
MMM MMM TTTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMM MMM TTTTTTTTTTTTTTTT AAAAAAAAA AAAAAAAAA CCCCCCCCCCCC PPPPPPPPPPPP
MMM MMM TTTTTTTTTTTTTTTT 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 AAAAAAAAAAAAAAAA AAAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAAAAAAAAAAAAAAA AAAAAAAAAAAAAAAA CCC PPP
MMM MMM TTT AAAAAAAAAAAAAAAA AAAAAAAAAAAAAAAA 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 !*                                                                        *
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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

                                          0004 00000          .ENTRY   ACCESS_FILE, Save R2                        ; 0452
                                     36   DD 00002            PUSHL    #54                                         ; 0516
                   0000G   CF        01   FB 00004            CALLS    #1, ALLOCATE                                ;
                      0A   A0        12   90 00009            MOVB     #18, 10(WINDOW)                             ; 0517
                           60        5B   D0 0000D            MOVL     CURRENT_VCB, (WINDOW)                       ; 0521
                      04   A0        5B   D0 00010            MOVL     CURRENT_VCB, 4(WINDOW)                      ; 0522
  0B   A0        01        00   0C   AC   F0 00014            INSV     READ_ACCESS, #0, #1, 11(WINDOW)             ; 0523
  0B   A0        01        01   10   AC   F0 0001B            INSV     WRITE_ACCESS, #1, #1, 11(WINDOW)            ; 0524
                      0C   A0   08   AC   D0 00022            MOVL     PID, 12(WINDOW)                             ; 0525
                      10   A0 0000G  CF   D0 00027            MOVL     CURRENT_UCB, 16(WINDOW)                     ; 0529
                      14   A0   04   AC   3C 0002D            MOVZWL   ORIGINAL_ACC, 20(WINDOW)                    ; 0530
                      1C   A0   20   AB   D0 00032            MOVL     32(CURRENT_VCB), 28(WINDOW)                 ; 0535
                      30   A0 0000G  CF   D0 00037            MOVL     CURRENT_UCB, 48(WINDOW)                     ; 0539
                   0000G   CF        50   D0 0003D            MOVL     WINDOW, CURRENT_WCB                         ; 0540
                      38   AB        50   D0 00042            MOVL     WINDOW, 56(CURRENT_VCB)                     ; 0541
                      0B   AB        01   8A 00046            BICB2    #1, 11(CURRENT_VCB)                         ; 0545
                                0C   AB   B6 0004A            INCW     12(CURRENT_VCB)                             ; 0549
                           52   14   AC   D0 0004D            MOVL     ABD, R2                                     ; 0553
                      02   A2        04   B0 00051            MOVW     #4, 2(R2)                                   ;
                           51        62   3C 00055            MOVZWL   (R2), R1                                    ; 0554
                              01 A241     9F 00058            PUSHAB   1(R2)[R1]                                   ; 0555
                           9E        50   D0 0005C            MOVL     WINDOW, @(SP)+                              ;
                                0000G CF  DD 0005F            PUSHL    IO_PACKET                                   ; 0556
                   0000G   CF        01   FB 00063            CALLS    #1, IO_DONE                                 ;
                                0000G CF  D4 00068            CLRL     IO_PACKET                                   ; 0557
                                          04 0006C            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