
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMM MMM TTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMMMMM MMMMMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM MMM TTT AAA AAA AAA AAA CCC PPP PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAA AAA AAA AAA CCC PPPPPPPPPPPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP
MMM MMM TTT AAA AAA AAA AAA CCCCCCCCCCCC PPP

FILEID**FIND

```
FFFFFFFFFF     IIIIII     NN       NN  DDDDDDDD
FFFFFFFFFF     IIIIII     NN       NN  DDDDDDDD
FF               II       NN       NN  DD      DD
FF               II       NN       NN  DD      DD
FF               II       NNNN     NN  DD      DD
FF               II       NNNN     NN  DD      DD
FFFFFFFF         II       NN  NN   NN  DD      DD
FFFFFFFF         II       NN  NN   NN  DD      DD
FF               II       NN    NNNN  DD      DD
FF               II       NN    NNNN  DD      DD
FF               II       NN      NN  DD      DD      ....
FF               II       NN      NN  DD      DD      ....
FF             IIIIII     NN      NN  DDDDDDDD        ....
FF             IIIIII     NN      NN  DDDDDDDD        ....

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
```

```
;  1          0001  0
;  2          0002  0 MODULE FIND ( LANGUAGE ( BLISS32 ),
;  3          0003  0                IDENT = 'V04-000'
;  4          0004  0                ) =
;  5          0005  1 BEGIN
;  6          0006  1 !
;  7          0007  1 !**********************************************************************
;  8          0008  1 !*                                                                    *
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; 26          0026  1 !*                                                                    *
; 27          0027  1 !*                                                                    *
; 28          0028  1 !**********************************************************************
; 29          0029  1
; 30          0030  1 !++
; 31          0031  1 !
; 32          0032  1 ! FACILITY:  MTAACP
; 33          0033  1 !
; 34          0034  1 ! ABSTRACT:
; 35          0035  1 !       This module finds a file by file name string.
; 36          0036  1 !
; 37          0037  1 ! ENVIRONMENT:
; 38          0038  1 !
; 39          0039  1 !       Starlet operating system, including privileged system services
; 40          0040  1 !       and internal exec routines.
; 41          0041  1 !
; 42          0042  1 !--
; 43          0043  1
; 44          0044  1 !
; 45          0045  1 !
; 46          0046  1 ! AUTHOR:  D. H. GILLESPIE,      CREATION DATE:  25-MAY-77 15:20
; 47          0047  1 !
; 48          0048  1 ! MODIFIED BY:
; 49          0049  1 !
; 50          0050  1 !       V03-002 MMD0283         Meg Dumont,     23-Mar-1984  10:33
; 51          0051  1 !               Fix to linkage of PARSE_FID.
; 52          0052  1 !
; 53          0053  1 !       V03-001 MMD0157         Meg Dumont,     26-Apr-1983  9:18
; 54          0054  1 !               Add support for long file names. Changed the maximum size
; 55          0055  1 !               file name one can have to be the symbol FILE_SPEC_MAX, which
; 56          0056  1 !               is defined in MTADEF.B32.
; 57          0057  1 !
```

```
;    58          0058  1 !       V02-009 DMW00073        David Michael Walp      28-Jan-1981
;    59          0059  1 !               Fixed wildcard characters in quoted string bug
;    60          0060  1 !
;    61          0061  1 !       V02-008 DMW00068        David Michael Walp      11-Jan-1981
;    62          0062  1 !               Added support for 17 ANSI 'a' characters thru QIO
;    63          0063  1 !               filename parameters
;    64          0064  1 !
;    65          0065  1 !       V02-007 DMW0006?        David Michael Walp      18-Dec-1981
;    66          0066  1 !               Rewrite to support 17 ANSI 'a' characters file names
;    67          0067  1 !
;    68          0068  1 !       V02-006 DMW00006        David Michael Walp      22-Jan-1981
;    69          0069  1 !               Added code for complete wild card support.  Changes
;    70          0070  1 !               in routine FIND_FILE.  Replaced direct compares of
;    71          0071  1 !               the file name and type via CH$EQL with the new
;    72          0072  1 !               FMG$MATCH_NAME procedure and removed old wild code.
;    73          0073  1 !
;    74          0074  1 !       V02-005 REFORMAT        Maria del C. Nasr       30-Jun-1980
;    75          0075  1 !
;    76          0076  1 !**
;    77          0077  1
;    78          0078  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
;    79          0079  1
;    80          0080  1 REQUIRE 'SRC$:MTADEF.B32';
;    81          0464  1
;    82          0465  1 FORWARD ROUTINE
;    83          0466  1     FIND_FILE           : COMMON_CALL NOVALUE,  ! find file by file name string
;    84          0467  1     CLEAR_ST_SEARCH     : COMMON_CALL NOVALUE;  ! clear start of search
;    85          0468  1
;    86          0469  1 LINKAGE
;    87          0470  1     L_MATCH_NAME = JSB ( REGISTER = 2, REGISTER = 3, REGISTER = 4, REGISTER = 5 )
;    88          0471  1                      : NOTUSED ( 10, 11 );
;    89          0472  1
;    90          0473  1
```

```
;    92          0474  1 GLOBAL ROUTINE FIND_FILE : COMMON_CALL NOVALUE =
;    93          0475  1
;    94          0476  1 !++
;    95          0477  1 !
;    96          0478  1 ! FUNCTIONAL DESCRIPTION:
;    97          0479  1 !       This routine finds a file by file name string.
;    98          0480  1 !
;    99          0481  1 ! CALLING SEQUENCE:
;   100          0482  1 !       FIND ( )
;   101          0483  1 !
;   102          0484  1 ! INPUT PARAMETERS:
;   103          0485  1 !       none
;   104          0486  1 !
;   105          0487  1 ! IMPLICIT INPUTS:
;   106          0488  1 !       LOCAL_FIB, CURRENT_VCB
;   107          0489  1 !
;   108          0490  1 ! OUTPUT PARAMETERS:
;   109          0491  1 !       none
;   110          0492  1 !
;   111          0493  1 ! IMPLICIT OUTPUTS:
;   112          0494  1 !       none
;   113          0495  1 !
;   114          0496  1 ! ROUTINE VALUE:
;   115          0497  1 !       NONE
;   116          0498  1 !
;   117          0499  1 ! SIDE EFFECTS:
;   118          0500  1 !       If file found, HDR1, HDR2, HDR3 and HDR4 will be read in or defaulted
;   119          0501  1 !       result file name string and length returned to user.
;   120          0502  1 !
;   121          0503  1 ! USER ERRORS:
;   122          0504  1 !       SS$_NOSUCHFILE - file not found
;   123          0505  1 !       SS$_RESULTOVF  - result string overflow
;   124          0506  1 !--
;   125          0507  1
;   126          0508  2     BEGIN
;   127          0509  2
;   128          0510  2     EXTERNAL REGISTER
;   129          0511  2         COMMON_REG;
;   130          0512  2
;   131          0513  2     EXTERNAL
;   132          0514  2         LOCAL_FIB       : BBLOCK;               ! copy of user's fib
;   133          0515  2
;   134          0516  2     EXTERNAL ROUTINE
;   135          0517  2         FORMAT_FID          : COMMON_CALL,      ! format fid
;   136          0518  2         FMG$MATCH_NAME      : L_MATCH_NAME,     ! match general wild card str
;   137          0519  2         GET_START_HDR       : L$GET_START_HDR,  ! get hdrs to start search on
;   138          0520  2         PARSE_FID           : COMMON_CALL,      ! parse FID fields in HDR1 and HDR4
;   139          0521  2         PARSE_PATTERN_SPEC  : COMMON_CALL,      ! parse pattern spec
;   140          0522  2         READ_HDR            : COMMON_CALL,      ! read headers
;   141          0523  2         RESULTANT_STRING    : COMMON_CALL NOVALUE,!  return resultant string
;   142          0524  2         REWIND_VOL_SET      : COMMON_CALL,      ! rewind volume set
;   143          0525  2         SPACE_EOF           : COMMON_CALL,      ! space to end of file
;   144          0526  2         SYS$FAO             : ADDRESSING_MODE ( ABSOLUTE ),! format ASCII output
;   145          0527  2         WRAP_AROUND         : L$WRAP_AROUND;    ! wrap around to beginning of
;   146          0528  2                                                 !   volume set
;   147          0529  2     LITERAL
;   148          0530  2         WILD_QUOTED         = 0,                ! bit layout for FILE_SPEC_BITS
```

```
;  149          0531  2          PATTERN_VMS_SPEC    = 1,                ! :
;  150          0532  2          TAPE_ID_VMS_SPEC    = 2,                ! :
;  151          0533  2
;  152          0534  2          NO_VMS              = 0,                ! meanings of the 2nd and 3rd
;  153          0535  2          PAT_VMS             = 1,                !  bits in FILE_SPEC_BITS
;  154          0536  2          TAPE_VMS            = 2,                !
;  155          0537  2          BOTH_VMS            = 3;                !
;  156          0538  2
;  157          0539  2      LOCAL
;  158          0540  2          FILE_SPEC_BITS      : BITVECTOR [ 3 ],  ! info about the file specs
;  159          0541  2          FID_VER             : WORD,             ! HDR1 FID binary version
;  160          0542  2          PAT_VER             : WORD,             ! Pattern binary fid version
;  161          0543  2
;  162          0544  2          ! descriptors and buffer for the file spec string
;  163          0545  2          ! size of FILE_SPEC_MAX to include VMS long filenames as well
;  164          0546  2          ! as ANSI file names
;  165          0547  2
;  166          0548  2          FID_DESC            : VECTOR [ 2, LONG ],
;  167          0549  2          FID_STR             : VECTOR [ FILE_SPEC_MAX, BYTE ],
;  168          0550  2          PAT_DESC            : VECTOR [ 2, LONG ],
;  169          0551  2          PAT_STR             : VECTOR [ FILE_SPEC_MAX, BYTE ];
;  170          0552  2
;  171          0553  2      BIND
;  172          0554  2          FILENAMES_TYPES     = FILE_SPEC_BITS : BLOCK;
;  173          0555  2
;  174          0556  2
;  175          0557  2      MACRO
;  176          0558  2          BITS_2_3            = 0, 1, 2, 0%;
;  177          0559  2
;  178          0560  2      ! if this is not a wild card lookup then zero context
;  179          0561  2      !
;  180          0562  2      IF NOT .LOCAL_FIB [ FIB$V_WILD ] THEN LOCAL_FIB [ FIB$L_WCC ] = 0;
;  181          0563  2
;  182          0564  2      ! if beginning of search check for rewind switch
;  183          0565  2      !
;  184          0566  2      IF .LOCAL_FIB [ FIB$L_WCC ] EQL 0
;  185          0567  2      THEN
;  186          0568  3          BEGIN
;  187          0569  3
;  188          0570  3          IF .LOCAL_FIB [ FIB$V_REWIND ] EQL 1 THEN REWIND_VOL_SET ( );
;  189          0571  3
;  190          0572  3          ! clear start of search file ID
;  191          0573  3          !
;  192          0574  3          KERNEL_CALL ( CLEAR_ST_SEARCH );
;  193          0575  3          END
;  194          0576  2
;  195          0577  2      ELSE
;  196          0578  3          BEGIN
;  197          0579  3
;  198          0580  3          ! If either of these two values are zero then the user has not preceded                    ;
;  199          0581  3          ! this call with a first time thru lookup.
;  200          0582  3          !
;  201          0583  3          IF .CURRENT_VCB [ VCB$L_CUR_FID ]   EQL 0                                                 ;
;  202          0584  3          OR .CURRENT_VCB [ VCB$L_START_FID ] EQL 0
;  203          0585  3          THEN ERR_EXIT ( SS$_BADPARAM );
;  204          0586  3
;  205          0587  3          ! if not first time through , then don't include current file in search
```

```
;  206     0588  3          !
;  207     0589  3          IF NOT .CURRENT_VCB [ VCB$V_LOGICEOVS ] THEN SPACE_EOF ( );
;  208     0590  3
;  209     0591  2          END;
;  210     0592  2
;  211     0593  2      ! position to first file and read the headers
;  212     0594  2      !
;  213     0595  2      IF NOT GET_START_HDR ( )
;  214     0596  2      THEN
;  215     0597  2
;  216     0598  2          ! tm, so at logical end of volume set
;  217     0599  2          ! continue search at beginning of tape unless the start of search was
;  218     0600  2          ! the beginning
;  219     0601  2          !
;  220     0602  2          IF NOT WRAP_AROUND ( ) THEN ERR_EXIT ( SS$_NOSUCHFILE );
;  221     0603  2
;  222     0604  2      ! if dummy file, deny its existence
;  223     0605  2      !
;  224     0606  2      IF .CURRENT_VCB [ VCB$W_CUR_NUM ] EQLU 0 THEN ERR_EXIT ( SS$_NOSUCHFILE );
;  225     0607  2
;  226     0608  2      ! if first time through save start context else check not at beginning of
;  227     0609  2      ! search
;  228     0610  2      !
;  229     0611  2      IF .LOCAL_FIB [ FIB$L_WCC ] EQL 0
;  230     0612  2      THEN
;  231     0613  2
;  232     0614  2          ! convert file seq and section number
;  233     0615  2          !
;  234     0616  3          KERNEL_CALL ( FORMAT_FID, CURRENT_VCB [ VCB$W_START_NUM ] )
;  235     0617  3
;  236     0618  2      ELSE
;  237     0619  2
;  238     0620  2          ! possible end of search
;  239     0621  2          !
;  240     0622  2          IF .CURRENT_VCB [ VCB$L_CUR_FID ] EQL .CURRENT_VCB [ VCB$L_START_FID ]
;  241     0623  2          THEN ERR_EXIT ( SS$_NOSUCHFILE );
;  242     0624  2
;  243     0625  2      ! initialize buffer descriptors with constants
;  244     0626  2      !
;  245     0627  2      PAT_DESC [ 0 ] = FILE_SPEC_MAX;
;  246     0628  2      PAT_DESC [ 1 ] = PAT_STR;
;  247     0629  2      FID_DESC [ 1 ] = FID_STR;
;  248     0630  2
;  249     0631  2      ! parse the pattern string
;  250     0632  2      !
;  251     0633  2      FILE_SPEC_BITS = PARSE_PATTERN_SPEC ( PAT_DESC, PAT_VER );
;  252     0634  2
;  253     0635  2      ! loop until a match or we have searched them all
;  254     0636  2      !
;  255     0637  2      WHILE 1
;  256     0638  2      DO
;  257     0639  3          BEGIN
;  258     0640  3
;  259     0641  3          ! reset the size of the FID buffer
;  260     0642  3          ! parse the FID of the current file
;  261     0643  3          !
;  262     0644  3          FID_DESC [ 0 ] = FILE_SPEC_MAX;
```

```
;  263     0645  3          FILE_SPEC_BITS [TAPE_ID_VMS_SPEC] = PARSE_FID (FID_DESC,FID_VER);
;  264     0646  3
;  265     0647  3          ! test if the current file spec fits the pattern spec, exitloop
;  266     0648  3          !   and return if we have a match
;  267     0649  3          !
;  268     0650  3          !
;  269     0651  3          !       match name      !     Tape File ID Field Value
;  270     0652  3          !        and type       !       Quoted        !     VMS
;  271     0653  3          !     -----------------+---------------------+-------------------------
;  272     0654  3          !      Pattern  Quoted  !  Strings Equal      ! String Equal ( in case
;  273     0655  3          !       File            !                     ! VMS spec in quotes )
;  274     0656  3          !       Spec    --------+---------------------+-------------------------
;  275     0657  3          !       Value     VMS   !  Only *.* or *.     ! Normal wildcard match
;  276     0658  3          !
;  277     0659  4          IF ( CASE .FILENAMES_TYPES [ BITS_2_3 ] FROM 0 TO 3 OF
;  278     0660  4                SET
;  279     0661  4                [ NO_VMS ]    : CH$EQL ( .FID_DESC[0], .FID_DESC[1],
;  280     0662  4                                         .PAT_DESC[0], .PAT_DESC[1], ' ' );
;  281     0663  4                [ PAT_VMS ]   : .FILE_SPEC_BITS [ WILD_QUOTED ];
;  282     0664  4                [ TAPE_VMS ]  : CH$EQL ( .FID_DESC[0], .FID_DESC[1],
;  283     0665  4                                         .PAT_DESC[0], .PAT_DESC[1], ' ' );
;  284     0666  4                [ BOTH_VMS ]  : FMG$MATCH_NAME ( .FID_DESC[0], .FID_DESC[1],
;  285     0667  4                                                 .PAT_DESC[0], .PAT_DESC[1] )
;  286     0668  4                TES )
;  287     0669  3          AND
;  288     0670  4             (     .LOCAL_FIB [ FIB$V_ALLVER ] !     wild version
;  289     0671  5               OR ( .PAT_VER LEQU 0 )          ! OR first or last version
;  290     0672  5               OR ( .PAT_VER EQLU .FID_VER )   ! OR same version
;  291     0673  5
;  292     0674  4             )
;  293     0675  3               THEN EXITLOOP;
;  294     0676  3
;  295     0677  3               ! no match, space to the end of this file and read the header for the
;  296     0678  3               ! next file, also test if have looked at all files
;  297     0679  3               !
;  298     0680  3               SPACE_EOF ( );
;  299     0681  3               IF NOT READ_HDR ( )
;  300     0682  3               THEN
;  301     0683  3                    IF NOT WRAP_AROUND ( ) THEN ERR_EXIT ( SS$_NOSUCHFILE );
;  302     0684  3
;  303     0685  3               IF .CURRENT_VCB [ VCB$L_CUR_FID ] EQL .CURRENT_VCB [ VCB$L_START_FID ]
;  304     0686  3               THEN ERR_EXIT ( SS$_NOSUCHFILE );
;  305     0687  3
;  306     0688  2               END;                                    ! end of while loop
;  307     0689  2
;  308     0690  2
;  309     0691  2          ! have file match setup to write back FID
;  310     0692  2          ! return File Identifier Number in File Information Block
;  311     0693  2          !
;  312     0694  2          FORMAT_FID ( LOCAL_FIB [ FIB$W_FID_NUM ] );
;  313     0695  2          LOCAL_FIB [ FIB$W_FID_RVN ] = .CURRENT_VCB [ VCB$B_CUR_RVN ] ;
;  314     0696  2
;  315     0697  2          ! note through lookup at least once
;  316     0698  2          !
;  317     0699  2          IF .LOCAL_FIB [ FIB$V_WILD ]
;  318     0700  2          THEN LOCAL_FIB [ FIB$L_WCC ] = 1
;  319     0701  2          ELSE LOCAL_FIB [ FIB$L_WCC ] = 0;
```

```
;  320          0702  2
;  321          0703  2      ! return resultant string
;  322          0704  2      !
;  323          0705  2      RESULTANT_STRING ( .FILE_SPEC_BITS [ TAPE_ID_VMS_SPEC ],
;  324          0706  2                         .FID_DESC [ 0 ],
;  325          0707  2                         .FID_DESC [ 1 ],
;  326          0708  2                         .FID_VER );
;  327          0709  2
;  328          0710  1      END;                                    ! end of routine FIND_FILE


                                                                     .TITLE  FIND
                                                                     .IDENT  \V04-000\

                                                                     .EXTRN  LOCAL_FIB, FORMAT_FID
                                                                     .EXTRN  FMG$MATCH_NAME, GET_START_HDR
                                                                     .EXTRN  PARSE_FID, PARSE_PATTERN_SPEC
                                                                     .EXTRN  READ_HDR, RESULTANT_STRING
                                                                     .EXTRN  REWIND_VOL_SET, SPACE_EOF
                                                                     .EXTRN  SYS$FAO, WRAP_AROUND
                                                                     .EXTRN  SYS$CMKRNL

                                                                     .PSECT  $CODE$,NOWRT,2

                                                07FC 00000           .ENTRY  FIND_FILE, Save R2,R3,R4,R5,R6,R7,R8,R9,R10 ; 0474
                                    59 00000000G  9F   9E 00002      MOVAB   @#SYS$CMKRNL, R9                            ;
                                    58      0000G  CF   9E 00009      MOVAB   LOCAL_FIB+16, R8                            ;
                                    5E      FF48   CE   9E 0000E      MOVAB   -184(SP), SP                                ;
                                    02        05   A8   E8 00013      BLBS    LOCAL_FIB+21, 1$                            ; 0562
                                                   68   D4 00017      CLRL    LOCAL_FIB+16                                ;
                                                   68   D5 00019 1$:  TSTL    LOCAL_FIB+16                                ; 0566
                                                   17   12 0001B      BNEQ    3$                                          ;
                          05        F0   A8        03   E1 0001D      BBC     #3, LOCAL_FIB, 2$                           ; 0570
                                 0000G   CF        00   FB 00022      CALLS   #0, REWIND_VOL_SET                          ;
                                                   7E   D4 00027 2$:  CLRL    -(SP)                                       ; 0574
                                                   5E   DD 00029      PUSHL   SP                                          ;
                                          0000V    CF   9F 0002B      PUSHAB  CLEAR_ST_SEARCH                             ;
                                              69        03   FB 0002F      CALLS   #3, SYS$CMKRNL                          ;
                                                        16   11 00032      BRB     6$                                      ; 0566
                                                   24   AB   D5 00034 3$:  TSTL    36(CURRENT_VCB)                         ; 0583
                                                        05   13 00037      BEQL    4$                                      ;
                                                   28   AB   D5 00039      TSTL    40(CURRENT_VCB)                         ; 0584
                                                        02   12 0003C      BNEQ    5$                                      ;
                                                        14   BF 0003E 4$:  CHMU    #20                                     ; 0585
                          05        0B   AB        01   E0 00040 5$:  BBS     #1, 11(CURRENT_VCB), 6$                     ; 0589
                                 0000G   CF        00   FB 00045      CALLS   #0, SPACE_EOF                               ;
                                              0000G    30   0004A 6$:  BSBW    GET_START_HDR                           ; 0595
                                                  0A        50   E8 0004D      BLBS    R0, 7$                              ;
                                              0000G    30   00050      BSBW    WRAP_AROUND                             ; 0602
                                                  04        50   E8 00053      BLBS    R0, 7$                              ;
                                                   0910   8F   BF 00056      CHMU    #2320                               ;
                                                     24   AB   B5 0005A 7$:  TSTW    36(CURRENT_VCB)                         ; 0606
                                                        04   12 0005D      BNEQ    8$                                      ;
                                                   0910   8F   BF 0005F      CHMU    #2320                               ;
                                                   68   D5 00063 8$:  TSTL    LOCAL_FIB+16                            ; 0611
                                                        10   12 00065      BNEQ    9$                                      ;
                                                     28   AB   9F 00067      PUSHAB  40(CURRENT_VCB)                         ; 0616
```

```
                                                01  DD 0006A          PUSHL   #1                                                      ;
                                                5E  DD 0006C          PUSHL   SP                                                      ;
                                          0000G CF  9F 0006E          PUSHAB  FORMAT_FID                                              ;
                                             69     04  FB 00072      CALLS   #4, SYS$CMKRNL                                          ;
                                                0B  11 00075          BRB     10$                                                     ;
                                       28   AB     24  AB D1 00077 9$:   CMPL    36(CURRENT_VCB), 40(CURRENT_VCB)                        ; 0622
                                                04  12 0007C          BNEQ    10$                                                     ;
                                          0910  8F  BF 0007E          CHMU    #2320                                                   ; 0623
                                       58   AE     4F  8F 9A 00082 10$:   MOVZBL  #79, PAT_DESC                                       ; 0627
                                       5C   AE     08  AE 9E 00087      MOVAB   PAT_STR, PAT_DESC+4                                     ; 0628
                                       FC   AD     60  AE 9E 0008C      MOVAB   FID_STR, FID_DESC+4                                     ; 0629
                                                5E  DD 00091          PUSHL   SP                                                      ; 0633
                                                5C  AE 9F 00093       PUSHAB  PAT_DESC                                                ;
                                          0000G CF     02  FB 00096    CALLS   #2, PARSE_PATTERN_SPEC                                  ;
                                             56     50  90 0009B      MOVB    R0, FILE_SPEC_BITS                                      ;
                                       F8   AD     4F  8F 9A 0009E 11$:   MOVZBL  #79, FID_DESC                                       ; 0644
                                                04  AE 9F 000A3       PUSHAB  FID_VER                                                 ; 0645
                                                F8  AD 9F 000A6       PUSHAB  FID_DESC                                                ;
                                          0000G CF     02  FB 000A9    CALLS   #2, PARSE_FID                                           ;
                                56      01           02  50 F0 000AE      INSV    R0, #2, #7, FILE_SPEC_BITS                          ;
                                57      56           02  01 EF 000B3      EXTZV   #1, #2, FILENAME$_TYPES, R7                         ; 0659
                                        03           00  57 CF 000B8      CASEL   R7, #0, #3                                          ;
                             001D             000F        000A     000F  000BC 12$:   .WORD   14$-12$,-                                  ;
                                                                                      13$-12$,-                                         ;
                                                                                      14$-12$,-                                         ;
                                                                                      15$-12$                                           ;
                                                05  11 000C4          BRB     14$                                                     ; 0661
                                             2D     56  E9 000C6 13$:   BLBC    FILE_SPEC_BITS, 17$                                     ; 0663
                                                1C  11 000C9          BRB     16$                                                     ;
                                58   AE      20   FC  BD     F8  AD 2D 000CB 14$:   CMPC5   FID_DESC, @FID_DESC+4, #32, PAT_DESC, -  ; 0664
                                                                5C  BE    000D3                 @PAT_DESC+4                           ;
                                                1F  12 000D5          BNEQ    17$                                                     ;
                                                0E  11 000D7          BRB     16$                                                     ;
                                          54        58  AE 7D 000D9 15$:   MOVQ    PAT_DESC, R4                                    ; 0666
                                          52        F8  AD 7D 000DD       MOVQ    FID_DESC, R2                                    ;
                                             0000G     30 000E1          BSBW    FMG$MATCH_NAME                                          ;
                                          0F           50  E9 000E4      BLBC    R0, 17$                                                 ;
                             2E       04   A8              03  E0 000E7 16$:   BBS     #3, LOCAL_FIB+20, 19$                           ; 0670
                                                6E  B5 000EC          TSTW    PAT_VER                                                 ; 0671
                                                2A  13 000EE          BEQL    19$                                                     ;
                                       04   AE              6E  B1 000F0      CMPW    PAT_VER, FID_VER                                ; 0672
                                                24  13 000F4          BEQL    19$                                                     ;
                                          0000G CF     00  FB 000F6 17$:   CALLS   #0, SPACE_EOF                                   ; 0680
                                          0000G CF     00  FB 000FB      CALLS   #0, READ_HDR                                        ; 0681
                                          0A           50  E8 00100      BLBS    R0, 18$                                             ;
                                             0000G     30 00103          BSBW    WRAP_AROUND                                             ; 0683
                                          04           50  E8 00106      BLBS    R0, 18$                                             ;
                                          0910  8F  BF 00109          CHMU    #2320                                                   ;
                                       28   AB     24  AB D1 0010D 18$:   CMPL    36(CURRENT_VCB), 40(CURRENT_VCB)                        ; 0685
                                                8A  12 00112          BNEQ    11$                                                     ;
                                          0910  8F  BF 00114          CHMU    #2320                                                   ; 0686
                                                84  11 00118          BRB     11$                                                     ; 0637
                                                F4  A8 9F 0011A 19$:   PUSHAB  LOCAL_FIB+4                                            ; 0694
                                          0000G CF     01  FB 0011D      CALLS   #1, FORMAT_FID                                          ;
                                             F8   A8     2F  AB 9B 00122      MOVZBW  47(CURRENT_VCB), LOCAL_FIB+8                    ; 0695
                                                05  05 A8  E9 00127      BLBC    LOCAL_FIB+21, 20$                                       ; 0699
                                                68      01  D0 0012B      MOVL    #1, LOCAL_FIB+16                                        ; 0700
```

```
                                                02  11 0012E            BRB     21$                                             ;
                                                68  D4 00130 20$:       CLRL    LOCAL_FIB+16                                    ; 0701
                                      7E    04  AE  3C 00132 21$:       MOVZWL  FID_VER, -(SP)                                  ; 0708
                                      7E    F8  AD  7D 00136            MOVQ    FID_DESC, -(SP)                                 ; 0706
                7E              56            01  02  EF 0013A            EXTZV   #2, #1, FILE_SPEC_BITS, -(SP)                   ; 0705
                                        0000G CF  04  FB 0013F            CALLS   #4, RESULTANT_STRING                            ;
                                                  04 00144            RET                                                     ; 0710

; Routine Size:  325 bytes,    Routine Base:  $CODE$ + 0000
```

```
;  330     0711  1 ROUTINE CLEAR_ST_SEARCH : COMMON_CALL NOVALUE =
;  331     0712  1
;  332     0713  1 !++
;  333     0714  1 !
;  334     0715  1 ! FUNCTIONAL DESCRIPTION:
;  335     0716  1 !       This routine clears the file id indicating the start of this search.
;  336     0717  1 !
;  337     0718  1 ! CALLING SEQUENCE:
;  338     0719  1 !       CLEAR_ST_SEARCH ( ), called in kernel mode
;  339     0720  1 !
;  340     0721  1 ! INPUT PARAMETERS:
;  341     0722  1 !       none
;  342     0723  1 !
;  343     0724  1 ! IMPLICIT INPUTS:
;  344     0725  1 !       CURRENT_VCB - address of current volume control block
;  345     0726  1 !
;  346     0727  1 ! OUTPUT PARAMETERS:
;  347     0728  1 !       none
;  348     0729  1 !
;  349     0730  1 ! IMPLICIT OUTPUTS:
;  350     0731  1 !       CURRENT_VCB [ VCB$L_START_FID ] cleared
;  351     0732  1 !
;  352     0733  1 ! ROUTINE VALUE:
;  353     0734  1 !       none
;  354     0735  1 !
;  355     0736  1 ! SIDE EFFECTS:
;  356     0737  1 !       none
;  357     0738  1 !
;  358     0739  1 ! USER ERRORS:
;  359     0740  1 !       none
;  360     0741  1 !
;  361     0742  1 !--
;  362     0743  1
;  363     0744  2     BEGIN
;  364     0745  2
;  365     0746  2     EXTERNAL REGISTER
;  366     0747  2         COMMON_REG;
;  367     0748  2
;  368     0749  2     CURRENT_VCB [ VCB$L_START_FID ] = 0;
;  369     0750  1     END;


                                        0000 00000 CLEAR_ST_SEARCH:
                                                   .WORD   Save nothing                    ; 0711
                                    28  AB  D4 00002         CLRL    40(CURRENT_VCB)        ; 0749
                                        04 00005         RET                             ; 0750

; Routine Size:  6 bytes,    Routine Base:  $CODE$ + 0145

;  370     0751  1 END
;  371     0752  1
;  372     0753  0 ELUDOM
```

```
;                                   PSECT SUMMARY
;
;       Name                    Bytes                           Attributes
;
;  $CODE$                         331  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        18         0        1000        00:01.9
;
;
;
;                                   COMMAND QUALIFIERS
;
;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:FIND/OBJ=OBJ$:FIND MSRC$:FIND/UPDATE=(ENH$:FIND)
;
; Size:         331 code + 0 data bytes
; Run Time:         00:11.2
; Elapsed Time:     00:36.6
; Lines/CPU Min:     4037
; Lexemes/CPU-Min: 22064
; Memory Used:  147 pages
; Compilation Complete
```

FREEPG
LIS

DEACCS
LIS

FIND
LIS

DATECN
LIS

FRMOD1
LIS

CREATE
LIS

GETREQ
LIS

EXPIRE
LIS

CNTRL
LIS

FRMHDR
LIS

HEADER
LIS

COMLABPRC
LIS

ENDVOL
LIS

GETFIB
LIS