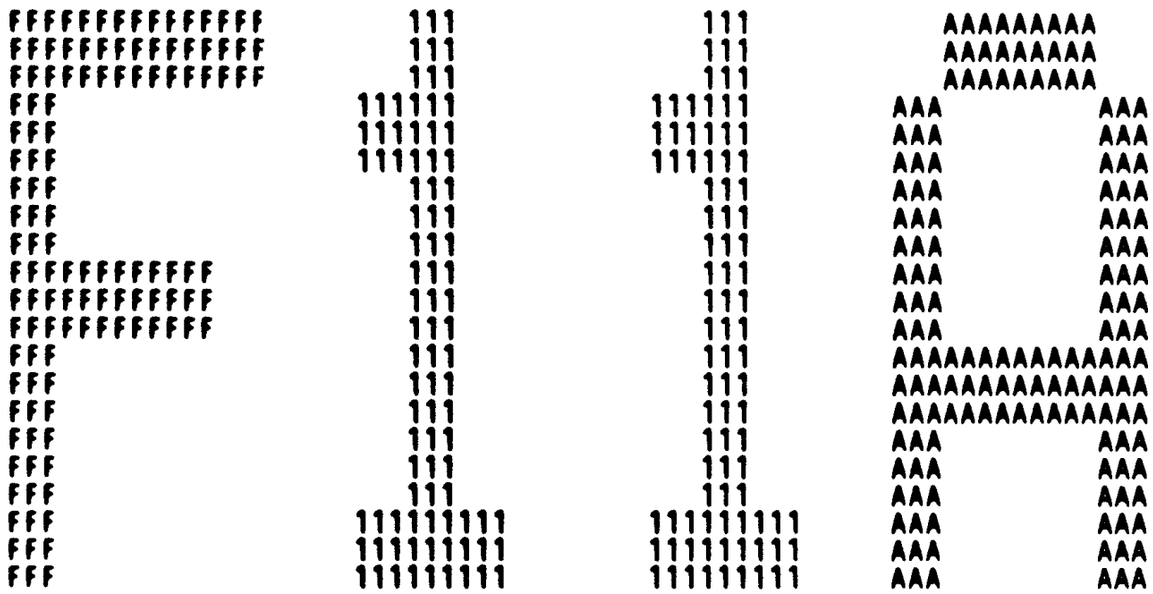
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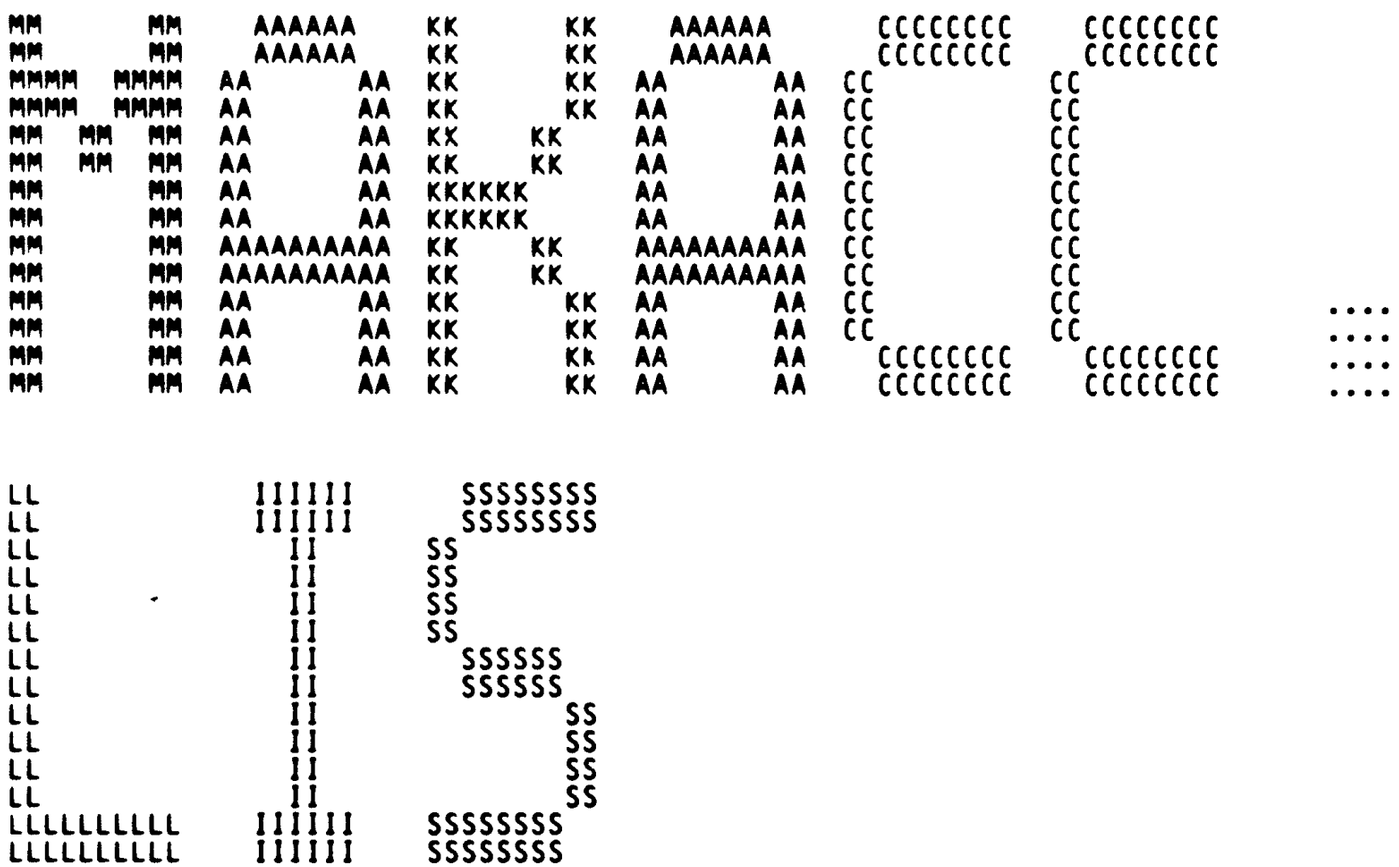
FILEID**MAKACC



```
;     1          0001  0 MODULE MAKACC (
;     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.                                                  *
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;    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 Level 1
;    34          0034  1 !
;    35          0035  1 ! ABSTRACT:
;    36          0036  1 !
;    37          0037  1 !       This routine makes the necessary hookups in the I/O database to
;    38          0038  1 !       reflect a new file access.
;    39          0039  1 ! ENVIRONMENT:
;    40          0040  1 !
;    41          0041  1 !       STARLET operating system, including privileged system services
;    42          0042  1 !       and internal exec routines. This routine must be called
;    43          0043  1 !       in kernel mode.
;    44          0044  1 !
;    45          0045  1 !--
;    46          0046  1 !
;    47          0047  1 !
;    48          0048  1 ! AUTHOR:  Andrew C. Goldstein,  CREATION DATE:  20-Dec-1976  17:28
;    49          0049  1 !
;    50          0050  1 ! MODIFIED BY:
;    51          0051  1 !
;    52          0052  1 !       V02-001 LMP0005         L. Mark Pilant,         29-Dec-1981  15:05
;    53          0053  1 !               Add support for Cathedral windows.
;    54          0054  1 !
;    55          0055  1 !       A0100   ACG0001         Andrew C. Goldstein,    10-Oct-1978  20:01
;    56          0056  1 !               Previous revision history moved to F11A.REV
;    57          0057  1 !
```

```
;    58          0058  1 !**
;    59          0059  1
;    60          0060  1
;    61          0061  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
;    62          0062  1 REQUIRE 'SRC$:FCPDEF.B32';
```

```
;    64     0377  1 GLOBAL ROUTINE MAKE_ACCESS (FCB, WINDOW, ABD) : NOVALUE =
;    65     0378  1
;    66     0379  1 !++
;    67     0380  1 !
;    68     0381  1 ! FUNCTIONAL DESCRIPTION:
;    69     0382  1 !
;    70     0383  1 !       This routine makes the necessary hookups in the I/O database to
;    71     0384  1 !       reflect a new file access.
;    72     0385  1 !
;    73     0386  1 ! CALLING SEQUENCE:
;    74     0387  1 !       MAKE_ACCESS (ARG1, ARG2, ARG3)
;    75     0388  1 !
;    76     0389  1 ! INPUT PARAMETERS:
;    77     0390  1 !       ARG1: address of FCB to access
;    78     0391  1 !       ARG2: address of window to link up
;    79     0392  1 !       ARG3: address of buffer descriptors
;    80     0393  1 !
;    81     0394  1 ! IMPLICIT INPUTS:
;    82     0395  1 !       CURRENT_VCB: VCB of volume in process
;    83     0396  1 !
;    84     0397  1 ! OUTPUT PARAMETERS:
;    85     0398  1 !       NONE
;    86     0399  1 !
;    87     0400  1 ! IMPLICIT OUTPUTS:
;    88     0401  1 !       NONE
;    89     0402  1 !
;    90     0403  1 ! ROUTINE VALUE:
;    91     0404  1 !       NONE
;    92     0405  1 !
;    93     0406  1 ! SIDE EFFECTS:
;    94     0407  1 !       VCB transaction count bumped, access counts in FCB adjusted,
;    95     0408  1 !       FCB and window hooked up.
;    96     0409  1 !
;    97     0410  1 !--
;    98     0411  1
;    99     0412  2 BEGIN
;   100     0413  2
;   101     0414  2 MAP
;   102     0415  2         FCB             : REF BBLOCK,   ! FCB arg
;   103     0416  2         WINDOW          : REF BBLOCK,   ! window arg
;   104     0417  2         ABD             : REF BBLOCKVECTOR [,ABD$C_LENGTH];
;   105     0418  2                                         ! buffer descriptor arg
;   106     0419  2
;   107     0420  2 LOCAL
;   108     0421  2         WINDOW_SEGMENT  : REF BBLOCK;   ! address of the current window segment
;   109     0422  2
;   110     0423  2 EXTERNAL
;   111     0424  2         CLEANUP_FLAGS   : BITVECTOR,    ! cleanup action flags
;   112     0425  2         CURRENT_VCB     : REF BBLOCK,   ! VCB
;   113     0426  2         PMS$GL_OPEN     : ADDRESSING_MODE (ABSOLUTE),
;   114     0427  2                                         ! system count of currently open files
;   115     0428  2         PMS$GL_OPENS    : ADDRESSING_MODE (ABSOLUTE);
;   116     0429  2                                         ! system count of files opened
;   117     0430  2
;   118     0431  2 ! If the access count in the FCB is zero, hook it into the FCB list,
;   119     0432  2 ! since it is not there yet. If, however, the directory LRU
;   120     0433  2 ! bit is set, the FCB is already in the list. Then clear the bit and
```

```
;  121          0434  2 ! credit an entry to the LRU count.
;  122          0435  2 !
;  123          0436  2
;  124          0437  2 IF .FCB[FCB$W_ACNT] EQL 0
;  125          0438  2 THEN
;  126          0439  3     BEGIN
;  127          0440  3     IF NOT .FCB[FCB$V_DIR]
;  128          0441  3     THEN INSQUE (.FCB, .CURRENT_VCB[VCB$L_FCBBL])
;  129          0442  3     ELSE
;  130          0443  4         BEGIN
;  131          0444  4         FCB[FCB$V_DIR] = 0;
;  132          0445  4         CURRENT_VCB[VCB$B_LRU_LIM] = .CURRENT_VCB[VCB$B_LRU_LIM] + 1;
;  133          0446  3         END;
;  134          0447  2     END;
;  135          0448  2
;  136          0449  2 ! Now hook the window onto the FCB and adjust the access counts
;  137          0450  2 ! according to the access control bits in the window.
;  138          0451  2 !
;  139          0452  2
;  140          0453  2 WINDOW_SEGMENT = .WINDOW;
;  141          0454  2 DO
;  142          0455  3     BEGIN
;  143          0456  3     INSQUE (.WINDOW_SEGMENT, .FCB[FCB$L_WLBL]);
;  144          0457  3     WINDOW_SEGMENT = .WINDOW_SEGMENT[WCB$L_LINK];
;  145          0458  3     END
;  146          0459  2 UNTIL .WINDOW_SEGMENT EQL 0;
;  147          0460  2 FCB[FCB$W_ACNT] = .FCB[FCB$W_ACNT] + 1; ! bump access count
;  148          0461  2
;  149          0462  2 IF .WINDOW[WCB$V_NOREAD]
;  150          0463  2     THEN FCB[FCB$V_EXCL] = 1;           ! set exclusive access
;  151          0464  2
;  152          0465  2 IF .WINDOW[WCB$V_NOWRITE]
;  153          0466  2     THEN FCB[FCB$W_LCNT] = .FCB[FCB$W_LCNT] + 1; ! no writers
;  154          0467  2
;  155          0468  2 IF .WINDOW[WCB$V_NOTRUNC]
;  156          0469  2     THEN FCB[FCB$W_TCNT] = .FCB[FCB$W_TCNT] + 1; ! no truncates
;  157          0470  2
;  158          0471  2 ! For a write access, bump the writer count. If this is the
;  159          0472  2 ! first write, and the file is the index file or the storage map, set
;  160          0473  2 ! the appropriate flag in the VCB.
;  161          0474  2 !
;  162          0475  2
;  163          0476  2 IF .WINDOW[WCB$V_WRITE]
;  164          0477  2 THEN
;  165          0478  3     BEGIN
;  166          0479  3     IF .FCB[FCB$W_WCNT] EQL 0
;  167          0480  3     THEN
;  168          0481  4         BEGIN
;  169          0482  4         IF .FCB[FCB$W_FID_NUM] EQL 1
;  170          0483  4             THEN CURRENT_VCB[VCB$V_WRITE_IF] = 1;
;  171          0484  4         IF .FCB[FCB$W_FID_NUM] EQL 2
;  172          0485  4             THEN CURRENT_VCB[VCB$V_WRITE_SM] = 1;
;  173          0486  3         END;
;  174          0487  3     FCB[FCB$W_WCNT] = .FCB[FCB$W_WCNT] + 1;
;  175          0488  2     END;
;  176          0489  2
;  177          0490  2 ! Count the access in the volume transaction count and return
```

```
;  178          0491  2 ! the window address for the user's CCB.
;  179          0492  2 !
;  180          0493  2
;  181          0494  2 PMS$GL_OPEN = .PMS$GL_OPEN + 1;          ! bump open file count
;  182          0495  2 PMS$GL_OPENS = .PMS$GL_OPENS + 1;        ! bump count of opens
;  183          0496  2 CURRENT_VCB[VCB$W_TRANS] = .CURRENT_VCB[VCB$W_TRANS] + 1;
;  184          0497  2
;  185          0498  2 ABD[ABD$C_WINDOW, ABD$W_COUNT] = 4;      ! enable write-back
;  186          0499  2 .ABD[ABD$C_WINDOW, ABD$W_TEXT] + ABD[ABD$C_WINDOW, ABD$W_TEXT] + 1 = .WINDOW;
;  187          0500  2                                         ! put window address in buffer text
;  188          0501  2
;  189          0502  2 ! Mark the access complete in the cleanup action flags.
;  190          0503  2 !
;  191          0504  2
;  192          0505  2 CLEANUP_FLAGS[CLF_DEACCESS] = 1;
;  193          0506  2
;  194          0507  1 END;                                    ! end of routine MAKE_ACCESS


                                                .TITLE  MAKACC
                                                .IDENT  \V04-000\

                                                .EXTRN  CLEANUP_FLAGS, CURRENT_VCB
                                                .EXTRN  PMS$GL_OPEN, PMS$GL_OPENS

                                                .PSECT  $CODE$,NOWRT,2

                                    000C 00000  .ENTRY  MAKE_ACCESS, Save R2,R3                         ; 0377
                          53    0000G CF  9E 00002  MOVAB   CURRENT_VCB, R3                           ;
                          51      04  AC  D0 00007  MOVL    FCB, R1                                   ; 0437
                                  1A  A1  B5 0000B  TSTW    26(R1)                                    ;
                                      14  12 0000E  BNEQ    2$                                        ;
                                  50      63  D0 00010  MOVL    CURRENT_VCB, R0                       ; 0441
                                  06  22  A1  E8 00013  BLBS    34(R1), 1$                            ; 0440
                              04  B0      61  0E 00017  INSQUE  (R1), @4(R0)                          ; 0441
                                          07  11 0001B  BRB     2$                                    ;
                              22  A1      01  8A 0001D  1$:     BICB2   #1, 34(R1)                    ; 0444
                                      49  A0  96 00021  INCB    73(R0)                                ; 0445
                                      51  08  AC  D0 00024  2$:     MOVL    WINDOW, WINDOW_SEGMENT      ; 0453
                                      50  04  AC  D0 00028  3$:     MOVL    FCB, R0                     ; 0456
                              14  B0      61  0E 0002C  INSQUE  (WINDOW_SEGMENT), @20(R0)            ;
                                      51  20  A1  D0 00030  MOVL    32(WINDOW_SEGMENT), WINDOW_SEGMENT  ; 0457
                                          F2  12 00034  BNEQ    3$                                    ; 0459
                                      50  04  AC  D0 00036  MOVL    FCB, R0                           ; 0460
                                      1A  A0  B6 0003A  INCW    26(R0)                                ;
                                      52  08  AC  D0 0003D  MOVL    WINDOW, R2                        ; 0462
                          04      15  A2      02  E1 00041  BBC     #2, 21(R2), 4$                    ;
                              22  A0      08  88 00046  BISB2   #8, 34(R0)                           ; 0463
                                      03  14  A2  E9 0004A  4$:     BLBC    20(R2), 5$                ; 0465
                                      1E  A0  B6 0004E  INCW    30(R0)                                ; 0466
                          03      15  A2      03  E1 00051  5$:     BBC     #3, 21(R2), 6$            ; 0468
                                      20  A0  B6 00056  INCW    32(R0)                                ; 0469
                          22      0B  A2      01  E1 00059  6$:     BBC     #1, 11(R2), 9$            ; 0476
                                      1C  A0  B5 0005E  TSTW    28(R0)                                ; 0479
                                          1A  12 00061  BNEQ    8$                                    ;
                                      01  24  A0  B1 00063  CMPW    36(R0), #1                        ; 0482
                                          07  12 00067  BNEQ    7$                                    ;
```

```
                    51              63  D0 00069          MOVL    CURRENT_VCB, R1                         ; 0483
              0B    A1              01  88 0006C          BISB2   #1, 11(R1)                              ;
                    02        24    A0  B1 00070 7$:      CMPW    36(R0), #2                              ; 0484
                                    07  12 00074          BNEQ    8$                                      ;
                    51              63  D0 00076          MOVL    CURRENT_VCB, R1                         ; 0485
              0B    A1              02  88 00079          BISB2   #2, 11(R1)                              ;
                          1C        A0  B6 0007D 8$:      INCW    28(R0)                                  ; 0487
                 00000000G    9F  D6 00080 9$:      INCL    @#PMS$GL_OPEN                           ; 0494
                 00000000G    9F  D6 00086          INCL    @#PMS$GL_OPENS                          ; 0495
                    50              63  D0 0008C          MOVL    CURRENT_VCB, R0                         ; 0496
                          0C        A0  B6 0008F          INCW    12(R0)                                  ;
                    51    0C        AC  D0 00092          MOVL    ABD, R1                                 ; 0498
              02    A1              04  B0 00096          MOVW    #4, 2(R1)                               ;
                    50              61  3C 0009A          MOVZWL  (R1), R0                                ; 0499
                          01 A140   9F  D6 0009D          PUSHAB  1(R1)[R0]                               ;
                    9E              52  D0 000A1          MOVL    R2, @(SP)+                              ;
          0000G     CF              01  88 000A4          BISB2   #1, CLEANUP_FLAGS+2                     ; 0505
                                    04  000A9          RET                                             ; 0507

; Routine Size:  170 bytes,    Routine Base:  $CODE$ + 0000


;  195          0508  1
;  196          0509  1 END
;  197          0510  0 ELUDOM



;                                   PSECT SUMMARY
;
;      Name                     Bytes                          Attributes
;  $CODE$                         170  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        23         0        1000        00:02.0



;                                    COMMAND QUALIFIERS
;
;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:MAKACC/OBJ=OBJ$:MAKACC MSRC$:MAKACC/UPDATE=(ENH$:MAKACC)
```

```
; Size:          170 code + 0 data bytes
; Run Time:        00:08.2
; Elapsed Time:    00:26.4
; Lines/CPU Min:    3754
; Lexemes/CPU-Min: 16181
; Memory Used:  114 pages
; Compilation Complete
```

REQUEU
LIS

RWATTR
LIS

MODIFY
LIS

SCHFCB
LIS

MAKAEC
LIS

MPWIND
LIS

MAPVBN
LIS

PMS
LIS

RDHEDR
LIS

RWVB
LIS

RETDIR
LIS

RDBLOK
LIS

SMALOC
LIS

MOUNT
LIS

MAKNMB
LIS

MAKSTR
LIS

MXTHDR
LIS