
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**ACCFL

```
  AAAAAA      CCCCCCCC    CCCCCCCC  FFFFFFFFFF  LL
  AAAAAA      CCCCCCCC    CCCCCCCC  FFFFFFFFFF  LL
AA      AA  CC          CC          FF          LL
AA      AA  CC          CC          FF          LL
AA      AA  CC          CC          FF          LL
AA      AA  CC          CC          FF          LL
AA      AA  CC          CC          FFFFFFFF    LL
AA      AA  CC          CC          FFFFFFFF    LL
AAAAAAAAAA  CC          CC          FF          LL
AAAAAAAAAA  CC          CC          FF          LL
AA      AA  CC          CC          FF          LL              ....
AA      AA  CC          CC          FF          LL              ....
AA      AA    CCCCCCCC    CCCCCCCC  FF          LLLLLLLLLL      ....
AA      AA    CCCCCCCC    CCCCCCCC  FF          LLLLLLLLLL      ....


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 ACCFL (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 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                              *
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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 makes necessary changes to i/o data base to allow access.
;    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: 17-MAY-77
;    47          0047  1 !
;    48          0048  1 ! MODIFIED BY:
;    49          0049  1 !
;    50          0050  1 !       V02-003 REFORMAT        Maria del C. Nasr       30-Jun-1980
;    51          0051  1 !
;    52          0052  1 !       A0002   SPR27676        Maria del C. Nasr       14-Dec-1979  16:17
;    53          0053  1 !               Update transaction count in VCB for each file access and
;    54          0054  1 !               deaccess.
;    55          0055  1 !
;    56          0056  1 !**
;    57          0057  1
```

```
;    58          0058  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
;    59          0059  1
;    60          0060  1 REQUIRE 'SRC$:MTADEF.B32';
;    61          0444  1
;    62          0445  1 EXTERNAL ROUTINE
;    63          0446  1     ALLOCATE,                       ! allocate non_paged system space
;    64          0447  1     IO_DONE;                        ! returns IO packet
;    65          0448  1
;    66          0449  1 EXTERNAL
;    67          0450  1     IO_PACKET    : REF BBLOCK;      ! address of current IO request packet
;    68          0451  1
```

```
;    70          0452  1 GLOBAL ROUTINE ACCESS_FILE (ORIGINAL_ACC, PID, READ_ACCESS, WRITE_ACCESS, ABD)
;    71          0453  1     : COMMON_CALL NOVALUE =
;    72          0454  1
;    73          0455  1 !++
;    74          0456  1 !
;    75          0457  1 ! FUNCTIONAL DESCRIPTION:
;    76          0458  1 !       This routine makes necessary changes to i/o data base to allow access.
;    77          0459  1 !
;    78          0460  1 !CALLING SEQUENCE:
;    79          0461  1 !       ACCESS_FILE(ARG1,ARG2,ARG3,ARG4,ARG5)
;    80          0462  1 !
;    81          0463  1 ! INPUT PARAMETERS:
;    82          0464  1 !       ARG1 - Original access request
;    83          0465  1 !       ARG2 - PID of process requesting access
;    84          0466  1 !       ARG3 - read access requested(0 - no, 1 - yes)
;    85          0467  1 !       ARG4 - write access requested(0 - no, 1 - yes)
;    86          0468  1 !       ARG5 - address of buffer descriptors
;    87          0469  1 !
;    88          0470  1 ! IMPLICIT INPUTS:
;    89          0471  1 !       CURRENT_UCB     - address of current unit control block
;    90          0472  1 !       CURRENT_VCB     - address of current vcb
;    91          0473  1 !       LOCAL_FIB       - copy of user's fib
;    92          0474  1 !
;    93          0475  1 ! OUTPUT PARAMETERS:
;    94          0476  1 !       None
;    95          0477  1 !                                                                                    ;
;    96          0478  1 ! IMPLICIT OUTPUTS:
;    97          0479  1 !       CURRENT_WCB - address of window control block
;    98          0480  1 !                                                                                    ;
;    99          0481  1 ! ROUTINE VALUE:
;   100          0482  1 !       None
;   101          0483  1 !
;   102          0484  1 ! SIDE EFFECTS:
;   103          0485  1 !       enable write back of window
;   104          0486  1 !
;   105          0487  1 !--
;   106          0488  1
;   107          0489  2     BEGIN
;   108          0490  2
;   109          0491  2     EXTERNAL REGISTER
;   110          0492  2         COMMON_REG;
;   111          0493  2
;   112          0494  2     LOCAL
;   113          0495  2         WINDOW  : REF BBLOCK;           ! address of window for this file
;   114          0496  2
;   115          0497  2     MAP
;   116          0498  2
;   117          0499  2         ! address of buffer descriptors
;   118          0500  2         !
;   119          0501  2         ABD     : REF BBLOCKVECTOR [, ABD$C_LENGTH];
;   120          0502  2
;   121          0503  2     EXTERNAL
;   122          0504  2         LOCAL_FIB       : BBLOCK,       ! copy of user's file information block
;   123          0505  2
;   124          0506  2         ! address of current unit control block
;   125          0507  2         !
;   126          0508  2         CURRENT_UCB     : REF BBLOCK,
```

```
;  127          0509  2
;  128          0510  2          ! address of current window control block
;  129          0511  2          !
;  130          0512  2          CURRENT_WCB     : REF BBLOCK;
;  131          0513  2
;  132          0514  2      ! create window
;  133          0515  2      !
;  134          0516  2      WINDOW = ALLOCATE(WCB$C_LENGTH + 6);
;  135          0517  2      WINDOW[WCB$B_TYPE] = DYN$C_WCB;
;  136          0518  2
;  137          0519  2      ! initialize window
;  138          0520  2      !
;  139          0521  2      WINDOW[WCB$L_WLFL] = .CURRENT_VCB;          ! link to vcb
;  140          0522  2      WINDOW[WCB$L_WLBL] = .CURRENT_VCB;
;  141          0523  2      WINDOW[WCB$V_READ] = .READ_ACCESS;          ! read access specified
;  142          0524  2      WINDOW[WCB$V_WRITE] = .WRITE_ACCESS;        ! write access specified
;  143          0525  2      WINDOW[WCB$L_PID] = .PID;                   ! pid of requester
;  144          0526  2
;  145          0527  2      ! current unit control block address
;  146          0528  2      !
;  147          0529  2      WINDOW[WCB$L_ORGUCB] = .CURRENT_UCB;
;  148          0530  2      WINDOW[WCB$W_ACON] = .ORIGINAL_ACC<0, 16>;  ! access control bits saved
;  149          0531  2      WINDOW[WCB$W_NMAP] = 0;                     ! prevent virtual io
;  150          0532  2
;  151          0533  2      ! address of relative volume table
;  152          0534  2      !
;  153          0535  2      WINDOW[WCB$L_RVT] = .CURRENT_VCB[VCB$L_RVT];
;  154          0536  2
;  155          0537  2      ! put unit to receive io in mapping pter
;  156          0538  2      !
;  157          0539  2      (WINDOW[WCB$W_P1_COUNT])<0, 32> = .CURRENT_UCB;
;  158          0540  2      CURRENT_WCB = .WINDOW;                      ! current window control block
;  159          0541  2      CURRENT_VCB[VCB$L_WCB] = .WINDOW;           ! note window address
;  160          0542  2
;  161          0543  2      ! not partial file since access establishes handles on it
;  162          0544  2      !
;  163          0545  2      CURRENT_VCB[VCB$V_PARTFILE] = 0;
;  164          0546  2
;  165          0547  2      ! increase transaction count
;  166          0548  2      !
;  167          0549  2      CURRENT_VCB[VCB$W_TRANS] = .CURRENT_VCB[VCB$W_TRANS] + 1;
;  168          0550  2
;  169          0551  2      ! enable write back of window
;  170          0552  2      !
;  171          0553  2      ABD[ABD$C_WINDOW, ABD$W_COUNT] = 4;
;  172          0554  2      .ABD[ABD$C_WINDOW, ABD$W_TEXT] + ABD[ABD$C_WINDOW, ABD$W_TEXT] + 1 =
;  173          0555  2                                  .WINDOW;
;  174          0556  2      IO_DONE(.IO_PACKET);                        ! complete IO
;  175          0557  2      IO_PACKET = 0;                              ! indicate IO has been completed
;  176          0558  1      END;                                        ! end of routine


                                                                         .TITLE  ACCFL
                                                                         .IDENT  \V04-000\

                                                                         .EXTRN  ALLOCATE, IO_DONE
                                                                         .EXTRN  IO_PACKET, LOCAL_FIB
```

```
                                                        .EXTRN  CURRENT_UCB, CURRENT_WCB

                                                        .PSECT  $CODE$,NOWRT,2

                                                        .ENTRY  ACCESS_FILE, Save R2                    ; 0452
                                                        PUSHL   #54                                     ; 0516
                                                        CALLS   #1, ALLOCATE
                                                        MOVB    #18, 10(WINDOW)                         ; 0517
                                                        MOVL    CURRENT_VCB, (WINDOW)                   ; 0521
                                                        MOVL    CURRENT_VCB, 4(WINDOW)                  ; 0522
                                                        INSV    READ_ACCESS, #0, #1, 11(WINDOW)         ; 0523
                                                        INSV    WRITE_ACCESS, #1, #1, 11(WINDOW)        ; 0524
                                                        MOVL    PID, T2(WINDOW)                         ; 0525
                                                        MOVL    CURRENT_UCB, 16(WINDOW)                 ; 0529
                                                        MOVZWL  ORIGINAL_ACC, 20(WINDOW)                ; 0530
                                                        MOVL    32(CURRENT_VCB), 28(WINDOW)             ; 0535
                                                        MOVL    CURRENT_UCB, 48(WINDOW)                 ; 0539
                                                        MOVL    WINDOW, CURRENT_WCB                     ; 0540
                                                        MOVL    WINDOW, 56(CURRENT_VCB)                 ; 0541
                                                        BICB2   #1, 11(CURRENT_VCB)                     ; 0545
                                                        INCW    12(CURRENT_VCB)                         ; 0549
                                                        MOVL    ABD, R2                                 ; 0553
                                                        MOVW    #4, 2(R2)
                                                        MOVZWL  (R2), R1                                ; 0554
                                                        PUSHAB  1(R2)[R1]                               ; 0555
                                                        MOVL    WINDOW, @(SP)+
                                                        PUSHL   IO_PACKET                               ; 0556
                                                        CALLS   #1, IO_DONE
                                                        CLRL    IO_PACKET                               ; 0557
                                                        RET                                             ; 0558

; Routine Size:  109 bytes,    Routine Base:  $CODE$ + 0000

;  177          0559  1
;  178          0560  1 END
;  179          0561  1
;  180          0562  0 ELUDOM



;                                       PSECT SUMMARY
;
;       Name                    Bytes                           Attributes
;
;  $CODE$                          109  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        25         0      1000          00:01.9
```

```
;                                       COMMAND QUALIFIERS

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

; Size:         109 code + 0 data bytes
; Run Time:        00:07.7
; Elapsed Time:    00:29.8
; Lines/CPU Min:    4396
; Lexemes/CPU-Min: 20378
; Memory Used:  89 pages
; Compilation Complete
```

CALDAYNO
LIS

SYSFAC
DAT

ACPCTR
LIS

ALLOCB
LIS

SYSMSG
LIS

CHKACC
LIS

MTAACP

ACCESS
LIS

MTAAACP
MAP

ACCFL
LIS

CALCTV
LIS

BLOCK
LIS

CLOSFL
LIS

MTADEF
B32 -

CHKDMO
LIS