G 6

```
PPPPPPPPPPPP        AAAAAAAAA        SSSSSSSSSSSS  RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
PPPPPPPPPPPP        AAAAAAAAA        SSSSSSSSSSSS  RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
PPPPPPPPPPPP        AAAAAAAAA        SSSSSSSSSSSS  RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
PPP         PPP  AAA         AAA  SSS               RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS               RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS               RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS               RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS               RRR         RRR        TTT        LLL
PPP         PPP  AAA         AAA  SSS               RRR         RRR        TTT        LLL
PPPPPPPPPPPP     AAA         AAA     SSSSSSSSS     RRRRRRRRRRRR           TTT        LLL
PPPPPPPPPPPP     AAA         AAA     SSSSSSSSS     RRRRRRRRRRRR           TTT        LLL
PPPPPPPPPPPP     AAA         AAA     SSSSSSSSS     RRRRRRRRRRRR           TTT        LLL
PPP              AAAAAAAAAAAAAAA              SSS  RRR   RRR              TTT        LLL
PPP              AAAAAAAAAAAAAAA              SSS  RRR   RRR              TTT        LLL
PPP              AAAAAAAAAAAAAAA              SSS  RRR   RRR              TTT        LLL
PPP              AAA         AAA              SSS  RRR      RRR           TTT        LLL
PPP              AAA         AAA              SSS  RRR      RRR           TTT        LLL
PPP              AAA         AAA              SSS  RRR      RRR           TTT        LLL
PPP              AAA         AAA  SSSSSSSSSSSS     RRR         RRR        TTT        LLLLLLLLLLLLLLL
PPP              AAA         AAA  SSSSSSSSSSSS     RRR         RRR        TTT        LLLLLLLLLLLLLLL
PPP              AAA         AAA  SSSSSSSSSSSS     RRR         RRR        TTT        LLLLLLLLLLLLLLL
```

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```
**FILE**ID**PASFILEUT                                M 6
```

```
PPPPPPPP      AAAAAA      SSSSSSSS  FFFFFFFFFF    IIIIII    LL          EEEEEEEEEE  UU      UU  TTTTTTTTTT
PPPPPPPP      AAAAAA      SSSSSSSS  FFFFFFFFFF    IIIIII    LL          EEEEEEEEEE  UU      UU  TTTTTTTTTT
PP      PP  AA      AA  SS          FF              II      LL          EE          UU      UU      TT
PP      PP  AA      AA  SS          FF              II      LL          EE          UU      UU      TT
PP      PP  AA      AA  SS          FF              II      LL          EE          UU      UU      TT
PP      PP  AA      AA  SS          FF              II      LL          EE          UU      UU      TT
PPPPPPPP    AA      AA    SSSSSS    FFFFFFFF        II      LL          EEEEEEEE    UU      UU      TT
PPPPPPPP    AA      AA    SSSSSS    FFFFFFFF        II      LL          EEEEEEEE    UU      UU      TT
PP          AAAAAAAAAA          SS  FF              II      LL          EE          UU      UU      TT
PP          AAAAAAAAAA          SS  FF              II      LL          EE          UU      UU      TT
PP          AA      AA          SS  FF              II      LL          EE          UU      UU      TT          ....
PP          AA      AA          SS  FF              II      LL          EE          UU      UU      TT          ....
PP          AA      AA  SSSSSSSS    FF            IIIIII    LLLLLLLLLL  EEEEEEEEEE  UUUUUUUUUU      TT          ....
PP          AA      AA  SSSSSSSS    FF            IIIIII    LLLLLLLLLL  EEEEEEEEEE  UUUUUUUUUU      TT          ....

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
```

```
0 MODULE PAS$$FILE_UTIL ( %TITLE 'File manipulation utility procedures'
0                 IDENT = '1-005'           ! File: PASFILEUT.B32 Edit: SBL1005
0                 ) =
1 BEGIN
1 !
1 !****************************************************************************
1 !*                                                                          *
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1 !*                                                                          *
1 !*                                                                          *
1 !****************************************************************************
1 !
1
1 !++
1 ! FACILITY:      Pascal Language Support
1 !
1 ! ABSTRACT:
1 !
1 !       Utility procedures to manipulate the global list of files.
1 !
1 ! ENVIRONMENT:  User mode - AST reentrant
1 !
1 ! AUTHOR: Steven B. Lionel, CREATION DATE: 1-April-1981
1 !
1 ! MODIFIED BY:
1 !
1 ! 1-001 - Original.  SBL 1-April-1981
1 ! 1-002 - Don't assume that PFV contains valid information in PAS$CLOSE_LOCAL_R3.
1 !         Use DO_CLOSE_HANDLER to display error messages from DO_CLOSE.
1 !         SBL 28-Jun-1982
1 ! 1-003 - Set all PFV fields that are needed to close the file in PAS$$CLOSE_LOCAL.
1 !         SBL 29-Jun-1982
1 ! 1-004 - Move FCB$L_STATUS to PFV$L_STATUS in PAS$$REMOVE_FILE.
1 !         QAR FT3-2  SBL 30-Aug-1982
1 ! 1-005 - Allow PAS$$REMOVE_FILE to be called without the queue having been
1 !         initialized.  This can occur if the first file opened in the program
1 !         fails to open and the OPEN is unwound.  SBL 10-Jan-1983
1 !--
1
```

```
1 %SBTTL 'Declarations'
1 !
1 ! PROLOGUE DEFINITIONS:
1 !
1
1 REQUIRE 'RTLIN:PASPROLOG';                          ! Linkages, externals, PSECTs, structures
1
1 !
1 ! TABLE OF CONTENTS:
1 !
1
1 FORWARD ROUTINE
1     PAS$$ADD_FILE: NOVALUE,                         ! Add file to global list
1     PAS$$REMOVE_FILE: NOVALUE,                      ! Remove file from global list
1     PAS$$PROMPT_ALL: NOVALUE,                       ! Prompt on all enabled files
1     PAS$$PROMPT_FILE: JSB_PROMPT_FILE NOVALUE,      ! Prompt on a file
1     PAS$$CLOSE_ALL: NOVALUE,                        ! Close all files
1     PAS$CLOSE_LOCAL_R3: JSB_CLOSE_LOCAL NOVALUE,    ! Close all local files
1     PAS$$CLOSE_LOCAL: JSB_CLOSE_LOCAL NOVALUE,      ! Internally callable
1     DO_CLOSE: NOVALUE,                              ! Close a file
1     DO_CLOSE_HANDLER,                               ! Handler for DO_CLOSE
1     INITIALIZE_QUEUE: NOVALUE,                      ! Initialize FILE_QUEUE
1     SERVICE_REQUEST: NOVALUE;                       ! Service remove request
1
1 !
1 ! MACROS:
1 !
1 !       NONE
1 !
1 ! EQUATED SYMBOLS:
1 !
1 !       NONE
1 !
1 ! FIELDS:
1 !
1 !       NONE
1 !
1 ! OWN STORAGE:
1 !
1
1 OWN
1     FILE_QUEUE: VECTOR [2, LONG],                           ! Queue of FCBs
1     REQUEST_LEVEL: INITIAL (-1),                            ! Reentrancy level
1     QUEUE_INITIALIZED: INITIAL (0),                         ! True if queue initialized
1     REMOVE_REQUESTED: INITIAL (0);                          ! Remove requested from AST level
```

```
1 %SBTTL 'PAS$$ADD_FILE - Add file to queue'
1 GLOBAL ROUTINE PAS$$ADD_FILE (
1     FCB: REF $PAS$FCB_CONTROL_BLOCK
1     ): NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Adds a file's FCB to the queue of files.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       PAS$$ADD_FILE (FCB.r.r)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       FCB             File Control Block for file
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       FILE_QUEUE
1 !       REQUEST_LEVEL
1 !       QUEUE_INITIALIZED
1 !       REMOVE_REQUESTED
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       Inserts FCB onto head of FILE_QUEUE.
1 !
1 ! SIGNALLED ERRORS:
1 !
1 !       NONE
1 !--
1
2     BEGIN
2
2     BUILTIN
2         INSQUE;
2
2     !+
2     ! Initialize the queue if necessary.
2     !-
2
2     IF NOT .QUEUE_INITIALIZED
2     THEN
2         INITIALIZE_QUEUE ();
2
2     !+
2     ! Increment REQUEST_LEVEL.
```

```
;       2       !-
;       2
;       2       REQUEST_LEVEL = .REQUEST_LEVEL + 1;
;       2
;       2       !+
;       2       ! Insert FCB onto FILE_QUEUE at head.
;       2       !-
;       2
;       2       INSQUE (FCB [FCB$L_QUEUE_FLINK], FILE_QUEUE);
;       2
;       2       !+
;       2       ! Mark the FCB as being on the queue.
;       2       !-
;       2
;       2       FCB [FCB$V_ON_QUEUE] = 1;
;       2
;       2       !+
;       2       ! Decrement REQUEST_LEVEL.
;       2       !-
;       2
;       2       REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;       2
;       2       !+
;       2       ! If a remove request has been made, service it.
;       2       !-
;       2
;       2       IF .REMOVE_REQUESTED
;       2       THEN
;       2           SERVICE_REQUEST ();
;       2
;       2       RETURN;
;       2
;       1       END;                                              ! End of routine PAS$$ADD_FILE

                                                                  .TITLE  PAS$$FILE_UTIL File manipulation utility proced
;                                                                                        ures
                                                                  .IDENT  \1-005\

                                                                  .PSECT  _PAS$DATA,NOEXE,  PIC,2

                                             00000 FILE_QUEUE:
                                                                  .BLKB   8
                                 FFFFFFFF    00008 REQUEST_LEVEL:
                                                                  .LONG   -1                                            ;
                                 00000000    0000C QUEUE_INITIALIZED:
                                                                  .LONG   0                                             ;
                                 00000000    00010 REMOVE_REQUESTED:
                                                                  .LONG   0                                             ;

                                                                  .EXTRN  PAS$$ADD_FILE, PAS$$REMOVE_FILE
                                                                  .EXTRN  PAS$$PROMPT_ALL
                                                                  .EXTRN  PAS$$PROMPT_FILE
                                                                  .EXTRN  PAS$$CLOSE_ALL, PAS$CLOSE_LOCAL_R3
                                                                  .EXTRN  PAS$$CLOSE_LOCAL

                                                                  .PSECT  _PAS$CODE,NOWRT,  SHR,  PIC,2
```

```
                                           0004 00000          .ENTRY  PAS$$ADD_FILE, Save R2                          ; 0165
                          52 00000000'  EF   9E 00002          MOVAB   REQUEST_LEVEL, R2
                          05        04  A2   E8 00009          BLBS    QUEUE_INITIALIZED, 1$                           ; 0215
                  0000V  CF             00   FB 0000D          CALLS   #0, INITIALIZE_QUEUE                            ; 0217
                                        62   D6 00012 1$:      INCL    REQUEST_LEVEL                                   ; 0223
                          50        04  AC   D0 00014          MOVL    FCB, R0                                         ; 0229
                     F8   A2        BC  A0   0E 00018          INSQUE  -68(R0), FILE_QUEUE
                          50        04  AC   D0 0001D          MOVL    FCB, R0                                         ; 0235
                     FE   A0            20   88 00021          BISB2   #32, -2(R0)                                     ;
                                        62   D7 00025          DECL    REQUEST_LEVEL                                   ; 0241
                          05        08  A2   E9 00027          BLBC    REMOVE_REQUESTED, 2$                            ; 0247
                  0000V  CF             00   FB 0002B          CALLS   #0, SERVICE_REQUEST                             ; 0249
                                             04 00030 2$:      RET                                                     ; 0253

; Routine Size:  49 bytes,    Routine Base:  _PAS$CODE + 0000


;  193          0254  1
;  194          0255  1 !<BLF/PAGE>
```

```
1 %SBTTL 'PAS$$REMOVE_FILE - Remove file from queue'
1 GLOBAL ROUTINE PAS$$REMOVE_FILE (
1     FCB: REF $PAS$FCB_CONTROL_BLOCK
1     ): NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Remove a file's FCB from the queue of files.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       PAS$$REMOVE_FILE (FCB.r.r)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       FCB             File Control Block for file
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       FILE_QUEUE
1 !       REQUEST_LEVEL
1 !       QUEUE_INITIALIZED
1 !       REMOVE_REQUESTED
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       FILE_QUEUE
1 !       REQUEST_LEVEL
1 !       QUEUE_INITIALIZED
1 !       REMOVE_REQUESTED
1 !       FCB [FCB$V_DEALLOC]
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       Removes FCB from FILE_QUEUE or requests deallocation.
1 !
1 ! SIGNALLED ERRORS:
1 !
1 !       NONE
1 !--
1
2     BEGIN
2
2     BUILTIN
2         REMQUE;
2
2     !+
2     ! Initialize the queue if necessary.
2     !-
2
2     IF NOT .QUEUE_INITIALIZED
2     THEN
```

```
2          INITIALIZE_QUEUE ();
2
2      !+
2      ! Invalidate FCB pointer in PFV.
2      !-
2
3      BEGIN
3      LOCAL
3          PFV: REF $PAS$PFV_FILE_VARIABLE;
3      PFV = .FCB [FCB$A_PFV];
3      PFV [PFV$V_FCB_VALID] = 0;
3      PFV [PFV$L_STATUS] = .FCB [FCB$L_STATUS];    ! Overlays PFV$A_FCB
2      END;
2
2
2      !+
2      ! If the FCB is not on the queue then simply free the
2      ! storage and return.
2      !-
2
2      IF NOT .FCB [FCB$V_ON_QUEUE]
2      THEN
3          BEGIN
3          LOCAL
3              BLOCK_ADDR; ! Address of allocated block
3          BLOCK_ADDR = FCB [FCB$L_QUEUE_FLINK];
3          PAS$$FREE_VM (PAS$K_FILE_DYN_BLN, BLOCK_ADDR);
3          END
3
2      ELSE
2
3          BEGIN
3          !+
3          ! Increment REQUEST_LEVEL.  If we are at level zero, then we can do the
3          ! REMQUE directly, so do it and free the storage.
3          ! Otherwise set the DEALLOC bit in the FCB and set REMOVE_REQUESTED.
3          !-
3
3          IF (REQUEST_LEVEL=.REQUEST_LEVEL+1) EQL 0
3          THEN
4              BEGIN
4              LOCAL
4                  ITEM_ADDR;                   ! Output from REMQUE
4              REMQUE (FCB [FCB$L_QUEUE_FLINK], ITEM_ADDR);
4              FCB [FCB$V_ON_QUEUE] = 0;
4              PAS$$FREE_VM (PAS$K_FILE_DYN_BLN, ITEM_ADDR);
4              END
3          ELSE
4              BEGIN
4              FCB [FCB$V_DEALLOC] = 1;
4              REMOVE_REQUESTED = 1;
3              END;
3
3          !+
3          ! Decrement REQUEST_LEVEL.
3          !-
3
```

```
                                                      H  7
PAS$FILE_UTIL  File manipulation utility procedures  16-Sep-1984 01:33:01   VAX-11 Bliss-32 V4.0-742             Page   8
1-005          PAS$REMOVE_FILE - Remove file from queue 14-Sep-1984 12:51:29 [PASRTL.SRC]PASFILEUT.B32;1              (4)

;  310         0370  3         REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;  311         0371  3
;  312         0372  2         END;
;  313         0373  2
;  314         0374  2      !+
;  315         0375  2      ! If a remove request has been made, service it.
;  316         0376  2      !-
;  317         0377  2
;  318         0378  2      IF .REMOVE_REQUESTED
;  319         0379  2      THEN
;  320         0380  2         SERVICE_REQUEST ();
;  321         0381  2
;  322         0382  2      RETURN;
;  323         0383  2
;  324         0384  1      END;                                          ! End of routine PAS$REMOVE_FILE


                                                                  .EXTRN  PAS$FREE_VM

                                           001C 00000             .ENTRY  PAS$REMOVE_FILE, Save R2,R3,R4             ; 0257
                    54 00000000G        00   9E 00002             MOVAB   PAS$FREE_VM, R4                            ;
                    53 00000000'        EF   9E 00009             MOVAB   REQUEST_LEVEL, R3                          ;
                    5E                  08   C2 00010             SUBL2   #8, SP                                     ;
                    05          04  A3  E8 00013                  BLBS    QUEUE_INITIALIZED, 1$                      ; 0311
              0000V CF                  00   FB 00017             CALLS   #0, INITIALIZE_QUEUE                       ; 0313
                    52          04  AC  D0 0001C  1$:             MOVL    FCB, R2                                    ; 0322
                    50          DC  A2  D0 00020                  MOVL    -36(R2), PFV                               ;
              07    A0          40  8F  8A 00024                  BICB2   #64, 7(PFV)                                ; 0323
              0C    A0          D4  A2  D0 00029                  MOVL    -44(R2), 12(PFV)                           ; 0324
        10    FE    A2              05  E0 0002E                  BBS     #5, -2(R2), 2$                             ; 0333
                    6E          BC  A2  9E 00033                  MOVAB   -68(R2), BLOCK_ADDR                        ; 0338
                                    5E  DD 00037                  PUSHL   SP                                         ; 0339
                    7E        0138  8F  3C 00039                  MOVZWL  #312, -(SP)                                ;
                    64              02  FB 0003E                  CALLS   #2, PAS$FREE_VM                            ;
                                    2B  11 00041                  BRB     5$                                         ; 0333
                                    63  D6 00043  2$:             INCL    REQUEST_LEVEL                              ; 0351
                                    1D  12 00045                  BNEQ    3$                                         ;
                    52          BD  A2  9E 00047                  MOVAB   -67(R2), R2                                ; 0356
              04    AE              72  0F 0004B                  REMQUE  -(R2), ITEM_ADDR                           ;
                    50          04  AC  D0 0004F                  MOVL    FCB, R0                                    ; 0357
              FE    A0              20  8A 00053                  BICB2   #32, -2(R0)                                ;
                                04  AE  9F 00057                  PUSHAB  ITEM_ADDR                                  ; 0358
                    7E        0138  8F  3C 0005A                  MOVZWL  #312, -(SP)                                ;
                    64              02  FB 0005F                  CALLS   #2, PAS$FREE_VM                            ;
                                    08  11 00062                  BRB     4$                                         ; 0351
              FE    A2              02  88 00064  3$:             BISB2   #2, -2(R2)                                 ; 0362
              08    A3              01  D0 00068                  MOVL    #1, REMOVE_REQUESTED                       ; 0363
                                    63  D7 0006C  4$:             DECL    REQUEST_LEVEL                              ; 0370
                    05          08  A3  E9 0006E  5$:             BLBC    REMOVE_REQUESTED, 6$                       ; 0378
              0000V CF              00  FB 00072                  CALLS   #0, SERVICE_REQUEST                        ; 0380
                                        04 00077  6$:             RET                                                ; 0384

; Routine Size:  120 bytes,    Routine Base:  _PAS$CODE + 0031


;  325         0385  1
;  326          0386   1 !<BLF/PAGE>
```

```
1 %SBTTL 'PAS$PROMPT_ALL - Prompt on all prompt-enabled files'
1 GLOBAL ROUTINE PAS$PROMPT_ALL
1     : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Finds all files for which prompting is enabled and which have
1 !       partial lines and writes the partial lines.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       PAS$PROMPT_ALL ()
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       FILE_QUEUE
1 !       REQUEST_LEVEL
1 !       QUEUE_INITIALIZED
1 !       REMOVE_REQUESTED
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !
1 ! SIGNALLED ERRORS:
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         FCB: REF $PAS$FCB_CONTROL_BLOCK;        ! File control block
2
2     BIND
2         RAB = FCB: REF BLOCK [, BYTE];          ! RAB is FCB
2
2     BUILTIN
2         TESTBITCS;
2
2     !+
2     ! If queue is not initialize, bugcheck.
2     !-
2
2     IF NOT .QUEUE_INITIALIZED
2     THEN
```

```
          $PAS$BUGCHECK (BUG_FQNOTINIT);

      !+
      ! Increment REQUEST_LEVEL.
      !-

      REQUEST_LEVEL = .REQUEST_LEVEL + 1;

      !+
      ! Get the first file from the queue.
      !-

      FCB = .FILE_QUEUE [0];

      !+
      ! While there are files left, look for files to prompt on.
      !-

      WHILE (FCB [FCB$R_FCB] NEQA FILE_QUEUE) DO  ! Stop when we get back to header
          BEGIN
          FCB = FCB [FCB$R_FCB] + FCB$K_BLN;        ! Set correct FCB origin
          IF .FCB [FCB$V_PROMPT_ENABLE] AND
              .FCB [FCB$V_GENERATION] AND
              NOT .FCB [FCB$V_DEALLOC]
          THEN
              BEGIN
              LOCAL
                  PFV: REF $PAS$PFV_FILE_VARIABLE;          ! Pascal File Variable
              PFV = .FCB [FCB$A_PFV];     ! Get file variable
              IF PFV [PFV$R_PFV] NEQA 0
              THEN
                  IF TESTBITCS (PFV [PFV$V_LOCK]) ! Test and set file lock
                  THEN
                      BEGIN
                      !+
                      ! File is locked.  See if it is in Generation mode
                      ! and has a partial line in the buffer.  If so, call
                      ! PAS$PROMPT_FILE to output the prompt.
                      !-

                      IF .FCB [FCB$V_GENERATION] AND
                          (.FCB [FCB$A_RECORD_CUR] NEQA .FCB [FCB$A_RECORD_BEG])
                      THEN
                          PAS$PROMPT_FILE (PFV [PFV$R_PFV], FCB [FCB$R_FCB]);

                      !+
                      ! Unlock file.
                      !-

                      PFV [PFV$V_LOCK] = 0;
                      END;

              END;

          !+
          ! Get next file from queue.
          !-
```

```
;  442          0501  3               FCB = .FCB [FCB$L_QUEUE_FLINK];
;  443          0502  3               END;
;  444          0503  2
;  445          0504  2
;  446          0505  2           !+
;  447          0506  2           ! Decrement REQUEST_LEVEL.
;  448          0507  2           !-
;  449          0508  2
;  450          0509  2           REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;  451          0510  2
;  452          0511  2           !+
;  453          0512  2           ! If a remove request has been made, service it.
;  454          0513  2           !-
;  455          0514  2
;  456          0515  2           IF .REMOVE_REQUESTED
;  457          0516  2           THEN
;  458          0517  2               SERVICE_REQUEST ();
;  459          0518  2
;  460          0519  2           RETURN;
;  461          0520  2
;  462          0521  1           END;                                           ! End of routine PAS$PROMPT_ALL


                                                                 .EXTRN  PAS$BUGCHECK

                                           00C4 00000            .ENTRY  PAS$PROMPT_ALL, Save R2,R6,R7              ; 0388
                      52 00000000'   EF   9E 00002               MOVAB   REQUEST_LEVEL, R2                          ;
                      0A         04  A2   E8 00009               BLBS    QUEUE_INITIALIZED, 1$                      ; 0442
                                     01   DD 0000D               PUSHL   #1                                         ; 0444
            00000000G 00             01   FB 0000F               CALLS   #1, PAS$BUGCHECK                           ;
                                          04 00016               RET                                                ;
                                     62   D6 00017  1$:          INCL    REQUEST_LEVEL                              ; 0450
                      57         F8  A2   D0 00019               MOVL    FILE_QUEUE, FCB                            ; 0456
                      50         F8  A2   9E 0001D  2$:          MOVAB   FILE_QUEUE, R0                             ; 0462
                      50             57   D1 00021               CMPL    FCB, R0                                    ;
                                     38   13 00024               BEQL    5$                                         ;
                      57         44  A7   9E 00026               MOVAB   68(R7), FCB                                ; 0464
           29      FD A7             06   E1 0002A               BBC     #6, -3(FCB), 4$                            ; 0465
           24      FD A7             04   E1 0002F               BBC     #4, -3(FCB), 4$                            ; 0466
           1F      FE A7             01   E0 00034               BBS     #1, -2(FCB), 4$                            ; 0467
                      56         DC  A7   D0 00039               MOVL    -36(FCB), PFV                              ; 0472
                                     19   13 0003D               BEQL    4$                                         ; 0473
           14      04 A6             1F   E2 0003F               BBSS    #31, 4(PFV), 4$                            ; 0475
           0A      FD A7             04   E1 00044               BBC     #4, -3(FCB), 3$                            ; 0484
                   E8 A7         EC  A7   D1 00049               CMPL    -20(FCB), -24(FCB)                         ; 0485
                                     03   13 0004E               BEQL    3$                                         ;
                                  0000V   30 00050               BSBW    PAS$PROMPT_FILE                            ; 0487
                   07 A6         80  8F   8A 00053  3$:          BICB2   #128, 7(PFV)                               ; 0493
                      57         BC  A7   D0 00058  4$:          MOVL    -68(FCB), FCB                              ; 0502
                                     BF   11 0005C               BRB     2$                                         ; 0462
                                     62   D7 0005E  5$:          DECL    REQUEST_LEVEL                              ; 0509
                      05         08  A2   E9 00060               BLBC    REMOVE_REQUESTED, 6$                       ; 0515
                0000V CF             00   FB 00064               CALLS   #0, SERVICE_REQUEST                        ; 0517
                                          04 00069  6$:          RET                                                ; 0521

; Routine Size:  106 bytes,    Routine Base:  _PAS$CODE + 00A9
;  463          0522  1
;  464          0523  1 !<BLF/PAGE>
```

```
1 %SBTTL 'PAS$$PROMPT_FILE - Prompt on a prompt-enabled files'
1 GLOBAL ROUTINE PAS$$PROMPT_FILE (
1     PFV: REF $PAS$PFV_FILE_VARIABLE,              ! Pascal File Variable
1     FCB: REF $PAS$FCB_CONTROL_BLOCK               ! File Control Block
1     ) : JSB_PROMPT_FILE NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Performs a partial-line write on a prompt-enabled file.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       PAS$$PROMPT_FILE (PFV.mr.r, FCB.mr.r)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       PFV             - The Pascal File Variable for the file.
1 !
1 !       FCB             - The File Control Block for the file.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       It is assumed that the file is a prompt-enabled textfile which
1 !       is locked and in Generation mode.
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       A partial line is written to the file, with the cursor left at
1 !       the end of the text written.
1 !
1 ! SIGNALLED ERRORS:
1 !
1 !       ERRDURPRO - error during prompting
1 !--
1
2     BEGIN
2
2     LOCAL
2       CHARS_IN_LINE;                              ! Number of characters in the line
2
2     BIND
2       RAB = FCB: REF BLOCK [, BYTE];              ! RAB is FCB
2
2     !+
2     ! If the record has any characters in it, write the partial line.
2     !-
2
2     CHARS_IN_LINE = .FCB [FCB$A_RECORD_CUR] - .FCB [FCB$A_RECORD_BEG];
```

```
;  523      0581  2        IF .CHARS_IN_LINE NEQ 0
;  524      0582  2        THEN
;  525      0583  3            BEGIN
;  526      0584  3            !+
;  527      0585  3            ! Set up record pointer in RAB for $PUT.
;  528      0586  3            !-
;  529      0587  3
;  530      0588  3            RAB [RAB$L_RBF] = .FCB [FCB$A_RECORD_BEG];
;  531      0589  3            RAB [RAB$W_RSZ] = .CHARS_IN_LINE;
;  532      0590  3
;  533      0591  3            !+
;  534      0592  3            ! Set carriagecontrol depending on whether a partial
;  535      0593  3            ! line has been previously written.
;  536      0594  3            !-
;  537      0595  3
;  538      0596  3            IF .FCB [FCB$V_PARTIAL_LINE]
;  539      0597  3            THEN
;  540      0598  3                FCB [FCB$W_PROMPT_CC] = FCB$K_CC_NULL        ! Nothing before, nothing
;  541      0599  3            ELSE
;  542      0600  3                FCB [FCB$W_PROMPT_CC] = FCB$K_CC_LFNL;      ! LF before, nothing after
;  543      0601  3
;  544      0602  3            !+
;  545      0603  3            ! Do the $PUT and check for errors.
;  546      0604  3            !-
;  547      0605  3
;  548      0606  4            IF NOT $PAS$RMS_OP ($PUT (RAB=.RAB))
;  549      0607  3            THEN
;  550      0608  3                $PAS$IO_ERROR (PAS$_ERRDURPRO);
;  551      0609  3
;  552      0610  3            !+
;  553      0611  3            ! Reset the record buffer.
;  554      0612  3            !-
;  555      0613  3
;  556      0614  3            FCB [FCB$A_RECORD_CUR] = .FCB [FCB$A_RECORD_BEG];
;  557      0615  3            FCB [FCB$V_PARTIAL_LINE] = 1;
;  558      0616  3
;  559      0617  2            END;
;  560      0618  2
;  561      0619  2        RETURN;
;  562      0620  2
;  563      0621  1        END;                                          ! End of routine PAS$$PROMPT_FILE


                                                                      .EXTRN  SYS$PUT, PAS$$SIGNAL
                                                                      .EXTRN  PAS$K_ERRDURPRO

                     50      EC   A7       E8   A7  C3 00000 PAS$$PROMPT_FILE::
                                                                      SUBL3   -24(FCB), -20(FCB), CHARS_IN_LINE           ; 0580
                                                49  13 00006          BEQL    5$                                          ; 0581
                             28   A7       E8   A7  D0 00008          MOVL    -24(FCB), 40(FCB)                           ; 0588
                             22   A7            50  B0 0000D          MOVW    CHARS_IN_LINE, 34(FCB)                      ; 0589
                                           FD   A7  95 00011          TSTB    -3(FCB)                                     ; 0596
                                                05  18 00014          BGEQ    1$                                          ;
                                           FA   A7  B4 00016          CLRW    -6(FCB)                                     ; 0598
                                                04  11 00019          BRB     2$                                          ;
                             FA   A7            01  B0 0001B 1$:      MOVW    #1, -6(FCB)                                 ; 0600
```

```
                                         57  DD 0001F 2$:      PUSHL   FCB                                ; 0606
                000000000G  00           01  FB 00021          CALLS   #1, SYS$PUT                        ;
                            1C           50  E8 00028          BLBS    $$STATUS, 4$                       ;
                0001825A    8F           50  D1 0002B          CMPL    $$STATUS, #98906                   ;
                            04           12  00032             BNEQ    3$                                 ;
                            E7      FF   A7  E8 00034          BLBS    -1(FCB), 2$                        ;
                            0C           50  E8 00038 3$:      BLBS    $$STATUS, 4$                       ;
                            7E     00G   8F  9A 0003B          MOVZBL  #PAS$K_ERRDURPRO, -(SP)            ; 0608
                000000000G  00           01  FB 0003F          CALLS   #1, PAS$$SIGNAL                    ;
                                             05 00046          RSB                                        ;
                       EC   A7      E8   A7  D0 00047 4$:      MOVL    -24(FCB), -20(FCB)                 ; 0614
                       FD   A7      80   8F  88 0004C          BISB2   #128, -3(FCB)                      ; 0615
                                             05 00051 5$:      RSB                                        ; 0621

; Routine Size:  82 bytes,    Routine Base:  _PAS$CODE + 0113


;  564          0622  1
;  565          0623  1 !<BLF/PAGE>
```

```
1 %SBTTL 'PAS$$CLOSE_ALL - Close all open files'
1 GLOBAL ROUTINE PAS$$CLOSE_ALL
1     : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Closes all open files.  This procedure is called from the exit
1 !       handler declared by PAS$$OPEN.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       PAS$$CLOSE_ALL ()
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       FILE_QUEUE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       Closes all open files, and removes their control blocks
1 !       from the queue.
1 !
1 ! SIGNALLED ERRORS:
1 !
1 !       NONE
1 !--
1
2    BEGIN
2
2    LOCAL
2       FCB: REF $PAS$FCB_CONTROL_BLOCK,        ! File control block
2       DUMMY_PFV: $PAS$PFV_FILE_VARIABLE,      ! Dummy PFV for local use
2       AST_STATUS;                             ! Status from $SETAST
2
2    BUILTIN
2       REMQUE;
2
2    !+
2    ! If queue not initialized, nothing to close.
2    !-
2
2    IF NOT .QUEUE_INITIALIZED
2    THEN
2       RETURN;
```

```
;  624        0681  2
;  625        0682  2         !+
;  626        0683  2         ! Set up dummy PFV.  We will use this to close files since
;  627        0684  2         ! the true PFV may be invalid.
;  628        0685  2         !-
;  629        0686  2
;  630        0687  2         DUMMY_PFV [PFV$W_FLAGS] = 0;
;  631        0688  2
;  632        0689  2         !+
;  633        0690  2         ! Disable ASTs
;  634        0691  2         !-
;  635        0692  2
;  636        0693  2         AST_STATUS = $SETAST (ENBFLG=0);
;  637        0694  2
;  638        0695  2         !+
;  639        0696  2         ! Remove all files from the queue, and close those still open.
;  640        0697  2         !-
;  641        0698  2
;  642        0699  2         UNTIL (REMQUE (.FILE_QUEUE [0], FCB)) DO      ! True when REMQUE fails
;  643        0700  3             BEGIN
;  644        0701  3             FCB = FCB [FCB$R_FCB] + FCB$K_BLN;                  ! Get correct FCB origin
;  645        0702  3             IF NOT .FCB [FCB$V_DEALLOC]
;  646        0703  3             THEN
;  647        0704  4                 BEGIN
;  648        0705  4                 !+
;  649        0706  4                 ! Use dummy PFV to do the close.
;  650        0707  4                 !-
;  651        0708  4                 DUMMY_PFV [PFV$A_FCB] = FCB [FCB$R_FCB];
;  652        0709  4                 DUMMY_PFV [PFV$A_PFD] = .FCB [FCB$A_PFD];
;  653        0710  4                 DUMMY_PFV [PFV$V_FCB_VALID] = 1;
;  654        0711  4                 DO_CLOSE (DUMMY_PFV [PFV$R_PFV]);   ! Close the file
;  655        0712  3                 END;
;  656        0713  2             END;
;  657        0714  2
;  658        0715  2         !+
;  659        0716  2         ! If ASTs were previously enabled, reenable them.
;  660        0717  2         !-
;  661        0718  2
;  662        0719  2         IF .AST_STATUS EQL SS$_WASSET
;  663        0720  2         THEN
;  664        0721  2             $SETAST (ENBFLG = 1);
;  665        0722  2
;  666        0723  2         RETURN;
;  667        0724  2
;  668        0725  1         END;                                      ! End of routine PAS$$CLOSE_ALL


                                                                  .EXTRN  SYS$SETAST

                                          001C 00000              .ENTRY  PAS$$CLOSE_ALL, Save R2,R3,R4              ; 0625
                         54 00000000G  00   9E 00002              MOVAB   SYS$SETAST, R4                              ;
                         5E            10   C2 00009              SUBL2   #16, SP                                     ;
                         3E 00000000'  EF   E9 0000C              BLBC    QUEUE_INITIALIZED, 3$                       ; 0678
                                   06  AE   B4 00013              CLRW    DUMMY_PFV+6                                 ; 0687
                                       7E   D4 00016              CLRL    -(SP)                                       ; 0693
                         64            01   FB 00018              CALLS   #1, SYS$SETAST                              ;
```

```
                          53                50 D0 0001B      MOVL    R0, AST_STATUS                         ;
                          52 00000000'      FF 0F 0001E 1$:  REMQUE  @FILE_QUEUE, FCB                       ; 0699
                          20                1D 00025         BVS     2$
                          52          44    A2 9E 00027      MOVAB   68(R2), FCB                            ; 0701
           EE        FE   A2                01 E0 0002B      BBS     #1, -2(FCB), 1$                        ; 0702
                     0C   AE                52 D0 00030      MOVL    FCB, DUMMY_PFV+12                      ; 0708
                     08   AE          E4    A2 D0 00034      MOVL    -28(FCB), DUMMY_PFV+8                  ; 0709
                     07   AE          40    8F 88 00039      BISB2   #64, DUMMY_PFV+7                       ; 0710
                                            5E DD 0003E      PUSHL   SP                                     ; 0711
                  0000V   CF                01 FB 00040      CALLS   #1, DO_CLOSE
                                            D7 11 00045      BRB     1$                                     ; 0699
                          09                53 D1 00047 2$:  CMPL    AST_STATUS, #9                         ; 0719
                                            05 12 0004A      BNEQ    3$
                                            01 DD 0004C      PUSHL   #1                                     ; 0721
                          64                01 FB 0004E      CALLS   #1, SYS$SETAST
                                               04 00051 3$:  RET                                            ; 0725

; Routine Size:  82 bytes,    Routine Base:  _PAS$CODE + 0165

;  669          0726  1
;  670          0727  1 !<BLF/PAGE>
;    1 %SBTTL 'PAS$CLOSE_LOCAL_R3 - Close local files'
;    1 GLOBAL ROUTINE PAS$CLOSE_LOCAL_R3
;    1     : JSB_CLOSE_LOCAL NOVALUE =
;    1
;    1 !++
;    1 ! FUNCTIONAL DESCRIPTION:
;    1 !
;    1 !       Closes all open files which were declared local by our caller.
;    1 !
;    1 ! CALLING SEQUENCE:
;    1 !
;    1 !       JSB PAS$CLOSE_LOCAL_R3
;    1 !
;    1 ! FORMAL PARAMETERS:
;    1 !
;    1 !       NONE
;    1 !
;    1 ! IMPLICIT INPUTS:
;    1 !
;    1 !       Current FP (Caller's)
;    1 !
;    1 ! IMPLICIT OUTPUTS:
;    1 !
;    1 !       NONE
;    1 !
;    1 ! COMPLETION STATUS:
;    1 !
;    1 !       NONE
;    1 !
;    1 ! SIDE EFFECTS:
;    1 !
;    1 !       Preserves registers 0 and 1.
;    1 !       See PAS$$CLOSE_LOCAL
;    1 !
;    1 ! SIGNALLED ERRORS:
;    1 !
;    1 !       NONE
;    1 !--
;    1
;    2   BEGIN
;    2
;    2   BUILTIN
;    2       FP;
;    2
;    2   !+
;    2   ! Call PAS$$CLOSE_LOCAL with one argument, the current FP.  This
;    2   ! will get pushed on the stack.
;    2   !-
;    2
;    2   PAS$$CLOSE_LOCAL (.FP);
;    2
;    2   RETURN;
;    2
;    1   END;                                     ! End of routine PAS$$CLOSE_LOCAL_R3
```

```
                                          5D  DD 00000 PAS$CLOSE_LOCAL_R3::
                                                                 PUSHL    FP                                      ; 0777
                                       0000V  30 00002          BSBW     PAS$$CLOSE_LOCAL                         ;
                               5E         04  C0 00005          ADDL2    #4, SP                                   ;
                                              05 00008          RSB                                               ; 0781

; Routine Size:  9 bytes,     Routine Base:  _PAS$CODE + 01B7


;  726           0782  1
;  727           0783  1 !<BLF/PAGE>
```

```
1 %SBTTL 'PAS$CLOSE_LOCAL - Close local files'
1 GLOBAL ROUTINE PAS$CLOSE_LOCAL (PROCEDURE_FP)
1       : JSB_CLOSE_LOCAL NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Closes all open files which were declared local by our caller.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       JSB PAS$CLOSE_LOCAL (PROCEDURE_FP.rlu.v)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       PROCEDURE_FP - This is the frame pointer of the procedure for
1 !                      which we are closing its local files.  This
1 !                      value is passed on the stack.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       Our SP
1 !       FILE_QUEUE
1 !       REQUEST_LEVEL
1 !       QUEUE_INITIALIZED
1 !       REMOVE_REQUESTED
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       Closes all open files whose PFVs are between PROCEDURE_FP and SP
1 !       (i.e. declared locally in our caller's procedure).
1 !
1 ! SIGNALLED ERRORS:
1 !
1 !       NONE
1 !--
1
2    BEGIN
2
2    LOCAL
2       FCB: REF $PAS$FCB_CONTROL_BLOCK,        ! File control block
2       NEXT_FCB,                               ! Next FCB in QUEUE
2       REMQUE_OK;                              ! TRUE if ok to do REMQUEs
2
2    BUILTIN
2       REMQUE,
2       SP;
2
2    !+
2       ! If queue not initialized, nothing to close.
2       !-
2
2       IF NOT .QUEUE_INITIALIZED
2       THEN
2           RETURN;
2
2       !+
2       ! Increment REQUEST_LEVEL and set REMQUE_OK appropriately.
2       !-
2
2       IF (REQUEST_LEVEL = .REQUEST_LEVEL + 1) NEQ 0
2       THEN
2           REMQUE_OK = 0
2       ELSE
2           REMQUE_OK = 1;
2
2       !+
2       ! Get the first FCB from the queue.
2       !-
2
2       FCB = .FILE_QUEUE [0];                  ! Forward link
2
2       !+
2       ! While there are files left, look for local files to close.
2       !-
2
2       WHILE (FCB [FCB$R_FCB] NEQA FILE_QUEUE) DO  ! Stop when we get back to header
3           BEGIN
3           FCB = FCB [FCB$R_FCB] + FCB$K_BLN;         ! Get correct FCB origin
3           NEXT_FCB = .FCB [FCB$L_QUEUE_FLINK];     ! Next file in queue
3           IF NOT .FCB [FCB$V_DEALLOC] AND NOT .FCB [FCB$V_STATIC]
3           THEN
4               BEGIN
4               LOCAL
4                   PFV: REF $PAS$PFV_FILE_VARIABLE;
4               PFV = .FCB [FCB$A_PFV];      ! Get PFV
4               IF PFV [PFV$R_PFV] LSSA .PROCEDURE_FP AND PFV [PFV$R_PFV] GTRA .SP
4               THEN
5                   BEGIN
5                   !+
5                   ! We have a local file.  We can't be guaranteed that the
5                   ! contents of the PFV are valid, so set the necessary items
5                   ! here.  Close the file.
5                   !-
5
5                   PFV [PFV$W_FLAGS] = 0;
5                   PFV [PFV$V_LOCK] = 1;
5                   PFV [PFV$V_FCB_VALID] = 1;
5                   PFV [PFV$A_FCB] = FCB [FCB$R_FCB];
5                   PFV [PFV$A_PFD] = .FCB [FCB$A_PFD];
5                   DO_CLOSE (PFV [PFV$R_PFV]);
5
5                   !+
5                   ! Remove the file from the queue.  This will either be
5                   ! a REMQUE or a request to remove.
5                   !-
```

```
;  843        0898  5
;  844        0899  5                         IF .REMQUE_OK
;  845        0900  5                         THEN
;  846        0901  6                             BEGIN
;  847        0902  6                             LOCAL
;  848        0903  6                                 ITEM_ADDR;                         ! Output from REMQUE
;  849        0904  6                             REMQUE (FCB [FCB$L_QUEUE_FLINK], ITEM_ADDR);
;  850        0905  6                             PAS$$FREE_VM (PAS$K_FILE_DYN_BLN, ITEM_ADDR);
;  851        0906  6                             END
;  852        0907  5                         ELSE
;  853        0908  6                             BEGIN
;  854        0909  6                             FCB [FCB$V_DEALLOC] = 1;
;  855        0910  6                             REMOVE_REQUESTED = 1;
;  856        0911  5                             END;
;  857        0912  4                         END;
;  858        0913  3                     END;
;  859        0914  3                 !+
;  860        0915  3                 ! Get next FCB from queue.
;  861        0916  3                 !-
;  862        0917  3                 FCB = .NEXT_FCB;
;  863        0918  2                 END;
;  864        0919  2
;  865        0920  2             !+
;  866        0921  2             ! Decrement REQUEST_LEVEL.
;  867        0922  2             !-
;  868        0923  2
;  869        0924  2             REQUEST_LEVEL = .REQUEST_LEVEL - 1;
;  870        0925  2
;  871        0926  2             !+
;  872        0927  2             ! If a remove request has been made, service it.
;  873        0928  2             !-
;  874        0929  2
;  875        0930  2             IF .REMOVE_REQUESTED
;  876        0931  2             THEN
;  877        0932  2                 SERVICE_REQUEST ();
;  878        0933  2
;  879        0934  2             RETURN;
;  880        0935  2
;  881        0936  1             END;                                          ! End of routine PAS$$CLOSE_LOCAL


                                 03  BB 00000 PAS$$CLOSE_LOCAL::
                                                  PUSHR   #^M<R0,R1>                              ; 0785
                    5E           08  C2 00002     SUBL2   #8, SP
                    03 00000000'  EF  E8 00005     BLBS    QUEUE_INITIALIZED, 1$                   ; 0844
                           0099  31 0000C     BRW     8$                                      ;
                       00000000'  EF  D6 0000F 1$:  INCL    REQUEST_LEVEL                           ; 0852
                                 04  13 00015     BEQL    2$                                      ;
                                 6E  D4 00017     CLRL    REMQUE_OK                               ; 0854
                                 03  11 00019     BRB     3$                                      ;
                    6E           01  D0 0001B 2$:  MOVL    #1, REMQUE_OK                           ; 0856
                    52 00000000'  EF  D0 0001E 3$:  MOVL    FILE_QUEUE, FCB                         ; 0862
                    50 00000000'  EF  9E 00025 4$:  MOVAB   FILE_QUEUE, R0                          ; 0868
                    50           52  D1 0002C     CMPL    FCB, R0                                 ;
```

```
                                        65  13 0002F          BEQL    7$                                  :
                  52          44  A2    9E 00031          MOVAB   68(R2), FCB                         : 0870
                  53          BC  A2    D0 00035          MOVL    -68(FCB), NEXT_FCB                  : 0871
         53       FE          A2        01  E0 00039          BBS     #1, -2(FCB), 6$                     : 0872
         4E       F8          A2        06  E0 0003E          BBS     #6, -8(FCB), 6$                     :
                  50          DC  A2    D0 00043          MOVL    -36(FCB), PFV                       : 0877
                  14          AE  50    D1 00047          CMPL    PFV, PROCEDURE_FP                   : 0878
                                  44    1E 0004B          BGEQU   6$                                  :
                  5E              50    D1 0004D          CMPL    PFV, SP                             :
                                  3F    1B 00050          BLEQU   6$                                  :
                              06  A0    B4 00052          CLRW    6(PFV)                              : 0887
                  07  A0      C0  8F    88 00055          BISB2   #192, 7(PFV)                        : 0889
                  0C  A0          52    D0 0005A          MOVL    FCB, 12(PFV)                        : 0890
                  08  A0      E4  A2    D0 0005E          MOVL    -28(FCB), 8(PFV)                    : 0891
                                  50    DD 00063          PUSHL   PFV                                 : 0892
              0000V   CF          01    FB 00065          CALLS   #1, DO_CLOSE                        :
                      19          6E    E9 0006A          BLBC    REMQUE_OK, 5$                       : 0899
                      50      BC  A2    9E 0006D          MOVAB   -68(FCB), R0                        : 0904
                  04  AE          60    0F 00071          REMQUE  (R0), ITEM_ADDR                     :
                              04  AE    9F 00075          PUSHAB  ITEM_ADDR                           : 0905
                      7E    0138  8F    3C 00078          MOVZWL  #312, -(SP)                         :
         00000000G    00          02    FB 0007D          CALLS   #2, PAS$$FREE_VM                    :
                                  0B    11 00084          BRB     6$                                  : 0899
                  FE  A2          02    88 00086  5$:     BISB2   #2, -2(FCB)                         : 0909
         00000000'    EF          01    D0 0008A          MOVL    #1, REMOVE_REQUESTED                : 0910
                      52          53    D0 00091  6$:     MOVL    NEXT_FCB, FCB                       : 0917
                                  8F    11 00094          BRB     4$                                  : 0868
               00000000'  EF            D7 00096  7$:     DECL    REQUEST_LEVEL                       : 0924
            05 00000000'  EF            E9 0009C          BLBC    REMOVE_REQUESTED, 8$                : 0930
              0000V   CF          00    FB 000A3          CALLS   #0, SERVICE_REQUEST                 : 0932
                      5E          08    C0 000A8  8$:     ADDL2   #8, SP                              : 0936
                                  03    BA 000AB          POPR    #^M<R0,R1>                          :
                                        05 000AD          RSB                                         :

; Routine Size:  174 bytes,    Routine Base:  _PAS$CODE + 01C0


;   882          0937  1
;   883          0938  1 !<BLF/PAGE>
```

```
1 %SBTTL 'DO_CLOSE - Close a file'
1 ROUTINE DO_CLOSE (                                     ! Close a file
1         PFV: REF $PAS$PFV_FILE_VARIABLE                ! File variable
1     ): NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This routine closes a Pascal file.  This entry is called from
1 !       PAS$$CLOSE_ALL and PAS$CLOSE_LOCAL.  It is different from
1 !       PAS$CLOSE2 only in that it does not call PAS$$REMOVE_FILE to
1 !       remove the FCB from the list of open files.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       CALL DO_CLOSE (PFV.mr.r)
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       PFV             - The Pascal File Variable (PFV) passed by reference.
1 !                         The structure of the PFV is defined in PASPFV.REQ.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! ROUTINE VALUE:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       See PAS$$CLOSE
1 !
1 ! SIGNALLED ERRORS:
1 !
1 !       ERRDURCLO - error during CLOSE
1 !
1 !--
1
2     BEGIN
2
2     LOCAL
2         PFV_ADDR: VOLATILE;                            ! Enable argument
2
2     !+
2     ! Enable a local condition handler to intercept any signals from
2     ! trying to close the file.
2     !-
2
2     ENABLE
2         DO_CLOSE_HANDLER (PFV_ADDR);
2
```

```
;  942      0996  2        !+
;  943      0997  2        ! Lock PFV  We don't care if it is already locked.
;  944      0998  2        !-
;  945      0999  2
;  946      1000  2        PFV [PFV$V_LOCK] = 1;
;  947      1001  2
;  948      1002  2        !+
;  949      1003  2        ! Set PFV_ADDR enable argument.
;  950      1004  2        !-
;  951      1005  2
;  952      1006  2        PFV_ADDR = PFV [PFV$R_PFV];
;  953      1007  2
;  954      1008  2        !+
;  955      1009  2        ! Call PAS$$CLOSE to do the work.
;  956      1010  2        !-
;  957      1011  2
;  958      1012  2        PAS$$CLOSE (PFV [PFV$R_PFV]);
;  959      1013  2
;  960      1014  2        !+
;  961      1015  2        ! Invalidate information in PFV
;  962      1016  2        !-
;  963      1017  2
;  964      1018  2        PFV [PFV$V_FCB_VALID] = 0;
;  965      1019  2        PFV [PFV$A_FCB] = 0;
;  966      1020  2
;  967      1021  2        RETURN;
;  968      1022  2
;  969      1023  1        END;                                              ! End of routine DO_CLOSE


                                                                  .EXTRN  PAS$$CLOSE

                                            0004 00000 DO_CLOSE:
                                                                  .WORD   Save R2                              ; 0940
                                          7E  D4 00002            CLRL    PFV_ADDR                             ; 0983
                          6D      001F  CF  DE 00004            MOVAL   1$, -(FP)
                          52        04  AC  D0 00009            MOVL    PFV, R2                              ; 1000
                     07   A2        80  8F  88 0000D            BISB2   #128, 7(R2)
                          6E            52  D0 00012            MOVL    R2, PFV_ADDR                         ; 1006
                                        52  DD 00015            PUSHL   R2                                   ; 1012
              00000000G   00            01  FB 00017            CALLS   #1, PAS$$CLOSE
                     07   A2        40  8F  8A 0001E            BICB2   #64, 7(R2)                           ; 1018
                                    0C  A2  D4 00023            CLRL    12(R2)                               ; 1019
                                            04 00026            RET                                          ; 1023
                                          0000 00027 1$:        .WORD   Save nothing                         ; 0983
                          50        08  AC  D0 00029            MOVL    8(AP), R0                            ;
                          50        04  A0  D0 0002D            MOVL    4(R0), R0                            ;
                                    FC  A0  9F 00031            PUSHAB  PFV_ADDR                             ;
                                        01  DD 00034            PUSHL   #1                                   ;
                                        5E  DD 00036            PUSHL   SP                                   ;
                          7E        04  AC  7D 00038            MOVQ    4(AP), -(SP)                         ;
                  0000V   CF            03  FB 0003C            CALLS   #3, DO_CLOSE_HANDLER                 ;
                                            04 00041            RET                                          ;

; Routine Size:  66 bytes,    Routine Base:  _PAS$CODE + 026E
;  970          1024  1
;  971          1025  1 !<BLF/PAGE>
```

```
%SBTTL 'DO_CLOSE_HANDLER - Error handler for DO_CLOSE'
ROUTINE DO_CLOSE_HANDLER (
        SIGNAL_ARGS: REF BLOCK [, BYTE],        ! Signal arguments array
        MECH_ARGS: REF BLOCK [, BYTE],          ! Mechanism arguments array
        ENABLE_ARGS: REF VECTOR [, LONG]        ! Enable arguments array
    ) =

!++
! FUNCTIONAL DESCRIPTION:
!
!       This is the condition handler enabled by DO_CLOSE.
!       If the current exception is a PAS$ message for the file
!       our establisher was processing, intercept the signal, use
!       $PUTMSG to display the message text, and unwind to our
!       establisher's caller.
!
!       The reason for using $PUTMSG is that DO_CLOSE may be called
!       from PAS$HANDLER during an unwind.  The current VAX
!       condition handling architecture does not specify what happens
!       when an exception occurs during an unwind, and the current
!       implementation performs the search for handlers incorrectly.
!       We are safe as long as we don't let the signal outside of the RTL.
!
! CALLING SEQUENCE:
!
!       status.wlc.v = DO_CLOSE_HANDLER (SIGNAL_ARGS.rl.ra, MECH_ARGS.rl.ra
!                                       , ENABLE_ARGS.rl.ra)
!
! FORMAL PARAMETERS:
!
!       SIGNAL_ARGS     - The signal argument list.
!
!       MECH_ARGS       - The mechanism argument list.
!
!       ENABLE_ARGS     - An array with the following
!                         format:
!
!                               +---------------+
!                               |   ENB_COUNT   |   <-- ENABLE_ARGS
!                               +---------------+
!                               |  ENB_PFV_ADDR |
!                               +---------------+
!
!                         ENB_COUNT is the count of following enable arguments.
!                         The count is always 1.
!
!                         ENB_PFV_ADDR - If non-zero, the address of a longword
!                         containing the PFV our establisher is operating on.
!
! IMPLICIT INPUTS:
!
!       The signaller's PFV placed as the first FAO argument in the primary
!       signalled message.
!
! IMPLICIT OUTPUTS:
!
!       May use $PUTMSG to write a message
```

```
1 !
1 ! ROUTINE VALUE:
1 !
1 !       SS$_RESIGNAL
1 !
1 ! SIDE EFFECTS:
1 !
1 !       May cause an unwind.
1 !
1 !--
1
2     BEGIN
2
2     LITERAL
2         ENB_COUNT = 0,              ! Count of enable arguments
2         ENB_PFV_ADDR = 1;           ! Address of address of PFV
2
2     BUILTIN
2         ACTUALCOUNT;
2
2     !+
2     ! Determine if this is an unwind.
2     !-
2
2     IF .SIGNAL_ARGS [CHF$L_SIG_NAME] NEQU SS$_UNWIND
2     THEN
3         BEGIN
3
3         LOCAL
3             COND_NAME: BLOCK [4, BYTE]; ! Primary condition name
3
3         !+
3         ! Get primary condition name.
3         !-
3
3         COND_NAME = .SIGNAL_ARGS [CHF$L_SIG_NAME];
3
3         !+
3         ! Is this a PAS$ error?  If not, resignal.
3         !-
3
3         IF .COND_NAME [STS$V_FAC_NO] NEQU PAS$_FACILITY
3         THEN
3             RETURN SS$_RESIGNAL;
3
3         !+
3         ! See if the error message is one which is "trapped"
3         ! by ERROR:=CONTINUE.  This is done by comparing the
3         ! message number against a select range.
3         !-
3
3         IF .COND_NAME [STS$V_CODE] GEQU PAS$$K_MSGCONTLO AND ! Lowest number
3             .COND_NAME [STS$V_CODE] LEQU PAS$$K_MSGCONTHI
3         THEN
4             BEGIN
4
4             !+
; 1087          1140  4                 ! See if the PFVs match.  The signaller's PFV is the
; 1088          1141  4                 ! first FAO parameter in the primary message.
; 1089          1142  4                 !-
; 1090          1143  4
; 1091          1144  4                 IF .SIGNAL_ARGS [12,0,32,0] EQLA ..ENABLE_ARGS [ENB_PFV_ADDR]
; 1092          1145  4                 THEN
; 1093          1146  5                     BEGIN
; 1094          1147  5
; 1095          1148  5                     !+
; 1096          1149  5                     ! We want to use $PUTMSG to display the message, and then
; 1097          1150  5                     ! unwind to our establisher's caller.  First, subtract two
; 1098          1151  5                     ! from the signal argument count so that $PUTMSG doesn't see
; 1099          1152  5                     ! the PC and PSL.
; 1100          1153  5                     !-
; 1101          1154  5
; 1102          1155  5                     SIGNAL_ARGS [CHF$L_SIG_ARGS] = .SIGNAL_ARGS [CHF$L_SIG_ARGS] - 2;
; 1103          1156  5                     COND_NAME [STS$V_SEVERITY] = STS$K_ERROR;         ! Make E severity
; 1104          1157  5                     SIGNAL_ARGS [CHF$L_SIG_NAME] = .COND_NAME;
; 1105          1158  5                     $PUTMSG (MSGVEC = SIGNAL_ARGS [CHF$L_SIG_ARGS]);
; 1106          1159  5                     SIGNAL_ARGS [CHF$L_SIG_ARGS] = .SIGNAL_ARGS [CHF$L_SIG_ARGS] + 2;
; 1107          1160  5
; 1108          1161  6                     IF NOT $UNWIND ()
; 1109          1162  5                     THEN
; 1110          1163  5                         $PAS$BUGCHECK (BUG_UNWINDFAIL);
; 1111          1164  4                     END;
; 1112          1165  3                 END;
; 1113          1166  2             END;
; 1114          1167  2
; 1115          1168  2         RETURN SS$_RESIGNAL;                          ! Resignal error
; 1116          1169  2
; 1117          1170  1         END;                                          ! End of routine DO_CLOSE_HANDLER


                                                                .EXTRN  PAS$_FACILITY, PAS$$K_MSGCONTLO
                                                                .EXTRN  PAS$$K_MSGCONTHI
                                                                .EXTRN  SYS$PUTMSG, SYS$UNWIND

                                                0004 00000 DO_CLOSE_HANDLER:
                                                                .WORD   Save R2                                      ; 1027
                           52       04   AC  D0 00002           MOVL    SIGNAL_ARGS, R2                              ; 1107
                00000920   8F       04   A2  D1 00006           CMPL    4(R2), #2336                                 ;
                                         5F  13 0000E           BEQL    1$                                           ;
                           51       04   A2  D0 00010           MOVL    4(R2), COND_NAME                             ; 1118
        00G             51          0C   10  ED 00014           CMPZV   #16, #12, COND_NAME, S^PAS$_FACILITY         ; 1124
                                         54  12 00019           BNEQ    1$                                           ;
00000000G  8F           51          0C   03  ED 0001B           CMPZV   #3, #12, COND_NAME, #PAS$$K_MSGCONTLO        ; 1134
                                         49  1F 00024           BLSSU   1$                                           ;
00000000G  8F           51          0C   03  ED 00026           CMPZV   #3, #12, COND_NAME, #PAS$$K_MSGCONTHI        ; 1135
                                         3E  1A 0002F           BGTRU   1$                                           ;
                           50       0C   AC  D0 00031           MOVL    ENABLE_ARGS, R0                              ; 1144
                      04   B0       0C   A2  D1 00035           CMPL    12(R2), @4(R0)                               ;
                                         33  12 0003A           BNEQ    1$                                           ;
                           62            02  C2 0003C           SUBL2   #2, (R2)                                     ; 1155
        51              03               00                                                                          
                                         02  F0 0003F           INSV    #2, #0, #3, COND_NAME                        ; 1156
                      04   A2            51  D0 00044           MOVL    COND_NAME, 4(R2)                             ; 1157
                                         7E  7C 00048           CLRQ    -(SP)                                        ; 1158
```

```
                                      7E  D4 0004A          CLRL    -(SP)                            ;
                                      52  DD 0004C          PUSHL   R2                               ;
                    00000000G  00     04  FB 0004E          CALLS   #4, SYS$PUTMSG                   ;
                               62     02  C0 00055          ADDL2   #2, (R2)                         ; 1159
                                      7E  7C 00058          CLRQ    -(SP)                            ; 1161
                    00000000G  00     02  FB 0005A          CALLS   #2, SYS$UNWIND                   ;
                               0B     50  E8 00061          BLBS    R0, 1$                           ;
                                      03  DD 00064          PUSHL   #3                               ; 1163
                    00000000G  00     01  FB 00066          CALLS   #1, PAS$$BUGCHECK                ;
                                      06  11 0006D          BRB     2$                               ;
                               50   0918  8F  3C 0006F 1$:  MOVZWL  #2328, R0                        ; 1168
                                      04 00074              RET                                      ;
                               50     D4 00075 2$:          CLRL    R0                               ; 1170
                                      04 00077              RET                                      ;

; Routine Size:  120 bytes,    Routine Base:  _PAS$CODE + 02B0

; 1118          1171  1
; 1119          1172  1 !<BLF/PAGE>
```

```
%SBTTL 'INITIALIZE_QUEUE - Initialize FILE_QUEUE'
ROUTINE INITIALIZE_QUEUE
    : NOVALUE =

!++
! FUNCTIONAL DESCRIPTION:
!
!       Initializes FILE_QUEUE to be an empty queue.
!
! CALLING SEQUENCE:
!
!       INITIALIZE_QUEUE ()
!
! FORMAL PARAMETERS:
!
!       NONE
!
! IMPLICIT INPUTS:
!
!       FILE_QUEUE
!       QUEUE_INITIALIZED
!
! IMPLICIT OUTPUTS:
!
!       FILE_QUEUE
!       QUEUE_INITIALIZED
!
! COMPLETION STATUS:
!
!       NONE
!
! SIDE EFFECTS:
!
!       Makes FILE_QUEUE an empty queue.
!
! SIGNALLED ERRORS:
!
!       NONE
!--

    BEGIN

    LOCAL
        AST_STATUS;                             ! Previous AST enable status

    BUILTIN
        TESTBITCS;

    !+
    ! Disable ASTs.
    !-

    AST_STATUS = $SETAST (ENBFLG = 0);

    !+
    ! If QUEUE_INITIALIZED is still clear, initialize FILE_QUEUE to
    ! be an empty queue.  Set QUEUE_INITIALIZED.
```

```
; 1178          1230  2      !-
; 1179          1231  2
; 1180          1232  2      IF TESTBITCS (QUEUE_INITIALIZED)
; 1181          1233  2      THEN
; 1182          1234  3          BEGIN
; 1183          1235  3          FILE_QUEUE [0] = FILE_QUEUE;               ! Set forward link
; 1184          1236  3          FILE_QUEUE [1] = .FILE_QUEUE [0];          ! Set backward link
; 1185          1237  3          END;
; 1186          1238  2
; 1187          1239  2      !+
; 1188          1240  2      ! Reenable ASTs if previously enabled.
; 1189          1241  2      !-
; 1190          1242  2
; 1191          1243  2      IF .AST_STATUS EQL SS$_WASSET
; 1192          1244  2      THEN
; 1193          1245  2          $SETAST (ENBFLG = 1);
; 1194          1246  2
; 1195          1247  2      RETURN;
; 1196          1248  2
; 1197          1249  1      END;                                           ! End of routine INITIALIZE_QUEUE



                                                    000C 00000 INITIALIZE_QUEUE:
                                                                        .WORD   Save R2,R3                                      ; 1174
                                    53 00000000G  00   9E 00002         MOVAB   SYS$SETAST, R3                                  ;
                                    52 00000000'  EF   9E 00009         MOVAB   FILE_QUEUE, R2                                  ;
                                                  7E   D4 00010         CLRL    -(SP)                                           ; 1225
                                    63            01   FB 00012         CALLS   #1, SYS$SETAST                                  ;
                    07        0C    A2            00   E2 00015         BBSS    #0, QUEUE_INITIALIZED, 1$                       ; 1232
                                    62            62   9E 0001A         MOVAB   FILE_QUEUE, FILE_QUEUE                          ; 1235
                              04    A2            62   D0 0001D         MOVL    FILE_QUEUE, FILE_QUEUE+4                        ; 1236
                                    09            50   D1 00021 1$:     CMPL    AST_STATUS, #9                                  ; 1243
                                                  05   12 00024         BNEQ    2$                                              ;
                                                  01   DD 00026         PUSHL   #1                                              ; 1245
                                    63            01   FB 00028         CALLS   #1, SYS$SETAST                                  ;
                                                       04 0002B 2$:     RET                                                     ; 1249

; Routine Size:  44 bytes,    Routine Base:  _PAS$CODE + 0328


; 1198          1250  1
; 1199          1251  1 !<BLF/PAGE>
```

```
1 %SBTTL 'SERVICE_REQUEST - Service remove request'
1 ROUTINE SERVICE_REQUEST
1     : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       Removes all FCBs from FILE_QUEUE that have DEALLOC set.
1 !
1 ! CALLING SEQUENCE:
1 !
1 !       SERVICE_REQUEST ()
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       FILE_QUEUE
1 !       REQUEST_LEVEL
1 !       REMOVE_REQUESTED
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       FILE_QUEUE
1 !       REQUEST_LEVEL
1 !       REMOVE_REQUESTED
1 !
1 ! COMPLETION STATUS:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       Removes FCBs from queue.
1 !
1 ! SIGNALLED ERRORS:
1 !
1 !       NONE
1 !--
1
2     BEGIN
2
2     LOCAL
2         FREE_LIST: REF VECTOR [, LONG];          ! List of FCBs we deallocated
2
2     BUILTIN
2         REMQUE;
2
2     !+
2     ! Initialize FREE_LIST.
2     !-
2
2     FREE_LIST = 0;
2
2     !+
2       ! Increment REQUEST_LEVEL.  If we are at level zero, then we can
2       ! scan the queue and do REMQUEs.
2       !-
2
2       IF (REQUEST_LEVEL=.REQUEST_LEVEL+1) EQL 0
2       THEN
3           BEGIN
3
3           LOCAL
3               AST_STATUS,                     ! Previous AST enable status
3               CURRENT_FCB: REF VECTOR [, LONG];   ! Current FCB to look at
3
3           !+
3           ! Disable ASTs and remember previous status.  This makes us
3           ! multi-stream AST reentrant.
3           !-
3
3           AST_STATUS = $SETAST (ENBFLG = 0);
3
3           !+
3           ! Get first FCB on FILE_QUEUE.
3           !-
3
3           CURRENT_FCB = .FILE_QUEUE [0];  ! Forward link
3
3           !+
3           ! Clear RENOVE_REQUESTED.
3           !-
3
3           REMOVE_REQUESTED = 0;
3
3           !+
3           ! While we haven't run out of FCBs, look for FCBs with the
3           ! DEALLOC bit set, remove them from the queue, and insert them
3           ! on the list of blocks to be freed.
3           !-
3
3           WHILE (.CURRENT_FCB NEQA FILE_QUEUE) DO ! Back at queue header?
4               BEGIN
4               !+
4               ! Allow offset to zero-origin of FCB.
4               !-
4               LOCAL
4                   FCB_ORIGIN: REF $PAS$FCB_CONTROL_BLOCK;
4               FCB_ORIGIN = .CURRENT_FCB + FCB$K_BLN;
4               IF .FCB_ORIGIN [FCB$V_DEALLOC]
4               THEN
5                   BEGIN
5                   LOCAL
5                       TEMP;               ! Output from REMQUE
5                   REMQUE (CURRENT_FCB [0], TEMP);
5                   CURRENT_FCB [0] = .FREE_LIST;   ! Add FCB to free list
5                   FREE_LIST = .CURRENT_FCB;
4                   END;
4
4               !+
4               ! Get next FCB from the queue.
```

```
; 1315       1366 4              !-
; 1316       1367 4
; 1317       1368 4              CURRENT_FCB = .CURRENT_FCB [0];        ! Forward link
; 1318       1369 3              END;
; 1319       1370 3
; 1320       1371 3          !+
; 1321       1372 3          ! Reenable ASTs if they were previously enabled.
; 1322       1373 3          !-
; 1323       1374 3
; 1324       1375 3          IF .AST_STATUS EQL SS$_WASSET
; 1325       1376 3          THEN
; 1326       1377 3              $SETAST (ENBFLG = 1);
; 1327       1378 3
; 1328       1379 2          END;
; 1329       1380 2
; 1330       1381 2      !+
; 1331       1382 2      ! Decrement REQUEST_LEVEL.
; 1332       1383 2      !-
; 1333       1384 2
; 1334       1385 2      REQUEST_LEVEL = .REQUEST_LEVEL - 1;
; 1335       1386 2
; 1336       1387 2      !+
; 1337       1388 2      ! Free all blocks on FREE_LIST.
; 1338       1389 2      !-
; 1339       1390 2
; 1340       1391 2      WHILE (.FREE_LIST NEQA 0) DO
; 1341       1392 3          BEGIN
; 1342       1393 3          LOCAL
; 1343       1394 3              BLOCK_ADDR;
; 1344       1395 3          BLOCK_ADDR = .FREE_LIST;
; 1345       1396 3          FREE_LIST = .FREE_LIST [0];
; 1346       1397 3          PAS$$FREE_VM (PAS$K_FILE_DYN_BLN, BLOCK_ADDR);
; 1347       1398 2          END;
; 1348       1399 2
; 1349       1400 2      RETURN;
; 1350       1401 2
; 1351       1402 1      END;                                          ! End of routine SERVICE_REQUEST



                                  003C 00000 SERVICE_REQUEST:
                                                      .WORD   Save R2,R3,R4,R5                        ; 1253
                   55 00000000G    00  9E 00002       MOVAB   SYS$SETAST, R5                          ;
                   54 00000000'    EF  9E 00009       MOVAB   REQUEST_LEVEL, R4                       ;
                   5E              04  C2 00010       SUBL2   #4, SP                                  ;
                                   53  D4 00013       CLRL    FREE_LIST                               ; 1306
                                   64  D6 00015       INCL    REQUEST_LEVEL                           ; 1313
                                   36  12 00017       BNEQ    4$                                      ;
                                   7E  D4 00019       CLRL    -(SP)                                   ; 1326
                   65              01  FB 0001B       CALLS   #1, SYS$SETAST                          ;
                   51          F8  A4  D0 0001E       MOVL    FILE_QUEUE, CURRENT_FCB                 ; 1332
                               08  A4  D4 00022       CLRL    REMOVE_REQUESTED                        ; 1338
                   52          F8  A4  9E 00025 1$:   MOVAB   FILE_QUEUE, R2                          ; 1346
                   52              51  D1 00029       CMPL    CURRENT_FCB, R2                         ;
                                   17  13 0002C       BEQL    3$                                      ;
```

```
                            52        44   A1   9E 0002E           MOVAB   68(R1), FCB_ORIGIN                        ; 1353
             09       FE    A2             01   E1 00032           BBC     #1, -2(FCB_ORIGIN), 2$                    ; 1354
                            52             61   0F 00037           REMQUE  (CURRENT_FCB), TEMP                       ; 1359
                            61             53   D0 0003A           MOVL    FREE_LIST, (CURRENT_FCB)                  ; 1360
                            53             51   D0 0003D           MOVL    CURRENT_FCB, FREE_LIST                    ; 1361
                            51             61   D0 00040 2$:       MOVL    (CURRENT_FCB), CURRENT_FCB                ; 1368
                                           E0   11 00043           BRB     1$                                        ; 1346
                            09             50   D1 00045 3$:       CMPL    AST_STATUS, #9                            ; 1375
                                           05   12 00048           BNEQ    4$                                        ;
                                           01   DD 0004A           PUSHL   #1                                        ; 1377
                            65             01   FB 0004C           CALLS   #1, SYS$SETAST                            ;
                                           64   D7 0004F 4$:       DECL    REQUEST_LEVEL                             ; 1385
                                           53   D5 00051 5$:       TSTL    FREE_LIST                                 ; 1391
                                           16   13 00053           BEQL    6$                                        ;
                            6E             53   D0 00055           MOVL    FREE_LIST, BLOCK_ADDR                     ; 1395
                            53             63   D0 00058           MOVL    (FREE_LIST), FREE_LIST                    ; 1396
                                           5E   DD 0005B           PUSHL   SP                                        ; 1397
                            7E      0138   8F   3C 0005D           MOVZWL  #312, -(SP)                               ;
                  00000000G 00             02   FB 00062           CALLS   #2, PAS$$FREE_VM                          ;
                                           E6   11 00069           BRB     5$                                        ; 1391
                                                04 0006B 6$:       RET                                               ; 1402

; Routine Size:  108 bytes,    Routine Base:  _PAS$CODE + 0354


; 1352          1403  1
; 1353          1404  1 !<BLF/PAGE>
; 1355          1405  1 END                                      ! End of module PAS$$FILE_UTIL
; 1356          1406  1
; 1357          1407  0 ELUDOM



;                                  PSECT SUMMARY
;
;       Name                      Bytes                      Attributes
;
;   _PAS$DATA                          20  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,  PIC,ALIGN(2)
;   _PAS$CODE                         960  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(2)


;                             Library Statistics
;
;                                           -------- Symbols --------      Pages       Processing
;       File                                 Total    Loaded  Percent     Mapped      Time
;
;   _$255$DUA28:[SYSLIB]STARLET.L32;1         9776        19        0        581        00:00.9
;   _$255$DUA28:[PASRTL.OBJ]PASLIB.L32;1       427       105       24         33        00:00.4



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

; Size:          960 code + 20 data bytes
; Run Time:         00:21.6
; Elapsed Time:     01:09.6
; Lines/CPU Min:     3915
; Lexemes/CPU-Min: 16758
; Memory Used:  102 pages
; Compilation Complete
```

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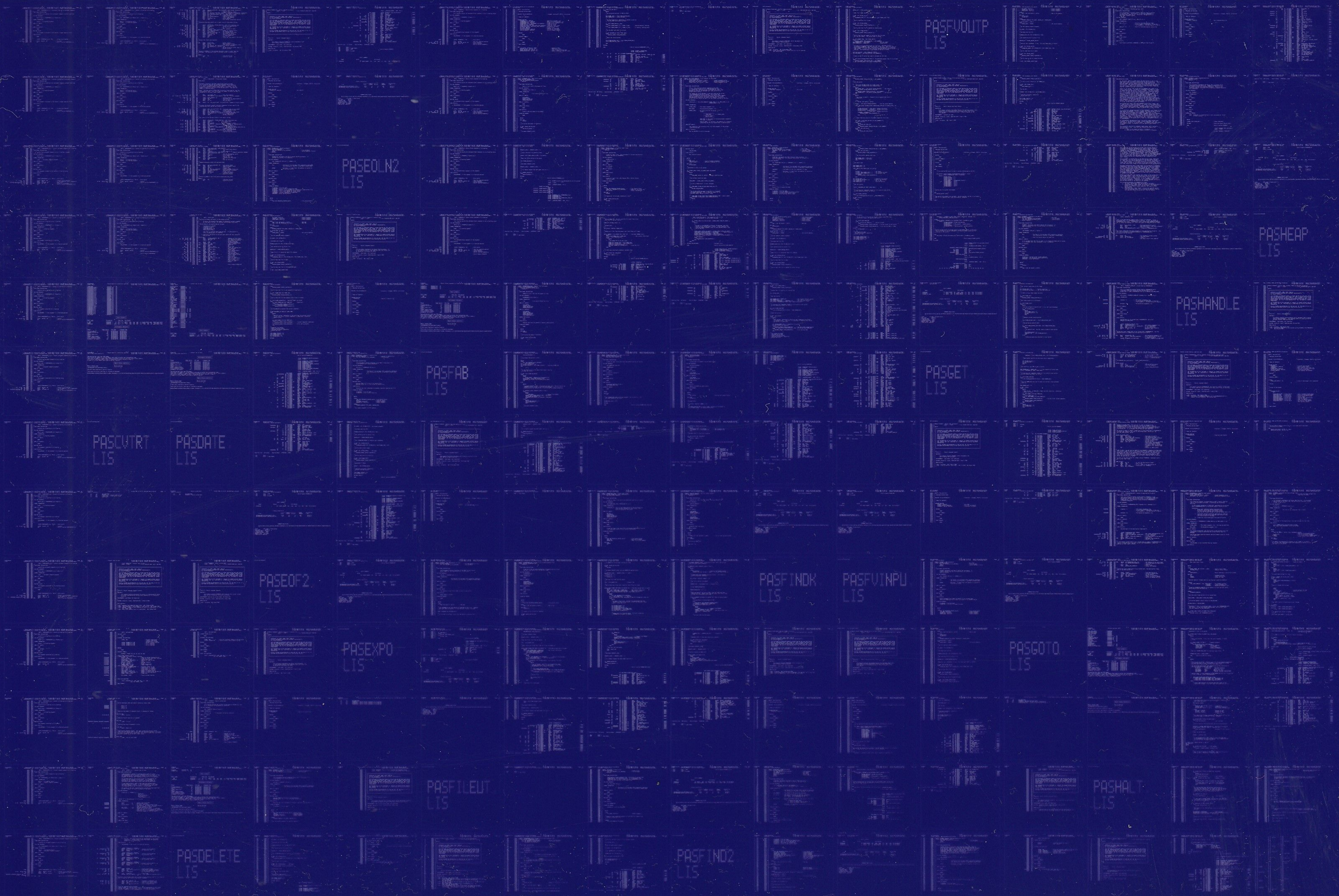
VAX/VMS V4.0 CONFIDENTIAL AND PROPRIETARY



PASFVOUTP
LIS

PASEOLN2
LIS

PASHEAP
LIS

PASHANDLE
LIS

PASFAB
LIS

PASGET
LIS

PASCVTRT
LIS

PASDATE
LIS

PASEOF2
LIS

PASFINDK
LIS

PASFVINPU
LIS

PASEXPO
LIS

PASGOTO
LIS

PASFILEUT
LIS

PASHALT
LIS

PASDELETE
LIS

PASFIND2
LIS