```
FFFFFFFFFFFFFFF        111              111        XXX         XXX
FFFFFFFFFFFFFFF        111              111        XXX         XXX
FFFFFFFFFFFFFFF        111              111        XXX         XXX
FFF                 111111           111111        XXX         XXX
FFF                 111111           111111        XXX         XXX
FFF                 111111           111111        XXX         XXX
FFF                    111              111           XXX   XXX
FFF                    111              111           XXX   XXX
FFF                    111              111           XXX   XXX
FFFFFFFF.FFF           111              111              XXX
FFFFFFFFFFFF           111              111              XXX
FFFFFFFFFFFF           111              111              XXX
FFF                    111              111           XXX   XXX
FFF                    111              111           XXX   XXX
FFF                    111              111           XXX   XXX
FFF                    111              111        XXX         XXX
FFF                    111              111        XXX         XXX
FFF                    111              111        XXX         XXX
FFF                 111111111        111111111     XXX         XXX
FFF                 111111111        111111111     XXX         XXX
FFF                 111111111        111111111     XXX         XXX
```

```
_$25

Symb
----
IOC$
IO_C
IO_C
IO_D
IO_F
IO_S
KILL

KILL
KILL
LB_E
LB_D
LB_F
LB_H
LB_L
LOCA
LOCA
LOCK

LOCK
LOCK
LOCK
LOC_
LOC_
L_CO
L_CO
L_DA
L_DA
MAIN
MAKE
MAKE
MAKE
MAKE
MAKE
MAKE

MAKE
MAKE
MAP_
MAP_

MAP
MARK
MARK
MARK
MARK
MARK
```

```
  GGGGGGGG  EEEEEEEEEE  TTTTTTTTTT  FFFFFFFFFF    IIIIII    BBBBBBBB
  GGGGGGGG  EEEEEEEEEE  TTTTTTTTTT  FFFFFFFFFF    IIIIII    BBBBBBBB
GG          EE              TT      FF            II      BB      BB
GG          EE              TT      FF            II      BB      BB
GG          EE              TT      FF            II      BB      BB
GG          EE              TT      FF            II      BB      BB
GG          EEEEEEEE        TT      FFFFFFFF      II      BBBBBBBB
GG          EEEEEEEE        TT      FFFFFFFF      II      BBBBBBBB
GG  GGGGGG  EE              TT      FF            II      BB      BB
GG  GGGGGG  EE              TT      FF            II      BB      BB
GG      GG  EE              TT      FF            II      BB      BB      ....
GG      GG  EE              TT      FF            II      BB      BB      ....
  GGGGGG    EEEEEEEEEE      TT      FF          IIIIII    BBBBBBBB        ....
  GGGGGG    EEEEEEEEEE      TT      FF          IIIIII    BBBBBBBB        ....

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 MODULE GETFIB (
;     2          0002  0                 LANGUAGE (BLISS32),
;     3          0003  0                 IDENT = 'V04-000'
;     4          0004  0                 ) =
;     5          0005  1 BEGIN
;     6          0006  1
;     7          0007  1 !
;     8          0008  1 !**********************************************************************
;     9          0009  1 !*                                                                    *
;    10          0010  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                           *
;    11          0011  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.            *
;    12          0012  1 !*  ALL RIGHTS RESERVED.                                             *
;    13          0013  1 !*                                                                    *
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;    15          0015  1 !*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE  *
;    16          0016  1 !*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER  *
;    17          0017  1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY  *
;    18          0018  1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY  *
;    19          0019  1 !*  TRANSFERRED.                                                       *
;    20          0020  1 !*                                                                    *
;    21          0021  1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE  *
;    22          0022  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT  *
;    23          0023  1 !*  CORPORATION.                                                       *
;    24          0024  1 !*                                                                    *
;    25          0025  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS  *
;    26          0026  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.            *
;    27          0027  1 !*                                                                    *
;    28          0028  1 !*                                                                    *
;    29          0029  1 !**********************************************************************
;    30          0030  1
;    31          0031  1 !++
;    32          0032  1 !
;    33          0033  1 ! FACILITY:  F11ACP Structure  evel 2
;    34          0034  1 !
;    35          0035  1 ! ABSTRACT:
;    36          0036  1 !
;    37          0037  1 !       This routine obtains the address of the FIB for this operation.
;    38          0038  1 !
;    39          0039  1 ! ENVIRONMENT:                                                                 ; F
;    40          0040  1 !
;    41          0041  1 !       STARLET operating system, including privileged system services        ;
;    42          0042  1 !       and internal exec routines.                                           ;
;    43          0043  1 !                                                                             ;
;    44          0044  1 !--                                                                           ;
;    45          0045  1 !
;    46          0046  1 !
;    47          0047  1 ! AUTHOR:  Andrew C. Goldstein,  CREATION DATE:  7-Jan-1977  01:02
;    48          0048  1 !
;    49          0049  1 ! MODIFIED BY:
;    50          0050  1 !
;    51          0051  1 !       V03-005 LMP0219         L. Mark Pilant,         24-Mar-1984  23:15  ;
;    52          0052  1 !               Preset FIB$L_ACL_STATUS to SS$_NORMAL.                        ;
;    53          0053  1 !                                                                             ;
;    54          0054  1 !       V03-004 ACG0408         Andrew C. Goldstein,    20-Mar-1984  17:49  ;
;    55          0055  1 !               Make APPLY_RVN and DEFAULT_RVN macros                         ;
;    56          0056  1 !                                                                             ;
;    57          0057  1 !       V03-003 CDS0002         Christian D. Saether    18-Jan-1984
```

```
;    58          0058  1 !                     Modify interface to APPLY_RVN.
;    59          0059  1 !
;    60          0060  1 !       V03-002 CDS0001         Christian D. Saether    30-Dec-1983
;    61          0061  1 !                       Use L_NORM linkage and BIND_COMMON macro.
;    62          0062  1 !
;    63          0063  1 !       V03-001 ACG0358         Andrew C. Goldstein,    15-Sep-1983  11:44
;    64          0064  1 !                       Remove -1,-1 DID conversion to MFD
;    65          0065  1 !
;    66          0066  1 !       V02-005 ACG0238         Andrew C. Goldstein,    10-Dec-1981  14:31
;    67          0067  1 !                       Allow dummy file ID of -1,-1,-1
;    68          0068  1 !
;    69          0069  1 !       V02-004 STJ34965        Steven T. Jeffreys, 28-Feb-1981
;    70          0070  1 !                       Temporary fix to clear FIB$V_NOCHARGE bit to prevent
;    71          0071  1 !                       users from bypassing diskquota charging.
;    72          0072  1 !
;    73          0073  1 !       V02-003 ACG0167         Andrew C. Goldstein,  10-Oct-1978  20:00
;    74          0074  1 !                       Previous revision history moved to [F11B.SRC]F11B.REV
;    75          0075  1 !**
;    76          0076  1
;    77          0077  1
;    78          0078  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
;    79          0079  1 REQUIRE 'SRC$:FCPDEF.B32';
```

```
;    81          1070  1 GLOBAL ROUTINE GET_FIB (ABD) : L_NORM =
;    82          1071  1
;    83          1072  1 !++
;    84          1073  1 !
;    85          1074  1 ! FUNCTIONAL DESCRIPTION:
;    86          1075  1 !
;    87          1076  1 !       This routine obtains the address of the FIB for this operation.
;    88          1077  1 !       It copies the FIB from the buffer packet into local storage
;    89          1078  1 !       and zero extends it to maximum length.
;    90          1079  1 !
;    91          1080  1 ! CALLING SEQUENCE:
;    92          1081  1 !       GET_FIB (ARG1)
;    93          1082  1 !
;    94          1083  1 ! INPUT PARAMETERS:
;    95          1084  1 !       ARG1: buffer descriptor list
;    96          1085  1 !
;    97          1086  1 ! IMPLICIT INPUTS:
;    98          1087  1 !       CURRENT_WINDOW: address of user's window or 0
;    99          1088  1 !       IO_PACKET: address of user's I/O packet
;   100          1089  1 !
;   101          1090  1 ! OUTPUT PARAMETERS:
;   102          1091  1 !       NONE
;   103          1092  1 !
;   104          1093  1 ! IMPLICIT OUTPUTS:
;   105          1094  1 !       NONE
;   106          1095  1 !
;   107          1096  1 ! ROUTINE VALUE:
;   108          1097  1 !       address of FIB
;   109          1098  1 !
;   110          1099  1 ! SIDE EFFECTS:
;   111          1100  1 !       file ID may be written into FIB
;   112          1101  1 !       channel window pointer write-back inhibited
;   113          1102  1 !       result string buffers zeroed
;   114          1103  1 !
;   115          1104  1 !--
;   116          1105  1
;   117          1106  2 BEGIN
;   118          1107  2
;   119          1108  2 MAP
;   120          1109  2         ABD             : REF BBLOCKVECTOR [,ABD$C_LENGTH];
;   121          1110  2                                           ! buffer descriptors
;   122          1111  2
;   123          1112  2 LOCAL
;   124          1113  2         FCB             : REF BBLOCK,   ! FCB of file
;   125          1114  2         FIBL;                           ! length of user FIB
;   126          1115  2
;   127          1116  2 BIND_COMMON;
;   128          1117  2
;   129          1118  2
;   130          1119  2 ! Get the length of the user-supplied FIB. If there is a window,
;   131          1120  2 ! and there is no user FIB, use the file ID from
;   132          1121  2 ! the window's FCB. Also use the FCB's file ID if the file number
;   133          1122  2 ! in the user FIB is zero.
;   134          1123  2 !
;   135          1124  2
;   136          1125  2 FIBL = .ABD[ABD$C_FIB, ABD$W_COUNT];
;   137          1126  2
```

```
;  138          1127  2 CH$COPY (.FIBL,
;  139          1128  2          .ABD[ABD$C_FIB, ABD$W_TEXT] + ABD[ABD$C_FIB, ABD$W_TEXT] + 1,
;  140          1129  2          0,
;  141          1130  2          FIB$C_LENGTH,
;  142          1131  2          LOCAL_FIB);
;  143          1132  2 CURRENT_FIB = LOCAL_FIB;
;  144          1133  2
;  145          1134  2 LOCAL_FIB[FIB$L_ACL_STATUS] = SS$_NORMAL;                ! Preset to success
;  146          1135  2
;  147          1136  2 ! If a non-zero directory ID is present, signal its presence in the
;  148          1137  2 ! cleanup flags.
;  149          1138  2 !
;  150          1139  2
;  151          1140  2 IF .LOCAL_FIB[FIB$W_DID_NUM] NEQ 0
;  152          1141  2 OR .LOCAL_FIB[FIB$W_DID_RVN] NEQ 0
;  153          1142  2 THEN
;  154          1143  3     BEGIN
;  155          1144  3     CLEANUP_FLAGS[CLF_DIRECTORY] = 1;
;  156          1145  3     APPLY_RVN (LOCAL_FIB[FIB$W_DID_RVN], .CURRENT_RVN);
;  157          1146  2     END;
;  158          1147  2
;  159          1148  2 IF .CURRENT_WINDOW NEQ 0
;  160          1149  2 THEN
;  161          1150  3     BEGIN
;  162          1151  3     FCB = .CURRENT_WINDOW[WCB$L_FCB];
;  163          1152  3     IF .LOCAL_FIB[FIB$W_FID_NUM] EQL 0
;  164          1153  3     AND .LOCAL_FIB[FIB$W_FID_RVN] EQL 0
;  165          1154  3     THEN CH$MOVE (FIB$S_FID, FCB[FCB$W_FID], LOCAL_FIB[FIB$W_FID]);
;  166          1155  2     END;
;  167          1156  2
;  168          1157  2 ! Default the RVN in the file ID to the RVN of the directory file, if given;
;  169          1158  2 ! else default to the current RVN.
;  170          1159  2 !
;  171          1160  2
;  172          1161  2 IF .LOCAL_FIB[FIB$B_FID_RVN] EQL 0
;  173          1162  2 THEN LOCAL_FIB[FIB$B_FID_RVN] = .LOCAL_FIB[FIB$B_DID_RVN];
;  174          1163  2 APPLY_RVN (LOCAL_FIB[FIB$W_FID_RVN], .CURRENT_RVN);
;  175          1164  2
;  176          1165  2 ! If the file ID in the FIB does not match that in the FCB, this operation
;  177          1166  2 ! is not on the open file; clear the FCB and window addresses (except in
;  178          1167  2 ! the case of a DEACCESS, in which we force the file ID to that of the open
;  179          1168  2 ! file and signal an error).
;  180          1169  2 !
;  181          1170  2
;  182          1171  2 IF .CURRENT_WINDOW NEQ 0
;  183          1172  2 THEN
;  184          1173  3     BEGIN
;  185          1174  3     IF .LOCAL_FIB[FIB$W_FID_NUM] NEQ .FCB[FCB$W_FID_NUM]
;  186          1175  3     OR .LOCAL_FIB[FIB$W_FID_RVN] NEQ .FCB[FCB$W_FID_RVN]
;  187          1176  3     THEN
;  188          1177  4         BEGIN
;  189          1178  4         IF .IO_PACKET[IRP$V_FCODE] EQL IO$_DEACCESS
;  190          1179  4         THEN
;  191          1180  5             BEGIN
;  192          1181  5             CH$MOVE (FIB$S_FID, FCB[FCB$W_FID], LOCAL_FIB[FIB$W_FID]);
;  193          1182  5             ERR_STATUS (SS$_BADPARAM);
;  194          1183  5             END
```

```
;  195          1184  4          ELSE
;  196          1185  5              BEGIN
;  197          1186  5              CURRENT_WINDOW = 0;
;  198          1187  5              PRIMARY_FCB = 0;
;  199          1188  4              END;
;  200          1189  3          END;
;  201          1190  3      END
;  202          1191  3
;  203          1192  3  ! If there is no file open, there must be a minimum FIB.
;  204          1193  3  !
;  205          1194  3
;  206          1195  2  ELSE
;  207          1196  3      BEGIN
;  208          1197  3      IF .FIBL LSS FIB$C_ACCDATA
;  209          1198  3      AND .IO_PACKET[IRP$V_FCODE] NEQ IO$_ACPCONTROL
;  210          1199  3      THEN ERR_EXIT (SS$_INSFARG);
;  211          1200  2      END;
;  212          1201  2
;  213          1202  2  !
;  214          1203  2  ! Clear FIB$V_NOCHARGE bit to prevent users from bypassing diskquota charging.
;  215          1204  2  !
;  216          1205  2  LOCAL_FIB [FIB$V_NOCHARGE] = 0;
;  217          1206  2
;  218          1207  2  RETURN LOCAL_FIB;
;  219          1208  2
;  220          1209  1  END;                                    ! end of routine GET_FIB
```

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


                                                        .PSECT  $CODE$,NOWRT,2

                                                01FC 00000      .ENTRY  GET_FIB, Save R2,R3,R4,R5,R6,R7,R8      ;  1070
                                          56    0204 ..A      9E 00002  MOVAB   516(BASE), R6                   ;  1114
                                          50      04  AC      D0 00007  MOVL    ABD, R0                         ;  1125
                                          58      0A  A0      3C 0000B  MOVZWL  10(R0), FIBL                    ;
                                          51      08  A0      9E 0000F  MOVAB   8(R0), R1                       ;  1128
                                          50          61      3C 00013  MOVZWL  (R1), R0
0040  8F       00      01 A140           58      2C 00016  MOVC5   FIBL, 1(R1)[R0], #0, #64, (R6)            ;  1127
                                                66      0001F
                                    10    AA        56      D0 00020  MOVL    R6, 16(BASE)                    ;  1132
                                    34    A6        01      D0 00024  MOVL    #1, 52(R6)                      ;  1134
                                              0A    A6      B5 00028  TSTW    10(R6)                          ;  1140
                                                    05      12 0002B  BNEQ    1$                              ;
                                              0E    A6      B5 0002D  TSTW    14(R6)                          ;  1141
                                                    1C      13 00030  BEQL    3$                              ;
                                          6A        40  8F  88 00032  1$:     BISB2   #64, (BASE)             ;  1144
                                              0E    A6      95 00036  TSTB    14(R6)                          ;  1145
                                                    05      12 00039  BNEQ    2$                              ;
                                    0E    A6        A0  AA  90 0003B  MOVB    -96(BASE), 14(R6)               ;
                                          01        0E  A6  91 00040  2$:     CMPB    14(R6), #1              ;
                                                    08      12 00044  BNEQ    3$                              ;
                                              A0    AA      D5 00046  TSTL    -96(BASE)                       ;
                                                    03      12 00049  BNEQ    3$                              ;
```

```
                                    0E  A6  94 0004B          CLRB    14(R6)
                               50   0C  AA  D0 0004E 3$:      MOVL    12(BASE), R0                    ; 1148
                                    14  13 00052              BEQL    4$
                               57   18  A0  D0 00054          MOVL    24(R0), FCB                     ; 1151
                                    04  A6  B5 00058          TSTW    4(R6)                           ; 1152
                                    0B  12 0005B              BNEQ    4$
                                    08  A6  B5 0005D          TSTW    8(R6)                           ; 1153
                                    06  12 00060              BNEQ    4$
                04  A6        24   A7      06  28 00062      MOVC3   #6, 36(FCB), 4(R6)              ; 1154
                               50   08  A6  9E 00068 4$:      MOVAB   8(R6), R0                       ; 1161
                                    60  95 0006C              TSTB    (R0)
                                    04  12 0006E              BNEQ    5$
                               60   0E  A6  90 00070          MOVB    14(R6), (R0)                    ; 1162
                                    60  95 00074 5$:         TSTB    (R0)                            ; 1163
                                    04  12 00076              BNEQ    6$
                               60   A0  AA  90 00078          MOVB    -96(BASE), (R0)
                               01       60  91 0007C 6$:      CMPB    (R0), #1
                                        07  12 0007F          BNEQ    7$
                                    A0  AA  D5 00081          TSTL    -96(BASE)
                                        02  12 00084          BNEQ    7$
                                        60  94 00086          CLRB    (R0)
                                    0C  AA  D5 00088 7$:      TSTL    12(BASE)                        ; 1171
                                        2E  13 0008B          BEQL    10$
                        24  A7      04  A6  B1 0008D          CMPW    4(R6), 36(FCB)                  ; 1174
                                        06  12 00092          BNEQ    8$
                        28  A7          60  B1 00094          CMPW    (R0), 40(FCB)                   ; 1175
                                        37  13 00098          BEQL    11$
                               50   90  AA  D0 0009A 8$:      MOVL    -112(BASE), R0                  ; 1178
          34    20  A0              06      00  ED 0009E      CMPZV   #0, #6, 32(R0), #52
                                            10  12 000A4      BNEQ    9$
                04  A6        24   A7      06  28 000A6      MOVC3   #6, 36(FCB), 4(R6)              ; 1181
                               21   80  AA  E9 000AC          BLBC    -128(BASE), 11$                 ; 1182
                        80  AA              14  B0 000B0      MOVW    #20, -128(BASE)
                                            1B  11 000B4      BRB     11$                             ; 1178
                                    08  AA  7C 000B6 9$:      CLRQ    8(BASE)                         ; 1187
                                        16  11 000B9          BRB     11$                             ; 1174
                               0A           58  D1 000BB 10$:     CMPL    FIBL, #10                   ; 1197
                                            11  18 000BE      BGEQ    11$
                               50   90  AA  D0 000C0          MOVL    -112(BASE), R0                  ; 1198
          38    20  A0              06      00  ED 000C4      CMPZV   #0, #6, 32(R0), #56
                                            05  13 000CA      BEQL    11$
                                0114    8F  BF 000CC          CHMU    #276                            ; 1199
                                            04 000D0          RET
                        17  A6      80  8F  8A 000D1 11$:     BICB2   #128, 23(R6)                    ; 1205
                               50           56  D0 000D6      MOVL    R6, R0                          ; 1207
                                            04 000D9          RET                                     ; 1209

; Routine Size:  218 bytes,    Routine Base:  $CODE$ + 0000

;  221          1210  1
;  222          1211  1 END
;  223          1212  0 ELUDOM
```

```
                                PSECT SUMMARY

      Name                      Bytes                         Attributes

$CODE$                            218  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        42         0        1000        00:01.9


                                COMMAND QUALIFIERS

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

; Size:          218 code + 0 data bytes
; Run Time:        00:18.3
; Elapsed Time:    00:37.0
; Lines/CPU Min:    3984
; Lexemes/CPU-Min: 49673
; Memory Used:  237 pages
; Compilation Complete
```

EXTIDX.LIS

GTLCAT.LIS

GETLOC.LIS

EXTEND.LIS

EXTHDR.LIS

FILUTL.LIS

GETREQ.LIS

EXTCONTIG.LIS

ERASE.LIS

GETTIM.LIS

FIND.LIS

GETFIB.LIS

INIFC2.LIS

INIFCP.LIS

EXTFCB.LIS

FILESERV.LIS

FILESIZE.LIS

GETPTR.LIS