCCCCCCC  DDDDDDDDDDD     UUU        UUU
   CCCCCCCCCCC  DDDDDDDDDDD     UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
CCC             DDD        DDD  UUU        UUU
   CCCCCCCCCCC  DDDDDDDDDDD     UUUUUUUUUUUUUU
   CCCCCCCCCCC  DDDDDDDDDDD     UUUUUUUUUUUUUU
   CCCCCCCCCCC  DDDDDDDDDDD     UUUUUUUUUUUUUU
```

```
**FILE**ID**LISTING                                                    H  1




LL            IIIIII      SSSSSSSS  TTTTTTTTTT    IIIIII    NN      NN    GGGGGGGG
LL            IIIIII      SSSSSSSS  TTTTTTTTTT    IIIIII    NN      NN    GGGGGGGG
LL              II      SS              TT          II      NN      NN  GG
LL              II      SS              TT          II      NN      NN  GG
LL              II      SS              TT          II      NNNN    NN  GG
LL              II      SS              TT          II      NNNN    NN  GG
LL              II        SSSSSS        TT          II      NN  NN  NN  GG
LL              II        SSSSSS        TT          II      NN  NN  NN  GG
LL              II              SS      TT          II      NN    NNNN  GG  GGGGGG
LL              II              SS      TT          II      NN    NNNN  GG  GGGGGG
LL              II              SS      TT          II      NN      NN  GG      GG      ....
LL              II              SS      TT          II      NN      NN  GG      GG      ....
LLLLLLLLLL    IIIIII    SSSSSSSS        TT        IIIIII    NN      NN    GGGGGG        ....
LLLLLLLLLL    IIIIII    SSSSSSSS        TT        IIIIII    NN      NN    GGGGGG        ....


LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
0 MODULE listing          (IDENT='V04-000',
0                         ADDRESSING_MODE(EXTERNAL=GENERAL))
1 = BEGIN
1
1 !*************************************************************************
1 !*                                                                       *
1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                              *
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1 !*                                                                       *
1 !*                                                                       *
1 !*************************************************************************
1
1 !++
1 ! Facility:     Command Definition Utility, Listing Generation
1 !
1 ! Abstract:     This module is responsible for generating a listing of the
1 !               CLD files we are compiling.  All files are listed in one
1 !               listing file, with headings, line numbers, and error messages.
1 !
1 ! Environment:  Standard CDU environment.
1 !
1 ! Author:       Paul C. Anagnostopoulos
1 ! Creation:     1 December 1982
1 !
1 ! Modifications:
1 !--
1
1
1 library 'sys$library:lib';
1 require 'cdureq';
```

```
;    47          0459  1 !       T A B L E   O F   C O N T E N T S
;    48          0460  1 !       ---------   ---   ---------------
;    49          0461  1
;    50          0462  1 forward routine
;    51          0463  1         cdu$prepare_listing_file: novalue,
;    52          0464  1         cdu$eject_listing_page: novalue,
;    53          0465  1         cdu$report_listing_line: novalue,
;    54          0466  1         cdu$report_listing_trailer: novalue;
;    55          0467  1
;    56          0468  1
;    57          0469  1 !       E X T E R N A L   R E F E R E N C E S
;    58          0470  1 !       ---------------   -------------------
;    59          0471  1
;    60          0472  1 external routine
;    61          0473  1         cdu$report_listing_heading2,
;    62          0474  1         cdu$report_rms_error,
;    63          0475  1         cli$get_value,
;    64          0476  1         cli$present,
;    65          0477  1         lib$lp_lines,
;    66          0478  1         str$trim;
;    67          0479  1
;    68          0480  1 external
;    69          0481  1         cdu$facility_string: descriptor,
;    70          0482  1         cdu$gl_cld_errors: long;
;    71          0483  1
;    72        P 0484  1 $shr_msgdef(cdu,17,local,
;    73        P 0485  1         (openout,severe),
;    74        P 0486  1         (writeerr,error)
;    75          0487  1         );
;    77         0488  1 !       L I S T I N G   F I L E   C O N T R O L   B L O C K S
;    78         0489  1 !       -------------   -------   -------------   -----------
;    79         0490  1
;    80         0491  1 ! The following items define the RMS control blocks needed to create and
;    81         0492  1 ! generate the listing file.
;    82         0493  1
;    83         0494  1 own
;    84       P 0495  1         listing_nam: $nam(
;    85         0496  1                                 ),
;    86         0497  1
;    87         0498  1         dbuffer(listing_spec,nam$c_maxrss),
;    88       P 0499  1         listing_fab: $fab(
;    89       P 0500  1                                 dnm='.LIS',
;    90       P 0501  1                                 fna=listing_spec+8,
;    91       P 0502  1                                 fns=%allocation(listing_spec)-8,
;    92       P 0503  1                                 fac=put,
;    93       P 0504  1                                 fop=<sqo,nam,ofp>,
;    94       P 0505  1                                 nam=listing_nam,
;    95       P 0506  1                                 org=seq,
;    96       P 0507  1                                 rat=cr,
;    97       P 0508  1                                 rfm=var
;    98         0509  1                                 ),
;    99         0510  1
;   100       P 0511  1         listing_rab: $rab(
;   101       P 0512  1                                 fab=listing_fab,
;   102       P 0513  1                                 rac=seq,
;   103       P 0514  1                                 rop=wbh
;   104         0515  1                                 );
;   105         0516  1
;   106         0517  1 !       L I S T I N G   C O N T R O L
;   107         0518  1 !       -------------   -------------
;   108         0519  1
;   109         0520  1 ! The following items keep track of the page number and the line count within
;   110         0521  1 ! a page.
;   111         0522  1
;   112         0523  1 own
;   113         0524  1         page_number: long,
;   114         0525  1         line_count: long;
```

```
1 !++
1 ! Description:  This routine is called to prepare the listing file for the
1 !               next CLD file listing.
1 !
1 ! Parameters:   cld_fab         By reference, the FAB for the new CLD file.
1 !
1 ! Returns:      Nothing.
1 !
1 ! Notes:        The listing file is created on the first call.
1 !--
1
1 GLOBAL ROUTINE cdu$prepare_listing_file(cld_fab: pointer)       : novalue
2 = BEGIN
2
2 local
2         status: long;
2
2
2 ! Determine if we are to generate a listing file.
2
3 if cli$present(dtext('LISTING')) then (
3
3         ! If we have not already created the listing file, do so.
3
4         if .listing_fab[fab$w_ifi] eqlu 0 then (
4
4                 ! Get any value specified on the listing qualifier to use as
4                 ! the spec for the listing file.
4
4                 cli$get_value(dtext('LISTING'),listing_spec);
4
4                 ! Use the CLD file NAM block as the related NAM block for our
4                 ! listing file.
4
4                 listing_nam[nam$l_rlf] = .cld_fab[fab$l_nam];
4
4                 ! Create and connect to the listing file.
4
4                 status = $create(fab=listing_fab);
5                 if .status then (
5                         status = $connect(rab=listing_rab);
5                         if not .status then
5                                 cdu$report_rms_error(msg(cdu$_openout),listing_rab);
4                 ) else
4                         cdu$report_rms_error(msg(cdu$_openout),listing_fab);
3         );
3
3         ! Prepare for a new listing by resetting the page number and
3         ! ejecting the page.
3
3         page_number = 0;
3         cdu$eject_listing_page();
2 );
2
2 return;
2
1 END;
```

```
                                                       .TITLE  LISTING
                                                       .IDENT  \V04-000\

                                                       .PSECT  $PLIT$,NOWRT,NOEXE,2

                 53  49  4C  2E  00000 P.AAA:   .ASCII  \.LIS\                                  ;
 00  47  4E  49  54  53  49  4C  00004 P.AAC:   .ASCII  \LISTING\<0>                            ;
                     010E0007  0000C P.AAB:   .LONG   17694727                                ;
                     00000000' 00010          .ADDRESS P.AAC                                  ;
 00  47  4E  49  54  53  49  4C  00014 P.AAE:   .ASCII  \LISTING\<0>                            ;
                     010E0007  0001C P.AAD:   .LONG   17694727                                ;
                     00000000' 00020          .ADDRESS P.AAE                                  ;

                                                       .PSECT  $OWN$,NOEXE,2

                           02  00000 LISTING_NAM:
                                               .BYTE   2                                       ;
                           60  00001           .BYTE   96                                      ;
                           00  00002           .BYTE   0                                       ;
                           00  00003           .BYTE   0                                       ;
                     00000000  00004           .LONG   0                                       ;
                           00  00008           .BYTE   0                                       ;
                           00  00009           .BYTE   0                                       ;
                           00  0000A           .BYTE   0                                       ;
                           00  0000B           .BYTE   0                                       ;
                     00000000  0000C           .LONG   0                                       ;
                     00000000  00010           .LONG   0                                       ;
                         0000# 00014           .WORD   0[8]                                    ;
                         0000# 00024           .WORD   0[3]                                    ;
                         0000# 0002A           .WORD   0[3]                                    ;
                     00000000  00030           .LONG   0                                       ;
                     00000000  00034           .LONG   0                                       ;
                           00  00038           .BYTE   0                                       ;
                           00  00039           .BYTE   0                                       ;
                           00  0003A           .BYTE   0                                       ;
                           00  0003B           .BYTE   0                                       ;
                           00  0003C           .BYTE   0                                       ;
                           00  0003D           .BYTE   0                                       ;
                           00# 0003E           .BYTE   0[2]                                    ;
                     00000000  00040           .LONG   0                                       ;
                     00000000  00044           .LONG   0                                       ;
                     00000000  00048           .LONG   0                                       ;
                     00000000  0004C           .LONG   0                                       ;
                     00000000  00050           .LONG   0                                       ;
                     00000000  00054           .LONG   0                                       ;
                     00000000# 00058           .LONG   0[2]                                    ;
                         00FF  00060 LISTING_SPEC:
                                               .WORD   255                                     ;
                       00  00  00062           .BYTE   0, 0                                    ;
                     00000000' 00064           .ADDRESS LISTING_SPEC+8                         ;
                               00068           .BLKB   255
                               00167           .BLKB   1
                           03  00168 LISTING_FAB:
                                               .BYTE   3                                       ;
                           50  00169           .BYTE   80                                      ;
```

```
     0000  0016A              .WORD    0                                                        ;
 21000040  0016C              .LONG    553648192                                                ;
 00000000  00170              .LONG    0                                                        ;
 00000000  00174              .LONG    0                                                        ;
 00000000  00178              .LONG    0                                                        ;
     0000  0017C              .WORD    0                                                        ;
       01  0017E              .BYTE    1                                                        ;
       00  0017F              .BYTE    0                                                        ;
 00000000  00180              .LONG    0                                                        ;
       00  00184              .BYTE    0                                                        ;
       00  00185              .BYTE    0                                                        ;
       02  00186              .BYTE    2                                                        ;
       02  00187              .BYTE    2                                                        ;
 00000000  00188              .LONG    0                                                        ;
 00000000  0018C              .LONG    0                                                        ;
00000000'  00190              .ADDRESS LISTING_NAM                                              ;
00000000'  00194              .ADDRESS LISTING_SPEC+8                                           ;
00000000'  00198              .ADDRESS P.AAA                                                    ;
       FF  0019C              .BYTE    -1                                                       ;
       04  0019D              .BYTE    4                                                        ;
     0000  0019E              .WORD    0                                                        ;
 00000000  001A0              .LONG    0                                                        ;
     0000  001A4              .WORD    0                                                        ;
       00  001A6              .BYTE    0                                                        ;
       00  001A7              .BYTE    0                                                        ;
 00000000  001A8              .LONG    0                                                        ;
 00000000  001AC              .LONG    0                                                        ;
     0000  001B0              .WORD    0                                                        ;
       00  001B2              .BYTE    0                                                        ;
       00  001B3              .BYTE    0                                                        ;
 00000000  001B4              .LONG    0                                                        ;
       01  001B8 LISTING_RAB:
                              .BYTE    1                                                        ;
       44  001B9              .BYTE    68                                                       ;
     0000  001BA              .WORD    0                                                        ;
 00000400  001BC              .LONG    1024                                                     ;
 00000000  001C0              .LONG    0                                                        ;
 00000000  001C4              .LONG    0                                                        ;
    0000#  001C8              .WORD    0[3]                                                     ;
     0000  001CE              .WORD    0                                                        ;
 00000000  001D0              .LONG    0                                                        ;
     0000  001D4              .WORD    0                                                        ;
       00  001D6              .BYTE    0                                                        ;
       00  001D7              .BYTE    0                                                        ;
     0000  001D8              .WORD    0                                                        ;
     0000  001DA              .WORD    0                                                        ;
 00000000  001DC              .LONG    0                                                        ;
 00000000  001E0              .LONG    0                                                        ;
 00000000  001E4              .LONG    0                                                        ;
 00000000  001E8              .LONG    0                                                        ;
       00  001EC              .BYTE    0                                                        ;
       00  001ED              .BYTE    0                                                        ;
       00  001EE              .BYTE    0                                                        ;
       00  001EF              .BYTE    0                                                        ;
 00000000  001F0              .LONG    0                                                        ;
00000000'  001F4              .ADDRESS LISTING_FAB                                              ;
 00000000  001F8              .LONG    0                                                        ;
```

```
                                          001FC PAGE_NUMBER:
                                                       .BLKB    4
                                          00200 LINE_COUNT:
                                                       .BLKB    4

                                                       .EXTRN   CDU$REPORT_LISTING_HEADING2
                                                       .EXTRN   CDJ$REPORT_RMS_ERROR
                                                       .EXTRN   CLI$GET_VALUE, CLI$PRESENT
                                                       .EXTRN   LIB$LP_LINES, STR$TRIM
                                                       .EXTRN   CDU$FACILITY_STRING
                                                       .EXTRN   CDU$GL_CLD_ERRORS
                                                       .EXTRN   SYS$CREATE, SYS$CONNECT

                                                       .PSECT   $CODE$,NOWRT,2

                                     0004 00000        .ENTRY   CDU$PREPARE_LISTING_FILE, Save R2        ; 0537
                52      0000'   CF   9E 00002          MOVAB    LISTING_FAB, R2                          ;
                        0000'   CF   9F 00007          PUSHAB   P.AAB                                    ; 0546
       00000000G  00                 01   FB 0000B     CALLS    #1, CLI$PRESENT                          ;
                54                   50   E9 00012     BLBC     R0, 4$                                   ;
                          02    A2   B5 00015          TSTW     LISTING_FAB+2                            ; 0550
                                46   12 00018          BNEQ     3$                                       ;
                        FEF8    C2   9F 0001A          PUSHAB   LISTING_SPEC                             ; 0555
                        0000'   CF   9F 0001E          PUSHAB   P.AAD                                    ;
       00000000G  00                 02   FB 00022     CALLS    #2, CLI$GET_VALUE                        ;
                50        04    AC   D0 00029          MOVL     CLD_FAB, R0                              ; 0560
           FEA8   C2      28    A0   D0 0002D          MOVL     40(R0), LISTING_NAM+16                   ;
                                52   DD 00033          PUSHL    R2                                       ; 0564
       00000000G  00                 01   FB 00035     CALLS    #1, SYS$CREATE                           ;
                12                   50   E9 0003C     BLBC     STATUS, 1$                               ; 0565
                          50    A2   9F 0003F          PUSHAB   LISTING_RAB                              ; 0566
       00000000G  00                 01   FB 00042     CALLS    #1, SYS$CONNECT                          ;
                14                   50   E8 00049     BLBS     STATUS, 3$                               ; 0567
                          50    A2   9F 0004C          PUSHAB   LISTING_RAB                              ; 0568
                                02   11 0004F          BRB      2$                                       ;
                                52   DD 00051 1$:      PUSHL    R2                                       ; 0570
                    001110A4    8F   DD 00053 2$:      PUSHL    #1118372                                 ;
       00000000G  00                 02   FB 00059     CALLS    #2, CDU$REPORT_RMS_ERROR                 ;
                        0094    C2   D4 00060 3$:      CLRL     PAGE_NUMBER                              ; 0576
           0000V  CF                 00   FB 00064     CALLS    #0, CDU$EJECT_LISTING_PAGE               ; 0577
                                     04 00069 4$:      RET                                               ; 0582

; Routine Size:  106 bytes,    Routine Base:  $CODE$ + 0000
;  174        0583  1 !++
;  175        0584  1 ! Description:  This routine is called to eject the page in the listing file.
;  176        0585  1 !               It produces a nice set of heading lines at the top of the page.
;  177        0586  1 !
;  178        0587  1 ! Parameters:   None.
;  179        0588  1 !
;  180        0589  1 ! Returns:      Nothing.
;  181        0590  1 !
;  182        0591  1 ! Notes:
;  183        0592  1 !--
;  184        0593  1
;  185        0594  1 GLOBAL ROUTINE cdu$eject_listing_page          : novalue
;  186        0595  2 = BEGIN
;  187        0596  2
;  188        0597  2
;  189        0598  2 ! Increment the page number and reset the line count for the new page.
;  190        0599  2
;  191        0600  2 increment(page_number);
;  192        0601  2 line_count = lib$lp_lines() - 5;
;  193        0602  2
;  194        0603  2 ! Generate a form feed.
;  195        0604  2
;  196        0605  2 cdu$report_listing_line(msg(cdu$_anything),nobabble+1,dtext(%char(FF)));
;  197        0606  2
;  198        0607  2 ! Generate a line containing the date and time, utility name, and page number.
;  199        0608  2
;  200        0609  2 cdu$report_listing_line(msg(cdu$_heading1),nobabble+3,0,cdu$facility_string,.page_number);
;  201        0610  2
;  202        0611  2 ! Generate a line containing information about the CLD file we are compiling.
;  203        0612  2 ! It's easier to just call a routine in the LEXICAL module.
;  204        0613  2
;  205        0614  2 cdu$report_listing_heading2();
;  206        0615  2
;  207        0616  2 ! Put out two blank lines.
;  208        0617  2
;  209        0618  2 cdu$report_listing_line(msg(cdu$_anything),nobabble+1,dtext(''));
;  210        0619  2 cdu$report_listing_line(msg(cdu$_anything),nobabble+1,dtext(''));
;  211        0620  2
;  212        0621  2 return;
;  213        0622  2
;  214        0623  1 END;


                                                     .PSECT  $PLIT$,NOWRT,NOEXE,2

              00  00  00  0C  00024 P.AAG:  .ASCII  <12><0><0><0>                    ;
                    010E0001  00028 P.AAF:  .LONG   17694721                         ;
                   00000000'  0002C         .ADDRESS P.AAG                           ;
                              00030 P.AAI:  .BLKB   0                                ;
                    010E0000  00030 P.AAH:  .LONG   17694720                         ;
                   00000000'  00034         .ADDRESS P.AAI                           ;
                              00038 P.AAK:  .BLKB   0                                ;
                    010E0000  00038 P.AAJ:  .LONG   17694720                         ;
                   00000000'  0003C         .ADDRESS P.AAK                           ;

                                                     .EXTRN  CDU$_ANYTHING, CDU$_HEADING1
```

```
                                                                          .PSECT  $CODE$,NOWRT,2

                                                       000C 00000         .ENTRY  CDU$EJECT_LISTING_PAGE, Save R2,R3          ; 0594
                                       53     0000V CF   9E 00002         MOVAB   CDU$REPORT_LISTING_LINE, R3                 ;
                                       52 00000000G 8F   D0 00007         MOVL    #CDU$_ANYTHING, R2                          ;
                                              0000' CF   D6 0000E         INCL    PAGE_NUMBER                                 ; 0600
                            00000000G  00           00   FB 00012         CALLS   #0, LIB$LP_LINES                            ; 0601
                                0000'  CF        FB A0   9E 00019         MOVAB   -5(R0), LINE_COUNT                          ;
                                              0000' CF   9F 0001F         PUSHAB  P.AAF                                       ; 0605
                                          00010001  8F   DD 00023         PUSHL   #65537                                      ;
                                                    52   DD 00029         PUSHL   R2                                          ;
                                       63           03   FB 0002B         CALLS   #3, CDU$REPORT_LISTING_LINE                 ;
                                              0000' CF   DD 0002E         PUSHL   PAGE_NUMBER                                 ; 0609
                                          00000000G 00   9F 00032         PUSHAB  CDU$FACILITY_STRING                         ;
                                                    7E   D4 00038         CLRL    -(SP)                                       ;
                                          00010003  8F   DD 0003A         PUSHL   #65539                                      ;
                                          00000000G 8F   DD 00040         PUSHL   #CDU$_HEADING1                              ;
                                       63           05   FB 00046         CALLS   #5, CDU$REPORT_LISTING_LINE                 ;
                            00000000G  00           00   FB 00049         CALLS   #0, CDU$REPORT_LISTING_HEADING2             ; 0614
                                              0000' CF   9F 00050         PUSHAB  P.AAH                                       ; 0618
                                          00010001  8F   DD 00054         PUSHL   #65537                                      ;
                                                    52   DD 0005A         PUSHL   R2                                          ;
                                       63           03   FB 0005C         CALLS   #3, CDU$REPORT_LISTING_LINE                 ;
                                              0000' CF   9F 0005F         PUSHAB  P.AAJ                                       ; 0619
                                          00010001  8F   DD 00063         PUSHL   #65537                                      ;
                                                    52   DD 00069         PUSHL   R2                                          ;
                                       63           03   FB 0006B         CALLS   #3, CDU$REPORT_LISTING_LINE                 ;
                                                         04 0006E         RET                                                 ; 0623

; Routine Size:  111 bytes,    Routine Base:  $CODE$ + 006A
;  216          0624   1 !++
;  217          0625   1 ! Description:  This routine is called to generate a line in the listing file.
;  218          0626   1 !               The line is created using $FAO and written into the listing
;  219          0627   1 !               file without any other manipulation.
;  220          0628   1 !
;  221          0629   1 ! Parameters:   A standard $PUTMSG argument list.
;  222          0630   1 !
;  223          0631   1 ! Returns:      Nothing.
;  224          0632   1 !
;  225          0633   1 ! Notes:
;  226          0634   1 !--
;  227          0635   1
;  228          0636   1 GLOBAL ROUTINE cdu$report_listing_line(message: long,
;  229          0637   1                                        fao_count: word,
;  230          0638   1                                        faoT: long)             : novalue
;  231          0639   2 = BEGIN
;  232          0640   2
;  233          0641   2 builtin
;  234          0642   2         argptr;
;  235          0643   2
;  236          0644   2 ! The following little routine is the action routine for $PUTMSG.  It
;  237          0645   2 ! receives a formatted line, which it writes into the listing file.
;  238          0646   2
;  239          0647   2 ROUTINE write_line(line: ref descriptor)
;  240          0648   3 = BEGIN
;  241          0649   3
;  242          0650   3 local
;  243          0651   3         status: long;
;  244          0652   3
;  245          0653   3 listing_rab[rab$w_rsz] = .line[len];
;  246          0654   3 listing_rab[rab$l_rbf] = .line[ptr];
;  247          0655   3 status = $put(rab=listing_rab);
;  248          0656   3 if not .status then
;  249          0657   3         cdu$report_rms_error(msg(cdu$_writeerr),listing_rab);
;  250          0658   3
;  251          0659   3 return false;
;  252          0660   3
;  253          0661   2 END;


                                                                  .EXTRN   SYS$PUT

                                                0004 00000 WRITE_LINE:
                                                                  .WORD    Save R2                                   ; 0647
                            52      0000'  CF   9E 00002          MOVAB    LISTING_RAB, R2                           ;
                            50         04  AC   D0 00007          MOVL     LINE, R0                                  ; 0653
                     22     A2             60   B0 0000B          MOVW     (R0), LISTING_RAB+34                      ;
                     28     A2         04  A0   D0 0000F          MOVL     4(R0), LISTING_RAB+40                     ; 0654
                                           52   DD 00014          PUSHL    R2                                        ; 0655
              00000000G     00             01   FB 00016          CALLS    #1, SYS$PUT                               ;
                            0F             50   E8 0001D          BLBS     STATUS, 1$                                ; 0656
                                           52   DD 00020          PUSHL    R2                                        ; 0657
                              001110D2     8F   DD 00022          PUSHL    #1118418                                  ;
              00000000G     00             02   FB 00028          CALLS    #2, CDU$REPORT_RMS_ERROR                  ;
                                           50   D4 0002F  1$:     CLRL     R0                                        ; 0659
                                                04 00031          RET                                                ; 0661
```

```
; Routine Size:  50 bytes,    Routine Base:  $CODE$ + 00D9

;   254          0662  2
;   255          0663  2
;   256          0664  2 ! If a listing file is not being generated, just return.
;   257          0665  2
;   258          0666  2 if .listing_fab[fab$w_ifi] eqlu 0 then
;   259          0667  2         return;
;   260          0668  2
;   261          0669  2 ! If there are no lines left on the current page, then eject it.
;   262          0670  2
;   263          0671  2 if .line_count eqlu 0 then
;   264          0672  2         cdu$eject_listing_page();
;   265          0673  2
;   266          0674  2 ! Use $PUTMSG to format the message lines.  It will call our action routine
;   267          0675  2 ! to write them into the listing file.
;   268          0676  2
;   269        P 0677  2 $putmsg(msgvec=argptr(),
;   270          0678  2         actrtn=write_line);
;   271          0679  2
;   272          0680  2 ! Account for the current line.
;   273          0681  2
;   274          0682  2 decrement(line_count);
;   275          0683  2 return;
;   276          0684  2
;   277          0685  1 END;


                                                                   .EXTRN  SYS$PUTMSG

                                                0000 00000         .ENTRY  CDU$REPORT_LISTING_LINE, Save nothing         ; 0636
                                      0000'  CF   B5 00002         TSTW    LISTING_FAB+2                                 ; 0666
                                             1D   13 00006         BEQL    2$                                            ;
                                      0000'  CF   D5 00008         TSTL    LINE_COUNT                                    ; 0671
                                             05   12 0000C         BNEQ    1$                                            ;
                        FF4C   CF                 00 FB 0000E      CALLS   #0, CDU$EJECT_LISTING_PAGE                    ; 0672
                                             7E   7C 00013 1$:     CLRQ    -(SP)                                         ; 0678
                                        B6   AF   9F 00015         PUSHAB  WRITE_LINE                                    ;
                                             5C   DD 00018         PUSHL   AP                                            ;
                     00000000G  00           04   FB 0001A         CALLS   #4, SYS$PUTMSG                                ;
                                      0000'  CF   D7 00021         DECL    LINE_COUNT                                    ; 0682
                                                  04 00025 2$:     RET                                                   ; 0685

; Routine Size:  38 bytes,    Routine Base:  $CODE$ + 010B
```

```
  1 !++
  1 ! Description:  This routine is called after a CLD file has been completely
  1 !               listed.  It generates a nice little trailer in the listing
  1 !               file, which includes the error count and the command line
  1 !               that invoked the CDU.
  1 !
  1 ! Parameters:   None.
  1 !
  1 ! Returns:      Nothing.
  1 !
  1 ! Notes:
  1 !--
  1
  1 GLOBAL ROUTINE cdu$report_listing_trailer             : novalue
  2 = BEGIN
  2
  2
  2 ! Skip down a couple of lines and report the error count, unless it's zero.
  2
  2 cdu$report_listing_line(msg(cdu$_anything),nobabble+1,dtext(''));
  3 if .cdu$gl_cld_errors nequ 0 then (
  3         cdu$report_listing_line(msg(cdu$_anything),nobabble+1,dtext(''));
  3         cdu$report_listing_line(msg(cdu$_errorcount),nobabble+1,.cdu$gl_cld_errors);
  2 );
  2
  2 ! Skip down another line and report the command line.
  2
  2 cdu$report_listing_line(msg(cdu$_anything),nobabble+1,dtext(''));
P 2 with_dbuffer(command_line,1024,
P 2         cli$get_value(dtext('$LINE'),command_line);
P 2         str$trim(command_line,command_line,command_line);
P 2         cdu$report_listing_line(msg(cdu$_commandline),nobabble+1,command_line);
  2 );
  2
  2 return;
  2
  1 END;


                                                     .PSECT  $PLIT$,NOWRT,NOEXE,2

                                      00040 P.AAM:   .BLKB   0
                            010E0000  00040 P.AAL:   .LONG   17694720
                            00000000' 00044          .ADDRESS P.AAM
                                      00048 P.AAO:   .BLKB   0
                            010E0000  00048 P.AAN:   .LONG   17694720
                            00000000' 0004C          .ADDRESS P.AAO
                                      00050 P.AAQ:   .BLKB   0
                            010E0000  00050 P.AAP:   .LONG   17694720
                            00000000' 00054          .ADDRESS P.AAQ
      00  00  00  45  4E  49  4C  24  00058 P.AAS:   .ASCII  \$LINE\<0><0><0>
                            010E0005  00060 P.AAR:   .LONG   17694725
                            00000000' 00064          .ADDRESS P.AAS

                                                     .EXTRN  CDU$_ERRORCOUNT
                                                     .EXTRN  CDU$_COMMANDLINE
```

```
                                                       .PSECT  $CODE$,NOWRT,2

                                   001C 00000          .ENTRY  CDU$REPORT_LISTING_TRAILER, Save R2,R3,R4    ; 0699
                  54 00000000G  00   9E 00002          MOVAB   CDU$GL_CLD_ERRORS, R4                        ;
                  53        CE  AF   9E 00009          MOVAB   CDU$REPORT_LISTING_LINE, R3                  ;
                  52 00000000G  8F   D0 0000D          MOVL    #CDU$_ANYTHING, R2                           ;
                  5E      FBF8  CE   9E 00014          MOVAB   -1032(SP), SP                                ;
                         0000'  CF   9F 00019          PUSHAB  P.AAL                                        ; 0705
                     00010001   8F   DD 0001D          PUSHL   #65537                                       ;
                                52   DD 00023          PUSHL   R2                                           ;
                  63            03   FB 00025          CALLS   #3, CDU$REPORT_LISTING_LINE                  ;
                                64   D5 00028          TSTL    CDU$GL_CLD_ERRORS                            ; 0706
                                20   13 0002A          BEQL    1$                                           ;
                         0000'  CF   9F 0002C          PUSHAB  P.AAN                                        ; 0707
                     00010001   8F   DD 00030          PUSHL   #65537                                       ;
                                52   DD 00036          PUSHL   R2                                           ;
                  63            03   FB 00038          CALLS   #3, CDU$REPORT_LISTING_LINE                  ;
                                64   DD 0003B          PUSHL   CDU$GL_CLD_ERRORS                            ; 0708
                     00010001   8F   DD 0003D          PUSHL   #65537                                       ;
                     00000000G  8F   DD 00043          PUSHL   #CDU$_ERRORCOUNT                             ;
                  63            03   FB 00049          CALLS   #3, CDU$REPORT_LISTING_LINE                  ;
                         0000'  CF   9F 0004C 1$:      PUSHAB  P.AAP                                        ; 0713
                     00010001   8F   DD 00050          PUSHL   #65537                                       ;
                                52   DD 00056          PUSHL   R2                                           ;
                  63            03   FB 00058          CALLS   #3, CDU$REPORT_LISTING_LINE                  ;
                  6E      0400  8F   3C 0005B          MOVZWL  #1024, COMMAND_LINE                          ; 0718
             04   AE        08  AE   9E 00060          MOVAB   COMMAND_LINE+8, COMMAND_LINE+4               ;
                                5E   DD 00065          PUSHL   SP                                           ;
                         0000'  CF   9F 00067          PUSHAB  P.AAR                                        ;
        00000000G 00            02   FB 0006B          CALLS   #2, CLI$GET_VALUE                            ;
                                5E   DD 00072          PUSHL   SP                                           ;
                            04  AE   9F 00074          PUSHAB  COMMAND_LINE                                 ;
                            08  AE   9F 00077          PUSHAB  COMMAND_LINE                                 ;
        00000000G 00            03   FB 0007A          CALLS   #3, STR$TRIM                                 ;
                                5E   DD 00081          PUSHL   SP                                           ;
                     00010001   8F   DD 00083          PUSHL   #65537                                       ;
                     00000000G  8F   DD 00089          PUSHL   #CDU$_COMMANDLINE                            ;
                  63            03   FB 0008F          CALLS   #3, CDU$REPORT_LISTING_LINE                  ;
                                     04 00092          RET                                                  ; 0722

; Routine Size:  147 bytes,    Routine Base:  $CODE$ + 0131


;  316          0723  1
;  317          0724  1 END
;  318          0725  0 ELUDOM



;                                PSECT SUMMARY
;
;       Name                     Bytes                        Attributes
;
```

```
;  $OWN$                         516  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $PLIT$                        104  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $CODE$                        452  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)




;                         Library Statistics
;
;                                          -------- Symbols --------      Pages      Processing
;      File                                Total    Loaded   Percent      Mapped     Time
;
;  _$255$DUA28:[SYSLIB]LIB.L32;1           18619        54         0      1000        00:01.8





;                                       COMMAND QUALIFIERS

;      BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:LISTING/OBJ=OBJ$:LISTING MSRC$:LISTING/UPDATE=(ENH$:LISTING)

; Size:          452 code + 620 data bytes
; Run Time:         00:14.4
; Elapsed Time:     00:45.3
; Lines/CPU Min:     3031
; Lexemes/CPU-Min: 27700
; Memory Used:  129 pages
; Compilation Complete
```

0044 AH-BT13A-SE
VAX/VMS V4.0

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