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MMM         MMM     000000000     UUU         UUU  NNN         NNN  TTTTTTTTTTTTTTT
MMM         MMM     000000000     UUU         UUU  NNN         NNN  TTTTTTTTTTTTTTT
MMM         MMM     000000000     UUU         UUU  NNN         NNN  TTTTTTTTTTTTTTT
MMMMMM   MMMMMM  000         000  UUU         UUU  NNN         NNN        TTT
MMMMMM   MMMMMM  000         000  UUU         UUU  NNN         NNN        TTT
MMMMMM   MMMMMM  000         000  UUU         UUU  NNN         NNN        TTT
MMM   MMM   MMM  000         000  UUU         UUU  NNNNNN      NNN        TTT
MMM   MMM   MMM  000         000  UUU         UUU  NNNNNN      NNN        TTT
MMM   MMM   MMM  000         000  UUU         UUU  NNNNNN      NNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN   NNN   NNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN   NNN   NNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN   NNN   NNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN      NNNNNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN      NNNNNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN      NNNNNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN         NNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN         NNN        TTT
MMM         MMM  000         000  UUU         UUU  NNN         NNN        TTT
MMM         MMM     000000000     UUUUUUUUUUUUUUU  NNN         NNN        TTT
MMM         MMM     000000000     UUUUUUUUUUUUUUU  NNN         NNN        TTT
MMM         MMM     000000000     UUUUUUUUUUUUUUU  NNN         NNN        TTT
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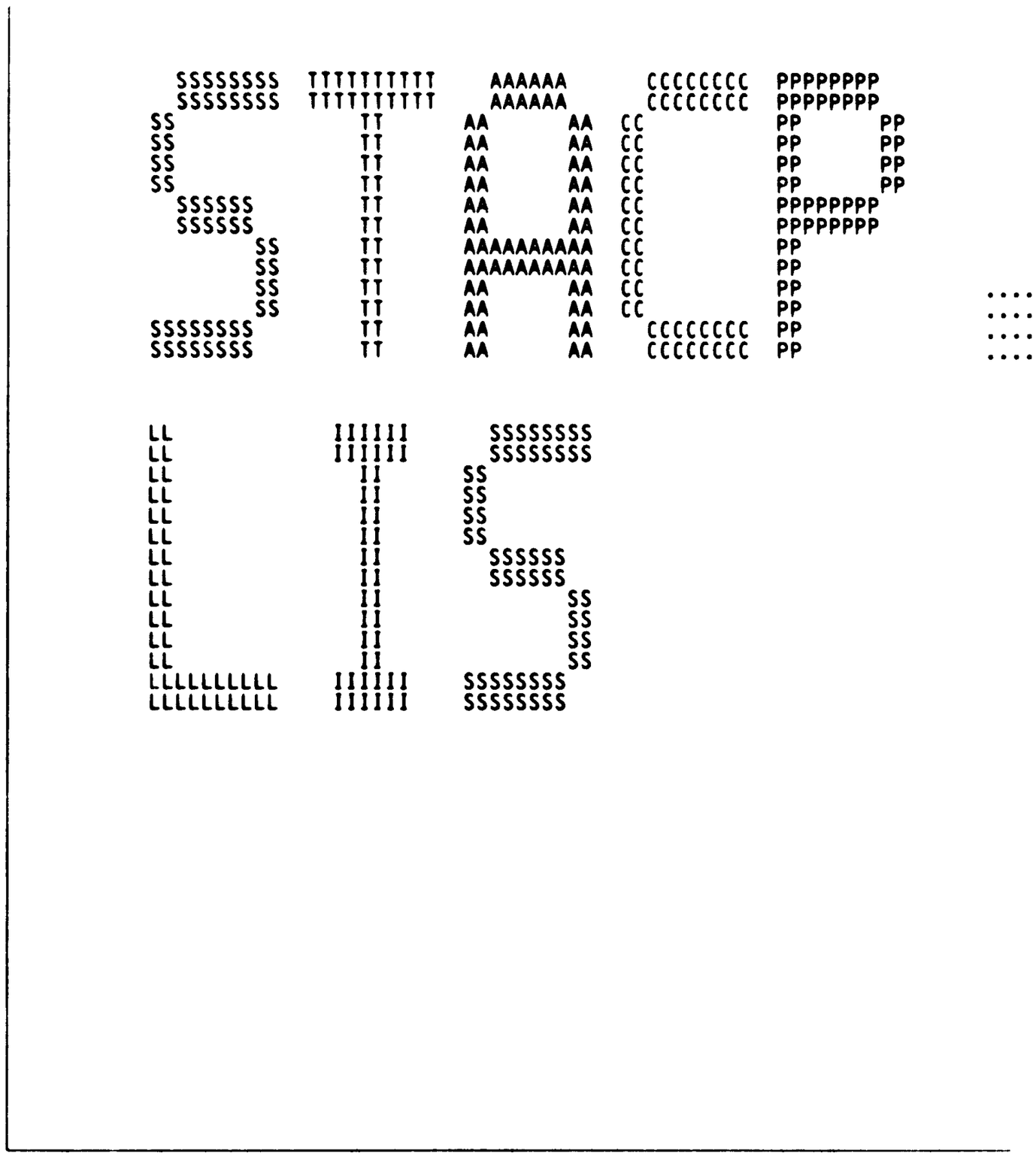
FILEID**STACP



```
;     1          0001  0 MODULE STACP (
;     2          0002  0                 LANGUAGE (BLISS32),
;     3          0003  0                 IDENT = 'V04-001'
;     4          0004  0                 ) =
;     5          0005  1 BEGIN
;     6          0006  1
;     7          0007  1 !
;     8          0008  1 !**************************************************************************
;     9          0009  1 !*                                                                        *
;    10          0010  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                              *
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;    20          0020  1 !*                                                                        *
;    21          0021  1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE  *
;    22          0022  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT  *
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;    24          0024  1 !*                                                                        *
;    25          0025  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS  *
;    26          0026  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                *
;    27          0027  1 !*                                                                        *
;    28          0028  1 !*                                                                        *
;    29          0029  1 !**************************************************************************
;    30          0030  1
;    31          0031  1 !++
;    32          0032  1 !
;    33          0033  1 ! FACILITY:  MOUNT Utility Structure Level 1
;    34          0034  1 !
;    35          0035  1 ! ABSTRACT:
;    36          0036  1 !
;    37          0037  1 !       This routine hooks up the VCB to the UCB being mounted, finds or
;    38          0038  1 !       creates the AQB and starts up the ACP.
;    39          0039  1 !
;    40          0040  1 ! ENVIRONMENT:
;    41          0041  1 !
;    42          0042  1 !       STARLET operating system, including privileged system services
;    43          0043  1 !       and internal exec routines.
;    44          0044  1 !
;    45          0045  1 !--
;    46          0046  1 !
;    47          0047  1 !
;    48          0048  1 ! AUTHOR:  Andrew C. Goldstein,  CREATION DATE:  19-Oct-1977  15:43
;    49          0049  1 !
;    50          0050  1 ! MODIFIED BY:
;    51          0051  1 !
;    52          0052  1 !       V04-001 HH0058          Hai Huang               13-Sep-1984
;    53          0053  1 !               Properly mark up the UCB if the MOUNT QIO fails. This
;    54          0054  1 !               will cause $DALLOC_DEVS to properly handle the device
;    55          0055  1 !               lock.
;    56          0056  1 !
;    57          0057  1 !       V03-021 HH0045          Hai Huang               10-Aug-1984
```

```
;    58          0058  1 !               Prevent race condition between mount and dismount
;    59          0059  1 !               (i.e. HH0025) for Files-11 level 1 volumes.
;    60          0060  1 !
;    61          0061  1 !       V03-020 CDS0009         Christian D. Saether    25-Jul-1984
;    62          0062  1 !               Fix name of sysgen parameter for fourth pool.
;    63          0063  1 !
;    64          0064  1 !       V03-019 HH0041          Hai Huang               24-Jul-1984
;    65          0065  1 !               Remove REQUIRE 'LIBD$:[VMSLIB.OBJ]MOUNTMSG.B32'.
;    66          0066  1 !
;    67          0067  1 !       V03-018 CDS0008         Christian D. Saether    15-July-1984
;    68          0068  1 !               Raise minimum requirement for header cache to 3 buffers.
;    69          0069  1 !               Add fourth pool to buffer cache for directory index.
;    70          0070  1 !
;    71          0071  1 !       V03-017 HH0029          Hai Huang               29-Jun-1984
;    72          0072  1 !               Enhance the block cache algorithm to retry with a reduced
;    73          0073  1 !               cache size if the initial cache allocation fails.
;    74          0074  1 !
;    75          0075  1 !       V03-016 HH0025          Hai Huang               21-Jun-1984
;    76          0076  1 !               Prevent the race condition between mount and dismount
;    77          0077  1 !               by "deallocating" the device as for non-private mounts
;    78          0078  1 !               before setting device-mounted bit.
;    79          0079  1 !
;    80          0080  1 !       V03-015 HH0004          Hai Huang               13-Mar-1984
;    81          0081  1 !               Fix truncation errors introduced by cluster-wide
;    82          0082  1 !               mount support.
;    83          0083  1 !
;    84          0084  1 !       V03-014 CDS0007         Christian D. Saether     3-Mar-1984
;    85          0085  1 !               Set CLF_UNLOCKDB prior to allocating buffer cache.
;    86          0086  1 !
;    87          0087  1 !       V03-013 CDS0006         Christian D. Saether    28-Feb-1984
;    88          0088  1 !               Store F11BC$T_CACHENAME.  Restrict size of block
;    89          0089  1 !               cache to 2^15-2 buffers total.
;    90          0090  1 !
;    91          0091  1 !       V03-012 CDS0005         Christian D. Saether     6-Feb-1984
;    92          0092  1 !               Add support for xqp block caches.
;    93          0093  1 !
;    94          0094  1 !       V03-011 CDS0004         Christian D. Saether    17-Aug-1983
;    95          0095  1 !               Change references to XQP to STORED_CONTEXT [XQP].
;    96          0096  1 !
;    97          0097  1 !       V03-010 RAS0180         Ron Schaefer             4-Aug-1983
;    98          0098  1 !               Fix broken calls caused by changes in DISMNTSHR.
;    99          0099  1 !
;   100          0100  1 !       V03-009 STJ56368        Steven T. Jeffreys,     27-May-1983
;   101          0101  1 !               Fix /PROCESSOR=SAME:<junk> bug.  Return NOACPDEV to force
;   102          0102  1 !               mount to abort rather than crash later on.
;   103          0103  1 !
;   104          0104  1 !       V03-008 STJ50311        Steven T. Jeffreys,     22-Feb-1983
;   105          0105  1 !               Explicitly assign a channel to the first volume of a
;   106          0106  1 !               tape volume set.
;   107          0107  1 !
;   108          0108  1 !       V03-007 CWH1002         CW Hobbs                19-Feb-1983
;   109          0109  1 !               Change $CREPRC call so that we change the extended pid returned
;   110          0110  1 !               by $CREPRC to the internal pid needed in the AQB.  Also change
;   111          0111  1 !               $DELPRC and $WAKE to use the new pid.  Create a new local ACP_PID
;   112          0112  1 !               which contains the EPID.
;   113          0113  1 !
;   114          0114  1 !       V03-006 CDS0003         Christian D. Saether    12-Jan-1983
```

```
;  115     0115  1 !
;  116     0116  1 !               Always flag the AQB for the xqp as unique so non-xqp
;  117     0117  1 !               mounts don't stumble onto it and use the xqp when
;  118     0118  1 !               an acp is desired.
;  119     0119  1 !
;  120     0120  1 !       V03-005 CDS0002         Christian D. Saether     6-Jan-1983
;  121     0121  1 !               The EXP$XQP translation is done in MOUNT_VOLUME now.
;  122     0122  1 !
;  123     0123  1 !       V03-004 CDS0001         C Saether                18-Jul-1982
;  124     0124  1 !               - Put hooks in to allow initial testing of procedure based
;  125     0125  1 !               file system.  To wit, if ods-2 and EXP$XQP translates,
;  126     0126  1 !               then ignore acp options such as unique, etc., and leave
;  127     0127  1 !               an AQB around with an ACPPID field of 0 to trigger a
;  128     0128  1 !               different queueing mechanism in qio.  Don't create an
;  129     0129  1 !               ACP either in that case.
;  130     0130  1 !
;  131     0131  1 !       V03-003 ACG47812        Andrew C. Goldstein,     20-Jul-1982  18:52
;  132     0132  1 !               Supply explicit quotas in creating ACP mailbox
;  133     0133  1 !
;  134     0134  1 !       V03-002 STJ0313         Steven T. Jeffreys,      02-Jul-1982
;  135     0135  1 !               Fix ACP process quota list bug.
;  136     0136  1 !
;  137     0137  1 !       V03-001 STJ0253         Steven T. Jeffreys,      03-Apr-1982
;  138     0138  1 !               - Use the system process quota list when creating an ACP.
;  139     0139  1 !               - Use common I/O routines where possible, and make the
;  140     0140  1 !                 use of event flags more robust.
;  141     0141  1 !               - Add ACP type code to ACP process name.
;  142     0142  1 !
;  143     0143  1 !       V02-004 STJ0191         Steven T. Jeffreys,      02-Feb-1982
;  144     0144  1 !               Zero GLOBAL and OWN storage to guaranty restartablity.
;  145     0145  1 !
;  146     0146  1 !       V02-003 DMW0007         David Micahel Walp       10-Jun-1981
;  147     0147  1 !               Use FIRST_CHANNEL instead of CHANNEL, for tapes in the
;  148     0148  1 !               MOUNT QIOW.
;  149     0149  1 !
;  150     0150  1 !       V02-002 DMW0005         David Michael Walp       20-May-1981
;  151     0151  1 !               Changed debugging terminal from _TTB1: to ACP$DEBUG_TERMINAL
;  152     0152  1 !
;  153     0153  1 !       V02-001 ACG0167         Andrew C. Goldstein,     18-Apr-1980  13:39
;  154     0154  1 !               Previous revision history moved to MOUNT.REV
;  155     0155  1 !**
;  156     0156  1
;  157     0157  1 LIBRARY 'SYS$LIBRARY:LIB.L32';
;  158     0158  1 REQUIRE 'SRC$:MOUDEF.B32';
;  159     0690  1
;  160     0691  1 FORWARD ROUTINE
;  161     0692  1         SETUP_BLOCKCACHE,
;  162     0693  1         ALLOCATE_PAGED;
```

```
;  164     0694  1 GLOBAL ROUTINE START_ACP (UCB, VCB, TYPE) : NOVALUE =
;  165     0695  1
;  166     0696  1 !++
;  167     0697  1 !
;  168     0698  1 ! FUNCTIONAL DESCRIPTION:
;  169     0699  1 !
;  170     0700  1 !       This routine hooks up the VCB to the UCB being mounted, finds or
;  171     0701  1 !       creates the AQB and starts up the ACP.
;  172     0702  1 !
;  173     0703  1 !
;  174     0704  1 ! CALLING SEQUENCE:
;  175     0705  1 !       START_ACP (ARG1, ARG2, ARG3)                                    4
;  176     0706  1 !
;  177     0707  1 ! INPUT PARAMETERS:
;  178     0708  1 !       ARG1: address of UCB
;  179     0709  1 !       ARG2: address of VCB
;  180     0710  1 !       ARG3: type code of ACP wanted
;  181     0711  1 !
;  182     0712  1 ! IMPLICIT INPUTS:
;  183     0713  1 !       MOUNT parser database
;  184     0714  1 !       CHANNEL: I/O channel assigned to device being mounted
;  185     0715  1 !
;  186     0716  1 ! OUTPUT PARAMETERS:
;  187     0717  1 !       NONE
;  188     0718  1 !
;  189     0719  1 ! IMPLICIT OUTPUTS:
;  190     0720  1 !       NONE
;  191     0721  1 !
;  192     0722  1 ! ROUTINE VALUE:
;  193     0723  1 !       NONE
;  194     0724  1 !
;  195     0725  1 ! SIDE EFFECTS:
;  196     0726  1 !       device characteristics altered, VCB hooked up to UCB, ACP started
;  197     0727  1 !
;  198     0728  1 !--
;  199     0729  1
;  200     0730  2 BEGIN
;  201     0731  2
;  202     0732  2 MAP
;  203     0733  2         UCB             : REF BBLOCK,   ! address of UCB being mounted
;  204     0734  2         VCB             : REF BBLOCK,   ! address of VCB being mounted
;  205     0735  2         TYPE            : BYTE;         ! type code of desired ACP
;  206     0736  2
;  207     0737  2 LINKAGE
;  208     0738  2         L_CVT_DEVNAM    = JSB (REGISTER = 0, REGISTER = 1, REGISTER = 5,
;  209     0739  2                                REGISTER = 4; REGISTER = 1) :
;  210     0740  2                         NOTUSED (6,7,8,9,10,11),
;  211     0741  2
;  212     0742  2         IOC_SEARCH      = JSB (REGISTER = 4) :
;  213     0743  2                         NOPRESERVE (2, 3, 5)
;  214     0744  2                         GLOBAL (ACP_DEVICE = 1);
;  215     0745  2
;  216     0746  2 LABEL
;  217     0747  2         ACP_SEARCH;                     ! main ACP search loop
;  218     0748  2
;  219     0749  2 LITERAL
;  220     0750  2         TIMER_EFN       = MOUNT_EFN + 1,! EFN for timer request
```

```
;  221     0751  2          PQL_LENGTH      = 100,          ! Size of local PQL length
;  222     0752  2                                          !  Note: PQL_LENGTH >= PQL$C_SYSPQLLEN+6
;  223     0753  2          HALF_SECOND     = 5000000,      ! 1/2 second in 100 nsec units
;  224     0754  2          ACP_UIC         = 1^16 + 3,     ! UIC to run ACP's under [1,3]
;  225     0755  2          MAILBOX_CHARLEN = 16,           ! length of mailbox characteristics buffer
;  226     0756  2          TERM_BUFFER_LEN = 8,            ! length of termination message buffer
;  227     0757  2          PROCBUF_LEN     = 16,           ! maximum length of ACP process name
;  228     0758  2          FILEBUF_LEN     = 64;           ! maximum length of ACP file name
;  229     0759  2
;  230     0760  2      LOCAL
;  231     0761  2          FIRST_CHANNEL,                  ! channel assigned to 1st tape drive
;  232     0762  2          CREATE_ACP,                     ! ACP creation flag
;  233     0763  2          STATUS,                         ! general service status value
;  234     0764  2          CLASS           : BYTE,         ! device class code for ACP sharing
;  235     0765  2          FILE_PREF       : REF VECTOR [,BYTE], ! address of ACP prefix string
;  236     0766  2          FILE_PREF_LEN,                  ! length of ACP prefix string
;  237     0767  2          SWAP_FLAG,                      ! ACP swap status flag
;  238     0768  2          WORKING_SET,                    ! working set quota for ACP
;  239     0769  2          ACP_PID,                        ! local extended pid for created ACP process
;  240     0770  2          ACP_TYPE        : VECTOR [2, BYTE], ! type string for ACP proc name
;  241     0771  2          ACP_UCB         : REF BBLOCK,   ! UCB of ACP to be used
;  242     0772  2          RVT             : REF BBLOCK,   ! address of disk RVT if multivolume
;  243     0773  2          AQB             : REF BBLOCK,   ! address of AQB to be used
;  244     0774  2          P               : REF BBLOCK,   ! pointer to chase AQB list
;  245     0775  2          QUOTA_LIST      : VECTOR [PQL_LENGTH, BYTE]; ! ACP quota list
;  246     0776  2
;  247     0777  2      OWN
;  248     0778  2          OWN_START       : VECTOR [0]    ADDRESSING_MODE (GENERAL),
;  249     0779  2                                          ! Mark start of OWN storage
;  250     0780  2                                          ! ACP termination buffer
;  251     0781  2          MAILBOX_CHAR    : BBLOCK [MAILBOX_CHARLEN] ADDRESSING_MODE (GENERAL),
;  252     0782  2                                          ! mailbox characteristics buffer
;  253     0783  2          MAILBOX_DESC    : VECTOR [2]    ADDRESSING_MODE (GENERAL),
;  254     0784  2                                          ! mailbox characteristics buffer descriptor
;  255     0785  2          TERM_BUFFER     : VECTOR [TERM_BUFFER_LEN, BYTE] ADDRESSING_MODE (GENERAL),
;  256     0786  2                                          ! ACP termination message buffer
;  257     0787  2          PROC_NAME       : VECTOR [2]    ADDRESSING_MODE (GENERAL),
;  258     0788  2                                          ! string descriptor of ACP process name
;  259     0789  2          PROCBUF         : VECTOR [PROCBUF_LEN, BYTE] ADDRESSING_MODE (GENERAL),
;  260     0790  2                                          ! string buffer for ACP process name
;  261     0791  2          FILE_NAME       : VECTOR [2]    ADDRESSING_MODE (GENERAL),
;  262     0792  2                                          ! string descriptor of ACP file name
;  263     0793  2          FILEBUF         : VECTOR [FILEBUF_LEN, BYTE] ADDRESSING_MODE (GENERAL),
;  264     0794  2                                          ! string buffer for ACP file name
;  265     0795  2          IO_STATUS       : VECTOR [2]    ADDRESSING_MODE (GENERAL),
;  266     0796  2                                          ! I/O status block
;  267     0797  2
;  268     0798  2          ! the following is a descriptor for the terminal used
;  269     0799  2          !  when debugging the ACP
;  270     0800  2          !
;  271     0801  2          TRANSBUF        : VECTOR [16, BYTE] ADDRESSING_MODE (GENERAL),
;  272     0802  2          TRANSDESC       : VECTOR [ 2, LONG] ADDRESSING_MODE (GENERAL),
;  273     0803  2          OWN_END         : VECTOR [0] ADDRESSING_MODE (GENERAL);
;  274     0804  2                                          ! Mark end of OWN storage
;  275     0305  2
;  276     0806  2      LITERAL
;  277     0807  2          OWN_LENGTH      = OWN_END - OWN_START;
```

```
;  278     0808  2
;  279     0809  2
;  280     0810  2 EXTERNAL LITERAL
;  281     0811  2         PQL$C_SYSPQLLEN;                ! System process quota list length
;  282     0812  2                                         ! (without the list terminator)
;  283     0813  2 EXTERNAL
;  284     0814  2         CACHE_STATUS,                   ! status of block cache allocation
;  285     0815  2         STORED_CONTEXT  : BITVECTOR,
;  286     0816  2         PHYS_NAME       : VECTOR VOLATILE,
;  287     0817  2                                         ! vector of physical device descriptors
;  288     0818  2         DEVICE_CHAR     : BBLOCK,       ! DEVICE CHARACTERISTICS OF DEVICE BEING MOUNTED
;  289     0819  2         MOUNT_OPTIONS   : BITVECTOR,    ! command options
;  290     0820  2         CLEANUP_FLAGS   : BITVECTOR,    ! cleanup action flags
;  291     0821  2         CHANNEL,                        ! channel assigned to device
;  292     0822  2         MAILBOX_CHANNEL,                ! channel number assigned to mailbox
;  293     0823  2         HOME_BLOCK      : BBLOCK,       ! address of volume home block if disk
;  294     0824  2         ACP_STRING      : VECTOR,       ! string descriptor of ACP device or name
;  295     0825  2         REAL_RVT        : REF BBLOCK,   ! address of RVT used, if any
;  296     0826  2         REAL_AQB        : REF BBLOCK,   ! address of AQB allocated
;  297     0827  2         REAL_WCB        : REF BBLOCK,   ! address of index file window
;  298     0828  2         PQL$AB_SYSPQL   : BBLOCK ADDRESSING_MODE (GENERAL),
;  299     0829  2                                         ! system process quota list
;  300     0830  2         CTL$GL_PCB      : REF BBLOCK ADDRESSING_MODE (GENERAL),
;  301     0831  2                                         ! address of our PCB
;  302     0832  2         IOC$GL_AQBLIST  : REF BBLOCK ADDRESSING_MODE (ABSOLUTE),
;  303     0833  2                                         ! system AQB listhead
;  304     0834  2         EXE$GL_FLAGS    : BITVECTOR ADDRESSING_MODE (ABSOLUTE),
;  305     0835  2                                         ! system flags longword
;  306     0836  2         ACP$GW_WORKSET  : WORD ADDRESSING_MODE (ABSOLUTE),
;  307     0837  2                                         ! disk ACP working set
;  308     0838  2         ACP$GW_MAPCACHE : WORD ADDRESSING_MODE (ABSOLUTE),
;  309     0839  2                                         ! disk ACP bitmap cache size
;  310     0840  2         ACP$GW_HDRCACHE : WORD ADDRESSING_MODE (ABSOLUTE),
;  311     0841  2                                         ! disk ACP header cache size
;  312     0842  2         ACP$GW_DIRCACHE : WORD ADDRESSING_MODE (ABSOLUTE),
;  313     0843  2                                         ! disk ACP directory cache size
;  314     0844  2         ACP$GB_SWAPFLGS : BITVECTOR ADDRESSING_MODE (ABSOLUTE),
;  315     0845  2                                         ! ACP swap mode flags
;  316     0846  2         ACP$GB_BASEPRIO : BYTE ADDRESSING_MODE (ABSOLUTE);
;  317     0847  2                                         ! ACP base priority
;  318     0848  2
;  319     0849  2 EXTERNAL LITERAL
;  320     0850  2         EXE$V_MULTACP   : UNSIGNED (6), ! multiple ACP bit in system flags
;  321     0851  2         EXE$V_INIT      : UNSIGNED (6), ! ACP initialized bit in system flags
;  322     0852  2         ACP$V_SWAPSYS   : UNSIGNED (6), ! swap /SYSTEM (etc.) ACP's
;  323     0853  2         ACP$V_SWAPGRP   : UNSIGNED (6), ! swap /GROUP ACP's
;  324     0854  2         ACP$V_SWAPPRV   : UNSIGNED (6), ! swap private ACP's
;  325     0855  2         ACP$V_SWAPMAG   : UNSIGNED (6); ! swap magtape ACP's
;  326     0856  2
;  327     0857  2 EXTERNAL ROUTINE
;  328     0858  2         LOCK_IODB       : ADDRESSING_MODE (LONG_RELATIVE),
;  329     0859  2                                         ! lock I/O database mutex
;  330     0860  2         UNLOCK_IODB     : ADDRESSING_MODE (LONG_RELATIVE),
;  331     0861  2                                         ! unlock the above
;  332     0862  2         ALLOCATE_MEM,                   ! allocate system dynamic memory
;  333     0863  2         DEALLOCATE_MEM,                 ! deallocate same
;  334     0864  2         SET_DATACHECK,                  ! set data check attributes for volume
```

```
;  335     0865  2          IOC$CVT_DEVNAM  : L_CVT_DEVNAM ADDRESSING_MODE (ABSOLUTE),
;  336     0866  2                                        ! get fully expanded device name
;  337     0867  2          IOC$SEARCHDEV   : IOC_SEARCH ADDRESSING_MODE (ABSOLUTE);
;  338     0868  2                                        ! search I/O database for device
;  339     0869  2
;  340     0870  2
;  341     0871  2 ! Intialize the OWN storage.  Most of it will be zeroed, but some
;  342     0872  2 ! locations must be set nonzero.
;  343     0873  2 !
;  344     0874  2 CH$FILL (0, OWN_LENGTH, OWN_START);
;  345     0875  2 MAILBOX_DESC [0] = MAILBOX_CHARLEN;
;  346     0876  2 MAILBOX_DESC [1] = MAILBOX_CHAR;
;  347     0877  2 TRANSDESC [0] = 16;
;  348     0878  2 TRANSDESC [1] = TRANSBUF;
;  349     0879  2 CACHE_STATUS  = 1;
;  350     0880  2
;  351     0881  2 !
;  352     0882  2 ! Establish whether we are creating an ACP. This is controlled by
;  353     0883  2 ! the /PROCESSOR qualifier; the default is controlled by EXE$V_MULTACP
;  354     0884  2 ! in the system mask: either a common ACP for each type, or one ACP per
;  355     0885  2 ! device class per ACP type.
;  356     0886  2 !
;  357     0887  2 ! An outer loop exists around this code to handle the situation where two
;  358     0888  2 ! users attempt to create the same common ACP (detected by seeing the
;  359     0889  2 ! AQB$V_CREATING bit in the found AQB). When this happens we simply wait
;  360     0890  2 ! a while and try all over. If the condition sticks for 30 seconds we
;  361     0891  2 ! give up on grounds of a sick I/O database.
;  362     0892  2 !
;  363     0893  2
;  364     0894  2 UCB[UCB$L_VCB] = .VCB;                  ! set up VCB pointer in UCB
;  365     0895  2
;  366     0896  3 ACP_SEARCH: BEGIN
;  367     0897  3 DECR J FROM 60 TO 1 DO
;  368     0898  4 BEGIN
;  369     0899  4
;  370     0900  4 LOCK_IODB ();
;  371     0901  4
;  372     0902  4 CREATE_ACP = 0;                        ! assume no ACP creation
;  373     0903  4
;  374     0904  4 CLASS = .BBLOCK[.UCB[UCB$L_DDB], DDB$B_ACPCLASS];
;  375     0905  4
;  376     0906  4 ! If this volume is part of a disk volume set and another volume is already
;  377     0907  4 ! mounted, use the ACP of that volume.
;  378     0908  4 !
;  379     0909  4
;  380     0910  4 IF NOT .BBLOCK [UCB[UCB$L_DEVCHAR], DEV$V_SQD]
;  381     0911  4 AND .REAL_RVT NEQ 0 AND .REAL_RVT[RVT$W_REFC] NEQ 1
;  382     0912  4 THEN
;  383     0913  5     BEGIN
;  384     0914  6     IF (
;  385     0915  6         INCR J FROM 1 TO .REAL_RVT[RVT$B_NVOLS]
;  386     0916  6         DO
;  387     0917  7             BEGIN
;  388     0918  7             ACP_UCB = .VECTOR [REAL_RVT[RVT$L_UCBLST], .J-1];
;  389     0919  7             IF .ACP_UCB NEQ 0 AND .ACP_UCB NEQ .UCB
;  390     0920  7             THEN EXITLOOP 0;
;  391     0921  7             END
```

```
;  392          0922  6          )
;  393          0923  5      THEN BUG_CHECK (NOTUCBRVT, FATAL, 'Failed to find UCB pointer in RVT');
;  394          0924  5
;  395          0925  5      IF NOT .BBLOCK [ACP_UCB[UCB$L_DEVCHAR], DEV$V_MNT]
;  396          0926  5      THEN BUG_CHECK (NOTUCBRVT, FATAL, 'Bad UCB pointer in RVT');
;  397          0927  5
;  398          0928  5      AQB = .BBLOCK [.ACP_UCB[UCB$L_VCB], VCB$L_AQB];
;  399          0929  5      IF .AQB[AQB$B_ACPTYPE] NEQ .TYPE
;  400          0930  5      THEN BUG_CHECK (NOTUCBRVT, FATAL, 'Bad UCB pointer in RVT');
;  401          0931  5      END
;  402          0932  5
;  403          0933  5  ! If a unique ACP is explicitly requested, set to create one.
;  404          0934  5  !
;  405          0935  5
;  406          0936  4  ELSE IF .MOUNT_OPTIONS[OPT_UNIQUEACP] OR .MOUNT_OPTIONS[OPT_FILEACP]
;  407          0937  4  THEN CREATE_ACP = 1
;  408          0938  4
;  409          0939  4  ! If the SAME qualifier was specified, find the device given and make sure
;  410          0940  4  ! it in fact has an ACP.
;  411          0941  4  !
;  412          0942  4
;  413          0943  4  ELSE IF .MOUNT_OPTIONS[OPT_SAMEACP]
;  414          0944  4  THEN
;  415          0945  5      BEGIN
;  416          0946  6          BEGIN
;  417          0947  6          GLOBAL REGISTER ACP_DEVICE = 1;
;  418          0948  6          ACP_DEVICE = ACP_STRING[0];
;  419          0949  6          STATUS = IOC$SEARCHDEV (.CTL$GL_PCB);
;  420          0950  6          ACP_UCB = .ACP_DEVICE;
;  421          0951  5          END;
;  422          0952  5      IF NOT .STATUS
;  423          0953  5      THEN
;  424          0954  6          BEGIN
;  425          0955  6          UNLOCK_IODB ();
;  426          0956  6          ERR_EXIT (MOUN$_NOACPDEV);
;  427          0957  5          END;
;  428          0958  5      IF NOT .BBLOCK [ACP_UCB[UCB$L_DEVCHAR], DEV$V_MNT]
;  429          0959  5      OR NOT .BBLOCK [ACP_UCB[UCB$L_DEVCHAR], DEV$V_FOD]
;  430          0960  5      OR .BBLOCK [ACP_UCB[UCB$L_DEVCHAR], DEV$V_FOR]
;  431          0961  5      THEN
;  432          0962  6          BEGIN
;  433          0963  6          UNLOCK_IODB ();
;  434          0964  6          ERR_EXIT (MOUN$_NOACPDEV);
;  435          0965  5          END;
;  436          0966  5      AQB = .BBLOCK [.ACP_UCB[UCB$L_VCB], VCB$L_AQB];
;  437          0967  5      IF .AQB[AQB$B_ACPTYPE] NEQ .TYPE
;  438          0968  5      THEN
;  439          0969  6          BEGIN
;  440          0970  6          UNLOCK_IODB ();
;  441          0971  6          ERR_EXIT (MOUN$_INCOMPACP);
;  442          0972  5          END;
;  443          0973  5      END
;  444          0974  5
;  445          0975  5  ! Otherwise we use the default ACP (one ACP per class/type). Search the
;  446          0976  5  ! system AQB list for a suitable AQB (of the right type and marked system
;  447          0977  5  ! default or right type and class and marked class default).
;  448          0978  5  !
```

```
;  449          0979  5
;  450          0980  4 ELSE
;  451          0981  5     BEGIN
;  452          0982  5     AQB = .IOC$GL_AQBLIST;
;  453          0983  5     UNTIL .AQB EQL 0 DO
;  454          0984  6         BEGIN
;  455          0985  6         IF .EXE$GL_FLAGS[EXE$V_MULTACP]
;  456          0986  6         THEN
;  457          0987  7             BEGIN
;  458          0988  7             IF .AQB[AQB$V_DEFCLASS]
;  459          0989  7             AND .AQB[AQB$B_ACPTYPE] EQL .TYPE
;  460          0990  7             AND .AQB[AQB$B_CLASS] EQL .CLASS
;  461          0991  7             THEN
;  462          0992  7                 EXITLOOP;
;  463          0993  7             END
;  464          0994  6         ELSE
;  465          0995  7             BEGIN
;  466          0996  7             IF .AQB[AQB$V_DEFSYS]
;  467          0997  7             AND .AQB[AQB$B_ACPTYPE] EQL .TYPE
;  468          0998  7             THEN
;  469          0999  7                 EXITLOOP;
;  470          1000  6             END;
;  471          1001  6         AQB = .AQB[AQB$L_LINK];
;  472          1002  5         END;
;  473          1003  5     IF .AQB EQL 0 THEN CREATE_ACP = 1;
;  474          1004  4     END;
;  475          1005  4
;  476          1006  4 ! If we are creating an ACP, now allocate the AQB thereto. Fill in the
;  477          1007  4 ! AQB and hook it into the system AQB list. Note that this must be done under
;  478          1008  4 ! the I/O database lock since the list is singly linked.
;  479          1009  4 !
;  480          1010  4
;  481          1011  4 IF .CREATE_ACP
;  482          1012  4 THEN
;  483          1013  5     BEGIN
;  484          1014  5     AQB = ALLOCATE_MEM (AQB$C_LENGTH, 0);
;  485          1015  5     AQB[AQB$B_TYPE] = DYN$C_AQB;
;  486          1016  5     AQB[AQB$B_MNTCNT] = 1;
;  487          1017  5     AQB[AQB$B_ACPTYPE] = .TYPE;
;  488          1018  5
;  489          1019  5     IF .STORED_CONTEXT [XQP]
;  490          1020  5     THEN
;  491          1021  5         AQB [AQB$V_XQIOPROC] = 1
;  492          1022  5     ELSE
;  493          1023  5
;  494          1024  5 ! Set the CREATING flag to interlock against multiple mounts trying
;  495          1025  5 ! to create the same ACP.  This interlock is not necessary when
;  496          1026  5 ! creating an AQB for an XQP file system because, for xqps, the IO database
;  497          1027  5 ! mutex is held until the AQB is completely initialized, whereas with
;  498          1028  5 ! an ACP, the mutex is released while the ACP process is being created.
;  499          1029  5 !
;  500          1030  5
;  501          1031  5         AQB[AQB$V_CREATING] = 1;
;  502          1032  5
;  503          1033  5     IF .MOUNT_OPTIONS[OPT_UNIQUEACP] OR .MOUNT_OPTIONS[OPT_FILEACP]
;  504          1034  5     THEN
;  505          1035  5         AQB[AQB$V_UNIQUE] = 1
```

```
;  506          1036  5      ELSE IF .EXE$GL_FLAGS[EXE$V_MULTACP]
;  507          1037  5      THEN
;  508          1038  6          BEGIN
;  509          1039  6          AQB[AQB$V_DEFCLASS] = 1;
;  510          1040  6          AQB[AQB$B_CLASS] = .CLASS;
;  511          1041  6          END
;  512          1042  5      ELSE
;  513          1043  5          AQB[AQB$V_DEFSYS] = 1;
;  514          1044  5
;  515          1045  5      AQB[AQB$L_ACPQFL] = AQB[AQB$L_ACPQFL];
;  516          1046  5      AQB[AQB$L_ACPQBL] = AQB[AQB$L_ACPQFL];
;  517          1047  5      AQB[AQB$L_LINK] = .IOC$GL_AQBLIST;
;  518          1048  5      IOC$GL_AQBLIST = .AQB;
;  519          1049  5      REAL_AQB = .AQB;
;  520          1050  5      CLEANUP_FLAGS[CLF_DELAQB] = 1;
;  521          1051  5      LEAVE ACP_SEARCH;
;  522          1052  5      END
;  523          1053  5
;  524          1054  5  ! If we are not creating a new ACP then we have found an AQB to use. Check
;  525          1055  5  ! that it is not in transition. If OK, bump its mount count. Otherwise,
;  526          1056  5  ! release the I/O database mutex, wait a while, and try all over.
;  527          1057  5  !
;  528          1058  5
;  529          1059  4  ELSE
;  530          1060  5      BEGIN
;  531          1061  5      IF NOT .AQB[AQB$V_CREATING]
;  532          1062  5      THEN
;  533          1063  6          BEGIN
;  534          1064  6          AQB[AQB$B_MNTCNT] = .AQB[AQB$B_MNTCNT] + 1;
;  535          1065  6          LEAVE ACP_SEARCH;
;  536          1066  5          END;
;  537          1067  4      END;
;  538          1068  4
;  539          1069  4  UNLOCK_IODB ();
;  540          1070  4
;  541          1071  4  ! The AQB we want to use is in transition (i.e., it is a new ACP being created).
;  542          1072  4  ! Since this may or may not be successful, we cannot use it at this time.
;  543          1073  4  ! Time out and retry.
;  544          1074  4  !
;  545          1075  4
;  546          1076  5  IF $SETIMR (REQIDT = 999, EFN = TIMER_EFN, DAYTIM = UPLIT (-HALF_SECOND, -1))
;  547          1077  4  THEN
;  548          1078  5      BEGIN
;  549          1079  5      $WAITFR (EFN = TIMER_EFN);
;  550          1080  5      $CANTIM (REQIDT = 999);
;  551          1081  5      $SETEF  (EFN = TIMER_EFN);
;  552          1082  4      END;
;  553          1083  4
;  554          1084  3  END;                                    ! end of ACP search retry loop
;  555          1085  3
;  556          1086  3  ! If we fall out of the loop, the AQB we want has been in transition for
;  557          1087  3  ! 10 seconds and is clearly in trouble.
;  558          1088  3  !
;  559          1089  3
;  560          1090  3  ERR_EXIT (MOUN$_AQBTIME);
;  561          1091  3
;  562          1092  2  END;                                    ! end of block ACP_SEARCH
```

```
;  563          1093  2
;  564          1094  2 IF NOT .CREATE_ACP
;  565          1095  2 THEN
;  566          1096  2     UNLOCK_IODB ()
;  567          1097  2 ELSE IF .AQB [AQB$V_XQIOPROC]
;  568          1098  2 THEN
;  569          1099  2     BEGIN
;  570          1100  2     LOCAL
;  571          1101  2         CACHE_HDR       : REF BBLOCK,
;  572          1102  2         LENGTH;
;  573          1103  2
;  574          1104  2     CLEANUP_FLAGS [CLF_UNLOCKDB] = 1;
;  575          1105  2
;  576          1106  2     AQB [AQB$L_BUFCACHE] = SETUP_BLOCKCACHE (CACHE_STATUS);
;  577          1107  2
;  578          1108  2     AQB [AQB$V_CREATING] = 0;
;  579          1109  2     CLEANUP_FLAGS [CLF_DELAQB] = 0;
;  580          1110  2     CLEANUP_FLAGS [CLF_UNLOCKDB] = 0;
;  581          1111  2
;  582          1112  2     CACHE_HDR = .AQB [AQB$L_BUFCACHE];
;  583          1113  2
;  584          1114  2     IOC$CVT_DEVNAM (15, CACHE_HDR [F11BC$T_CACHENAME] + 1, .UCB, 0; LENGTH);
;  585          1115  2
;  586          1116  2     (CACHE_HDR [F11BC$T_CACHENAME])<0,8> = .LENGTH + 8;
;  587          1117  2     CH$MOVE (8, UPLIT BYTE ('XQPCACHE'),
;  588          1118  2                 CACHE_HDR [F11BC$T_CACHENAME] + 1 + .LENGTH);
;  589          1119  2
;  590          1120  2     UNLOCK_IODB ();
;  591          1121  2
;  592          1122  2     END
;  593          1123  2 ELSE
;  594          1124  2
;  595          1125  2 ! Now create the ACP process if needed. Construct the process name from
;  596          1126  2 ! the device name and unit in the form ddcuACP; construct the
;  597          1127  2 ! ACP file name from the supplied name or the default name in the DDB.
;  598          1128  2 ! Note that the ACP file prefix depends upon whether or not a file system
;  599          1129  2 ! exists for the system disk. Normally, we use 'SYS$SYSTEM' but when this
;  600          1130  2 ! is the mount of the system disk, we use '[SYSEXE]' since FILEREAD doesn't
;  601          1131  2 ! do logical name translation.
;  602          1132  2 !
;  603          1133  2
;  604          1134  3     BEGIN
;  605          1135  3
;  606          1136  3     UNLOCK_IODB ();
;  607          1137  3
;  608          1138  3     PROC_NAME[0] = PROCBUF_LEN;
;  609          1139  3     PROC_NAME[1] = PROCBUF;
;  610          1140  3     ACP_TYPE[0] = 1;
;  611          1141  3     ACP_TYPE[1] = 'A' - 1 + .TYPE;
;  612          1142  3
;  613        P 1143  3     $FAO (
;  614        P 1144  3         DESCRIPTOR ('!AC!UW!AC!AC'),
;  615        P 1145  3         PROC_NAME[0],
;  616        P 1146  3         PROC_NAME[0],
;  617        P 1147  3         BBLOCK [.UCB[UCB$L_DDB], DDB$T_NAME],
;  618        P 1148  3         .UCB[UCB$W_UNIT],
;  619        P 1149  3         ACP_TYPE,
```

```
;  620        P 1150  3          UPLIT BYTE (3, 'ACP')
;  621          1151  3          );
;  622          1152  3
;  623          1153  3      IF .EXE$GL_FLAGS[EXE$V_INIT]
;  624          1154  3      THEN
;  625          1155  4          BEGIN
;  626          1156  4          FILE_PREF_LEN = %CHARCOUNT ('SYS$SYSTEM:');
;  627          1157  4          FILE_PREF = UPLIT BYTE ('SYS$SYSTEM:');
;  628          1158  4          END
;  629          1159  3      ELSE
;  630          1160  4          BEGIN
;  631          1161  4          FILE_PREF_LEN = %CHARCOUNT ('[SYSEXE]');
;  632          1162  4          FILE_PREF = UPLIT BYTE ('[SYSEXE]');
;  633          1163  3          END;
;  634          1164  3
;  635          1165  3      FILE_NAME[1] = FILEBUF;
;  636          1166  3      IF .MOUNT_OPTIONS[OPT_FILEACP]
;  637          1167  3      THEN
;  638          1168  4          BEGIN
;  639          1169  4          FILE_NAME[0] = .ACP_STRING[0] + .FILE_PREF_LEN;
;  640          1170  4          CH$COPY (.FILE_PREF_LEN, .FILE_PREF, .ACP_STRING[0], .ACP_STRING[1],
;  641          1171  4                   0, .FILE_NAME[0], FILEBUF);
;  642          1172  4          END
;  643          1173  3      ELSE
;  644          1174  4          BEGIN
;  645          1175  4          FILE_NAME[0] = .FILE_PREF_LEN + 11;
;  646          1176  4          CH$COPY (.FILE_PREF_LEN, .FILE_PREF, 3, BBLOCK [.UCB[UCB$L_DDB], DDB$L_ACPD],
;  647          1177  4                   8, UPLIT BYTE ('AACP.EXE'),
;  648          1178  4                   0, .FILE_PREF_LEN+11, FILEBUF);
;  649          1179  4          IF .MOUNT_OPTIONS[OPT_IS_FILES11B]
;  650          1180  4          THEN (FILEBUF+.FILE_PREF_LEN+3)<0,8> = 'B';
;  651          1181  3          END;
;  652          1182  3
;  653          1183  3  ! Create a mailbox which will receive the termination message in case the
;  654          1184  3  ! ACP bombs. The $GETCHN call is used to obtain the mailbox unit number.
;  655          1185  3  !
;  656          1186  3
;  657          1187  3      MAILBOX_CHANNEL = 0;
;  658        P 1188  3      STATUS = $CREMBX (CHAN   = MAILBOX_CHANNEL,
;  659        P 1189  3                        MAXMSG = 132,
;  660        P 1190  3                        BUFQUO = 132,
;  661          1191  3                        PROMSK = %X'FFED');        ! system writable, owner readable
;  662          1192  3      IF NOT .STATUS THEN ERR_EXIT (.STATUS);
;  663          1193  3      CLEANUP_FLAGS[CLF_DEASSMBX] = 1;
;  664          1194  3
;  665        P 1195  3      $GETCHN (CHAN   = .MAILBOX_CHANNEL,
;  666          1196  3               PRIBUF = MAILBOX_DESC[0]);
;  667          1197  3
;  668          1198  3      SWAP_FLAG = PRC$M_PSWAPM;
;  669          1199  4      IF .ACP$GB_SWAPFLGS[ (IF .DEVICE_CHAR[DEV$V_SQD] THEN ACP$V_SWAPMAG
;  670          1200  4                            ELSE IF .AQB[AQB$V_DEFSYS] OR .AQB[AQB$V_DEFCLASS]
;  671          1201  4                                 OR .MOUNT_OPTIONS[OPT_SYSTEM] THEN ACP$V_SWAPSYS
;  672          1202  4                            ELSE IF .MOUNT_OPTIONS[OPT_GROUP] THEN ACP$V_SWAPGRP
;  673          1203  4                            ELSE ACP$V_SWAPPRV
;  674          1204  3                            )]
;  675          1205  3      THEN SWAP_FLAG = 0;
;  676          1206  3
```

```
;  677          1207  3 ! Compute the working set quota for the ACP
;  678          1208  3 !
;  679          1209  3
;  680          1210  3     IF .DEVICE_CHAR[DEV$V_SQD]
;  681          1211  3     THEN
;  682          1212  3         WORKING_SET = 128                ! working set for magtape ACP
;  683          1213  3     ELSE
;  684          1214  4         BEGIN
;  685          1215  4         WORKING_SET = .ACP$GW_WORKSET;   ! working set for disk ACP
;  686          1216  4         IF .WORKING_SET EQL 0
;  687          1217  4         THEN WORKING_SET = .ACP$GW_MAPCACHE + .ACP$GW_HDRCACHE + .ACP$GW_DIRCACHE + 150;
;  688          1218  4         END;
;  689          1219  3
;  690          1220  3     ! Make a local copy of the system quota list and append the calculated
;  691          1221  3     ! ACP working set quota to the end of the list.  As the system quota list
;  692          1222  3     ! may grow, take care to leave room for our custom quota entry.
;  693          1223  3     !
;  694          1224  3
;  695          1225  3     CH$MOVE (MIN (PQL$C_SYSPQLLEN,(PQL_LENGTH-6)), PQL$AB_SYSPQL, QUOTA_LIST);
;  696          1226  3     (QUOTA_LIST+PQL$C_SYSPQLLEN)<0,8> = PQL$_WSQUOTA;
;  697          1227  3     (QUOTA_LIST+PQL$C_SYSPQLLEN+1)<0,32> = .WORKING_SET;
;  698          1228  3     (QUOTA_LIST+PQL$C_SYSPQLLEN+5)<0,8> = PQL$_LISTEND;
;  699          1229  3
;  700          1230  3     ! for debugging the ACP
;  701          1231  3     !
;  702        P 1232  3     $TRNLOG ( LOGNAM = DESCRIPTOR ('ACP$DEBUG_TERMINAL'),
;  703        P 1233  3               RSLLEN = TRANSDESC,
;  704          1234  3               RSLBUF = TRANSDESC );
;  705          1235  3
;  706        P 1236  3     STATUS = $CREPRC (
;  707        P 1237  3                      PIDADR = ACP_PID,          ! get extended pid in local
;  708        P 1238  3                      IMAGE  = FILE_NAME[0],
;  709        P 1239  3                      PRCNAM = PROC_NAME[0],
;  710        P 1240  3                      QUOTA  = QUOTA_LIST,
;  711        P 1241  3                      PRVADR = UPLIT (-1,-1),
;  712        P 1242  3                      BASPRI = .ACP$GB_BASEPRIO,
;  713        P 1243  3                      UIC    = ACP_UIC,
;  714        P 1244  3                      MBXUNT = .MAILBOX_CHAR[DIB$W_UNIT],
;  715        P 1245  3                      STSFLG = (.SWAP_FLAG OR PRC$M_HIBER),      ! hibernate immediately
;  716          1246  3                      INPUT  = TRANSDESC );      ! DEBUG the ACP
;  717          1247  3
;  718          1248  3     IF NOT .STATUS THEN ERR_EXIT (.STATUS);
;  719          1249  3
;  720          1250  3 ! We created the process in the hibernate state because we need to twiddle the PID before it gets put in the
;  721          1251  3 ! $CREPRC has put an exte.ied PID in ACP_PID, we need to convert the EPID to an internal PID for the AQB.  W
;  722          1252  3 ! this is done we can wake the ACP.
;  723          1253  3 !
;  724          1254  4     BEGIN       ! put a block around the routine declarations
;  725          1255  4     LINKAGE
;  726          1256  4         cvt_lnk = JSB (REGISTER=0) : PRESERVE (1,2,3,4,5) NOTUSED (6,7,8,9,10,11);
;  727          1257  4     EXTERNAL ROUTINE
;  728          1258  4         EXE$EPID_TO_IPID : cvt_lnk ADDRESSING_MODE (GENERAL);
;  729          1259  4     AQB[AQB$L_ACPPID] = EXE$EPID_TO_IPID (.ACP_PID);
;  730          1260  3     END;
;  731          1261  3     STATUS = $WAKE (PIDADR = ACP_PID);          ! wake it up using the epid
;  732          1262  3     IF NOT .STATUS THEN ERR_EXIT (.STATUS);
;  733          1263  3
```

```
;  734          1264  3 ! Now wait for the ACP to come up. We do this by sitting in a time out loop
;  735          1265  3 ! waiting for the transition bit in the AQB to clear, and also waiting for
;  736          1266  3 ! a message on the mailbox in case the ACP dies.
;  737          1267  3 !
;  738          1268  3
;  739        P 1269  3     $QIO (
;  740        P 1270  3         CHAN   = .MAILBOX_CHANNEL,
;  741        P 1271  3         FUNC   = IO$_READVBLK,
;  742        P 1272  3         EFN    = MOUNT_EFN,
;  743        P 1273  3         IOSB   = IO_STATUS[0],
;  744        P 1274  3         P1     = TERM_BUFFER,
;  745        P 1275  3         P2     = TERM_BUFFER_LEN
;  746          1276  3         );
;  747          1277  3     $SETEF (EFN = MOUNT_EFN);
;  748          1278  3
;  749          1279  3     IF DECR J FROM 60 TO 1 DO
;  750          1280  4         BEGIN
;  751          1281  5         IF $SETIMR (REQIDT = 999, EFN = TIMER_EFN, DAYTIM = UPLIT (-HALF_SECOND, -1))
;  752          1282  4         THEN
;  753          1283  5             BEGIN
;  754          1284  5             $WAITFR (EFN = TIMER_EFN);
;  755          1285  5             $CANTIM (REQIDT = 999);
;  756          1286  5             $SETEF (EFN = TIMER_EFN);
;  757          1287  4             END;
;  758          1288  4
;  759          1289  4         IF NOT .AQB[AQB$V_CREATING]
;  760          1290  4         THEN EXITLOOP 0;
;  761          1291  4
;  762          1292  4         IF .IO_STATUS[0] NEQ 0
;  763          1293  4         THEN
;  764          1294  5             BEGIN
;  765          1295  5             IF NOT .IO_STATUS[0] THEN ERR_EXIT (.IO_STATUS[0]);
;  766          1296  5             IF .TERM_BUFFER<0,16> EQL MSG$_DELPROC
;  767          1297  5             THEN ERR_EXIT (.(TERM_BUFFER+4));
;  768          1298  5
;  769        P 1299  5             $QIO (
;  770        P 1300  5                 CHAN = .MAILBOX_CHANNEL,
;  771        P 1301  5                 FUNC = IO$_READVBLK,
;  772        P 1302  5                 EFN  = MOUNT_EFN,
;  773        P 1303  5                 IOSB = IO_STATUS[0],
;  774        P 1304  5                 P1   = TERM_BUFFER,
;  775        P 1305  5                 P2   = TERM_BUFFER_LEN
;  776          1306  5                 );
;  777          1307  5             $SETEF (EFN = MOUNT_EFN);
;  778          1308  4             END;
;  779          1309  4         END                                 ! end of ACP wait loop
;  780          1310  4
;  781          1311  4 ! If we time out of the loop, the ACP is hung for some reason (such as that
;  782          1312  4 ! the image wasn't an ACP). Bomb it and clean up.
;  783          1313  4 !
;  784          1314  4
;  785          1315  3     THEN
;  786          1316  4         BEGIN
;  787          1317  4         $DELPRC (PIDADR = ACP_PID);     ! blow it away using the extended pid
;  788          1318  4         ERR_EXIT (MOUN$_ACPTIME);
;  789          1319  3         END;
;  790          1320  3
```

```
;  791          1321  3 ! The ACP is really and truly now up. Dispose of the mailbox.
;  792          1322  3 !
;  793          1323  3
;  794          1324  3     $DASSGN (CHAN = .MAILBOX_CHANNEL);
;  795          1325  3     CLEANUP_FLAGS[CLF_DEASSMBX] = 0;
;  796          1326  3     CLEANUP_FLAGS[CLF_DELAQB] = 0;
;  797          1327  2     END;                                    ! end of ACP creation
;  798          1328  2
;  799          1329  2
;  800          1330  2 ! Enable the device and issue the MOUNT QIO.
;  801          1331  2 !
;  802          1332  2
;  803          1333  2 UCB[UCB$V_MOUNTING] = 1;
;  804          1334  2 VCB[VCB$L_AQB] = .AQB;
;  805          1335  2
;  806          1336  2 IF NOT .DEVICE_CHAR[DEV$V_SQD]
;  807          1337  2 THEN
;  808          1338  3     BEGIN
;  809          1339  3     IF .MOUNT_OPTIONS[OPT_IS_FILES11B]
;  810          1340  3     THEN SET_DATACHECK (.UCB, HOME_BLOCK)
;  811          1341  3     ELSE SET_DATACHECK (.UCB, 0);
;  812          1342  3
;  813          1343  3     !
;  814          1344  3     ! To prevent the race condition between a simultaneous mount and a
;  815          1345  3     ! dismount, "deallocate" the device if this is not a private mount.
;  816          1346  3     ! This ensures that the dismount processing in the file system will
;  817          1347  3     ! see a consistent I/O database, i.e. UCB$L_PID accurately reflects
;  818          1348  3     ! how the volume is mounted, even while mount is in progress.
;  819          1349  3     !
;  820          1350  4     IF  ( NOT .MOUNT_OPTIONS [OPT_NOSHARE] )            ! and non-private mounts
;  821          1351  4     AND ( .UCB [UCB$L_PID] NEQ 0 )                      ! and device "allocated", i.e.
;  822          1352  3     THEN                                                !   mount is in progress
;  823          1353  4         BEGIN
;  824          1354  4         LOCK_IODB ();                                   ! Lock I/O database
;  825          1355  4         UCB [UCB$L_PID] = 0;                            ! "Deallocate" the device
;  826          1356  4         BBLOCK [ UCB [UCB$L_DEVCHAR], DEV$V_ALL ] = 0;
;  827          1357  4         UCB [UCB$W_REFC] = .UCB [UCB$W_REFC] - 1;
;  828          1358  4         UNLOCK_IODB ();
;  829          1359  3         END;
;  830          1360  3
;  831        P 1361  3     STATUS = DO_IO (CHAN = .CHANNEL,
;  832        P 1362  3                     FUNC = IO$_MOUNT,
;  833        P 1363  3                     IOSB = IO_STATUS[0]
;  834          1364  3                     );
;  835          1365  3     END
;  836          1366  2 ELSE
;  837          1367  3     BEGIN
;  838          1368  3     !
;  839          1369  3     ! Use the 1st device for tapes
;  840          1370  3     !
;  841          1371  4     IF (STATUS = $ASSIGN (CHAN = FIRST_CHANNEL, DEVNAM = PHYS_NAME[0]))
;  842          1372  3     THEN
;  843        P 1373  3         STATUS = DO_IO (CHAN = .FIRST_CHANNEL,
;  844        P 1374  3                         FUNC = IO$_MOUNT,
;  845        P 1375  3                         IOSB = IO_STATUS[0]
;  846          1376  3                        );
;  847          1377  3     $DASSGN (CHAN = .FIRST_CHANNEL);
```

```
;  848          1378  2     END;
;  849          1379  2
;  850          1380  2 ! If the MOUNT QIO directive fails, just unhook the VCB and drop the mount
;  851          1381  2 ! count in the AQB. If the AQB count goes to zero, wake the ACP who will
;  852          1382  2 ! clean himself up in the proper manner. This must be done this way to avoid
;  853          1383  2 ! timing windows which could conceivably lose I/O packets.
;  854          1384  2 !
;  855          1385  2
;  856          1386  2 IF .STATUS THEN STATUS = .IO_STATUS[0];
;  857          1387  2 IF NOT .STATUS
;  858          1388  2 THEN
;  859          1389  3     BEGIN
;  860          1390  3     LOCK_IODB ();
;  861          1391  3     UCB[UCB$V_MOUNTING] = 0;
;  862          1392  3     UCB[UCB$L_VCB] = 0;
;  863          1393  3     AQB[AQB$B_MNTCNT] = .AQB[AQB$B_MNTCNT] - 1;
;  864          1394  3
;  865          1395  3     !
;  866          1396  3     ! We marked the device as "not allocated" prior to issuing
;  867          1397  3     ! the MOUNT QIO. Now that the QIO failed, restore the UCB
;  868          1398  3     ! to its original state so that the device deallocation
;  869          1399  3     ! routine (in module ASSIST) can deallocate this device and
;  870          1400  3     ! release the device lock.
;  871          1401  3     !
;  872          1402  4     IF  ( NOT .MOUNT_OPTIONS [OPT_NOSHARE] )            ! For non-private mounts
;  873          1403  3     THEN
;  874          1404  4         BEGIN
;  875          1405  4         UCB [UCB$L_PID] = .CTL$GL_PCB [PCB$L_PID];      ! Re-allocate the device
;  876          1406  4         BBLOCK [ UCB [UCB$L_DEVCHAR], DEV$V_ALL ] = 1;
;  877          1407  4         UCB [UCB$W_REFC] = .UCB [UCB$W_REFC] + 1;
;  878          1408  3         END;
;  879          1409  3
;  880          1410  3     UNLOCK_IODB ();
;  881          1411  3     IF .AQB[AQB$B_MNTCNT] EQL 0 AND NOT .AQB [AQB$V_XQIOPROC]
;  882          1412  3     THEN
;  883          1413  3
;  884          1414  3 ! The AQB$L_ACPPID contains an internal pid, we must convert to extended pid to call the
;  885          1415  3 ! $WAKE service.
;  886          1416  3 !
;  887          1417  4         BEGIN
;  888          1418  4         LINKAGE
;  889          1419  4             cvt_lnk = JSB (REGISTER=0) : PRESERVE (1,2,3,4,5) NOTUSED (6,7,8,9,10,11);
;  890          1420  4         EXTERNAL ROUTINE
;  891          1421  4             EXE$IPID_TO_EPID : cvt_lnk ADDRESSING_MODE (GENERAL);
;  892          1422  4         ACP_PID = EXE$IPID_TO_EPID (.AQB[AQB$L_ACPPID]);
;  893          1423  4         $WAKE (PIDADR = ACP_PID);
;  894          1424  3         END;
;  895          1425  3     ERR_EXIT (.STATUS);
;  896          1426  2     END;
;  897          1427  2
;  898          1428  1 END;                                    ! end of routine START_ACP


                                                        .TITLE  STACP
                                                        .IDENT  \V04-001\

                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2
```

```
                                                FFFFFFFF  FFB3B4C0  00000 P.AAA:  .LONG   -5000000, -1
                                        45  48  43  41  43  50  51  58  00008 P.AAB:  .ASCII  \XQPCACHE\
                    43  41  21  43  41  21  57  55  21  43  41  21  00010 P.AAD:  .ASCII  \!AC!UW!AC.AC\
                                                    0000000C  0001C P.AAC:  .LONG   12
                                                    00000000' 00020         .ADDRESS P.AAD
                                                              03  00024 P.AAE:  .BYTE   3
                                                        50  43  41  00025         .ASCII  \ACP\
                        3A  4D  45  54  53  59  53  24  53  59  53  00028 P.AAF:  .ASCII  \SYS$SYSTEM:\
                                    5D  45  58  45  53  59  53  5B  00033 P.AAG:  .ASCII  \[SYSEXE]\
                                    45  58  45  2E  50  43  41  41  0003B P.AAH:  .ASCII  \ACP.EXE\
49  4D  52  45  54  5F  47  55  42  45  44  24  50  43  41  41  00043 P.AAJ:  .ASCII  \ACP$DEBUG_TERMINAL\
                                                        4C  41  4E  00052
                                                                    00055         .BLKB   3
                                                    00000012  00058 P.AAI:  .LONG   18
                                                    00000000' 0005C         .ADDRESS P.AAJ
                                                FFFFFFFF  FFFFFFFF  00060 P.AAK:  .LONG   -1, -1
                                                FFFFFFFF  FFB3B4C0  00068 P.AAL:  .LONG   -5000000, -1

                                                                            .PSECT  $OWN$,NOEXE,2

                                                                    00000 OWN_START:
                                                                            .BLKB   0
                                                                    00000 MAILBOX_CHAR:
                                                                            .BLKB   16
                                                                    00010 MAILBOX_DESC:
                                                                            .BLKB   8
                                                                    00018 TERM_BUFFER:
                                                                            .BLKB   8
                                                                    00020 PROC_NAME:
                                                                            .BLKB   8
                                                                    00028 PROCBUF:  .BLKB   16
                                                                    00038 FILE_NAME:
                                                                            .BLKB   8
                                                                    00040 FILEBUF:  .BLKB   64
                                                                    00080 IO_STATUS:
                                                                            .BLKB   8
                                                                    00088 TRANSBUF:
                                                                            .BLKB   16
                                                                    00098 TRANSDESC:
                                                                            .BLKB   8
                                                                    000A0 OWN_END:  .BLKB   0

                                                                            .EXTRN  PQL$C_SYSPQLLEN
                                                                            .EXTRN  CACHE_STATUS, STORED_CONTEXT
                                                                            .EXTRN  PHYS_NAME, DEVICE_CHAR
                                                                            .EXTRN  MOUNT_OPTIONS, CLEANUP_FLAGS
                                                                            .EXTRN  CHANNEL, MAILBOX_CHANNEL
                                                                            .EXTRN  HOME_BLOCK, ACP_STRING
                                                                            .EXTRN  REAL_RVT, REAL_AQB
                                                                            .EXTRN  REAL_WCB, PQL$AB_SYSPQL
                                                                            .EXTRN  CTL$GL_PCB, IOC$GL_AQBLIST
                                                                            .EXTRN  EXE$GL_FLAGS, ACP$GW_WORKSET
                                                                            .EXTRN  ACP$GW_MAPCACHE
                                                                            .EXTRN  ACP$GW_HDRCACHE
                                                                            .EXTRN  ACP$GW_DIRCACHE
                                                                            .EXTRN  ACP$GB_SWAPFLGS
```

```
                                                        .EXTRN  ACP$GB_BASEPRIO
                                                        .EXTRN  EXE$V_MULTACP, EXE$V_INIT
                                                        .EXTRN  ACP$V_SWAPSYS, ACP$V_SWAPGRP
                                                        .EXTRN  ACP$V_SWAPPRV, ACP$V_SWAPMAG
                                                        .EXTRN  LOCK_IODB, UNLOCK_IODB
                                                        .EXTRN  ALLOCATE_MEM, DEALLOCATE_MEM
                                                        .EXTRN  SET_DATACHECK, IOC$CVT_DEVNAM
                                                        .EXTRN  IOC$SEARCHDEV, BUG$_NOTUCBRVT
                                                        .EXTRN  SYS$SETIMR, SYS$WAITFR
                                                        .EXTRN  SYS$CANTIM, SYS$SETEF
                                                        .EXTRN  SYS$FAO, SYS$CREMBX
                                                        .EXTRN  SYS$GETCHN, SYS$TRNLOG
                                                        .EXTRN  SYS$CREPRC, EXE$EPID_TO_IPID
                                                        .EXTRN  SYS$WAKE, SYS$QIO
                                                        .EXTRN  SYS$DELPRC, SYS$DASSGN
                                                        .EXTRN  COMMON_IO, SYS$ASSIGN
                                                        .EXTRN  EXE$IPID_TO_EPID

                                                        .PSECT  $CODE$,NOWRT,2

                                         0FFC 00000     .ENTRY  START_ACP, Save R2,R3,R4,R5,R6,R7,R8,R9,-   ; 0694
                                                                R10,R11                                     ;
                       5E          88  AE  9E 00002     MOVAB   -120(SP), SP                                ;
 00A0  8F        00    6E              00  2C 00006     MOVC5   #0, (SP), #0, #160, OWN_START               ; 0874
                             00000000' 00     0000D                                                         ;
          00000000'  00                10  D0 00012     MOVL    #16, MAILBOX_DESC                           ; 0875
          00000000'  00  00000000'     00  9E 00019     MOVAB   MAILBOX_CHAR, MAILBOX_DESC+4                ; 0876
          00000000'  00                10  D0 00024     MOVL    #16, TRANSDESC                              ; 0877
          00000000'  00  00000000'     00  9E 0002B     MOVAB   TRANSBUF, TRANSDESC+4                       ; 0878
              000C0G CF                01  D0 00036     MOVL    #1, CACHE_STATUS                            ; 0879
                       50          04  AC  D0 0003B     MOVL    UCB, R0                                     ; 0894
                 34    A0          08  AC  D0 0003F     MOVL    VCB, 52(R0)                                 ;
                       59              3C  D0 00044     MOVL    #60, J                                      ; 0897
          00000000G    EF              00  FB 00047 1$: CALLS   #0, LOCK_IODB                               ; 0900
                                       58  D4 0004E     CLRL    CREATE_ACP                                  ; 0902
                       51          04  AC  D0 00050     MOVL    UCB, R1                                     ; 0904
                       50          28  A1  D0 00054     MOVL    40(R1), R0                                  ;
                       5A          13  A0  90 00058     MOVB    19(R0), CLASS                               ;
         55      38    A1              05  E0 0005C     BBS     #5, 56(R1), 7$                              ; 0910
                             0000G CF      D5 00061     TSTL    REAL_RVT                                    ; 0911
                                       4F  13 00065     BEQL    7$                                          ;
                       50    0000G CF      D0 00067     MOVL    REAL_RVT, R0                                ;
                       01          04  A0  B1 0006C     CMPW    4(R0), #1                                   ;
                                       44  13 00070     BEQL    7$                                          ;
                       50    0000G CF      D0 00072     MOVL    REAL_RVT, R0                                ; 0915
                       53          0B  A0  9A 00077     MOVZBL  11(R0), R3                                  ;
                       52          44  A0  9E 0007B     MOVAB   68(R0), R2                                  ; 0918
                                       50  D4 0007F     CLRL    J                                           ;
                                       0C  11 00081     BRB     3$                                          ;
                       56      FC A240     D0 00083 2$: MOVL    -4(R2)[J], ACP_UCB                          ;
                                       05  13 00088     BEQL    3$                                          ; 0919
                       51              56  D1 0008A     CMPL    ACP_UCB, R1                                 ;
                                       08  12 0008D     BNEQ    4$                                          ;
         F0            50              53  F3 0008F 3$: AOBLEQ  R3, J, 2$                                   ; 0915
                                         FEFF 00093     BUGW                                                ; 0923
                                        0000* 00095     .WORD   <BUG$_NOTUCBRVT!4>                          ;
         04      3A    A6              03  E0 00097 4$: BBS     #3, 58(ACP_UCB), 5$                         ; 0925
```

```
                                FEFF 0009C             BUGW                                                                    ; 0926
                                0000* 0009E            .WORD   <BUG$_NOTUCBRVT!4>                                              ;
                    50      34  A6   D0 000A0 5$:      MOVL    52(ACP_UCB), R0                                                 ; 0928
                    57      10  A0   D0 000A4          MOVL    16(R0), AQB                                                     ;
                 0C AC      15  A7   91 000A8          CMPB    21(AQB), TYPE                                                   ; 0929
                                04   13 000AD          BEQL    6$                                                              ;
                                  FEFF 000AF           BUGW                                                                    ; 0930
                                  0000* 000B1          .WORD   <BUG$_NOTUCBRVT!4>                                              ;
                              00CD   31 000B3 6$:      BRW     20$                                                             ; 0910
03      0000G   CF                02   E1 000B6 7$:      BBC     #2, MOUNT_OPTIONS+3, 9$                                         ; 0936
                              00C1   31 000BC 8$:      BRW     19$                                                             ;
F7      0000G   CF                04   E0 000BF 9$:      BBS     #4, MOUNT_OPTIONS+3, 8$                                         ;
76      0000G   CF                03   E1 000C5          BBC     #3, MOUNT_OPTIONS+3, 13$                                        ; 0943
                51      0000G     CF   9E 000CB          MOVAB   ACP_STRING, ACP_DEVICE                                          ; 0948
                54 00000000G      00   D0 000D0          MOVL    CTL$GL_PCB, R4                                                  ; 0949
                   00000000G      9F   16 000D7          JSB     @#IOC$SEARCHDEV                                                 ;
                6E                50   D0 000DD          MOVL    R0, STATUS                                                      ;
                56                51   D0 000E0          MOVL    ACP_DEVICE, ACP_UCB                                             ; 0950
                14                6E   E8 000E3          BLBS    STATUS, 10$                                                     ; 0952
    00000000G   EF                00   FB 000E6          CALLS   #0, UNLOCK_IODB                                                 ; 0955
                   00728094       8F   DD 000ED          PUSHL   #7504020                                                        ; 0956
    00000000G   00                01   FB 000F3          CALLS   #1, LIB$STOP                                                    ;
09      3A      A6                03   E1 000FA 10$:     BBC     #3, 58(ACP_UCB), 11$                                            ; 0958
04      39      A6                06   E1 000FF          BBC     #6, 57(ACP_UCB), 11$                                            ; 0959
                14      3B        A6   E9 00104          BLBC    59(ACP_UCB), 12$                                                ; 0960
    00000000G   EF                00   FB 00108 11$:     CALLS   #0, UNLOCK_IODB                                                 ; 0963
                   00728094       8F   DD 0010F          PUSHL   #7504020                                                        ; 0964
    00000000G   00                01   FB 00115          CALLS   #1, LIB$STOP                                                    ;
                50      34        A6   D0 0011C 12$:     MOVL    52(ACP_UCB), R0                                                 ; 0966
                57      10        A0   D0 00120          MOVL    16(R0), AQB                                                     ;
                 0C AC      15  A7   91 00124          CMPB    21(AQB), TYPE                                                   ; 0967
                                58   13 00129          BEQL    20$                                                             ;
    00000000G   EF                00   FB 0012B          CALLS   #0, UNLOCK_IODB                                                 ; 0970
                   007280A4       8F   DD 00132          PUSHL   #7504036                                                        ; 0971
    00000000G   00                01   FB 00138          CALLS   #1, LIB$STOP                                                    ;
                                  42   11 0013F          BRB     20$                                                             ; 0943
                57 00000000G      9F   D0 00141 13$:     MOVL    @#IOC$GL_AQBLIST, AQB                                           ; 0982
50 00000000G    9F                01   00G EF 00148      EXTZV   S^EXE$V_MULTACP, #1, @#EXE$GL_FLAGS, R0                         ; 0985
                                  57   D5 00151 14$:     TSTL    AQB                                                             ; 0983
                                  27   13 00153          BEQL    18$                                                             ;
                12                50   E9 00155          BLBC    R0, 15$                                                         ; 0988
        19      14      A7        01   E1 00158          BBC     #1, 20(AQB), 17$                                                ;
                0C      AC  15    A7   91 0015D          CMPB    21(AQB), TYPE                                                   ; 0989
                                  12   12 00162          BNEQ    17$                                                             ;
                5A          16    A7   91 00164          CMPB    22(AQB), CLASS                                                  ; 0990
                                  0A   11 00168          BRB     16$                                                             ;
        07      14      A7        02   E1 0016A 15$:     BBC     #2, 20(AQB), 17$                                                ; 0996
                0C      AC  15    A7   91 0016F          CMPB    21(AQB), TYPE                                                   ; 0997
                                  06   13 00174 16$:     BEQL    18$                                                             ;
                57          10    A7   D0 00176 17$:     MOVL    16(AQB), AQB                                                    ; 1001
                                  D5   11 0017A          BRB     14$                                                             ; 0983
                                  57   D5 0017C 18$:     TSTL    AQB                                                             ; 1003
                                  03   12 0017E          BNEQ    20$                                                             ;
                58                01   D0 00180 19$:     MOVL    #1, CREATE_ACP                                                  ;
                6F                58   E9 00183 20$:     BLBC    CREATE_ACP, 27$                                                 ; 1011
                7E                1C   7D 00186          MOVQ    #28, -(SP)                                                      ; 1014
            0000G   CF            02   FB 00189          CALLS   #2, ALLOCATE_MEM                                                ;
```

```
                    57             50  D0 0018E           MOVL     R0, AQB                                      ;
           0A       A7       0103  8F  B0 00191           MOVW     #259, 10(AQB)                                ; 1015
           15       A7         0C  AC  90 00197           MOVB     TYPE, 21(AQB)                                ; 1017
                    50         14  A7  9E 0019C           MOVAB    20(AQB), R0                                  ; 1021
 05       0000G     CF             02  E1 001A0           BBC      #2, STORED_CONTEXT, 21$                      ; 1019
                    60             10  88 001A6           BISB2    #16, (R0)                                    ; 1021
                                   03  11 001A9           BRB      22$                                          ;
                    60             08  88 001AB  21$:     BISB2    #8, (R0)                                     ; 1031
 06       0000G     CF             02  E0 001AE  22$:     BBS      #2, MOUNT_OPTIONS+3, 23$                     ; 1033
 05       0000G     CF             04  E1 001B4           BBC      #4, MOUNT_OPTIONS+3, 24$                     ;
                    60             01  88 001BA  23$:     BISB2    #1, (R0)                                     ; 1035
                                   14  11 001BD           BRB      26$                                          ;
 09 00000000G       9F            00G  E1 001BF  24$:     BBC      S^EXE$V_MULTACP, @#EXE$GL_FLAGS, 25$         ; 1036
                    60             02  88 001C7           BISB2    #2, (R0)                                     ; 1039
           16       A7             5A  90 001CA           MOVB     CLASS, 22(AQB)                               ; 1040
                                   03  11 001CE           BRB      26$                                          ; 1036
                    60             04  88 001D0  25$:     BISB2    #4, (R0)                                     ; 1043
                    67             57  D0 001D3  26$:     MOVL     AQB, (AQB)                                   ; 1045
           04       A7             57  D0 001D6           MOVL     AQB, 4(AQB)                                  ; 1046
           10       A7  00000000G  9F  D0 001DA           MOVL     @#IOC$GL_AQBLIST, 16(AQB)                    ; 1047
    00000000G       9F             57  D0 001E2           MOVL     AQB, @#IOC$GL_AQBLIST                        ; 1048
        0000G       CF             57  D0 001E9           MOVL     AQB, REAL_AQB                                ; 1049
        0000G       CF             04  88 001EE           BISB2    #4, CLEANUP_FLAGS                            ; 1050
                                   5D  11 001F3           BRB      32$                                          ; 1051
 05        14       A7             03  E0 001F5  27$:     BBS      #3, 20(AQB), 28$                             ; 1061
                               0B  A7  96 001FA           INCB     11(AQB)                                      ; 1064
                                   53  11 001FD           BRB      32$                                          ; 1065
    00000000G       EF             00  FB 001FF  28$:     CALLS    #0, UNLOCK_IODB                              ; 1069
                    7E       03E7  8F  3C 00206           MOVZWL   #999, -(SP)                                  ; 1076
                                   7E  D4 0020B           CLRL     -(SP)                                        ;
                             0000' CF  9F 0020D           PUSHAB   P.AAA                                        ;
                                   1B  DD 00211           PUSHL    #27                                          ;
    00000000G       00             04  FB 00213           CALLS    #4, SYS$SETIMR                               ;
                    20             50  E9 0021A           BLBC     R0, 29$                                      ;
                                   1B  DD 0021D           PUSHL    #27                                          ; 1079
    00000000G       00             01  FB 0021F           CALLS    #1, SYS$WAITFR                               ;
                                   7E  D4 00226           CLRL     -(SP)                                        ; 1080
                    7E       03E7  8F  3C 00228           MOVZWL   #999, -(SP)                                  ;
    00000000G       00             02  FB 0022D           CALLS    #2, SYS$CANTIM                               ;
                                   1B  DD 00234           PUSHL    #27                                          ; 1081
    00000000G       00             01  FB 00236           CALLS    #1, SYS$SETEF                                ;
                    02             59  F5 0023D  29$:     SOBGTR   J, 30$                                       ; 0897
                                   03  11 00240           BRB      31$                                          ;
                                 FE02  31 00242  30$:     BRW      1$                                           ;
                         00728154  8F  DD 00245  31$:     PUSHL    #7504212                                     ; 1090
    00000000G       00             01  FB 0024B           CALLS    #1, LIB$STOP                                 ;
                    4E             58  E9 00252  32$:     BLBC     CREATE_ACP, 33$                              ; 1094
                    55         04  AC  D0 00255           MOVL     UCB, R5                                      ; 1114
           04       AE         14  A7  9E 00259           MOVAB    20(AQB), 4(SP)                               ; 1097
 4A        04       BE             04  E1 0025E           BBC      #4, @4(SP), 34$                              ;
        0000G       CF             08  88 00263           BISB2    #8, CLEANUP_FLAGS+1                          ; 1104
                            0000G  CF  9F 00268           PUSHAB   CACHE_STATUS                                 ; 1106
        0000V       CF             01  FB 0026C           CALLS    #1, SETUP_BLOCKCACHE                         ;
           18       A7             50  D0 00271           MOVL     R0, 24(AQB)                                  ;
           04       BE             08  8A 00275           BICB2    #8, @4(SP)                                   ; 1108
        0000G       CF       0804  8F  AA 00279           BICW2    #2052, CLEANUP_FLAGS                         ; 1110
                    52         18  A7  D0 00280           MOVL     24(AQB), CACHE_HDR                           ; 1112
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                                51      00AD    C2  9E 00284          MOVAB   173(CACHE_HDR), R1                          ; 1114
                                                54  D4 00289          CLRL    R4
                                50              0F  D0 0028B          MOVL    #15, R0
                                    00000000G   9F  16 0028E          JSB     @#IOC$CVT_DEVNAM
                00AC    C2              51      08  81 00294          ADDB3   #8, LENGTH, 172(CACHE_HDR)                ; 1116
                00AD C142       0000'   CF      08  28 0029A          MOVC3   #8, P.AAB, 173(LENGTH:[CACHE_HDR]         ; 1118
                        00000000G       EF              00  FB 002A3 33$:    CALLS   #0, UNLOCK_IODB                     ; 1120
                                                  0360  31 002AA          BRW     60$                                 ; 1097
                        00000000G       EF              00  FB 002AD 34$:    CALLS   #0, UNLOCK_IODB                     ; 1136
                        00000000'       00              10  D0 002B4          MOVL    #16, PROC_NAME                      ; 1138
                        00000000'       00  00000000'   00  9E 002BB          MOVAB   PROCBUF, PROC_NAME+4                ; 1139
                                08      AE              01  90 002C6          MOVB    #1, ACP_TYPE                        ; 1140
                09      AE              0C      AC      8F  81 002CA          ADDB3   #64, TYPE, ACP_TYPE+1               ; 1141
                                                0000'   CF  9F 002D1          PUSHAB  P.AAE                               ; 1151
                                                  0C    AE  9F 002D5          PUSHAB  ACP_TYPE
                                7E              54      A5  3C 002D8          MOVZWL  84(R5), -(SP)
                                58              28      A5  D0 002DC          MOVL    40(R5), R8
                                                  14    A8  9F 002E0          PUSHAB  20(R8)
                                            00000000'   00  9F 002E3          PUSHAB  PROC_NAME
                                            00000000'   00  9F 002E9          PUSHAB  PROC_NAME
                                                0000'   CF  9F 002EF          PUSHAB  P.AAC
                        00000000G       00              07  FB 002F3          CALLS   #7, SYS$FAO
                    0A  00000000G       9F              00G E1 002FA          BBC     S^EXE$V_INIT, @#EXE$GL_FLAGS, 35$   ; 1153
                                56                      0B  D0 00302          MOVL    #11, FILE_PREF_LEN                  ; 1156
                                59      0000'           CF  9E 00305          MOVAB   P.AAF, FILE_PREF                    ; 1157
                                                        08  11 0030A          BRB     36$                                 ; 1153
                                56                      08  D0 0030C 35$:    MOVL    #8, FILE_PREF_LEN                   ; 1161
                                59      0000'           CF  9E 0030F          MOVAB   P.AAG, FILE_PREF                    ; 1162
                        00000000'       00  00000000'   00  9E 00314 36$:    MOVAB   FILEBUF, FILE_NAME+4                ; 1165
                    32      0000G       CF              04  E1 0031F          BBC     #4, MOUNT_OPTIONS+3, 37$            ; 1166
                        00000000'       00      0000GDF 46  9E 00325          MOVAB   @ACP_STRING[FILE_PREF_LEN], FILE_NAME ; 1169
                                5B  00000000'           00  D0 0032F          MOVL    FILE_NAME, R11                      ; 1171
                                5A  00000000'           00  9E 00336          MOVAB   FILEBUF, R10                        ; 1170
    5B          00                  69                  56  2C 0033D          MOVC5   FILE_PREF_LEN, (FILE_PREF), #0, R11, (R10)
                                                        6A      00342
                                                        5B  18 00343          BGEQ    39$
                                5A                      56  C0 00345          ADDL2   FILE_PREF_LEN, R10
                                5B                      56  C2 00348          SUBL2   FILE_PREF_LEN, R11
    5B          00      0000G   DF      0000G           CF  2C 0034B          MOVC5   ACP_STRING, @ACP_STRING+4, #0, R11, (R10)
                                                        6A      00354
                                                        49  11 00355          BRB     39$                                 ; 1166
                                50              0B      A6  9E 00357 37$:    MOVAB   11(R6), R0                          ; 1175
                            00000000'           00              50  D0 0035B          MOVL    R0, FILE_NAME
                                5B                              50  D0 00362          MOVL    R0, R11                     ; 1178
                                5A  00000000'                   00  9E 00365          MOVAB   FILEBUF, R10                ; 1176
    5B          00                  69                          56  2C 0036C          MOVC5   FILE_PREF_LEN, (FILE_PREF), #0, R11, (R10)
                                                                6A      00371
                                                                1D  18 00372          BGEQ    38$
                                5A                              56  C0 00374          ADDL2   FILE_PREF_LEN, R10
                                5B                              56  C2 00377          SUBL2   FILE_PREF_LEN, R11
    5B          00      10      AB                              03  2C 0037A          MOVC5   #3, T6(R8), #0, R11, (R10)
                                                                6A      00380
                                                                0E  18 00381          BGEQ    38$
                                5A                              03  C0 00383          ADDL2   #3, R10
                                5B                              03  C2 00386          SUBL2   #3, R11
    5B          00      0000'   CF                              08  2C 00389          MOVC5   #8, P.AAH, #0, R11, (R10)
                                                                6A      00390
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                                                02  E1  00391 38$:     BBC     #2, MOUNT_OPTIONS+4, 39$                        ; 1179
                00000000'0046          42       8F  90  00397         MOVB    #66, FILEBUF+3[FILE_PREF_LEN]                   ; 1180
                                               0000G CF  D4  003A0 39$:     CLRL    MAILBOX_CHANNEL                         ; 1187
                                                7E   7C  003A4         CLRQ    -(SP)                                           ; 1191
                                        7E     FFED      8F  3C  003A6         MOVZWL  #65517, -(SP)                           ;
                                        7E       84      8F  9A  003AB         MOVZBL  #132, -(SP)                             ;
                                        7E       84      8F  9A  003AF         MOVZBL  #132, -(SP)                             ;
                                               0000G CF  9F  003B3         PUSHAB  MAILBOX_CHANNEL                         ;
                                                7E   D4  003B7         CLRL    -(SP)                                   ;
                    00000000G           00          07  FB  003B9         CALLS   #7, SYS$CREMBX                          ;
                                        6E          50  D0  003C0         MOVL    R0, STATUS                              ;
                                        09          6E  E8  003C3         BLBS    STATUS, 40$                             ; 1192
                                                    6E  DD  003C6         PUSHL   STATUS                                  ;
                    00000000G           00          01  FB  003C8         CALLS   #1, LIB$STOP                            ;
                        0000G           CF          08  88  003CF 40$:     BISB2   #8, CLEANUP_FLAGS                       ; 1193
                                                     7E 7C  003D4         CLRQ    -(SP)                                   ; 1196
                                    00000000'       00  9F  003D6         PUSHAB  MAILBOX_DESC                            ;
                                                     7E D4  003DC         CLRL    -(SP)                                   ;
                                               0000G CF  DD  003DE         PUSHL   MAILBOX_CHANNEL                         ;
                    00000000G           00          05  FB  003E2         CALLS   #5, SYS$GETCHN                          ;
                                        59          04  D0  003E9         MOVL    #4, SWAP_FLAG                           ; 1198
                05      0000G           CF          05  E1  003EC         BBC     #5, DEVICE_CHAR, 41$                    ; 1199
                                        50          00G 9A  003F2         MOVZBL  S^ACP$V_SWAPMAG, R0                     ;
                                                    22  11  003F5         BRB     45$                                     ;
                0A        04            BE          02  E0  003F7 41$:     BBS     #2, @4(SP), 42$                         ; 1200
                05        04            BE          01  E0  003FC         BBS     #1, @4(SP), 42$                         ;
                                        05      0000G CF  E9  00401         BLBC    MOUNT_OPTIONS+1, 43$                    ; 1201
                                        50          00G 9A  00406 42$:     MOVZBL  S^ACP$V_SWAPSYS, R0                     ; 1200
                                                    0E  11  00409         BRB     45$                                     ;
                                               0000G CF  95  0040B 43$:     TSTB    MOUNT_OPTIONS                           ; 1202
                                                    05  18  0040F         BGEQ    44$                                     ;
                                        50          00G 9A  00411         MOVZBL  S^ACP$V_SWAPGRP, R0                     ;
                                                    03  11  00414         BRB     45$                                     ;
                                        50          00G 9A  00416 44$:     MOVZBL  S^ACP$V_SWAPPRV, R0                     ;
                    02 00000000G        9F          50  E1  00419 45$:     BBC     R0, @#ACP$GB_SWAPFLGS, 46$              ; 1199
                                                    59  D4  00421         CLRL    SWAP_FLAG                               ; 1205
                06      0000G           CF          05  E1  00423 46$:     BBC     #5, DEVICE_CHAR, 47$                    ; 1210
                                        58      80      8F  9A  00429         MOVZBL  #128, WORKING_SET                       ; 1212
                                                    27  11  0042D         BRB     48$                                     ;
                                        58  00000000G    9F  3C  0042F 47$:     MOVZWL  @#ACP$GW_WORKSET, WORKING_SET           ; 1215
                                                    1E  12  00436         BNEQ    48$                                     ; 1216
                                        50  00000000G    9F  3C  00438         MOVZWL  @#ACP$GW_MAPCACHE, R0                   ; 1217
                                        51  00000000G    9F  3C  0043F         MOVZWL  @#ACP$GW_HDRCACHE, R1                   ;
                                        50              51  C0  00446         ADDL2   R1, R0                                  ;
                                        51  00000000G    9F  3C  00449         MOVZWL  @#ACP$GW_DIRCACHE, R1                   ;
                                        58      0096 C140   9E  00450         MOVAB   150(R1)[R0], WORKING_SET                ;
                                        50  00000000G    8F  D0  00456 48$:     MOVL    #PQL$C_SYSPQLLEN, R0                    ; 1225
                            0000005E    8F              50  D1  0045D         CMPL    R0, #94                                 ;
                                                    04  15  00464         BLEQ    49$                                     ;
                                        50          5E  8F  9A  00466         MOVZBL  #94, R0                                 ;
                14    AE 00000000G      00          50  28  0046A 49$:     MOVC3   R0, PQL$AB_SYSPQL, QUOTA_LIST           ;
                                        50          14  AE  9E  00473         MOVAB   QUOTA_LIST, R0                          ; 1226
                                        50  00000000G    E0  9E  00477         MOVAB   PQL$C_SYSPQLLEN(R0), R0                 ;
                                        60              0A  90  0047E         MOVB    #10, (R0)                               ;
                                    01      A0          58  D0  00481         MOVL    WORKING_SET, 1(R0)                      ; 1227
                                                   05   A0  94  00485         CLRB    5(R0)                                   ; 1228
                                                    7E  7C  00488         CLRQ    -(SP)                                   ; 1234
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                                7E  D4 0048A          CLRL    -(SP)                                                   ;
                    00000000'   00  9F 0048C          PUSHAB  TRANSDESC                                               ;
                    00000000'   00  9F 00492          PUSHAB  TRANSDESC                                               ;
                          0000' CF  9F 00498          PUSHAB  P.AAI                                                   ;
    00000000G   00              06  FB 0049C          CALLS   #6, SYS$TRNLOG                                          ;
                                7E  D4 004A3          CLRL    -(SP)                                                   ; 1246
7E                      59      20  C9 004A5          BISL3   #32, SWAP_FLAG, -(SP)                                   ;
                        7E 00000000'00  3C 004A9      MOVZWL  MAILBOX_CHAR+12, -(SP)                                  ;
                           00010003 8F  DD 004B0      PUSHL   #65539                                                  ;
                        7E 00000000G9F  9A 004B6      MOVZBL  @#ACP$GB_BASEPRIO, -(SP)                                ;
                    00000000'   00  9F 004BD          PUSHAB  PROC_NAME                                               ;
                            2C  AE  9F 004C3          PUSHAB  QUOTA_LIST                                              ;
                          0000' CF  9F 004C6          PUSHAB  P.AAK                                                   ;
                                7E  7C 004CA          CLRQ    -(SP)                                                   ;
                    00000000'   00  9F 004CC          PUSHAB  TRANSDESC                                               ;
                    00000000'   00  9F 004D2          PUSHAB  FILE_NAME                                               ;
                            40  AE  9F 004D8          PUSHAB  ACP_PID                                                 ;
    00000000G   00              0D  FB 004DB          CALLS   #13, SYS$CREPRC                                         ;
                        6E      50  D0 004E2          MOVL    R0, STATUS                                              ;
                        09      6E  E8 004E5          BLBS    STATUS, 50$                                             ; 1248
                                6E  DD 004E8          PUSHL   STATUS                                                  ;
    00000000G   00              01  FB 004EA          CALLS   #1, LIB$STOP                                            ;
                        50      10  AE  D0 004F1 50$: MOVL    ACP_PID, R0                                             ; 1259
                    00000000G   00  16 004F5          JSB     EXE$EPID_TO_IPID                                        ;
                  0C    A7          50  D0 004FB      MOVL    R0, 12(AQB)                                             ;
                                7E  D4 004FF          CLRL    -(SP)                                                   ; 1261
                            14  AE  9F 00501          PUSHAB  ACP_PID                                                 ;
    00000000G   00              02  FB 00504          CALLS   #2, SYS$WAKE                                            ;
                        6E      50  D0 0050B          MOVL    R0, STATUS                                              ;
                        09      6E  E8 0050E          BLBS    STATUS, 51$                                             ; 1262
                                6E  DD 00511          PUSHL   STATUS                                                  ;
    00000000G   00              01  FB 00513          CALLS   #1, LIB$STOP                                            ;
                                7E  7C 0051A 51$:     CLRQ    -(SP)                                                   ; 1276
                                7E  7C 0051C          CLRQ    -(SP)                                                   ;
                                08  DD 0051E          PUSHL   #8                                                      ;
                    00000000'   00  9F 00520          PUSHAB  TERM_BUFFER                                             ;
                                7E  7C 00526          CLRQ    -(SP)                                                   ;
                    00000000'   00  9F 00528          PUSHAB  IO_STATUS                                               ;
                                31  DD 0052E          PUSHL   #49                                                     ;
                          0000G CF  DD 00530          PUSHL   MAILBOX_CHANNEL                                         ;
                                1A  DD 00534          PUSHL   #26                                                     ;
    00000000G   00              0C  FB 00536          CALLS   #12, SYS$QIO                                            ;
                                1A  DD 0053D          PUSHL   #26                                                     ; 1277
    00000000G   00              01  FB 0053F          CALLS   #1, SYS$SETEF                                           ;
                        52      3C  D0 00546          MOVL    #60, J                                                  ; 1279
                        7E  03E7 8F 3C 00549 52$:     MOVZWL  #999, -(SP)                                             ; 1281
                                7E  D4 0054E          CLRL    -(SP)                                                   ;
                          0000' CF  9F 00550          PUSHAB  P.AAL                                                   ;
                                1B  DD 00554          PUSHL   #27                                                     ;
    00000000G   00              04  FB 00556          CALLS   #4, SYS$SETIMR                                          ;
                        20      50  E9 0055D          BLBC    R0, 53$                                                 ;
                                1B  DD 00560          PUSHL   #27                                                     ; 1284
    00000000G   00              01  FB 00562          CALLS   #1, SYS$WAITFR                                          ;
                                7E  D4 00569          CLRL    -(SP)                                                   ; 1285
                        7E  03E7 8F 3C 0056B          MOVZWL  #999, -(SP)                                             ;
    00000000G   00              02  FB 00570          CALLS   #2, SYS$CANTIM                                          ;
                                1B  DD 00577          PUSHL   #27                                                     ; 1286
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                00000000G  00              01  FB 00579              CALLS   #1, SYS$SETEF
78                    04   BE              03  E1 00580 53$:         BBC     #3, @4(SP), 59$                 ;1289
                           50 00000000'     00  D0 00585              MOVL    IO_STATUS, R0                   ;1292
                                            4E  13 0058C              BEQL    56$
                           09               50  E8 0058E              BLBS    R0, 54$                         ;1295
                                            50  DD 00591              PUSHL   R0
                00000000G  00               01  FB 00593              CALLS   #1, LIB$STOP
                           03 00000000'     00  B1 0059A 54$:         CMPW    TERM_BUFFER, #3                 ;1296
                                            0D  12 005A1              BNEQ    55$
                           00000000'        00  DD 005A3              PUSHL   TERM_BUFFER+4                   ;1297
                00000000G  00               01  FB 005A9              CALLS   #1, LIB$STOP
                                            7E  7C 005B0 55$:         CLRQ    -(SP)                           ;1306
                                            7E  7C 005B2              CLRQ    -(SP)
                                            08  DD 005B4              PUSHL   #8
                           00000000'        00  9F 005B6              PUSHAB  TERM_BUFFER
                                            7E  7C 005BC              CLRQ    -(SP)
                           00000000'        00  9F 005BE              PUSHAB  IO_STATUS
                                            31  DD 005C4              PUSHL   #49
                               0000G        CF  DD 005C6              PUSHL   MAILBOX_CHANNEL
                                            1A  DD 005CA              PUSHL   #26
                00000000G  00               0C  FB 005CC              CALLS   #12, SYS$QIO
                                            1A  DD 005D3              PUSHL   #26                             ;1307
                00000000G  00               01  FB 005D5              CALLS   #1, SYS$SETEF
                           02               52  F5 005DC 56$:         SOBGTR  J, 57$                          ;1279
                                            03  11 005DF              BRB     58$
                                      FF65  31  E1 005E1 57$:         BRW     52$
                                            7E  D4 005E4 58$:         CLRL    -(SP)                           ;1317
                                  14        AE  9F 005E6              PUSHAB  ACP_PID
                00000000G  00               02  FB 005E9              CALLS   #2, SYS$DELPRC
                           0072814C         8F  DD 005F0              PUSHL   #7504204                        ;1318
                00000000G  00               01  FB 005F6              CALLS   #1, LIB$STOP
                               0000G        CF  DD 005FD 59$:         PUSHL   MAILBOX_CHANNEL                 ;1324
                00000000G  00               01  FB 00601              CALLS   #1, SYS$DASSGN
                     0000G  CF              0C  8A 00608              BICB2   #12, CLEANUP_FLAGS              ;1326
                           52         04    AC  D0 0060D 60$:         MOVL    UCB, R2                         ;1333
                                 65   A2      02  88 00611              BISB2   #2, 101(R2)
                           50         08    AC  D0 00615              MOVL    VCB, R0                         ;1334
                                 10   A0      57  D0 0061C              MOVL    AQB, 16(R0)
5B                   0000G  CF              05  E0 0061D              BBS     #5, DEVICE_CHAR, 64$            ;1336
06                   0000G  CF              02  E1 00623              BBC     #2, MOUNT_OPTIONS+4, 61$        ;1339
                                      0000G  CF  9F 00629              PUSHAB  HOME_BLOCK                      ;1340
                                             02  11 0062D              BRB     62$
                                             7E  D4 0062F 61$:         CLRL    -(SP)                           ;1341
                                             52  DD 00631 62$:         PUSHL   R2
                     0000G  CF               02  FB 00633              CALLS   #2, SET_DATACHECK
1E                   0000G  CF               04  E0 00638              BBS     #4, MOUNT_OPTIONS, 63$          ;1350
                                        2C   A2  D5 0063E              TSTL    44(R2)                          ;1351
                                             19  13 00641              BEQL    63$
                00000000G  EF               00  FB 00643              CALLS   #0, LOCK_IODB                   ;1354
                                        2C   A2  D4 0064A              CLRL    44(R2)                          ;1355
                                 3A     A2  80  8F 8A 0064D           BICB2   #128, 58(R2)                    ;1356
                                        5C   A2  B7 00652              DECW    92(R2)                          ;1357
                00000000G  EF               00  FB 00655              CALLS   #0, UNLOCK_IODB                 ;1358
                                             7E  7C 0065C 63$:         CLRQ    -(SP)                           ;1364
                                             7E  7C 0065E              CLRQ    -(SP)
                                             7E  7C 00660              CLRQ    -(SP)
                                             7E  7C 00662              CLRQ    -(SP)
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                        00000000'  00   9F 00664          PUSHAB  IO_STATUS                                        ;
                                   39   DD 0066A          PUSHL   #57                                              ;
                             0000G CF   DD 0066C          PUSHL   CHANNEL                                          ;
                                   1A   DD 00670          PUSHL   #26                                              ;
                00000000G  00      0C   FB 00672          CALLS   #12, COMMON_IO                                   ;
                           6E      50   D0 00679          MOVL    R0, STATUS                                       ;
                                   3F   11 0067C          BRB     66$                                      ;1336
                                   7E   7C 0067E 64$:     CLRQ    -(SP)                                    ;1371
                             14    AE   9F 00680          PUSHAB  FIRST_CHANNEL                                    ;
                             0000G CF   9F 00683          PUSHAB  PHYS_NAME                                        ;
                00000000G  00      04   FB 00687          CALLS   #4, SYS$ASSIGN                                   ;
                           6E      50   D0 0068E          MOVL    R0, STATUS                                       ;
                           1F      6E   E9 00691          BLBC    STATUS, 65$                                      ;
                                   7E   7C 00694          CLRQ    -(SP)                                    ;1376
                                   7E   7C 00696          CLRQ    -(SP)                                            ;
                                   7E   7C 00698          CLRQ    -(SP)                                            ;
                                   7E   7C 0069A          CLRQ    -(SP)                                            ;
                        00000000'  00   9F 0069C          PUSHAB  IO_STATUS                                        ;
                                   39   DD 006A2          PUSHL   #57                                              ;
                             34    AE   DD 006A4          PUSHL   FIRST_CHANNEL                                    ;
                                   1A   DD 006A7          PUSHL   #26                                              ;
                00000000G  00      0C   FB 006A9          CALLS   #12, COMMON_IO                                   ;
                           6E      50   D0 006B0          MOVL    R0, STATUS                                       ;
                             0C    AE   DD 006B3 65$:     PUSHL   FIRST_CHANNEL                            ;1377
                00000000G  00      01   FB 006B6          CALLS   #1, SYS$DASSGN                                   ;
                           0A      6E   E9 006BD 66$:     BLBC    STATUS, 67$                              ;1386
                           6E 00000000'  00   D0 006C0     MOVL    IO_STATUS, STATUS                                ;
                           5F      6E   E8 006C7          BLBS    STATUS, 70$                              ;1387
                00000000G  EF      00   FB 006CA 67$:     CALLS   #0, LOCK_IODB                            ;1390
                      65   A2      02   8A 006D1          BICB2   #2, 101(R2)                              ;1391
                             34    A2   D4 006D5          CLRL    52(R2)                                   ;1392
                             0B    A7   97 006D8          DECB    11(AQB)                                  ;1393
                     14      0000G CF   04   E0 006DB          BBS     #4, MOUNT_OPTIONS, 68$                   ;1402
                                   50 00000000G 00   D0 006E1 MOVL    CTL$GL_PCB, R0                           ;1405
                             2C    A2      60   A0 D0 006E8 MOVL    96(R0), 44(R2)                                   ;
                             3A    A2      80   8F 88 006ED BISB2   #128, 58(R2)                             ;1406
                                           5C   A2 B6 006F2 INCW    92(R2)                                   ;1407
                        00000000G  EF      00   FB 006F5 68$:     CALLS   #0, UNLOCK_IODB                  ;1410
                                           0B   A7 95 006FC          TSTB    11(AQB)                          ;1411
                                           1F   12 006FF          BNEQ    69$                                      ;
                     1A      14    A7      04   E0 00701          BBS     #4, 20(AQB), 69$                         ;
                                   50      0C   A7 D0 00706          MOVL    12(AQB), R0                      ;1422
                                        00000000G 00   16 0070A     JSB     EXE$IPID_TO_EPID                         ;
                             10    AE      50   D0 00710          MOVL    R0, ACP_PID                              ;
                                           7E   D4 00714          CLRL    -(SP)                            ;1423
                                           14   AE 9F 00716          PUSHAB  ACP_PID                                  ;
                        00000000G  00      02   FB 00719          CALLS   #2, SYS$WAKE                             ;
                                           6E   DD 00720 69$:     PUSHL   STATUS                           ;1425
                        00000000G  00      01   FB 00722          CALLS   #1, LIB$STOP                             ;
                                           04   00729 70$:     RET                                      ;1428

; Routine Size:  1834 bytes,    Routine Base:  $CODE$ + 0000

;  899          1429  1
```

```
;  901          1430  1 ROUTINE SETUP_BLOCKCACHE (STATUS) =
;  902          1431  1
;  903          1432  1 !++
;  904          1433  1 !
;  905          1434  1 ! FUNCTIONAL DESCRIPTION:
;  906          1435  1 !
;  907          1436  1 !       This routine allocates dynamic memory and initializes it for
;  908          1437  1 !       use as the block cache for the AQB desired.
;  909          1438  1 !
;  910          1439  1 ! CALLING SEQUENCE:
;  911          1440  1 !
;  912          1441  1 !       SETUP_BLOCKCACHE (ARG1)
;  913          1442  1 !
;  914          1443  1 ! INPUT PARAMETERS:
;  915          1444  1 !
;  916          1445  1 !       ARG1 :  Address of a longword to receive the cache
;  917          1446  1 !               allocation status
;  918          1447  1 !
;  919          1448  1 ! IMPLICIT INPUTS:
;  920          1449  1 !
;  921          1450  1 !       None.
;  922          1451  1 !
;  923          1452  1 ! IMPLICIT OUTPUTS·
;  924          1453  1 !
;  925          1454  1 !       ARG1 :  1 if the block cache allocated
;  926          1455  1 !               0 if a reduced block cache is allocated
;  927          1456  1 !
;  928          1457  1 ! ROUTINE VALUE:
;  929          1458  1 !
;  930          1459  1 !       Address of initialized buffer cache.
;  931          1460  1 !
;  932          1461  1 ! SIDE EFFECTS:
;  933          1462  1 !
;  934          1463  1 !--
;  935          1464  1
;  936          1465  2 BEGIN
;  937          1466  2
;  938          1467  2 MACRO
;  939          1468  2         QA (SIZE) = (((SIZE) + 15) AND NOT 15) %,       ! Quad Align
;  940          1469  2         FLNK = 0,0,32,0 %,
;  941          1470  2         BLNK = 4,0,32,0 %;
;  942          1471  2
;  943          1472  2 BUILTIN INSQUE;
;  944          1473  2
;  945          1474  2 EXTERNAL ROUTINE
;  946          1475  2         ALLOCATE_MEM;
;  947          1476  2
;  948          1477  2 EXTERNAL
;  949          1478  2         ACP$GW_MAPCACHE : WORD ADDRESSING_MODE (GENERAL),
;  950          1479  2         ACP$GW_HDRCACHE : WORD ADDRESSING_MODE (GENERAL),
;  951          1480  2         ACP$GW_DIRCACHE : WORD ADDRESSING_MODE (GENERAL),
;  952          1481  2         ACP$GW_DINDXCACHE : WORD ADDRESSING_MODE (GENERAL);
;  953          1482  2
;  954          1483  2 LOCAL
;  955          1484  2         MAP_COUNT,
;  956          1485  2         HDR_COUNT,
;  957          1486  2         DIR_COUNT,
```

```
;  958          1487  2          DINDX_COUNT,
;  959          1488  2          BFRCOUNT,
;  960          1489  2          BUFFER_BYTES,
;  961          1490  2          OVRHD_BYTES,
;  962          1491  2          TOTAL_BYTES,
;  963          1492  2          EOMEM,
;  964          1493  2          HSHTBLS,
;  965          1494  2          INDX,
;  966          1495  2          BFRD            : REF BLOCKVECTOR [,BFRD$S_BFRDDEF,BYTE],
;  967          1496  2          BFRL            : REF BLOCKVECTOR [,BFRL$S_BFRLDEF,BYTE],
;  968          1497  2          CACHE_HDR       : REF BBLOCK;
;  969          1498  2
;  970          1499  2 .STATUS = 1;                                    ! Assume succesful allocation
;  971          1500  2 MAP_COUNT = MAXU (1, .ACP$GW_MAPCACHE);
;  972          1501  2 HDR_COUNT = MAXU (3, .ACP$GW_HDRCACHE);
;  973          1502  2 DIR_COUNT = MAXU (2, .ACP$GW_DIRCACHE);
;  974          1503  2 DINDX_COUNT = MAXU (1, .ACP$GW_DINDXCACHE);
;  975          1504  2
;  976          1505  2 BFRCOUNT = .MAP_COUNT + .HDR_COUNT + .DIR_COUNT + .DINDX_COUNT;
;  977          1506  2
;  978          1507  3 IF .BFRCOUNT GTRU (2^15 - 2)
;  979          1508  2 THEN
;  980          1509  3     BEGIN
;  981          1510  3     MAP_COUNT = (2^15/6) - 1;
;  982          1511  3     DINDX_COUNT = (2^15/6) - 1;
;  983          1512  3     HDR_COUNT = (2^16/6) - 1;
;  984          1513  3     DIR_COUNT = (2^16/6) - 1;
;  985          1514  3     BFRCOUNT = .MAP_COUNT + .HDR_COUNT + .DIR_COUNT + .DINDX_COUNT;
;  986          1515  2     END;
;  987          1516  2
;  988          1517  2 BUFFER_BYTES = .BFRCOUNT*512;
;  989          1518  2
;  990          1519  3 OVRHD_BYTES = QA (F11BC$S_F11BCDEF)             ! Overall cache header
;  991          1520  3                 + QA (.BFRCOUNT*BFRD$S_BFRDDEF) ! plus descriptors
;  992          1521  3                 + QA (.BFRCOUNT*BFRL$S_BFRLDEF) ! plus buffer lock blocks
;  993          1522  3                 + QA (.BFRCOUNT*2)              ! plus LBN hash table
;  994          1523  2                 + QA (.BFRCOUNT*2);             ! plus buffer lock hash table.
;  995          1524  2
;  996          1525  2 ! Add up total requirements, plus add 1 page so we can line the buffers
;  997          1526  2 ! up on page boundaries.
;  998          1527  2 !
;  999          1528  2
; 1000          1529  2 TOTAL_BYTES = .BUFFER_BYTES + .OVRHD_BYTES + 512;
; 1001          1530  2
; 1002          1531  2 CACHE_HDR = ALLOCATE_PAGED (.TOTAL_BYTES);      ! Allocate cache from paged pool
; 1003          1532  2
; 1004          1533  2 IF .CACHE_HDR EQL 0
; 1005          1534  2 THEN
; 1006          1535  3     BEGIN
; 1007          1536  3     !
; 1008          1537  3     ! The full block cache allocation has failed due to insufficient paged
; 1009          1538  3     ! pool. Retry to allocate a reduced block cache with the following:
; 1010          1539  3     !
; 1011          1540  3     !   MAP_COUNT = 2;
; 1012          1541  3     !   HDR_COUNT = 6;
; 1013          1542  3     !   DIR_COUNT = 4;
; 1014          1543  3     !   DINDX_COUNT = 2;
```

```
;  1015          1544  3      !
;  1016          1545  3      ! If the reduced block cache is successfully allocated, set the proper
;  1017          1546  3      ! status in the argument of this routine. Otherwise, the allocation
;  1018          1547  3      ! routine will signal an error, and the mount will fail with an "insuf-
;  1019          1548  3      ! ficient dynamic memory" error.
;  1020          1549  3      !
;  1021          1550  3      MAP_COUNT = 2;
;  1022          1551  3      HDR_COUNT = 6;
;  1023          1552  3      DIR_COUNT = 4;
;  1024          1553  3      DINDX_COUNT = 2;
;  1025          1554  3      BFRCOUNT = .MAP_COUNT + .HDR_COUNT + .DIR_COUNT + .DINDX_COUNT;
;  1026          1555  3      BUFFER_BYTES = .BFRCOUNT*512;
;  1027          1556  4      OVRHD_BYTES = QA (F11BC$S_F11BCDEF)          ! Overall cache header
;  1028          1557  4                  + QA (.BFRCOUNT*BFRD$S_BFRDDEF) ! plus descriptors
;  1029          1558  4                  + QA (.BFRCOUNT*BFRL$S_BFRLDEF) ! plus buffer lock blocks
;  1030          1559  4                  + QA (.BFRCOUNT*2)              ! plus LBN hash table
;  1031          1560  3                  + QA (.BFRCOUNT*2);             ! plus buffer lock hash table.
;  1032          1561  3      TOTAL_BYTES = .BUFFER_BYTES + .OVRHD_BYTES + 512;
;  1033          1562  3      CACHE_HDR = ALLOCATE_MEM (.TOTAL_BYTES,1);  ! Allocate cache from paged pool
;  1034          1563  3      .STATUS = 0;                                ! Set reduced cache status
;  1035          1564  2      END;
;  1036          1565  2
;  1037          1566  2  CACHE_HDR [F11BC$L_REALSIZE] = .(CACHE_HDR [F11BC$W_SIZE])<0,32>;
;  1038          1567  2
;  1039        L 1568  2  %IF F11BC$K_NUM_POOLS NEQ 4
;  1040        U 1569  2  %THEN %WARN ('Bad pool count constant');
;  1041          1570  2  %FI
;  1042          1571  2
;  1043          1572  3  BEGIN
;  1044          1573  3
;  1045          1574  3  BIND
;  1046          1575  3          POOL_LRU        = CACHE_HDR [F11BC$Q_POOL_LRU] : BLOCKVECTOR [,8,BYTE],
;  1047          1576  3          POOL_WAITQ      = CACHE_HDR [F11BC$Q_POOL_WAITQ] : BLOCKVECTOR [,8,BYTE],
;  1048          1577  3          POOLCNT         = CACHE_HDR [F11BC$W_POOLCNT] : VECTOR [,WORD],
;  1049          1578  3          POOLAVAIL       = CACHE_HDR [F11BC$L_POOLAVAIL] : VECTOR;
;  1050          1579  3
;  1051          1580  3  POOLCNT [0] = POOLAVAIL [0] = .MAP_COUNT;
;  1052          1581  3  POOLCNT [1] = POOLAVAIL [1] = .DIR_COUNT;
;  1053          1582  3  POOLCNT [2] = POOLAVAIL [2] = .HDR_COUNT;
;  1054          1583  3  POOLCNT [3] = POOLAVAIL [3] = .DINDX_COUNT;
;  1055          1584  3
;  1056          1585  3  CACHE_HDR [F11BC$W_BFRCNT] = .BFRCOUNT;
;  1057          1586  3
;  1058          1587  3  CACHE_HDR [F11BC$W_SIZE] = F11BC$S_F11BCDEF;
;  1059          1588  3  CACHE_HDR [F11BC$B_TYPE] = DYN$C_PGD;
;  1060          1589  3  CACHE_HDR [F11BC$B_SUBTYPE] = DYN$C_PGD_F11BC;
;  1061          1590  3
;  1062          1591  3  EOMEM = (.CACHE_HDR + .CACHE_HDR [F11BC$L_REALSIZE]) AND NOT 511;
;  1063          1592  3
;  1064          1593  3  CACHE_HDR [F11BC$L_BUFBASE] = .EOMEM - .BUFFER_BYTES;
;  1065          1594  3  CACHE_HDR [F11BC$L_BUFSIZE] = .BUFFER_BYTES;
;  1066          1595  3
;  1067          1596  3  BFRD = (CACHE_HDR [F11BC$L_BFRDBAS] = QA (.CACHE_HDR + F11BC$S_F11BCDEF));
;  1068          1597  3
;  1069          1598  3  BFRL = (CACHE_HDR [F11BC$L_BFRLDBAS] = QA (.BFRD + .BFRCOUNT*BFRD$S_BFRDDEF));
;  1070          1599  3
;  1071          1600  3  HSHTBLS = .BFRL + .BFRCOUNT*BFRL$S_BFRLDEF;
```

```
;  1072          1601  3 CACHE_HDR [F11BC$L_LBNHSHBAS] = .HSHTBLS;
;  1073          1602  3 CACHE_HDR [F11BC$W_LBNHSHCNT] = (.CACHE_HDR [F11BC$L_BUFBASE] - .HSHTBLS)/4;
;  1074          1603  3
;  1075          1604  3 CACHE_HDR [F11BC$L_BLHSHBAS] = .CACHE_HDR [F11BC$L_LBNHSHBAS]
;  1076          1605  3                               + .CACHE_HDR [F11BC$W_LBNHSHCNT]*2;
;  1077          1606  3 CACHE_HDR [F11BC$W_BLHSHCNT] = .CACHE_HDR [F11BC$W_LBNHSHCNT];
;  1078          1607  3
;  1079          1608  3 ! Run through all the buffer descriptors and link them into the appropriate
;  1080          1609  3 ! pool, noting in each descriptor which pool it belongs to.
;  1081          1610  3 !
;  1082          1611  3
;  1083          1612  3 CACHE_HDR [F11BC$W_FREEBFRL] = 1;
;  1084          1613  3
;  1085          1614  3 INDX = 0;
;  1086          1615  3
;  1087          1616  3 INCR POOL FROM 0 TO 3
;  1088          1617  3 DO
;  1089          1618  4     BEGIN
;  1090          1619  4
;  1091          1620  4     POOL_LRU [.POOL, FLNK] = POOL_LRU [.POOL, FLNK];
;  1092          1621  4     POOL_LRU [.POOL, BLNK] = POOL_LRU [.POOL, FLNK];
;  1093          1622  4
;  1094          1623  4     POOL_WAITQ [.POOL, FLNK] = POOL_WAITQ [.POOL, FLNK];
;  1095          1624  4     POOL_WAITQ [.POOL, BLNK] = POOL_WAITQ [.POOL, FLNK];
;  1096          1625  4
;  1097          1626  4     INCR I FROM 0 TO .POOLCNT [.POOL] - 1
;  1098          1627  4     DO
;  1099          1628  5         BEGIN
;  1100          1629  5         INSQUE (BFRD [.INDX, BFRD$L_QFL], .POOL_LRU [.POOL, BLNK]);
;  1101          1630  5         BFRD [.INDX, BFRD$V_POOL] = .POOL;
;  1102          1631  5         BFRL [.INDX, BFRL$W_NXTBFRL] = .INDX + 2;
;  1103          1632  5         INDX = .INDX + 1;
;  1104          1633  4         END;
;  1105          1634  3     END;
;  1106          1635  3
;  1107          1636  3 BFRL [.INDX-1, BFRL$W_NXTBFRL] = 0;
;  1108          1637  3
;  1109          1638  3 .CACHE_HDR
;  1110          1639  3
;  1111          1640  3 END
;  1112          1641  1 END;


                                                .EXTRN  ACP$GW_DINDXCACHE

                                    07FC 00000 SETUP_BLOCKCACHE:
                                                .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10        ;  1430
                          04    BC            01   D0 00002         MOVL    #1, @STATUS          ;  1499
                                50 00000000G  00   3C 00006         MOVZWL  ACP$GW_MAPCACHE, R0  ;  1500
                                              03   12 0000D         BNEQ    1$                   ;
                                50            01   D0 0000F         MOVL    #1, R0               ;
                                55            50   D0 00012 1$:    MOVL    R0, MAP_COUNT        ;
                                50 00000000G  00   3C 00015         MOVZWL  ACP$GW_HDRCACHE, R0  ;  1501
                                03            50   B1 0001C         CMPW    R0, #3               ;
                                              03   1E 0001F         BGEQU   2$                   ;
                                50            03   D0 00021         MOVL    #3, R0               ;
```

```
                5A                50   D0 00024 2$:    MOVL    R0, HDR_COUNT
                50 00000000G      00   3C 00027        MOVZWL  ACP$GW_DIRCACHE, R0                     ; 1502
                02                50   B1 0002E        CMPW    R0, #2
                                  03   1E 00031        BGEQU   3$
                50                02   D0 00033        MOVL    #2, R0
                59                50   D0 00036 3$:    MOVL    R0, DIR_COUNT
                50 00000000G      00   3C 00039        MOVZWL  ACP$GW_DINDXCACHE, R0                   ; 1503
                                  03   12 00040        BNEQ    4$
                50                01   D0 00042        MOVL    #1, R0
                58                50   D0 00045 4$:    MOVL    R0, DINDX_COUNT
           50   55                5A   C1 00048        ADDL3   HDR_COUNT, MAP_COUNT, R0                ; 1505
                50                59   C0 0004C        ADDL2   DIR_COUNT, R0
           52   50                58   C1 0004F        ADDL3   DINDX_COUNT, R0, BFRCOUNT
     0000FFFE   8F                52   D1 00053        CMPL    BFRCOUNT, #65534                        ; 1507
                                  1F   18 0005A        BLEQU   5$
                55      2AA9      8F   3C 0005C        MOVZWL  #10921, MAP_COUNT                       ; 1510
                58      2AA9      8F   3C 00061        MOVZWL  #10921, DINDX_COUNT                     ; 1511
                5A      5554      8F   3C 00066        MOVZWL  #21844, HDR_COUNT                       ; 1512
                59      5554      8F   3C 0006B        MOVZWL  #21844, DIR_COUNT                       ; 1513
           50   55                5A   C1 00070        ADDL3   HDR_COUNT, MAP_COUNT, R0                ; 1514
                50                59   C0 00074        ADDL2   DIR_COUNT, R0
           52   50                58   C1 00077        ADDL3   DINDX_COUNT, R0, BFRCOUNT
           56   52                09   78 0007B 5$:    ASHL    #9, BFRCOUNT, BUFFER_BYTES              ; 1517
           51   52                05   78 0007F        ASHL    #5, BFRCOUNT, R1                        ; 1520
                53        0F      A1   9E 00083        MOVAB   15(R1), R3
                53                0F   8A 00087        BICB2   #15, R3
           51   52                04   78 0008A        ASHL    #4, BFRCOUNT, R1                        ; 1521
                51                0F   C0 0008E        ADDL2   #15, R1
                51                0F   8A 00091        BICB2   #15, R1
           50   53                51   C1 00094        ADDL3   R1, R3, R0
           53   52                01   78 00098        ASHL    #1, BFRCOUNT, R3                        ; 1522
                53                0F   C0 0009C        ADDL2   #15, R3
                53                0F   8A 0009F        BICB2   #15, R3
                50                53   C0 000A2        ADDL2   R3, R0
                54      00D0 C340 9E   000A5        MOVAB   208(R3)[R0], OVRHD_BYTES                ; 1523
                57      0200 C446 9E   000AB        MOVAB   512(OVRHD_BYTES)[BUFFER_BYTES], TOTAL_BYTES ; 1529
                                  57   DD 000B1        PUSHL   TOTAL_BYTES                             ; 1531
          0000V CF                01   FB 000B3        CALLS   #1, ALLOCATE_PAGED
                                  50   D5 000B8        TSTL    CACHE_HDR                               ; 1533
                                  58   12 000BA        BNEQ    6$
                55                02   D0 000BC        MOVL    #2, MAP_COUNT                           ; 1550
                5A                06   D0 000BF        MOVL    #6, HDR_COUNT                           ; 1551
                59                04   D0 000C2        MOVL    #4, DIR_COUNT                           ; 1552
                58                02   D0 000C5        MOVL    #2, DINDX_COUNT                         ; 1553
           51   55                5A   C1 000C8        ADDL3   HDR_COUNT, MAP_COUNT, R1                ; 1554
                51                59   C0 000CC        ADDL2   DIR_COUNT, R1
           52   51                58   C1 000CF        ADDL3   DINDX_COUNT, R1, BFRCOUNT
           56   52                09   78 000D3        ASHL    #9, BFRCOUNT, BUFFER_BYTES              ; 1555
           51   52                05   78 000D7        ASHL    #5, BFRCOUNT, R1                        ; 1557
                53        0F      A1   9E 000DB        MOVAB   15(R1), R3
                53                0F   8A 000DF        BICB2   #15, R3
           51   52                04   78 000E2        ASHL    #4, BFRCOUNT, R1                        ; 1558
                51                0F   C0 000E6        ADDL2   #15, R1
                51                0F   8A 000E9        BICB2   #15, R1
                51                53   C0 000EC        ADDL2   R3, R1
           53   52                01   78 000EF        ASHL    #1, BFRCOUNT, R3                        ; 1559
                53                0F   C0 000F3        ADDL2   #15, R3
```

```
                53              0F   8A 000F6          BICB2   #15, R3                                                 ;
                51              53   C0 000F9          ADDL2   R3, R1                                                  ;
                54      00D0 C341    9E 000FC          MOVAB   208(R3)[R1], OVRHD_BYTES                                ; 1560
                57      0200 C446    9E 00102          MOVAB   512(OVRHD_BYTES)[BUFFER_BYTES], TOTAL_BYTES             ; 1561
                               01    DD 00108          PUSHL   #1                                                      ; 1562
                               57    DD 0010A          PUSHL   TOTAL_BYTES
        0000G   CF             02    FB 0010C          CALLS   #2, ALLOCATE_MEM
                            04 BC    D4 00111          CLRL    @STATUS                                                 ; 1563
              0C    A0      08 A0    D0 00114 6$:      MOVL    8(CACHE_HDR), 12(CACHE_HDR)                             ; 1566
                    54      78 A0    9E 00119          MOVAB   120(CACHE_HDR), R4                                      ; 1577
                    51      68 A0    9E 0011D          MOVAB   104(CACHE_HDR), R1                                      ; 1578
                    61              55   D0 00121      MOVL    MAP_COUNT, (R1)                                         ; 1580
                    64              55   B0 00124      MOVW    MAP_COUNT, (R4)
                04  A1              59   7D 00127      MOVQ    DIR_COUNT, 4(R1)                                        ; 1581
                02  A4              59   B0 0012B      MOVW    DIR_COUNT, 2(R4)
                04  A4              5A   B0 0012F      MOVW    HDR_COUNT, 4(R4)                                        ; 1582
                0C  A1              58   D0 00133      MOVL    DINDX_COUNT, 12(R1)                                     ; 1583
                06  A4              58   B0 00137      MOVW    DINDX_COUNT, 6(R4)
                16  A0              52   B0 0013B      MOVW    BFRCOUNT, 22(CACHE_HDR)                                 ; 1585
                08  A0  016600C4    8F   D0 0013F      MOVL    #23462084, 8(CACHE_HDR)                                 ; 1587
        51              50      0C  A0   C1 00147      ADDL3   12(CACHE_HDR), CACHE_HDR, R1                            ; 1591
                        51    01FF  8F   AA 0014C      BICW2   #511, EOMEM
        60              51              56   C3 00151  SUBL3   BUFFER_BYTES, EOMEM, (CACHE_HDR)                      ; 1593
                04  A0              56   D0 00155      MOVL    BUFFER_BYTES, 4(CACHE_HDR)                              ; 1594
                    51      00D3    C0   9E 00159      MOVAB   211(R0), R1                                             ; 1596
                    51              0F   8A 0015E      BICB2   #15, R1
                18  A0              51   D0 00161      MOVL    R1, 24(CACHE_HDR)
                    5               51   D0 00165      MOVL    R1, BFRD
        53              52              05   78 00168  ASHL    #5, BFRCOUNT, R3                                        ; 1598
                    51        0F A346    9E 0016C      MOVAB   15(R3)[BFRD], R1
                    51              0F   8A 00171      BICB2   #15, R1
                1C  A0              51   D0 00174      MOVL    R1, 28(CACHE_HDR)
                    53              51   D0 00178      MOVL    R1, BFRL
                    52              10   C4 0017B      MULL2   #16, R2                                                 ; 1600
        51          52              53   C1 0017E      ADDL3   BFRL, R2, HSHTBLS
                10  A0              51   D0 00182      MOVL    HSHTBLS, 16(CACHE_HDR)                                  ; 1601
        51          60              51   C3 00186      SUBL3   HSHTBLS, (CACHE_HDR), R1                                ; 1602
        52          51              04   C7 0018A      DIVL3   #4, R1, R2
                14  A0              52   B0 0018E      MOVW    R2, 20(CACHE_HDR)
                    51          14  A0   3C 00192      MOVZWL  20(CACHE_HDR), R1                                       ; 1605
                20  A0          10 B041  3E 00196      MOVAW   @16(CACHE_HDR)[R1], 32(CACHE_HDR)
                24  A0          14  A0   B0 0019C      MOVW    20(CACHE_HDR), 36(CACHE_HDR)                            ; 1606
                26  A0              01   B0 001A1      MOVW    #1, 38(CACHE_HDR)                                       ; 1612
                                 51   7C 001A5      CLRQ    INDX                                                    ; 1614
                    55      28 A042  7E 001A7 7$:      MOVAQ   40(CACHE_HDR)[POOL], R5                                 ; 1620
                    65              55   D0 001AC      MOVL    R5, (R5)
                            2C A042  7F 001AF      PUSHAQ  44(CACHE_HDR)[POOL]                                     ; 1621
                    9E              55   D0 001B3      MOVL    R5, @(SP)+
                    55      48 A042  7E 001B6      MOVAQ   72(CACHE_HDR)[POOL], R5                                 ; 1623
                    65              55   D0 001BB      MOVL    R5, (R5)
                            4C A042  7F 001BE      PUSHAQ  76(CACHE_HDR)[POOL]                                     ; 1624
                    9E              55   D0 001C2      MOVL    R5, @(SP)+
                    58          6442 3C 001C5      MOVZWL  (R4)[POOL], R8                                          ; 1626
                    57              01   CE 001C9      MNEGL   #1, I
                                    26   11 001CC      BRB     9$
        55          51              05   78 001CE 8$:      ASHL    #5, INDX, R5                                    ; 1629
                    59      2C A042  7E 001D2      MOVAQ   44(CACHE_HDR)[POOL], R9                                 ;
```

```
                      00    B9          6546  0E 001D7          INSQUE  (R5)[BFRD], @0(R9)
                        55  51            05  78 001DC          ASHL    #5, INDX, R5                                    ; 1630
              18 A546   02  00            52  F0 001E0          INSV    POOL, #0, #2, 24(R5)[BFRD]
                        55  51            04  78 001E7          ASHL    #4, INDX, R5                                    ; 1631
                                      6543  9F 001EB          PUSHAB  (R5)[BFRL]
                        9E  51            02  A1 001EE          ADDW3   #2, INDX, @(SP)+
                                          51  D6 001F2          INCL    INDX                                            ; 1632
                        D6  57            58  F2 001F4 9$:      AOBLSS  R8, I, 8$                                       ; 1626
                        AB  52            03  F3 001F8          AOBLEQ  #3, POOL, 7$                                    ; 1616
                            51            10  C4 001FC          MULL2   #16, R1                                         ; 1636
                                    F0 A143  9F 001FF          PUSHAB  -16(R1)[BFRL]
                                          9E  B4 00203          CLRW    @(SP)+
                                              04 00205          RET                                                     ; 1641

; Routine Size:  518 bytes,    Routine Base:  $CODE$ + 072A

; 1113          1642  1
```

```
;  1115          1643  1
;  1116          1644  1 ROUTINE ALLOCATE_PAGED (SIZE_NEEDED) =
;  1117          1645  1
;  1118          1646  1 !++
;  1119          1647  1 !
;  1120          1648  1 ! FUNCTIONAL DESCRIPTION:
;  1121          1649  1 !
;  1122          1650  1 !       This is a local paged pool allocation routine for module STACP.
;  1123          1651  1 !       Functionally, it 's identical to the ALLOCATE_MEM routine. The
;  1124          1652  1 !       difference is that on an allocation failure, this routine return
;  1125          1653  1 !       a 0 to the caller rather than signalling an error.
;  1126          1654  1 !
;  1127          1655  1 !
;  1128          1656  1 ! CALLING SEQUENCE:
;  1129          1657  1 !
;  1130          1658  1 !       ALLOCATE_PAGED (ARG1)
;  1131          1659  1 !
;  1132          1660  1 ! INPUT PARAMETERS:
;  1133          1661  1 !
;  1134          1662  1 !       ARG1: size needed in bytes
;  1135          1663  1 !
;  1136          1664  1 ! IMPLICIT INPUTS:
;  1137          1665  1 !
;  1138          1666  1 !       None.
;  1139          1667  1 !
;  1140          1668  1 ! OUTPUT PARAMETERS:
;  1141          1669  1 !
;  1142          1670  1 !       None.
;  1143          1671  1 !
;  1144          1672  1 ! IMPLICIT OUTPUTS:
;  1145          1673  1 !
;  1146          1674  1 !       None.
;  1147          1675  1 !
;  1148          1676  1 ! ROUTINE VALUE:
;  1149          1677  1 !
;  1150          1678  1 !       Address of block allocated. If the allocation failed, the routine
;  1151          1679  1 !       value returned is 0.
;  1152          1680  1 !
;  1153          1681  1 ! SIDE EFFECTS:
;  1154          1682  1 !
;  1155          1683  1 !       Memory allocated, zeroed, and full longword size is stored
;  1156          1684  1 !       at size word location.
;  1157          1685  1 !
;  1158          1686  1 !--
;  1159          1687  1
;  1160          1688  2 BEGIN
;  1161          1689  2
;  1162          1690  2 LINKAGE
;  1163          1691  2         EXE_ALLOCO      = JSB :
;  1164          1692  2                           NOPRESERVE (3, 4, 5)
;  1165          1693  2                           GLOBAL (SIZE = 1, ADDRESS = 2);
;  1166          1694  2
;  1167          1695  2 LOCAL
;  1168          1696  2         STATUS,                           ! status return of allocator
;  1169          1697  2         BLOCK_SIZE,                       ! local copy of size allocated
;  1170          1698  2         BLOCK_ADDRESS;                    ! local copy of address
;  1171          1699  2
```

```
;  1172          1700  3 BEGIN                                           . nested block to avoid scope conflicts
;  1173          1701  3
;  1174          1702  3 GLOBAL REGISTER
;  1175          1703  3         SIZE            = 1,                    ! rounded up allocation size
;  1176          1704  3         ADDRESS         = 2 : REF VECTOR [,WORD]; ! address returned by exec routines
;  1177          1705  3
;  1178          1706  3 EXTERNAL ROUTINE
;  1179          1707  3         EXE$ALOPAGED    : EXE_ALLOCO ADDRESSING_MODE (ABSOLUTE);
;  1180          1708  3
;  1181          1709  3
;  1182          1710  3 ! Simply compute the size needed rounded up to the next quadword and call the
;  1183          1711  3 ! appropriate exec allocation routine.
;  1184          1712  3 !
;  1185          1713  3
;  1186          1714  3 SIZE = .SIZE_NEEDED;
;  1187          1715  3
;  1188          1716  3 STATUS = EXE$ALOPAGED ();
;  1189          1717  3
;  1190          1718  3 ! Copy the block size and address into locals to dodge the MOVC5.
;  1191          1719  3 !
;  1192          1720  3
;  1193          1721  3 BLOCK_SIZE = .SIZE;
;  1194          1722  3 BLOCK_ADDRESS = .ADDRESS;
;  1195          1723  2 END;
;  1196          1724  2
;  1197          1725  2 IF NOT .STATUS
;  1198          1726  2 THEN
;  1199          1727  2     RETURN 0;
;  1200          1728  2
;  1201          1729  2 CH$FILL (0, .BLOCK_SIZE, .BLOCK_ADDRESS);
;  1202          1730  2 (.BLOCK_ADDRESS + 8) = .BLOCK_SIZE;
;  1203          1731  2 RETURN .BLOCK_ADDRESS;
;  1204          1732  2
;  1205          1733  1 END;                                             ! end of routine ALLOCATE_MEM


                                                                .EXTRN  EXE$ALOPAGED

                                                    0FFC 00000 ALLOCATE_PAGED:
                                                                .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11            ; 1644
                                    51        04    AC  D0 00002          MOVL    SIZE_NEEDED, SIZE                   ; 1714
                                              00000000G   9F  16 00006    JSB     @#EXE$ALOPAGED                      ; 1716
                                    57                    51  D0 0000C    MOVL    SIZE, BLOCK_SIZE                    ; 1721
                                    56                    52  D0 0000F    MOVL    ADDRESS, BLOCK_ADDRESS              ; 1722
                                    0E                    50  E9 00012    BLBC    STATUS, 1$                          ; 1725
                57                  00                6E  00  2C 00015    MOVC5   #0, (SP), #0, BLOCK_SIZE, (BLOCK_ADDRESS) ; 1729
                                                          66      0001A
                                          08        A6  57  D0 0001B    MOVL    BLOCK_SIZE, 8(BLOCK_ADDRESS)        ; 1730
                                    50                    56  D0 0001F    MOVL    BLOCK_ADDRESS, R0                   ; 1731
                                                          04  00022    RET
                                                          50  D4 00023 1$: CLRL    R0                                  ; 1733
                                                              04  00025  RET

; Routine Size:  38 bytes,    Routine Base:  $CODE$ + 0930
```

```
; 1206          1734  1
; 1207          1735  1 END
; 1208          1736  0 ELUDOM


                                                        .EXTRN  LIB$STOP

;                               PSECT SUMMARY

;       Name                    Bytes                           Attributes

;  $OWN$                         160  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $PLIT$                        112  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $CODE$                       2390  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       100         0        1000        00:02.0



;                                       COMMAND QUALIFIERS

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

; Size:          2390 code + 272 data bytes
; Run Time:         00:50.5
; Elapsed Time:     01:57.6
; Lines/CPU Min:     2064
; Lexemes/CPU-Min: 23705
; Memory Used:  476 pages
; Compilation Complete
```

0246 AH-BT13A-SE
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