```
DDDDDDDDDDD         IIIIIIIII     RRRRRRRRRRR
DDDDDDDDDDDD        IIIIIIIII     RRRRRRRRRRRR
DDDDDDDDDDDD        IIIIIIIII     RRRRRRRRRRRR
DDD          DDD       III        RRR         RRR
DDD          DDD       III        RRR         RRR
DDD          DDD       III        RRR         RRR
DDD          DDD       III        RRR         RRR
DDD          DDD       III        RRR         RRR
DDD          DDD       III        RRR         RRR
DDD          DDD       III        RRRRRRRRRRRR
DDD          DDD       III        RRRRRRRRRRRR
DDD          DDD       III        RRRRRRRRRRRR
DDD          DDD       III        RRR   RRR
DDD          DDD       III        RRR   RRR
DDD          DDD       III        RRR   RRR
DDD          DDD       III        RRR      RRR
DDD          DDD       III        RRR      RRR
DDD          DDD       III        RRR      RRR
DDDDDDDDDDDD        IIIIIIIII     RRR         RRR
DDDDDDDDDDDD        IIIIIIIII     RRR         RRR
DDDDDDDDDDDD        IIIIIIIII     RRR         RRR
```

```
DDDDDDDD      IIIIII      SSSSSSSS  PPPPPPPP    LL            AAAAAA    YY      YY
DDDDDDDD      IIIIII      SSSSSSSS  PPPPPPPP    LL            AAAAAA    YY      YY
DD      DD      II      SS          PP      PP  LL          AA      AA  YY      YY
DD      DD      II      SS          PP      PP  LL          AA      AA  YY      YY
DD      DD      II      SS          PP      PP  LL          AA      AA    YY  YY
DD      DD      II      SS          PP      PP  LL          AA      AA    YY  YY
DD      DD      II        SSSSSS    PPPPPPPP    LL          AA      AA      YY
DD      DD      II        SSSSSS    PPPPPPPP    LL          AA      AA      YY
DD      DD      II              SS  PP          LL          AAAAAAAAAA      YY
DD      DD      II              SS  PP          LL          AAAAAAAAAA      YY
DD      DD      II              SS  PP          LL          AA      AA      YY          ....
DD      DD      II              SS  PP          LL          AA      AA      YY          ....
DDDDDDDD      IIIIII    SSSSSSSS    PP          LLLLLLLLLL  AA      AA      YY          ....
DDDDDDDD      IIIIII    SSSSSSSS    PP          LLLLLLLLLL  AA      AA      YY          ....

LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
;     1          0001  0 MODULE DISPLAY (
;     2          0002  0                   LANGUAGE (BLISS32),
;     3          0003  0                   IDENT = 'V04-000'
;     4          0004  0                   ) =
;     5          0005  0
;     6          0006  1 BEGIN
;     7          0007  1
;     8          0008  1 !*****************************************************************************
;     9          0009  1 !*                                                                           *
;    10          0010  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
;    11          0011  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                   *
;    12          0012  1 !*  ALL RIGHTS RESERVED.                                                     *
;    13          0013  1 !*                                                                           *
;    14          0014  1 !*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED     *
;    15          0015  1 !*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE    *  00
;    16          0016  1 !*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER     *
;    17          0017  1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY     *  00
;    18          0018  1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY     *
;    19          0019  1 !*  TRANSFERRED.                                                             *
;    20          0020  1 !*                                                                           *
;    21          0021  1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE     *
;    22          0022  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT     *
;    23          0023  1 !*  CORPORATION.                                                             *
;    24          0024  1 !*                                                                           *
;    25          0025  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS     *
;    26          0026  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                   *
;    27          0027  1 !*                                                                           *
;    28          0028  1 !*                                                                           *
;    29          0029  1 !*****************************************************************************
;    30          0030  1
;    31          0031  1 !++
;    32          0032  1 !
;    33          0033  1 ! FACILITY:     DIRECTORY
;    34          0034  1 !
;    35          0035  1 ! ABSTRACT:
;    36          0036  1 !
;    37          0037  1 !       This module contains all of the routines necessary to display the
;    38          0038  1 !       information gathered about the selected files.
;    39          0039  1 !
;    40          0040  1 ! ENVIRONMENT:
;    41          0041  1 !
;    42          0042  1 !       VAX/VMS operating system, unprivileged user mode utilities.
;    43          0043  1 !
;    44          0044  1 !--
;    45          0045  1 !
;    46          0046  1 ! AUTHOR:       L. Mark Pilant          CREATION DATE:  4-Mar-1983
;    47          0047  1 !
;    48          0048  1 ! MODIFIED BY:
;    49          0049  1 !
;    50          0050  1 !       V03-020 LMP0296         L. Mark Pilant,         6-Aug-1984  13:01
;    51          0051  1 !               Access the file by "file-ID" during /FULL if the device is
;    52          0052  1 !               a sequential device (i.e., a magtape).  This is to compensate
;    53          0053  1 !               for a bug in the magtape ACP.
;    54          0054  1 !
;    55          0055  1 !       V03-019 LMP0282         L. Mark Pilant,         25-Jul-1984  9:58
;    56          0056  1 !               Check the info needed flags, not the qualifier present flags,
;    57          0057  1 !               when determining if information is needed about a file.
```

```
;    58          0058  1 !
;    59          0059  1 !       V03-018 LMP0227         L. Mark Pilant,         9-Apr-1984  11:20
;    60          0060  1 !               Use FIB$L_ACL_STATUS to check the results of the READACL
;    61          0061  1 !               operation.  Also, only read the ACL in 512 byte chunks, rather
;    62          0062  1 !               than trying to read in the entire ACL.
;    63          0063  1 !
;    64          0064  1 !       V03-017 LMP0220         L. Mark Pilant,         24-Mar-1984  23:33
;    65          0065  1 !               Remove references to journaling.
;    66          0066  1 !
;    67          0067  1 !       V03-016 LMP0212         L. Mark Pilant,         12-Mar-1984  15:01
;    68          0068  1 !               Make sure that a new channel is allocated not only when
;    69          0069  1 !               the device changes, but if no channel was previously assigned.
;    70          0070  1 !
;    71          0071  1 !       V03-015 LMP0211         L. Mark Pilant,         10-Mar-1984  12:49
;    72          0072  1 !               Display all of the useful information obtained directly from
;    73          0073  1 !               the disk ACP in the /FULL display.  Also correct a bug that
;    74          0074  1 !               caused long file names to be truncated when the /SINCE
;    75          0075  1 !               qualifier was the only qualifier given on the command line.
;    76          0076  1 !
;    77          0077  1 !       V03-014 LMP0187         L. Mark Pilant,         2-Feb-1984  17:29
;    78          0078  1 !               Fix a bug that caused the first ACE to be dropped from the
;    79          0079  1 !               ACL display during a full display.
;    80          0080  1 !
;    81          0081  1 !       V03-013 LMP0182         L. Mark Pilant,         11-Jan-1984  12:48
;    82          0082  1 !               Only do selection when the /SELECT qualifier was given.
;    83          0083  1 !
;    84          0084  1 !       V03-012 LMP0176         L. Mark Pilant,         6-Dec-1983  9:08
;    85          0085  1 !               Use the correct display width when formatting an ACE.
;    86          0086  1 !
;    87          0087  1 !       V03-011 LMP0171         L. Mark Pilant,         23-Nov-1983  10:08
;    88          0088  1 !               Use the display width when formatting an ACE, not a fixed
;    89          0089  1 !               value.  Also impliment the size selection item (this was
;    90          0090  1 !               dropped on the floor).
;    91          0091  1 !
;    92          0092  1 !       V03-010 LMP0163         L. Mark Pilant,         10-Oct-1983  9:32
;    93          0093  1 !               Correct a bug that caused an RMS IFI error when using any
;    94          0094  1 !               of the common qualifiers (and RMS was gathering the info).
;    95          0095  1 !
;    96          0096  1 !       V03-009 LMP0160         L. Mark Pilant,         3-Oct-1983  15:10
;    97          0097  1 !               Return the channel if the ACP QIO to get the file
;    98          0098  1 !               information fails.
;    99          0099  1 !
;   100          0100  1 !       V03-008 LMP0157         L. Mark Pilant,         27-Sep-1983  10:57
;   101          0101  1 !               Add support for a unique message file.
;   102          0102  1 !
;   103          0103  1 !       V03-007 LMP0155         L. Mark Pilant,         19-Sep-1983  11:33
;   104          0104  1 !               Fix a bug that caused the RMS journaling names to be put
;   105          0105  1 !               in the wrong place when obtained directly from the ACP.
;   106          0106  1 !
;   107          0107  1 !       V03-006 LMP0140         L. Mark Pilant,         24-Aug-1983  1:55
;   108          0108  1 !               Remove temporary hack for identifiers.  Also, fix a bug
;   109          0109  1 !               that caused second network access for network directories.
;   110          0110  1 !
;   111          0111  1 !       V03-005 DAS0001         David Solomon           29-Jul-1983
;   112          0112  1 !               Journaling bit RUA is now ONLY_RU.
;   113          0113  1 !
;   114          0114  1 !       V03-004 LMP0119         L. Mark Pilant,         15-Jun-1983  11:58
```

```
;  115     0115  1 !                 Add support for identifiers.
;  116     0116  1 !
;  117     0117  1 !       V03-003 LMP0108         L. Mark Pilant,         28-Apr-1983  11:05
;  118     0118  1 !               Don't double space when listing only the file name in
;  119     0119  1 !               one column.  Also, add support for RMS journaling.
   120     0120  1 !
;  121     0121  1 !       V03-002 LMP0100         L. Mark Pilant,         14-Apr-1983  11:48
;  122     0122  1 !               Misc fixups.  Also add $FORMAT_ACL system service.
;  123     0123  1 !
;  124     0124  1 !       V03-001 LMP0096         L. Mark Pilant,         29-Mar-1983  10:10
;  125     0125  1 !               Correctly handle locked files.
;  126     0126  1 !
;  127     0127  1 !**
;  128     0128  1
;  129     0129  1 LIBRARY 'SYS$LIBRARY:LIB';
;  130     0130  1 REQUIRE 'SRC$:DIRECTDEF';
```

```
;  132     0532  1 FORWARD ROUTINE
;  133     0533  1         DIR$GET_INFO,                   ! Get information about a file
;  134     0534  1         DIR$RMS_FILL,                   ! Get specific info from RMS
;  135     0535  1         DIR$ACP_FILL,                   ! Get specific info from the ACP
;  136     0536  1         DIR$SHOW_INFO,                  ! Display gathered information
;  137     0537  1         DIR$SHOW_FULL,                  ! Display all information
;  138     0538  1         DIR$SHOW_ACL,                   ! Display the file's ACL
;  139     0539  1         DIR$TOTAL,                      ! Display per directory totals
;  140     0540  1         DIR$GRAND_TOTAL,                ! Display overall totals
;  141     0541  1         DIR$APPEND;                     ! Append text to current line
;  142     0542  1
;  143     0543  1 OWN
;  144     0544  1         PROT_TABLE      : VECTOR [16]           ! Protection descr table
;  145     0545  1                           INITIAL (
;  146     0546  1                                   $DESCRIPTOR ('RWED'),
;  147     0547  1                                   $DESCRIPTOR ('WED'),
;  148     0548  1                                   $DESCRIPTOR ('RED'),
;  149     0549  1                                   $DESCRIPTOR ('ED'),
;  150     0550  1                                   $DESCRIPTOR ('RWD'),
;  151     0551  1                                   $DESCRIPTOR ('WD'),
;  152     0552  1                                   $DESCRIPTOR ('RD'),
;  153     0553  1                                   $DESCRIPTOR ('D'),
;  154     0554  1                                   $DESCRIPTOR ('RWE'),
;  155     0555  1                                   $DESCRIPTOR ('WE'),
;  156     0556  1                                   $DESCRIPTOR ('RE'),
;  157     0557  1                                   $DESCRIPTOR ('E'),
;  158     0558  1                                   $DESCRIPTOR ('RW'),
;  159     0559  1                                   $DESCRIPTOR ('W'),
;  160     0560  1                                   $DESCRIPTOR ('R'),
;  161     0561  1                                   $DESCRIPTOR ('')
;  162     0562  1                                     );
;  163     0563  1
;  164     0564  1 EXTERNAL ROUTINE
;  165     0565  1         LIB$GET_VM              : ADDRESSING_MODE (GENERAL),
;  166     0566  1         LIB$QUAL_FILE_MATCH     : ADDRESSING_MODE (GENERAL);
;  167     0567  1
;  168     0568  1 EXTERNAL LITERAL
;  169     0569  1         LIB$_FILFAIMAT,
;  170     0570  1
;  171     0571  1 ! DIRECTORY text messages
;  172     0572  1
;  173     0573  1         DIR$_NEWDIRECT,
;  174     0574  1         DIR$_NOBRFILEID,
;  175     0575  1         DIR$_NOBRCREDAT,
;  176     0576  1         DIR$_NOBRREVDAT,
;  177     0577  1         DIR$_NOBREXPDAT,
;  178     0578  1         DIR$_NOBRBAKDAT,
;  179     0579  1         DIR$_FULLFILEID,
;  180     0580  1         DIR$_NOFUFILEID,
;  181     0581  1         DIR$_FULLSIZE,
;  182     0582  1         DIR$_FULLOWNERID,
;  183     0583  1         DIR$_FULLOWNERUIC,
;  184     0584  1         DIR$_NOFUCREDAT,
;  185     0585  1         DIR$_FULLCREDAT,
;  186     0586  1         DIR$_NOFUREVDAT,
;  187     0587  1         DIR$_FULLREVDAT,
;  188     0588  1         DIR$_NOFUEXPDAT,
```

```
;  189          0589  1          DIR$_FULLEXPDAT,
;  190          0590  1          DIR$_NOFUBAKDAT,
;  191          0591  1          DIR$_FULLBAKDAT,
;  192          0592  1          DIR$_FILEORG,
;  193          0593  1          DIR$_FILORGSEQ,
;  194          0594  1          DIR$_FILORGREL,
;  195          0595  1          DIR$_FILORGIDX,
;  196          0596  1          DIR$_IDXPROLOG,
;  197          0597  1          DIR$_IDXAREA,
;  198          0598  1          DIR$_FILORGUNK,
;  199          0599  1          DIR$_FILEATTR,
;  200          0600  1          DIR$_MAXBKTSIZ,
;  201          0601  1          DIR$_BUCKETSIZ,
;  202          0602  1          DIR$_GBLBUFCNT,
;  203          0603  1          DIR$_VERLIMIT,
;  204          0604  1          DIR$_NOVERLIMIT,
;  205          0605  1          DIR$_FILATRCTG,
;  206          0606  1          DIR$_FILATRCTB,
;  207          0607  1          DIR$_FILATRLCK,
;  208          0608  1          DIR$_FILATRNOBAK,
;  209          0609  1          DIR$_FILATRWRBAK,
;  210          0610  1          DIR$_FILATRRDCHK,
;  211          0611  1          DIR$_FILATRWRCHK,
;  212          0612  1          DIR$_FILATRBADACL,
;  213          0613  1          DIR$_FILATRDIR,
;  214          0614  1          DIR$_FILATRBADBLK,
;  215          0615  1          DIR$_FILATRNOCHRG,
;  216          0616  1          DIR$_FILATRERASE,
;  217          0617  1          DIR$_RECFORMAT,
;  218          0618  1          DIR$_RECFMTFIX,
;  219          0619  1          DIR$_RECFMTVAR,
;  220          0620  1          DIR$_RECFMTVFC,
;  221          0621  1          DIR$_RECFMTUDF,
;  222          0622  1          DIR$_RECFMTSTM,
;  223          0623  1          DIR$_RECFMTSTMLF,
;  224          0624  1          DIR$_RECFMTSTMCR,
;  225          0625  1          DIR$_RECFMTUNK,
;  226          0626  1          DIR$_MAXRECSIZ,
;  227          0627  1          DIR$_RECATTR,
;  228          0628  1          DIR$_NORECATTR,
;  229          0629  1          DIR$_CRCARCTL,
;  230          0630  1          DIR$_FTNCARCTL,
;  231          0631  1          DIR$_PRICARCTL,
;  232          0632  1          DIR$_NOCARCTL,
;  233          0633  1          DIR$_NOSPAN,
;  234          0634  1          DIR$_JNLENABLED,
;  235          0635  1          DIR$_NOJNLENB,
;  236          0636  1          DIR$_BIJNLNAME,
;  237          0637  1          DIR$_NOBIJNL,
;  238          0638  1          DIR$_AIJNLNAME,
;  239          0639  1          DIR$_NOAIJNL,
;  240          0640  1          DIR$_ATJNLNAME,
;  241          0641  1          DIR$_NOATJNL,
;  242          0642  1          DIR$_FILEPROT,
;  243          0643  1          DIR$_SYSPROT,
;  244          0644  1          DIR$_OWNPROT,
;  245          0645  1          DIR$_GRPPROT,
```

```
;  246          0646  1          DIR$_WORPROT,
;  247          0647  1          DIR$_FILEACL,
;  248          0648  1          DIR$_NOFILEACL,
;  249          0649  1          DIR$_TOTSIZALL,
;  250          0650  1          DIR$_TOTSIZ,
;  251          0651  1          DIR$_TOTNOSIZ,
;  252          0652  1          DIR$_GTOTSIZALL,
;  253          0653  1          DIR$_GTOTSIZALL1,
;  254          0654  1          DIR$_GTOTSIZ,
;  255          0655  1          DIR$_GTOTSIZ1,
;  256          0656  1          DIR$_GTOTNOSIZ,
;  257          0657  1          DIR$_GTOTNOSIZ1;
;  258          0658  1
;  259          0659  1 ! Assumptions made about various RMS structure constants.
;  260          0660  1
;  261          0661  1 $ASSUME (FAB$C_SEQ EQL DIR_C_SEQUENTIAL*16);
;  262          0662  1 $ASSUME (FAB$C_REL EQL DIR_C_RELATIVE*16);
;  263          0663  1 $ASSUME (FAB$C_IDX EQL DIR_C_INDEXED*16);
;  264          0664  1
;  265          0665  1 $ASSUME (FAB$C_FIX EQL DIR_C_FIXED);
;  266          0666  1 $ASSUME (FAB$C_VAR EQL DIR_C_VARIABLE);
;  267          0667  1 $ASSUME (FAB$C_VFC EQL DIR_C_VFC);
;  268          0668  1 $ASSUME (FAB$C_UDF EQL DIR_C_UNDEFINED);
;  269          0669  1 $ASSUME (FAB$C_STM EQL DIR_C_STREAM);
;  270          0670  1 $ASSUME (FAB$C_STMLF EQL DIR_C_STREAMLF);
;  271          0671  1 $ASSUME (FAB$C_STMCR EQL DIR_C_STREAMCR);
```

```
;  273     0672  1 GLOBAL ROUTINE DIR$GET_INFO (FILE_FAB) =
;  274     0673  1
;  275     0674  1 !++
;  276     0675  1 !
;  277     0676  1 ! FUNCTIONAL DESCRIPTION:
;  278     0677  1 !       Get information about a file
;  279     0678  1 !
;  280     0679  1 ! CALLING SEQUENCE:
;  281     0680  1 !       DIR$GET_INFO (ARG1)
;  282     0681  1 !
;  283     0682  1 ! INPUT PARAMETERS:
;  284     0683  1 !       ARG1: FAB address
;  285     0684  1 !
;  286     0685  1 ! IMPLICIT INPUTS:
;  287     0686  1 !       none
;  288     0687  1 ! OUTPUT PARAMETERS:
;  289     0688  1 !       none
;  290     0689  1 !
;  291     0690  1 ! IMPLICIT OUTPUTS:
;  292     0691  1 !       none
;  293     0692  1 !
;  294     0693  1 ! ROUTINE VALUE:
;  295     0694  1 !       1
;  296     0695  1 !
;  297     0696  1 ! SIDE EFFECTS:
;  298     0697  1 !       none
;  299     0698  1 !
;  300     0699  1 !--
;  301     0700  1
;  302     0701  2 BEGIN
;  303     0702  2
;  304     0703  2 MAP
;  305     0704  2         FILE_FAB        : REF $BBLOCK;          ! FAB address
;  306     0705  2
;  307     0706  2 LOCAL
;  308     0707  2         FAB             : REF $BBLOCK,          ! Address of the FAB
;  309     0708  2         NAM             : REF $BBLOCK,          ! NAMe block address
;  310     0709  2         STATUS;                                 ! Local routine return status
;  311     0710  2
;  312     0711  2 EXTERNAL ROUTINE
;  313     0712  2         DIR$FILE_ERROR;                         ! File error signaling routine
;  314     0713  2
;  315     0714  2 ! Assume success.
;  316     0715  2
;  317     0716  2 STATUS = SS$_NORMAL;
;  318     0717  2
;  319     0718  2 ! Set pointers to the necessary RMS data structures.
;  320     0719  2
;  321     0720  2 CH$MOVE (NAM$C_BLN, .FILE_FAB[FAB$L_NAM], INFO_NAM);    ! Copy NAMe block
;  322     0721  2 NAM = INFO_NAM;                                 ! Set NAMe block address
;  323     0722  2 FAB = .FILE_FAB;                                ! Assume from $SEARCHed FAB
;  324     0723  2
;  325     0724  2 ! Check to see whether a legal file specification has been $SEARCHed.                   ;
;  326     0725  2
;  327     0726  2 IF NOT .(FAB[FAB$L_DEV])<$BITPOSITION (DEV$V_DIR), 1>
;  328     0727  2 AND NOT .NAM[NAM$V_NODE]
;  329     0728  2 THEN
```

```
;  330          0729  3      BEGIN
;  331          0730  3      FAB[FAB$L_STS] = SS$_NOTFILEDEV;
;  332          0731  3      FAB[FAB$L_STV] = 0;
;  333          0732  3      DIR$FILE_ERROR (DIR$_OPENIN, .FAB);
;  334          0733  3      RETURN 1;
;  335          0734  2      END;
;  336          0735  2
;  337          0736  2  IF .(FAB[FAB$L_DEV])<$BITPOSITION (DEV$V_FOR), 1>
;  338          0737  2  THEN
;  339          0738  3      BEGIN
;  340          0739  3      FAB[FAB$L_STS] = SS$_DEVFOREIGN;
;  341          0740  3      FAB[FAB$L_STV] = 0;
;  342          0741  3      DIR$FILE_ERROR (DIR$_OPENIN, .FAB);
;  343          0742  3      RETURN 1;
;  344          0743  2      END;
;  345          0744  2
;  346          0745  2  . Fill some of the initial portions of the display block.
;  347          0746  2
;  348          0747  2  CH$FILL (0, DIR_C_LENGTH, .DISPLAY_BLOCK);
;  349          0748  2  DISPLAY_BLOCK[DIR_W_FID_NUM] = .NAM[NAM$W_FID_NUM];
;  350          0749  2  DISPLAY_BLOCK[DIR_W_FID_SEQ] = .NAM[NAM$W_FID_SEQ];
;  351          0750  2  DISPLAY_BLOCK[DIR_W_FID_RVN] = .NAM[NAM$W_FID_RVN];
;  352          0751  2  DISPLAY_BLOCK[DIR_B_FNS] = .NAM[NAM$B_RSL];
;  353          0752  2  CH$MOVE (.NAM[NAM$B_RSL], .NAM[NAM$L_RSA], DISPLAY_BLOCK[DIR_T_FILENAME]);
;  354          0753  2  CH$MOVE (NAM$C_DVI, NAM[NAM$T_DVI], DISPLAY_BLOCK[DIR_T_DVI]);
;  355          0754  2  DISPLAY_BLOCK[DIR_B_NODE] = .NAM[NAM$B_NODE];
;  356          0755  2  DISPLAY_BLOCK[DIR_B_DEV] = .NAM[NAM$B_DEV];
;  357          0756  2  DISPLAY_BLOCK[DIR_B_DIR] = .NAM[NAM$B_DIR];
;  358          0757  2  DISPLAY_BLOCK[DIR_B_VER] = .NAM[NAM$B_VER];
;  359          0758  2  DISPLAY_BLOCK[DIR_V_SQD] = .(FAB[FAB$[_DEV])<$BITPOSITION (DEV$V_SQD), 1>;
;  360          0759  2
;  361          0760  2  ! If it is not a network directory operation, it is necessary to change the
;  362          0761  2  ! FAB address for the following RMS/ACP operations.
;  363          0762  2
;  364          0763  2  IF NOT .NAM[NAM$V_NODE] THEN FAB = INFO_FAB;
;  365          0764  2
;  366          0765  2  ! Get the requested information about the file and put it in the display
;  367          0766  2  ! block.
;  368          0767  2
;  369          0768  2  IF .QUAL_FLAGS[DIR_V_NEED_FHC] OR .QUAL_FLAGS[DIR_V_NEED_DAT]
;  370          0769  2  OR .QUAL_FLAGS[DIR_V_NEED_PRO] OR .QUAL_FLAGS[DIR_V_NEED_SUM]
;  371          0770  2  OR .QUAL_FLAGS[DIR_V_NEED_JNL] OR .QUAL_FLAGS[DIR_V_QUAL_ACL]
;  372          0771  2  THEN
;  373          0772  3      BEGIN
;  374          0773  3      IF .NAM[NAM$V_NODE]
;  375          0774  3      THEN STATUS = DIR$RMS_FILL (.FAB, .NAM)
;  376          0775  3      ELSE STATUS = DIR$ACP_FILL (.FAB, .NAM);
;  377          0776  2      END;
;  378          0777  2
;  379          0778  2  DISPLAY_BLOCK[DIR_L_STATUS] = .STATUS;
;  380          0779  2
;  381          0780  2  ! See if this file matches the criteria specified by the common command
;  382          0781  2  ! qualifiers.
;  383          0782  2
;  384          0783  2  FAB[FAB$W_IFI] = -1;                          ! Since XAB info is there
;  385          0784  2  STATUS = LIB$QUAL_FILE_MATCH (CMN_QUAL_CTX, .FAB, 0, LINE_DESC);
;  386          0785  2  FAB[FAB$W_IFI] = 0;                           ! Finished testing XAB info
```

```
;  387          0786  2 IF .STATUS EQL LIB$_FILFMAT
;  388          0787  2 THEN RETURN 1                                    ! Return if not a candidate
;  389          0788  2 ELSE IF .DISPLAY_BLOCK[DIR_L_STATUS]
;  390          0789  2      THEN DISPLAY_BLOCK[DIR_L_STATUS] = .STATUS;
;  391          0790  2
;  392          0791  2 ! Now that all of the specified common qualifiers have been checked, check
;  393          0792  2 ! the file size if necessary.
;  394          0793  2
;  395          0794  2 IF .QUAL_FLAGS[DIR_V_SELE_SIZE]
;  396          0795  3 AND .MIN_BLOCK GTR (IF .QUAL_FLAGS[DIR_V_SIZE_ALL] OR .QUAL_FLAGS[DIR_V_SIZE_ALLO]
;  397          0796  3                     THEN .DISPLAY_BLOCK[DIR_L_HIBLK]
;  398          0797  2                     ELSE .DISPLAY_BLOCK[DIR_L_EFBLK]) THEN RETURN 1;
;  399          0798  2 IF .QUAL_FLAGS[DIR_V_SELE_SIZE]
;  400          0799  3 AND .MAX_BLOCK LSS (IF .QUAL_FLAGS[DIR_V_SIZE_ALL] OR .QUAL_FLAGS[DIR_V_SIZE_ALLO]
;  401          0800  3                     THEN .DISPLAY_BLOCK[DIR_L_HIBLK]
;  402          0801  2                     ELSE .DISPLAY_BLOCK[DIR_L_EFBLK]) THEN RETURN 1;
;  403          0802  2
;  404          0803  2 ! The file is indeed a candidate for being displayed.  Proceed to do it.
;  405          0804  2
;  406          0805  2 QUAL_FLAGS[DIR_V_FILE_FOUND] = 1;                ! Note that something was found
;  407          0806  2 IF .QUAL_FLAGS[DIR_V_QUAL_FULL]
;  408          0807  2 THEN DIR$SHOW_FULL ()
;  409          0808  2 ELSE DIR$SHOW_INFO ();
;  410          0809  2
;  411          0810  2 RETURN 1;
;  412          0811  2
;  413          0812  1 END;                                             ! End of routine DIR$GET_INFO


                        .TITLE  DISPLAY
                        .IDENT  \V04-000\

                        .PSECT  DIR$COMMON,NOEXE,  OVR,0

00000 QUAL_FLAGS:
                        .BLKB   8
00008 COLUMN_COUNT:
                        .BLKB   4
0000C COLUMN_INDEX:
                        .BLKB   4
00010 COLUMN_WIDTH:
                        .BLKB   4
00014 WORST_ERROR:
                        .BLKB   4
00018 CMN_QUAL_CTX:
                        .BLKB   4
0001C DISPLAY_BLOCK:
                        .BLKB   4
00020 CHANNEL:.BLKB     4
00024 DEVICE_NAME:
                        .BLKB   16
00034 LINE_DESC:
                        .BLKB   8
0003C LINE_BUFFER:
                        .BLKB   1024
0043C TOTAL_USED:
                        .BLKB   4
```

```
                00440 TOTAL_ALLOC:
                                .BLKB   4
                00444 TOTAL_FILES:
                                .BLKB   4
                00448 GRAND_USED:
                                .BLKB   4
                0044C GRAND_ALLOC:
                                .BLKB   4
                00450 GRAND_FILES:
                                .BLKB   4
                00454 GRAND_DIRS:
                                .BLKB   4
                00458 PREV_DIR:
                                .BLKB   255
                00557           .BLKB   1
                00558 PREV_DIR_LEN:
                                .BLKB   4
                0055C PREV_FILE:
                                .BLKB   255
                0065B           .BLKB   1
                0065C PREV_FILE_LEN:
                                .BLKB   4
                00660 VERSION_COUNT:
                                .BLKB   4
                00664 VERSION_INDEX:
                                .BLKB   4
                00668 FIRST_XAB:
                                .BLKB   4
              22  0066C INFO_XABJNL:
                                .BYTE   34
              3C  0066D           .BYTE   60
            0000  0066E           .WORD   0
        00000000  00670           .LONG   0
            0000  00674           .WORD   0
            0000  00676           .WORD   0
              00  00678           .BYTE   0
              00  00679           .BYTE   0
            0000  0067A           .WORD   0
        00000000  0067C           .LONG   0
              00  00680           .BYTE   0
              00  00681           .BYTE   0
            0000  00682           .WORD   0
        00000000  00684           .LONG   0
              00  00688           .BYTE   0
              00  00689           .BYTE   0
            0000  0068A           .WORD   0
        00000000  0068C           .LONG   0
                  00690           .BLKB   24
              16  006A8 INFO_XABSUM:
                                .BYTE   22
              0C  006A9           .BYTE   12
            0000  006AA           .WORD   0
        00000000  006AC            LONG   0
              00  006B0           .BYTE   0
              00  006B1           .BYTE   0
            0000  006B2           .WORD   0
              13  006B4 INFO_XABPRO:
```

```
                                        .BYTE   19
          58  006B5                     .BYTE   88
        0000  006B6                     .WORD   0
    00000000  006B8                     .LONG   0
        FFFF  006BC                     .WORD   -1
          00  006BE                     .BYTE   0
          00  006BF                     .BYTE   0
0000    0000  006C0                     .WORD   0, 0
          00  006C4                     .BYTE   0
          00  006C5                     .BYTE   0
        0000  006C6                     .WORD   0
    00000000  006C8                     .LONG   0
    00000000  006CC                     .LONG   0
        0000  006D0                     .WORD   0
        0000  006D2                     .WORD   0
    00000000  006D4                     .LONG   0
    00000000  006D8                     .LONG   0
              006DC                     .BLKB   48
          12  0070C INFO_XABDAT:
                                        .BYTE   18
          2C  0070D                     .BYTE   44
        0000  0070E                     .WORD   0
    00000000  00710                     .LONG   0
        0000  00714                     .WORD   0
        0000  00716                     .WORD   0
00000000#     00718                     .LONG   0[2]
00000000#     00720                     .LONG   0[2]
    00000000  00728                     .LONG   0
    00000000  0072C                     .LONG   0
00000000#     00730                     .LONG   0[2]
          1D  00738 INFO_XABFHC:
                                        .BYTE   29
          2C  00739                     .BYTE   44
        0000  0073A                     .WORD   0
    00000000  0073C                     .LONG   0
00000000#     00740                     .LONG   0[9]
          02  00764 INFO_NAM:
                                        .BYTE   2
          60  00765                     .BYTE   96
          00  00766                     .BYTE   0
          00  00767                     .BYTE   0
    00000000  00768                     .LONG   0
          00  0076C                     .BYTE   0
          00  0076D                     .BYTE   0
          00  0076E                     .BYTE   0
          00  0076F                     .BYTE   0
    00000000  00770                     .LONG   0
    00000000  00774                     .LONG   0
        0000# 00778                     .WORD   0[8]
        0000# 00788                     .WORD   0[3]
        0000# 0078E                     .WORD   0[3]
    00000000  00794                     .LONG   0
    00000000  00798                     .LONG   0
          00  0079C                     .BYTE   0
          00  0079D                     .BYTE   0
          00  0079E                     .BYTE   0
          00  0079F                     .BYTE   0
```

```
      00  007A0          .BYTE   0
      00  007A1          .BYTE   0
     00# 007A2          .BYTE   0[2]
00000000  007A4          .LONG   0
00000000  007A8          .LONG   0
00000000  007AC          .LONG   0
00000000  007B0          .LONG   0
00000000  007B4          .LONG   0
00000000  007B8          .LONG   0
00000000# 007BC          .LONG   0[2]
      03  007C4 INFO_FAB:
                         .BYTE   3
      50  007C5          .BYTE   80
    0000  007C6          .WORD   0
01000000  007C8          .LONG   16777216
00000000  007CC          .LONG   0
00000000  007D0          .LONG   0
00000000  007D4          .LONG   0
    0000  007D8          .WORD   0
      02  007DA          .BYTE   2
      43  007DB          .BYTE   67
00000000  007DC          .LONG   0
      00  007E0          .BYTE   0
      00  007E1          .BYTE   0
      00  007E2          .BYTE   0
      02  007E3          .BYTE   2
00000000  007E4          .LONG   0
00000000  007E8          .LONG   0
00000000' 007EC          .ADDRESS INFO_NAM
00000000  007F0          .LONG   0
00000000  007F4          .LONG   0
      00  007F8          .BYTE   0
      00  007F9          .BYTE   0
    0000  007FA          .WORD   0
00000000  007FC          .LONG   0
    0000  00800          .WORD   0
      00  00802          .BYTE   0
      00  00803          .BYTE   0
00000000  00804          .LONG   0
00000000  00808          .LONG   0
    0000  0080C          .WORD   0
      00  0080E          .BYTE   0
      00  0080F          .BYTE   0
00000000  00810          .LONG   0
          00814 DISPLAY_WIDTH:
                         .BLKB   4
          00818 FILENAME_WIDTH:
                         .BLKB   4
          0081C OWNER_WIDTH:
                         .BLKB   4
          00820 SIZE_WIDTH:
                         .BLKB   4
          00824 MIN_BLOCK:
                         .BLKB   4
          00828 MAX_BLOCK:
                         .BLKB   4
          0082C ACL_LENGTH:
```

```
                                00830 OUTPUT_RAB:
                                                .BLKB   4
                                                .BLKB   68

                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

                                00000 P.AAB:    .ASCII  \RWED\
                                00004 P.AAA:    .LONG   4
                                00008           .ADDRESS P.AAB
                                0000C P.AAD:    .ASCII  \WED\
                                0000F           .BLKB   1
                                00010 P.AAC:    .LONG   3
                                00014           .ADDRESS P.AAD
                                00018 P.AAF:    .ASCII  \RED\
                                0001B           .BLKB   1
                                0001C P.AAE:    .LONG   3
                                00020           .ADDRESS P.AAF
                                00024 P.AAH:    .ASCII  \ED\
                                00026           .BLKB   2
                                00028 P.AAG:    .LONG   2
                                0002C           .ADDRESS P.AAH
                                00030 P.AAJ:    .ASCII  \RWD\
                                00033           .BLKB   1
                                00034 P.AAI:    .LONG   3
                                00038           .ADDRESS P.AAJ
                                0003C P.AAL:    .ASCII  \WD\
                                0003E           .BLKB   2
                                00040 P.AAK:    .LONG   2
                                00044           .ADDRESS P.AAL
                                00048 P.AAN:    .ASCII  \RD\
                                0004A           .BLKB   2
                                0004C P.AAM:    .LONG   2
                                00050           .ADDRESS P.AAN
                                00054 P.AAP:    .ASCII  \D\
                                00055           .BLKB   3
                                00058 P.AAO:    .LONG   1
                                0005C           .ADDRES. P.AAP
                                00060 P.AAR:    .ASCII  \RWE\
                                00063           .BLKB   1
                                00064 P.AAQ:    .LONG   3
                                00068           .ADDRESS P.AAR
                                0006C P.AAT:    .ASCII  \WE\
                                0006E           .BLKB   2
                                00070 P.AAS:    .LONG   2
                                00074           .ADDRESS P.AAT
                                00078 P.AAV:    .ASCII  \RE\
                                0007A           .BLKB   2
                                0007C P.AAU:    .LONG   2
                                00080           .ADDRESS P.AAV
                                00084 P.AAX:    .ASCII  \E\
                                00085           .BLKB   3
                                00088 P.AAW:    .LONG   1
                                0008C           .ADDRESS P.AAX
                                00090 P.AAZ:    .ASCII  \RW\
                                00092           .BLKB   2
                                00094 P.AAY:    .LONG   2
                                00098           .ADDRESS P.AAZ
```

```
                                      57  0009C P.ABB:   .ASCII  \W\                                                      ;
                                          0009D          .BLKB   3
                                00000C01  000A0 P.ABA:   .LONG   1                                                        ;
                                00000000' 000A4          .ADDRESS P.ABB                                                  ;
                                      52  000A8 P.ABD:   .ASCII  \R\                                                      ;
                                          000A9          .BLKB   3
                                00000001  000AC P.ABC:   .LONG   1                                                        ;
                                00000000' 000B0          .ADDRESS P.ABD                                                  ;
                                          000B4 P.ABF:   .BLKB   0                                                        ;
                                00000000  000B4 P.ABE:   .LONG   0                                                        ;
                                00000000' 000B8          .ADDRESS P.ABF                                                  ;

                                                         .PSECT  $OWN$,NOEXE,2

00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 00000 PROT_TABLE:
                                                         .ADDRESS P.AAA, P.AAC, P.AAE, P.AAG, P.AAI, -                   ;
00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 00018                P.AAK, P.AAM, P.AAO, P.AAQ, P.AAS, P.AAU, - ;
                    00000000' 00000000' 00000000' 00000000' 00030                P.AAW, P.AAY, P.ABA, P.ABC, P.ABE           ;

                                                         .EXTRN  LIB$GET_VM, LIB$QUAL_FILE_MATCH
                                                         .EXTRN  LIB$_FILFAIMAT, DIR$_NEWDIRECT
                                                         .EXTRN  DIR$_NOBRFILEID
                                                         .EXTRN  DIR$_NOBRCREDAT
                                                         .EXTRN  DIR$_NOBRREVDAT
                                                         .EXTRN  DIR$_NOBREXPDAT
                                                         .EXTRN  DIR$_NOBRBAKDAT
                                                         .EXTRN  DIR$_FULLFILEID
                                                         .EXTRN  DIR$_NOFUFILEID
                                                         .EXTRN  DIR$_FULLSIZE, DIR$_FULLOWNERID
                                                         .EXTRN  DIR$_FULLOWNERUIC
                                                         .EXTRN  DIR$_NOFUCREDAT
                                                         .EXTRN  DIR$_FULLCREDAT
                                                         .EXTRN  DIR$_NOFUREVDAT
                                                         .EXTRN  DIR$_FULLREVDAT
                                                         .EXTRN  DIR$_NOFUEXPDAT
                                                         .EXTRN  DIR$_FULLEXPDAT
                                                         .EXTRN  DIR$_NOFUBAKDAT
                                                         .EXTRN  DIR$_FULLBAKDAT
                                                         .EXTRN  DIR$_FILEORG, DIR$_FILORGSEQ
                                                         .EXTRN  DIR$_FILORGREL, DIR$_FILORGIDX
                                                         .EXTRN  DIR$_IDXPROLOG, DIR$_IDXAREA
                                                         .EXTRN  DIR$_FILORGUNK, DIR$_FILEATTR
                                                         .EXTRN  DIR$_MAXBKTSIZ, DIR$_BUCKETSIZ
                                                         .EXTRN  DIR$_GBLBUFCNT, DIR$_VERLIMIT
                                                         .EXTRN  DIR$_NOVERLIMIT
                                                         .EXTRN  DIR$_FILATRCTG, DIR$_FILATRCTB
                                                         .EXTRN  DIR$_FILATRLCK, DIR$_FILATRNOBAK
                                                         .EXTRN  DIR$_FILATRWRBAK
                                                         .EXTRN  DIR$_FILATRRDCHK
                                                         .EXTRN  DIR$_FILATRWRCHK
                                                         .EXTRN  DIR$_FILATRBADACL
                                                         .EXTRN  DIR$_FILATRDIR, DIR$_FILATRBADBLK
                                                         .EXTRN  DIR$_FILATRNOCHRG
                                                         .EXTRN  DIR$_FILATRERASE
                                                         .EXTRN  DIR$_RECFORMAT, DIR$_RECFMTFIX
                                                         .EXTRN  DIR$_RECFMTVAR, DIR$_RECFMTVFC
                                                         .EXTRN  DIR$_RECFMTUDF, DIR$_RECFMTSTM
```

```
                                                        .EXTRN  DIR$_RECFMTSTMLF
                                                        .EXTRN  DIR$_RECFMTSTMCR
                                                        .EXTRN  DIR$_RECFMTUNK, DIR$_MAXRECSIZ
                                                        .EXTRN  DIR$_RECATTR, DIR$_NORECATTR
                                                        .EXTRN  DIR$_CRCARCTL, DIR$_FTNCARCTL
                                                        .EXTRN  DIR$_PRICARCTL, DIR$_NOCARCTL
                                                        .EXTRN  DIR$_NOSPAN, DIR$_JNLENABLED
                                                        .EXTRN  DIR$_NOJNLENB, DIR$_BIJNLNAME
                                                        .EXTRN  DIR$_NOBIJNL, DIR$_AIJNLNAME
                                                        .EXTRN  DIR$_NOAIJNL, DIR$_ATJNLNAME
                                                        .EXTRN  DIR$_NOATJNL, DIR$_FILEPROT
                                                        .EXTRN  DIR$_SYSPROT, DIR$_OWNPROT
                                                        .EXTRN  DIR$_GRPPROT, DIR$_WORPROT
                                                        .EXTRN  DIR$_FILEACL, DIR$_NOFILEACL
                                                        .EXTRN  DIR$_TOTSIZALL, DIR$_TOTSIZ
                                                        .EXTRN  DIR$_TOTNOSIZ, DIR$_GTOTSIZALL
                                                        .EXTRN  DIR$_GTOTSIZALL1
                                                        .EXTRN  DIR$_GTOTSIZ, DIR$_GTOTSIZ1
                                                        .EXTRN  DIR$_GTOTNOSIZ, DIR$_GTOTNOSIZ1
                                                        .EXTRN  DIR$FILE_ERROR

                                                        .PSECT  $CODE$,NOWRT,2

                                        07FC 00000      .ENTRY  DIR$GET_INFO, Save R2,R3,R4,R5,R6,R7,R8,R9,-  ; 0672
                                                                R10                                           ;
                                5A 00000000'    EF  9E 00002    MOVAB   QUAL_FLAGS, R10                       ;
                                59              01  D0 00009    MOVL    #1, STATUS                            ; 0716
                                56        04    AC  D0 0000C    MOVL    FILE_FAB, R6                          ; 0720
                0764    CA      28    B6      0060  8F  28 00010    MOVC3   #96, @40(R6), INFO_NAM                ;
                                57      0764    CA  9E 00019    MOVAB   INFO_NAM, NAM                         ; 0721
                                58              56  D0 0001E    MOVL    R6, FAB                               ; 0722
                        0D      40    A8            03  E0 00021    BBS     #3, 64(FAB), 1$                       ; 0726
                        08      36    A7            01  E0 00026    BBS     #1, 54(NAM), 1$                       ; 0727
                                08    A8      01CC  8F  3C 0002B    MOVZWL  #460, 8(FAB)                          ; 0730
                                              09  11 00031    BRB     2$                                    ; 0731
                                18      43  A8  E9 00033 1$:  BLBC    67(FAB), 3$                           ; 0736
                                08      A8    64  8F  9A 00037    MOVZBL  #100, 8(FAB)                          ; 0739
                                              0C  A8  D4 0003C 2$:  CLRL    12(FAB)                               ; 0740
                                              58  DD 0003F    PUSHL   FAB                                   ; 0741
                                    0079109A  8F  DD 00041    PUSHL   #7934106                              ;
                                00000G  CF        02  FB 00047    CALLS   #2, DIR$FILE_ERROR                    ;
                                            011D  31 0004C    BRW     18$                                   ; 0742
                                56        1C    AA  D0 0004F 3$:  MOVL    DISPLAY_BLOCK, R6                     ; 0747
        01CB    8F      00              6E        00  2C 00053    MOVC5   #0, (SP), #0, #459, (R6)              ;
                                                  66      0005A                                               ;
                                0123    C6    24  A7  D0 0005B    MOVL    36(NAM), 291(R6)                      ; 0748
                                0127    C6    28  A7  B0 00061    MOVW    40(NAM), 295(R6)                      ; 0750
                                  18    A6    03  A7  90 00067    MOVB    3(NAM), 24(R6)                        ; 0751
                                50      03    A7  9A 0006C    MOVZBL  3(NAM), R0                            ; 0752
                    19  A6      04    B7        50  28 00070    MOVC3   R0, @4(NAM), 25(R6)                   ;
                    08  A6      14    A7        10  28 00076    MOVC3   #16, 20(NAM), 8(R6)                   ; 0753
                                0119    C6    38  A7  B0 0007C    MOVW    56(NAM), 281(R6)                      ; 0754
                                011B    C6    3A  A7  90 00082    MOVB    58(NAM), 283(R6)                      ; 0756
                                011C    C6    3D  A7  90 00088    MOVB    61(NAM), 284(R6)                      ; 0757
            50  40  A8              01        01  05  EF 0008E    EXTZV   #5, #1, 64(FAB), R0                   ; 0758
        04  A6              01              01        50  F0 00094    INSV    R0, #1, #1, 4(R6)                     ;
                        05      36    A7            01  E0 0009A    BBS     #1, 54(NAM), 4$                       ; 0763
```

```
                58      07C4    CA  9E 0009F               MOVAB   INFO_FAB, FAB                                   ;
                17        04    AA  E8 000A4 4$:           BLBS    QUAL_FLAGS+4, 5$                                ; 0768
            12      04  AA      01  E0 000A8               BBS     #1, QUAL_FLAGS+4, 5$                            ;
            0D      04  AA      02  E0 000AD               BBS     #2, QUAL_FLAGS+4, 5$                            ; 0769
            08      04  AA      03  E0 000B2               BBS     #3, QUAL_FLAGS+4, 5$                            ;
            03      04  AA      04  E0 000B7               BBS     #4, QUAL_FLAGS+4, 5$                            ; 0770
                    1C          6A  E9 000BC               BLBC    QUAL_FLAGS, 8$                                  ;
            0B      36  A7      01  E1 000BF 5$:           BBC     #1, 54(NAM), 6$                                 ; 0774
                                57  DD 000C4               PUSHL   NAM                                             ;
                                58  DD 000C6               PUSHL   FAB                                             ;
                0000V   CF      02  FB 000C8               CALLS   #2, DIR$RMS_FILL                                ;
                                09  11 000CD               BRB     7$                                              ;
                                57  DD 000CF 6$:           PUSHL   NAM                                             ; 0775
                                58  DD 000D1               PUSHL   FAB                                             ;
                0000V   CF      02  FB 000D3               CALLS   #2, DIR$ACP_FILL                                ;
                        59      50  D0 000D8 7$:           MOVL    R0, STATUS                                      ;
                          1C    BA  59  D0 000DB 8$:       MOVL    STATUS, @DISPLAY_BLOCK                          ; 0778
                          02    A8  01  AE 000DF           MNEGW   #1, 2(FAB)                                      ; 0783
                                34  AA  9F 000E3           PUSHAB  LINE_DESC                                       ; 0784
                                    7E  D4 000E6           CLRL    -(SP)                                           ;
                                58  DD 000E8               PUSHL   FAB                                             ;
                                18  AA  9F 000EA           PUSHAB  CMN_QUAL_CTX                                    ;
        00000000G       00          04  FB 000ED           CALLS   #4, LIB$QUAL_FILE_MATCH                         ;
                        59          50  D0 000F4           MOVL    R0, STATUS                                      ;
                                02  A8  B4 000F7           CLRW    2(FAB)                                          ; 0785
        00000000G       8F          59  D1 000FA           CMPL    STATUS, #LIB$_FILFAIMAT                         ; 0786
                                    69  13 00101           BEQL    18$                                             ;
                        04      1C  BA  E9 00103           BLBC    @DISPLAY_BLOCK, 9$                              ; 0788
                          1C    BA          59  D0 00107   MOVL    STATUS, @DISPLAY_BLOCK                          ; 0789
            47          02    AA          02  E1 0010B 9$: BBC     #2, QUAL_FLAGS+2, 16$                           ; 0794
                        50      1C  AA      D0 00110       MOVL    DISPLAY_BLOCK, R0                               ; 0796
            05          02    AA          04  E0 00114     BBS     #4, QUAL_FLAGS+2, 10$                           ; 0795
            07          02    AA          05  E1 00119     BBC     #5, QUAL_FLAGS+2, 11$                           ;
                        50      012D    C0  D0 0011E 10$:  MOVL    301(R0), R0                                     ; 0796
                                        05  11 00123       BRB     12$                                             ;
                        50      0131    C0  D0 00125 11$:  MOVL    305(R0), R0                                     ; 0797
                        50      0824    CA  D1 0012A 12$:  CMPL    MIN_BLOCK, R0                                   ; 0795
                                        3B  14 0012F       BGTR    18$                                             ;
            21          02    AA          02  E1 00131     BBC     #2, QUAL_FLAGS+2, 16$                           ; 0798
                        50      1C  AA      D0 00136       MOVL    DISPLAY_BLOCK, R0                               ; 0800
            05          02    AA          04  EC 0013A     BBS     #4, QUAL_FLAGS+2, 13$                           ; 0799
            07          02    AA          05  E1 0013F     BBC     #5, QUAL_FLAGS+2, 14$                           ;
                        50      012D    C0  D0 00144 13$:  MOVL    301(R0), R0                                     ; 0800
                                        05  11 00149       BRB     15$                                             ;
                        50      0131    C0  D0 0014B 14$:  MOVL    305(R0), R0                                     ; 0801
                        50      0828    CA  D1 00150 15$:  CMPL    MAX_BLOCK, R0                                   ; 0799
                                        15  19 00155       BLSS    18$                                             ;
                          04    AA          20  88 00157 16$:  BISB2   #32, QUAL_FLAGS+4                           ; 0805
            07            01  AA          01  E1 0015B     BBC     #1, QUAL_FLAGS+1, 17$                           ; 0806
                    0000V   CF          00  FB 00160       CALLS   #0, DIR$SHOW_FULL                               ; 0807
                                        05  11 00165       BRB     18$                                             ;
                    0000V   CF          00  FB 00167 17$:  CALLS   #0, DIR$SHOW_INFO                               ; 0808
                        50              01  D0 0016C 18$:  MOVL    #1, R0                                          ; 0810
                                            04 0016F       RET                                                     ; 0812

; Routine Size:  368 bytes,    Routine Base:  $CODE$ + 0000
```

```
;  415     0813  1 ROUTINE DIR$RMS_FILL (FILE_FAB, FILE_NAM) =
;  416     0814  1
;  417     0815  1 !++
;  418     0816  1 !
;  419     0817  1 ! FUNCTIONAL DESCRIPTION:
;  420     0818  1 !
;  421     0819  1 !       This routine fills in the information requested from RMS.
;  422     0820  1 !
;  423     0821  1 ! CALLING SEQUENCE:
;  424     0822  1 !       DIR$RMS_FILL (ARG1, ARG2)
;  425     0823  1 !
;  426     0824  1 ! INPUT PARAMETERS:
;  427     0825  1 !       ARG1: address of the FAB
;  428     0826  1 !       ARG2: address of the NAMe block
;  429     0827  1 !
;  430     0828  1 ! IMPLICIT INPUTS:
;  431     0829  1 !       none
;  432     0830  1 !
;  433     0831  1 ! OUTPUT PARAMETERS:
;  434     0832  1 !       none
;  435     0833  1 !
;  436     0834  1 ! IMPLICIT OUTPUTS:
;  437     0835  1 !       none
;  438     0836  1 !
;  439     0837  1 ! ROUTINE VALUE:
;  440     0838  1 !       1 if successful
;  441     0839  1 !       error code otherwise
;  442     0840  1 !
;  443     0841  1 ! SIDE EFFECTS:
;  444     0842  1 !       The necessary information is collected and put into the display
;  445     0843  1 !       information block.
;  446     0844  1 !
;  447     0845  1 !--
;  448     0846  1
;  449     0847  2 BEGIN
;  450     0848  2
;  451     0849  2 MAP
;  452     0850  2         FILE_FAB        : REF $BBLOCK,          ! Address of the FAB
;  453     0851  2         FILE_NAM        : REF $BBLOCK;          ! Address of the NAMe block
;  454     0852  2
;  455     0853  2 LOCAL
;  456     0854  2         STATUS;                                 ! Routine exit status
;  457     0855  2
;  458     0856  2 ! Set up for the RMS OPEN.
;  459     0857  2
;  460     0858  2 IF NOT .FILE_NAM[NAM$V_WILDCARD]
;  461     0859  3 THEN STATUS = $SEARCH (FAB = .FILE_FAB)
;  462     0860  2 ELSE STATUS = .FILE_FAB[FAB$L_STS];
;  463     0861  2
;  464     0862  2 ! If the STS is success and the STV is in error, set the return status to the
;  465     0863  2 ! STV value.  This only happens on network directory operations, and is the
;  466     0864  2 ! method by which RMS/FAL returns back any errors that occurred while
;  467     0865  2 ! attempting to obtain the file attributes.
;  468     0866  2
;  469     0867  2 IF .FILE_FAB[FAB$L_STS] AND .FILE_FAB[FAB$L_STV] NEQ 0
;  470     0868  2 THEN IF NOT .FILE_FAB[FAB$L_STV]
;  471     0869  2 THEN STATUS = .FILE_FAB[FAB$L_STV];
```

```
;  472          0870  2
;  473          0871  2 IF .STATUS EQL RMS$_NOJ THEN STATUS = RMS$_NORMAL;
;  474          0872  2
;  475          0873  2 ! Now fill the display block with the information gathered by RMS.
;  476          0874  2
;  477          0875  2 DISPLAY_BLOCK[DIR_V_CONTIG] = .FILE_FAB[FAB$V_CTG];
;  478          0876  2 DISPLAY_BLOCK[DIR_V_CONTIGB] = .FILE_FAB[FAB$V_CBT];
;  479          0877  2 DISPLAY_BLOCK[DIR_V_SQD] = .(FILE_FAB[FAB$L_DEV])<$BITPOSITION (DEV$V_SQD), 1>;
;  480          0878  2 DISPLAY_BLOCK[DIR_L_HIBLK] = .FILE_FAB[FAB$L_ALQ];
;  481          0879  2 DISPLAY_BLOCK[DIR_W_DEFEXT] = .FILE_FAB[FAB$W_DEQ];
;  482          0880  2 DISPLAY_BLOCK[DIR_V_RTYPE] = .FILE_FAB[FAB$B_RFM];
;  483          0881  2 DISPLAY_BLOCK[DIR_V_FILEORG] = .FILE_FAB[FAB$B_ORG] / 16;
;  484          0882  2 IF (DISPLAY_BLOCK[DIR_B_VFCSIZE] = .FILE_FAB[FAB$B_FSZ]) EQL 0
;  485          0883  2 THEN DISPLAY_BLOCK[DIR_B_VFCSIZE] = 2;
;  486          0884  2 DISPLAY_BLOCK[DIR_B_RATTRIB] = .FILE_FAB[FAB$B_RAT];
;  487          0885  2 DISPLAY_BLOCK[DIR_B_BKTSIZE] = .FILE_FAB[FAB$B_BKS];
;  488          0886  2 DISPLAY_BLOCK[DIR_W_RSIZE] = .FILE_FAB[FAB$W_MRS];
;  489          0887  2 DISPLAY_BLOCK[DIR_W_GBC] = .FILE_FAB[FAB$W_GBC];
;  490          0888  2
;  491          0889  2 DISPLAY_BLOCK[DIR_W_VERLIMIT] = .INFO_XABFHC[XAB$W_VERLIMIT];
;  492          0890  2 IF (DISPLAY_BLOCK[DIR_L_EFBLK] = .INFO_XABFHC[XAB$L_EBK]) EQL 0
;  493          0891  2 THEN DISPLAY_BLOCK[DIR_L_EFBLK] = .FILE_FAB[FAB$L_ALQ]
;  494          0892  2 ELSE IF .INFO_XABFHC[XAB$W_FFB] EQL 0
;  495          0893  2 THEN DISPLAY_BLOCK[DIR_L_EFBLK] = .DISPLAY_BLOCK[DIR_L_EFBLK] - 1;
;  496          0894  2
;  497          0895  2 DISPLAY_BLOCK[DIR_L_CDT0] = .INFO_XABDAT[XAB$L_CDT0];
;  498          0896  2 DISPLAY_BLOCK[DIR_L_CDT4] = .INFO_XABDAT[XAB$L_CDT4];
;  499          0897  2 DISPLAY_BLOCK[DIR_L_RDT0] = .INFO_XABDAT[XAB$L_RDT0];
;  500          0898  2 DISPLAY_BLOCK[DIR_L_RDT4] = .INFO_XABDAT[XAB$L_RDT4];
;  501          0899  2 DISPLAY_BLOCK[DIR_L_EDT0] = .INFO_XABDAT[XAB$L_EDT0];
;  502          0900  2 DISPLAY_BLOCK[DIR_L_EDT4] = .INFO_XABDAT[XAB$L_EDT4];
;  503          0901  2 DISPLAY_BLOCK[DIR_L_BDT0] = .INFO_XABDAT[XAB$L_BDT0];
;  504          0902  2 DISPLAY_BLOCK[DIR_L_BDT4] = .INFO_XABDAT[XAB$L_BDT4];
;  505          0903  2 DISPLAY_BLOCK[DIR_W_REVISION] = .INFO_XABDAT[XAB$W_RVN];
;  506          0904  2
;  507          0905  2 DISPLAY_BLOCK[DIR_L_FILEOWNER] = .INFO_XABPRO[XAB$L_UIC];
;  508          0906  2 DISPLAY_BLOCK[DIR_W_FILEPROT] = .INFO_XABPRO[XAB$W_PRO];
;  509          0907  2
;  510          0908  2 DISPLAY_BLOCK[DIR_L_MRN] = .FILE_FAB[FAB$L_MRN];
;  511          0909  2 DISPLAY_BLOCK[DIR_B_NOKEYS] = .INFO_XABSUM[XAB$B_NOK];
;  512          0910  2 DISPLAY_BLOCK[DIR_W_PVN] = .INFO_XABSUM[XAB$W_PVN];
;  513          0911  2 DISPLAY_BLOCK[DIR_B_NOAREAS] = .INFO_XABSUM[XAB$B_NOA];
;  514          0912  2
;  515          0913  2 RETURN .STATUS;
;  516          0914  2
;  517          0915  1 END;                                    ! End of routine DIR$RMS_FILL


                                                .EXTRN  SYS$SEARCH

                                001C 00000 DIR$RMS_FILL:
                                                .WORD   Save R2,R3,R4                   ; 0813
54 00000000'    EF   9E 00002                   MOVAB   DISPLAY_BLOCK, R4               ;
52         04   AC   D0 00009                   MOVL    FILE_FAB, R2                    ; 0859
50         08   AC   D0 0000D                   MOVL    FILE_NAM, R0                    ; 0858
0B         35   A0   E8 00011                   BLBS    53(R0), 1$                      ;
```

```
                                          52  DD 00015          PUSHL    R2                                  ; 0859
                  0000000G   00           01  FB 00017          CALLS    #1, SYS$SEARCH                      ;
                                          04  11 0001E          BRB      2$                                  ;
                             50      08   A2  D0 00020  1$:     MOVL     8(R2), STATUS                       ; 0860
                             0D      08   A2  E9 00024  2$:     BLBC     8(R2), 3$                           ; 0867
                                     0C   A2  D5 00028          TSTL     12(R2)                              ;
                                          08  13 0002B          BEQL     3$                                  ;
                             04      0C   A2  E8 0002D          BLBS     12(R2), 3$                          ; 0868
                             50      0C   A2  D0 00031          MOVL     12(R2), STATUS                      ; 0869
                  0001C154   8F           50  D1 00035  3$:     CMPL     STATUS, #115028                     ; 0871
                                          07  12 0003C          BNEQ     4$                                  ;
                             50 00010001  8F  D0 0003E          MOVL     #65537, STATUS                      ;
                             51           64  D0 00045  4$:     MOVL     DISPLAY_BLOCK, R1                   ; 0875
      53     06   A2                      01  EF 00048          EXTZV    #4, #1, 6(R2), R3                   ;
0149  C1          01                      07  F0 0004E          INSV     R3, #7, #1, 329(R1)                 ;
      53     06   A2                      01  EF 00055          EXTZV    #5, #1, 6(R2), R3                   ; 0876
0149  C1          01                      05  F0 0005B          INSV     R3, #5, #1, 329(R1)                 ;
      53     40   A2                      01  EF 00062          EXTZV    #5, #1, 64(R2), R3                  ; 0877
  04  A1          01                      01  F0 00068          INSV     R3, #1, #1, 4(R1)                   ;
                       012D  C1      10   A2  D0 0006E          MOVL     16(R2), 301(R1)                     ; 0878
                       013B  C1      14   A2  B0 00074          MOVW     20(R2), 315(R1)                     ; 0879
0129  C1          04         00      1F   A2  F0 0007A          INSV     31(R2), #0, #4, 297(R1)             ; 0880
                             53      1D   A2  9A 00082          MOVZBL   29(R2), R3                          ; 0881
                             53           10  C6 00086          DIVL2    #16, R3                             ;
0129  C1          04         04           53  F0 00089          INSV     R3, #4, #4, 297(R1)                 ;
                       0138  C1      3F   A2  90 00090          MOVB     63(R2), 312(R1)                     ; 0882
                                          05  12 00096          BNEQ     5$                                  ;
                       0138  C1           02  90 00098          MOVB     #2, 312(R1)                         ; 0883
                       012A  C1      1E   A2  90 0009D  5$:     MOVB     30(R2), 298(R1)                     ; 0884
                       0137  C1      3E   A2  90 000A3          MOVB     62(R2), 311(R1)                     ; 0885
                       012B  C1      36   A2  B0 000A9          MOVW     54(R2), 299(R1)                     ; 0886
                       013D  C1      48   A2  B0 000AF          MOVW     72(R2), 317(R1)                     ; 0887
                       011D  C1    0742   C4  B0 000B5          MOVW     INFO_XABFHC+38, 285(R1)             ; 0889
                             53    0131   C1  9E 000BC          MOVAB    305(R1), R3                         ; 0890
                             63    072C   C4  D0 000C1          MOVL     INFO_XABFHC+16, (R3)                ;
                                          06  12 000C6          BNEQ     6$                                  ;
                             63      10   A2  D0 000C8          MOVL     16(R2), (R3)                        ; 0891
                                          08  11 000CC          BRB      7$                                  ;
                                   0730   C4  B5 000CE  6$:     TSTW     INFO_XABFHC+20                      ; 0892
                                          02  12 000D2          BNEQ     7$                                  ;
                                          63  D7 000D4          DECL     (R3)                                ; 0893
                       0170  C1    0704   C4  7D 000D6  7$:     MOVQ     INFO_XABDAT+20, 368(R1)             ; 0895
                       0178  C1    06FC   C4  7D 000DD          MOVQ     INFO_XABDAT+12, 376(R1)             ; 0897
                       0180  C1    070C   C4  7D 000E4          MOVQ     INFO_XABDAT+28, 384(R1)             ; 0899
                       0188  C1    0714   C4  7D 000EB          MOVQ     INFO_XABDAT+36, 392(R1)             ; 0901
                       016E  C1    06F8   C4  B0 000F2          MOVW     INFO_XABDAT+8, 366(R1)              ; 0903
                       014E  C1    06A4   C4  D0 000F9          MOVL     INFO_XABPRO+12, 334(R1)             ; 0905
                       0152  C1    06A0   C4  B0 00100          MOVW     INFO_XABPRO+8, 338(R1)              ; 0906
                       0190  C1      38   A2  D0 00107          MOVL     56(R2), 400(R1)                     ; 0908
                       0194  C1    0694   C4  D0 0010D          MOVL     INFO_XABSUM+8, 404(R1)              ; 0911
                                              04 00114          RET                                          ; 0915

; Routine Size:  277 bytes,    Routine Base:  $CODE$ + 0170
```

```
;  519     0916  1 ROUTINE DIR$ACP_FILL (FILE_FAB, FILE_NAM) =
;  520     0917  1
;  521     0918  1 !++
;  522     0919  1 !
;  523     0920  1 ! FUNCTIONAL DESCRIPTION:
;  524     0921  1 !
;  525     0922  1 !       This routine gathers the requested information about the file from
;  526     0923  1 !       the ACP.
;  527     0924  1 !
;  528     0925  1 ! CALLING SEQUENCE:
;  529     0926  1 !       DIR$ACP_FILL (ARG1, ARG2))
;  530     0927  1 !
;  531     0928  1 ! INPUT PARAMETERS:
;  532     0929  1 !       ARG1: address of the FAB
;  533     0930  1 !       ARG2: address of the NAMe block
;  534     0931  1 !
;  535     0932  1 ! IMPLICIT INPUTS:
;  536     0933  1 !       none
;  537     0934  1 !
;  538     0935  1 ! OUTPUT PARAMETERS:
;  539     0936  1 !       none
;  540     0937  1 !
;  541     0938  1 ! IMPLICIT OUTPUTS:
;  542     0939  1 !       none
;  543     0940  1 !
;  544     0941  1 ! ROUTINE VALUE:
;  545     0942  1 !       1 if successful
;  546     0943  1 !       error code otherwise
;  547     0944  1 !
;  548     0945  1 ! SIDE EFFECTS:
;  549     0946  1 !       The information display block if filled in with the necessary
;  550     0947  1 !       information requested.
;  551     0948  1 !
;  552     0949  1 !--
;  553     0950  1
;  554     0951  2 BEGIN
;  555     0952  2
;  556     0953  2 MAP
;  557     0954  2         FILE_FAB        : REF $BBLOCK,          ! Address of the FAB
;  558     0955  2         FILE_NAM        : REF $BBLOCK;          ! Address of the NAMe block
;  559     0956  2
;  560     0957  2 LITERAL
;  561     0958  2         NUM_ATTR        = 20;                   ! Max number of ACP attributes
;  562     0959  2
;  563     0960  2 LOCAL
;  564     0961  2         DEVICE_DESC     : $BBLOCK [DSC$C_S_BLN],        ! Device name descriptor
;  565     0962  2         FILE_DESC       : $BBLOCK [DSC$C_S_BLN],        ! File name descriptor
;  566     0963  2         FIB_DESC        : $BBLOCK [DSC$C_S_BLN],        ! FIB descriptor
;  567     0964  2         FIB             : $BBLOCK [FIB$C_LENGTH],       ! FIB Storage
;  568     0965  2         ATTRIBUTES      : BLOCKVECTOR [NUM_ATTR, 8, BYTE],      ! Attribute descrs
;  569     0966  2         ACP_STATISTICS  : $BBLOCK [ATR$S_STATBLK],      ! ACP statistics block
;  570     0967  2         AI_JNLACE       : $BBLOCK [ATR$S_FNDACETYP],    ! AI journal ACE
;  571     0968  2         BI_JNLACE       : $BBLOCK [ATR$S_FNDACETYP],    ! BI journal ACE
;  572     0969  2         AT_JNLACE       : $BBLOCK [ATR$S_FNDACETYP],    ! AT journal ACE
;  573     0970  2         IOSTS           : VECTOR [4, WORD],     ! I/O status block
;  574     0971  2         STATUS;                                 ! Local routine exit status
;  575     0972  2
```

```
;  576          0973  2 ! If necessary, first assign a channel to the device.
;  577          0974  2
;  578          0975  2 IF CH$NEQ (NAM$C_DVI, FILE_NAM[NAM$T_DVI], NAM$C_DVI, DEVICE_NAME, 0)
;  579          0976  2 OR .CHANNEL EQL 0
;  580          0977  2 THEN
;  581          0978  3     BEGIN
;  582          0979  3     IF .CHANNEL NEQ 0 THEN $DASSGN (CHAN = .CHANNEL);
;  583          0980  3     CH$MOVE (NAM$C_DVI, FILE_NAM[NAM$T_DVI], DEVICE_NAME);
;  584          0981  3     CH$FILL (0, DSC$C_S_BLN, DEVICE_DESC);
;  585          0982  3     DEVICE_DESC[DSC$W_LENGTH] = .DEVICE_NAME[0];
;  586          0983  3     DEVICE_DESC[DSC$A_POINTER] = DEVICE_NAME[1];
;  587        P 0984  3     STATUS = $ASSIGN (DEVNAM = DEVICE_DESC,
;  588          0985  3                       CHAN = CHANNEL);
;  589          0986  3     IF NOT .STATUS
;  590          0987  3     THEN
;  591          0988  4         BEGIN
;  592          0989  4         CH$FILL (0, NAM$C_DVI, DEVICE_NAME);
;  593          0990  4         CHANNEL = 0;
;  594          0991  4         RETURN .STATUS;
;  595          0992  3         END;
;  596          0993  2     END;
;  597          0994  2
;  598          0995  2 ! Build the ACP attribute list for the needed information.
;  599          0996  2
;  600          0997  2 CH$FILL (0, NUM_ATTR*8, ATTRIBUTES);
;  601          0998  2 ATTRIBUTES [0, ATR$W_TYPE] = ATR$C_RECATTR;
;  602          0999  2 ATTRIBUTES [0, ATR$W_SIZE] = ATR$S_RECATTR;
;  603          1000  2 ATTRIBUTES [0, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_R_RECATTR];
;  604          1001  2 ATTRIBUTES [1, ATR$W_TYPE] = ATR$C_CREDATE;
;  605          1002  2 ATTRIBUTES [1, ATR$W_SIZE] = ATR$S_CREDATE;
;  606          1003  2 ATTRIBUTES [1, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_Q_CREDATE];
;  607          1004  2 ATTRIBUTES [2, ATR$W_TYPE] = ATR$C_REVDATE;
;  608          1005  2 ATTRIBUTES [2, ATR$W_SIZE] = ATR$S_REVDATE;
;  609          1006  2 ATTRIBUTES [2, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_Q_REVDATE];
;  610          1007  2 ATTRIBUTES [3, ATR$W_TYPE] = ATR$C_EXPDATE;
;  611          1008  2 ATTRIBUTES [3, ATR$W_SIZE] = ATR$S_EXPDATE;
;  612          1009  2 ATTRIBUTES [3, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_Q_EXPDATE];
;  613          1010  2 ATTRIBUTES [4, ATR$W_TYPE] = ATR$C_BAKDATE;
;  614          1011  2 ATTRIBUTES [4, ATR$W_SIZE] = ATR$S_BAKDATE;
;  615          1012  2 ATTRIBUTES [4, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_Q_BAKDATE];
;  616          1013  2 ATTRIBUTES [5, ATR$W_TYPE] = ATR$C_STATBLK;
;  617          1014  2 ATTRIBUTES [5, ATR$W_SIZE] = ATR$S_STATBLK;
;  618          1015  2 ATTRIBUTES [5, ATR$L_ADDR] = ACP_STATISTICS;
;  619          1016  2 ATTRIBUTES [6, ATR$W_TYPE] = ATR$C_UIC;
;  620          1017  2 ATTRIBUTES [6, ATR$W_SIZE] = ATR$S_UIC;
;  621          1018  2 ATTRIBUTES [6, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_L_FILEOWNER];
;  622          1019  2 ATTRIBUTES [7, ATR$W_TYPE] = ATR$C_FPRO;
;  623          1020  2 ATTRIBUTES [7, ATR$W_SIZE] = ATR$S_FPRO;
;  624          1021  2 ATTRIBUTES [7, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_W_FILEPROT];
;  625          1022  2 ATTRIBUTES [8, ATR$W_TYPE] = ATR$C_UCHAR;
;  626          1023  2 ATTRIBUTES [8, ATR$W_SIZE] = ATR$S_UCHAR;
;  627          1024  2 ATTRIBUTES [8, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_L_FILECHAR];
;  628          1025  2 ATTRIBUTES [9, ATR$W_TYPE] = ATR$C_ASCDATES;
;  629          1026  2 ATTRIBUTES [9, ATR$W_SIZE] = 2;
;  630          1027  2 ATTRIBUTES [9, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_W_REVISION];
;  631          1028  2 ATTRIBUTES [10, ATR$W_TYPE] = ATR$C_JOURNAL;
;  632          1029  2 ATTRIBUTES [10, ATR$W_SIZE] = ATR$S_JOURNAL;
```

```
;  633          1030  2 ATTRIBUTES [10, ATR$L_ADDR] = DISPLAY_BLOCK[DIR_W_JOURNAL];
;  634          1031  2 ATTRIBUTES [11, ATR$W_TYPE] = ATR$C_FNDACETYP;
;  635          1032  2 ATTRIBUTES [11, ATR$W_SIZE] = ATR$S_FNDACETYP;
;  636          1033  2 ATTRIBUTES [11, ATR$L_ADDR] = AI_JNLACE;
;  637          1034  2 ATTRIBUTES [12, ATR$W_TYPE] = ATR$C_FNDACETYP;
;  638          1035  2 ATTRIBUTES [12, ATR$W_SIZE] = ATR$S_FNDACETYP;
;  639          1036  2 ATTRIBUTES [12, ATR$L_ADDR] = BI_JNLACE;
;  640          1037  2 ATTRIBUTES [13, ATR$W_TYPE] = ATR$C_FNDACETYP;
;  641          1038  2 ATTRIBUTES [13, ATR$W_SIZE] = ATR$S_FNDACETYP;
;  642          1039  2 ATTRIBUTES [13, ATR$L_ADDR] = AT_JNLACE;
;  643          1040  2 ATTRIBUTES [14, ATR$W_TYPE] = ATR$C_ACLLENGTH;
;  644          1041  2 ATTRIBUTES [14, ATR$W_SIZE] = ATR$S_ACLLENGTH;
;  645          1042  2 ATTRIBUTES [14, ATR$L_ADDR] = ACL_LENGTH;
;  646          1043  2
;  647          1044  2 ! Set up for the ACE locate operation necessary to get the RMS journal
;  648          1045  2 ! information.
;  649          1046  2
;  650          1047  2 AI_JNLACE[ACE$B_SIZE] = 0;
;  651          1048  2 AI_JNLACE[ACE$B_TYPE] = ACE$C_AIJNL;
;  652          1049  2 BI_JNLACE[ACE$B_SIZE] = 0;
;  653          1050  2 BI_JNLACE[ACE$B_TYPE] = ACE$C_BIJNL;
;  654          1051  2 AT_JNLACE[ACE$B_SIZE] = 0;
;  655          1052  2 AT_JNLACE[ACE$B_TYPE] = ACE$C_ATJNL;
;  656          1053  2
;  657          1054  2 ! Issue the ACP QIO to get the needed information.
;  658          1055  2
;  659          1056  2 CH$FILL (0, FIB$C_LENGTH, FIB);
;  660          1057  2 CH$FILL (0, DSC$C_S_BLN, FIB_DESC);
;  661          1058  2 FIB_DESC[DSC$W_LENGTH] = FIB$C_LENGTH;
;  662          1059  2 FIB_DESC[DSC$A_POINTER] = FIB;
;  663          1060  2
;  664          1061  2 IF .QUAL_FLAGS[DIR_V_QUAL_FULL]                                    2C
;  665          1062  2 AND NOT .DISPLAY_BLOCK[DIR_V_SQD]
;  666          1063  2 THEN
;  667          1064  3     BEGIN
;  668          1065  3     FIB[FIB$W_DID_NUM] = .FILE_NAM[NAM$W_DID_NUM];
;  669          1066  3     FIB[FIB$W_DID_SEQ] = .FILE_NAM[NAM$W_DID_SEQ];                  3E
;  670          1067  3     FIB[FIB$W_DID_RVN] = .FILE_NAM[NAM$W_DID_RVN];
;  671          1068  3     CH$FILL (0, DSC$C_S_BLN, FILE_DESC);
;  672          1069  3     FILE_DESC[DSC$W_LENGTH] = .FILE_NAM[NAM$B_NAME] +
;  673          1070  3                               .FILE_NAM[NAM$B_TYPE] +
;  674          1071  3                               .FILE_NAM[NAM$B_VER];
;  675          1072  3     FILE_DESC[DSC$A_POINTER] = .FILE_NAM[NAM$L_NAME];
;  676          1073  3     END
;  677          1074  2 ELSE
;  678          1075  3     BEGIN
;  679          1076  3     FIB[FIB$W_FID_NUM] = .FILE_NAM[NAM$W_FID_NUM];
;  680          1077  3     FIB[FIB$W_FID_SEQ] = .FILE_NAM[NAM$W_FID_SEQ];
;  681          1078  3     FIB[FIB$W_FID_RVN] = .FILE_NAM[NAM$W_FID_RVN];
;  682          1079  2     END;
;  683          1080  2
;  684        P 1081  2 STATUS = $QIOW (FUNC = IO$_ACCESS,
;  685        P 1082  2                 CHAN = .CHANNEL,
;  686        P 1083  2                 IOSB = IOSTS,
;  687        P 1084  2                 P1 = FIB_DESC,
;  688        P 1085  2                 P2 = (IF .QUAL_FLAGS[DIR_V_QUAL_FULL]
;  689        P 1086  2                       AND NOT .DISPLAY_BLOCK[DIR_V_SQD]
```

```
;  690        P 1087  2                        THEN FILE_DESC ELSE 0),
;  691          1088  2                    P5 = ATTRIBUTES);
;  692          1089  2 IF .STATUS THEN STATUS = .IOSTS[0];
;  693          1090  2 IF NOT .STATUS
;  694          1091  2 THEN
;  695          1092  3     BEGIN
;  696          1093  3     $DASSGN (CHAN = .CHANNEL);
;  697          1094  3     CHANNEL = 0;
;  698          1095  3     RETURN .STATUS;
;  699          1096  2     END;
;  700          1097  2
;  701          1098  2 ! Fix up some of the information returned.
;  702          1099  2
;  703          1100  2 IF .DISPLAY_BLOCK[DIR_V_SQD]
;  704          1101  2 THEN
;  705          1102  3     BEGIN
;  706          1103  3     DISPLAY_BLOCK[DIR_L_HIBLK] = ROT (.ACP_STATISTICS[SBK$L_FILESIZE], 16);
;  707          1104  3     DISPLAY_BLOCK[DIR_L_EFBLK] = .DISPLAY_BLOCK[DIR_L_HIBLK];
;  708          1105  3     END
;  709          1106  2 ELSE
;  710          1107  3     BEGIN
;  711          1108  3     DISPLAY_BLOCK[DIR_L_HIBLK] = ROT (.DISPLAY_BLOCK[DIR_L_HIBLK], 16);
;  712          1109  3     IF (DISPLAY_BLOCK[DIR_L_EFBLK] = ROT (.DISPLAY_BLOCK[DIR_L_EFBLK], 16)) EQL 0
;  713          1110  3     THEN DISPLAY_BLOCK[DIR_L_EFBLK] = .DISPLAY_BLOCK[DIR_L_HIBLK]
;  714          1111  3     ELSE IF .DISPLAY_BLOCK[DIR_W_FFBYTE] EQL 0
;  715          1112  3          THEN DISPLAY_BLOCK[DIR_L_EFBLK] = .DISPLAY_BLOCK[DIR_L_EFBLK] - 1;
;  716          1113  2     END;
;  717          1114  2
;  718          1115  2 IF .DISPLAY_BLOCK[DIR_W_RSIZE] EQL 0
;  719          1116  2 THEN DISPLAY_BLOCK[DIR_W_RSIZE] = .DISPLAY_BLOCK[DIR_W_MAXREC];
;  720          1117  2 DISPLAY_BLOCK[DIR_W_VERLIMIT] = .FIB[FIB$W_VERLIMIT];
;  721          1118  2
;  722          1119  2 ! Check for any RMS journaling information in the file's ACL.
;  723          1120  2
;  724          1121  2 IF .AI_JNLACE[ACE$B_SIZE] NEQ 0
;  725          1122  2 THEN
;  726          1123  3     BEGIN
;  727          1124  3     DISPLAY_BLOCK[DIR_B_AI_SIZE] = .AI_JNLACE[ACE$B_SIZE] -
;  728          1125  3                                    $BYTEOFFSET (ACE$T_RMSJNLNAM);
;  729          1126  3     CH$MOVE (.DISPLAY_BLOCK[DIR_B_AI_SIZE], AI_JNLACE[ACE$T_RMSJNLNAM],
;  730          1127  3                                             DISPLAY_BLOCK[DIR_T_AI_NAME]);
;  731          1128  2     END;
;  732          1129  2 IF .BI_JNLACE[ACE$B_SIZE] NEQ 0
;  733          1130  2 THEN
;  734          1131  3     BEGIN
;  735          1132  3     DISPLAY_BLOCK[DIR_B_BI_SIZE] = .BI_JNLACE[ACE$B_SIZE] -
;  736          1133  3                                    $BYTEOFFSET (ACE$T_RMSJNLNAM);
;  737          1134  3     CH$MOVE (.DISPLAY_BLOCK[DIR_B_BI_SIZE], BI_JNLACE[ACE$T_RMSJNLNAM],
;  738          1135  3                                             DISPLAY_BLOCK[DIR_T_BI_NAME]);
;  739          1136  2     END;
;  740          1137  2 IF .AT_JNLACE[ACE$B_SIZE] NEQ 0
;  741          1138  2 THEN
;  742          1139  3     BEGIN
;  743          1140  3     DISPLAY_BLOCK[DIR_B_AT_SIZE] = .AT_JNLACE[ACE$B_SIZE] -
;  744          1141  3                                    $BYTEOFFSET (ACE$T_RMSJNLNAM);
;  745          1142  3     CH$MOVE (.DISPLAY_BLOCK[DIR_B_AT_SIZE], AT_JNLACE[ACE$T_RMSJNLNAM],
;  746          1143  3                                             DISPLAY_BLOCK[DIR_T_AT_NAME]);
```

```
;  747          1144  2     END;
;  748          1145  2
;  749          1146  2 ! Now copy the information obtained into the appropriate RMS data structures.
;  750          1147  2 ! This is necessary because the common qualifier package expects RMS data
;  751          1148  2 ! structures.  This is only done if one of the common qualifiers is given
;  752          1149  2 ! on the command line.
;  753          1150  2
;  754          1151  2 IF .QUAL_FLAGS[DIR_V_COMM_QUAL]
;  755          1152  2 THEN
;  756          1153  3     BEGIN
;  757          1154  3
;  758          1155  3 ! Fill in the FAB first.
;  759          1156  3
;  760          1157  3     IF .DISPLAY_BLOCK[DIR_V_CONTIG] THEN FILE_FAB[FAB$V_CTG] = 1;
;  761          1158  3     IF .DISPLAY_BLOCK[DIR_V_CONTIGB] THEN FILE_FAB[FAB$V_CBT] = 1;
;  762          1159  3     IF .DISPLAY_BLOCK[DIR_V_READCHECK] THEN FILE_FAB[FAB$V_RCK] = 1;
;  763          1160  3     IF .DISPLAY_BLOCK[DIR_V_MARKDEL] THEN FILE_FAB[FAB$V_TMP] = 1;
;  764          1161  3     IF .DISPLAY_BLOCK[DIR_V_WRITCHECK] THEN FILE_FAB[FAB$V_WCK] = 1;
;  765          1162  3
;  766          1163  3     FILE_FAB[FAB$L_ALQ] = .DISPLAY_BLOCK[DIR_L_HIBLK];
;  767          1164  3     FILE_FAB[FAB$B_BKS] = .DISPLAY_BLOCK[DIR_B_BKTSIZE];
;  768          1165  3     FILE_FAB[FAB$W_DEQ] = .DISPLAY_BLOCK[DIR_W_DEFEXT];
;  769          1166  3     FILE_FAB[FAB$B_FSZ] = .DISPLAY_BLOCK[DIR_B_VFCSIZE];
;  770          1167  3     FILE_FAB[FAB$W_GBC] = .DISPLAY_BLOCK[DIR_W_GBC];
;  771          1168  3     IF (FILE_FAB[FAB$W_MRS] = .DISPLAY_BLOCK[DIR_W_RSIZE]) EQL 0
;  772          1169  3     THEN FILE_FAB[FAB$Q_MRS] = .DISPLAY_BLOCK[DIR_Q_MAXREC];
;  773          1170  3     FILE_FAB[FAB$B_ORG] = .DISPLAY_BLOCK[DIR_V_FILEORG];
;  774          1171  3     FILE_FAB[FAB$B_RAT] = .DISPLAY_BLOCK[DIR_B_RATTRIB];
;  775          1172  3     FILE_FAB[FAB$B_RFM] = .DISPLAY_BLOCK[DIR_V_RTYPE];
;  776          1173  3     FILE_FAB[FAB$L_XAB] = .FIRST_XAB;
;  777          1174  3
;  778          1175  3 ! Now fill in the DATe XAB.
;  779          1176  3
;  780          1177  3     CH$MOVE (8, DISPLAY_BLOCK[DIR_Q_BAKDATE], INFO_XABDAT[XAB$Q_BDT]);
;  781          1178  3     CH$MOVE (8, DISPLAY_BLOCK[DIR_Q_CREDATE], INFO_XABDAT[XAB$Q_CDT]);
;  782          1179  3     CH$MOVE (8, DISPLAY_BLOCK[DIR_Q_EXPDATE], INFO_XABDAT[XAB$Q_EDT]);
;  783          1180  3     CH$MOVE (8, DISPLAY_BLOCK[DIR_Q_REVDATE], INFO_XABDAT[XAB$Q_RDT]);
;  784          1181  3     INFO_XABDAT[XAB$W_RVN] = .DISPLAY_BLOCK[DIR_W_REVISION];
;  785          1182  3
;  786          1183  3 ! Now for the File Header Characteristics XAB.
;  787          1184  3
;  788          1185  3     INFO_XABFHC[XAB$B_ATR] = .FILE_FAB[FAB$B_RAT];
;  789          1186  3     INFO_XABFHC[XAB$B_BKZ] = .FILE_FAB[FAB$B_BKS];
;  790          1187  3     INFO_XABFHC[XAB$W_DXQ] = .FILE_FAB[FAB$W_DEQ];
;  791          1188  3     INFO_XABFHC[XAB$L_EBK] = .DISPLAY_BLOCK[DIR_L_EFBLK];
;  792          1189  3     INFO_XABFHC[XAB$W_FFB] = .DISPLAY_BLOCK[DIR_W_FFBYTE];
;  793          1190  3     INFO_XABFHC[XAB$W_GBC] = .FILE_FAB[FAB$W_GBC];
;  794          1191  3     INFO_XABFHC[XAB$L_HBK] = .DISPLAY_BLOCK[DIR_L_HIBLK];
;  795          1192  3     INFO_XABFHC[XAB$B_HSZ] = .FILE_FAB[FAB$B_FSZ];
;  796          1193  3     INFO_XABFHC[XAB$W_MRZ] = .FILE_FAB[FAB$W_MRS];
;  797          1194  3     INFO_XABFHC[XAB$B_RFO] = .FILE_FAB[FAB$B_ORG];
;  798          1195  3     INFO_XABFHC[XAB$L_SBN] = .ACP_STATISTICS[SBK$L_STLBN];
;  799          1196  3     INFO_XABFHC[XAB$W_VERLIMIT] = .DISPLAY_BLOCK[DIR_W_VERLIMIT];
;  800          1197  3
;  801          1198  3 ! Now for the RMS journaling XAB.
;  802          1199  3
;  803          1200  3     IF (INFO_XABJNL[XAB$B_AIL] = .DISPLAY_BLOCK[DIR_B_AI_SIZE]) GTR 0
```

```
;   804          1201  3     THEN INFO_XABJNL[XAB$L_AIA] = DISPLAY_BLOCK[DIR_T_AI_NAME];
;   805          1202  3     IF (INFO_XABJNL[XAB$B_BIL] = .DISPLAY_BLOCK[DIR_B_BI_SIZE]) GTR 0
;   806          1203  3     THEN INFO_XABJNL[XAB$L_BIA] = DISPLAY_BLOCK[DIR_T_BI_NAME];
;   807          1204  3     IF (INFO_XABJNL[XAB$B_ATL] = .DISPLAY_BLOCK[DIR_B_AT_SIZE]) GTR 0
;   808          1205  3     THEN INFO_XABJNL[XAB$L_ATA] = DISPLAY_BLOCK[DIR_T_AT_NAME];
;   809          1206  3
;   810          1207  3 ! And now...The PROtection XAB.
;   811          1208  3
;   812          1209  3     INFO_XABPRO[XAB$W_PRO] = .DISPLAY_BLOCK[DIR_W_FILEPROT];
;   813          1210  3     INFO_XABPRO[XAB$L_UIC] = .DISPLAY_BLOCK[DIR_L_FILEOWNER];
;   814          1211  2     END;
;   815          1212  2
;   816          1213  2 ! Finally, if this is a relative or indexed file, obtain the information from
;   817          1214  2 ! the file's prolog.
;   818          1215  2
;   819          1216  2 IF (.DISPLAY_BLOCK[DIR_V_FILEORG] EQL DIR_C_RELATIVE
;   820          1217  3     OR .DISPLAY_BLOCK[DIR_V_FILEORG] EQL DIR_C_INDEXED)
;   821          1218  2 AND .QUAL_FLAGS[DIR_V_QUAL_FULL]
;   822          1219  2 THEN
;   823          1220  3     BEGIN
;   824          1221  3     LOCAL       OLD_FAB_LNK,
;   825          1222  3                 OLD_XAB_LNK;
;   826          1223  3     OLD_FAB_LNK = .FILE_FAB[FAB$L_XAB];
;   827          1224  3     OLD_XAB_LNK = .INFO_XABSUM[XAB$L_NXT];
;   828          1225  3     FILE_FAB[FAB$W_DEQ] = 0;                    ! Zero because RMS takes non-zero as input
;   829          1226  3     FILE_FAB[FAB$L_XAB] = INFO_XABSUM;
;   830          1227  3     INFO_XABSUM[XAB$L_NXT] = 0;
;   831          1228  4     IF $OPEN (FAB = .FILE_FAB)
;   832          1229  3     THEN
;   833           230  4         BEGIN
;   834           231  4         DISPLAY_BLOCK[DIR_L_MRN] = .FILE_FAB[FAB$L_MRN];
;   835           232  4         DISPLAY_BLOCK[DIR_B_NOKEYS] = .INFO_XABSUM[XAB$B_NOK];
;   836           233  4         DISPLAY_BLOCK[DIR_W_PVN] = .INFO_XABSUM[XAB$W_PVN];
;   837          1234  4         DISPLAY_BLOCK[DIR_B_NOAREAS] = .INFO_XABSUM[XAB$B_NOA];
;   838          1235  4         $CLOSE (FAB = .FILE_FAB);
;   839          1236  3         END;
;   840          1237  3     FILE_FAB[FAB$L_XAB] = .OLD_FAB_LNK;
;   841          1238  3     INFO_XABSUM[XAB$L_NXT] = .OLD_XAB_LNK;
;   842          1239  2     END;
;   843          1240  2
;   844          1241  2 RETURN .STATUS;
;   845          1242  2
;   846          1243  1 END;                                          ! End of routine DIRSACP_FILL


                                                    .EXTRN  SYS$DASSGN, SYS$ASSIGN
                                                    .EXTRN  SYS$QIOW, SYS$OPEN
                                                    .EXTRN  SYS$CLOSE

                                        0FFC 00000 DIRSACP_FILL:
                                                    .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11        ; 0916
                                   5E     FBE0  CE  9E 00002       MOVAB   -1056(SP), SP                   ;
                                   56       08  AC  D0 00007       MOVL    FILE_NAM, R6                    ; 0975
00000000'  EF        14  A6           10  29 0000B       CMPC3   #16, 20(R6), DEVICE_NAME                ;
                                           08  12 00014       BNEQ    1$                                  ;
                                00000000'  EF  D5 00016       TSTL    CHANNEL                             ; 0976
```

```
                                                57  12 0001C                BNEQ    3$                                                      ;
                                     50 00000000'  EF  D0 0001E  1$:        MOVL    CHANNEL, R0                                             ; 0979
                                                09  13 00025              BEQL    2$                                                      ;
                                                50  DD 00027              PUSHL   R0                                                      ;
                                 00000000G      00  FB 00029              CALLS   #1, SYS$DASSGN                                          ;
                00000000'  EF        14      A6  10  28 00030  2$:        MOVC3   #16, 20(R6), DEVICE_NAME                                ; 0980
        08              00                   6E  00  2C 00039              MOVC5   #0, (SP), #0, #8, DEVICE_DESC                           ; 0981
                                          F8    AD        0003E                                                                           ;
                                    F8    AD 00000000'  EF  9B 00040              MOVZBW  DEVICE_NAME, DEVICE_DESC                        ; 0982
                                    FC    AD 00000000'  EF  9E 00048              MOVAB   DEVICE_NAME+1, DEVICE_DESC+4                    ; 0983
                                                7E  7C 00050              CLRQ    -(SP)                                                   ; 0985
                                          00000000'  EF  9F 00052              PUSHAB  CHANNEL                                                 ;
                                             F8    AD  9F 00058              PUSHAB  DEVICE_DESC                                             ;
                                 00000000G      00  04  FB 0005B              CALLS   #4, SYS$ASSIGN                                          ;
                                                50  D0 00062              MOVL    R0, STATUS                                              ;
                                                0D  5B  E8 00065              BLBS    STATUS, 3$                                              ; 0986
        10              00                   6E  00  2C 00068              MOVC5   #0, (SP), #0, #16, DEVICE_NAME                          ; 0989
                                          00000000'  EF        0006D                                                                           ;
                                                   01C4  31 00072              BRW     9$                                                      ; 0990
    00A0    8F          00                   6E  00  2C 00075  3$:        MOVC5   #0, (SP), #0, #160, ATTRIBUTES                          ; 0997
                                             FF08    CD        0007C                                                                           ;
                                    FF08    CD 00040020   8F  D0 0007F              MOVL    #262176, ATTRIBUTES                             ; 0999
                                          57 00000000'  EF  D0 00088              MOVL    DISPLAY_BLOCK, R7                               ; 1000
                                    FF0C    CD     0129   C7  9E 0008F              MOVAB   297(R7), ATTRIBUTES+4                           ;
                                    FF10    CD 00110008   8F  D0 00096              MOVL    #1114120, ATTRIBUTES+8                          ; 1002
                                    FF14    CD     0170   C7  9E 0009F              MOVAB   368(R7), ATTRIBUTES+12                          ; 1003
                                    FF18    CD 00120008   8F  D0 000A6              MOVL    #1179656, ATTRIBUTES+16                         ; 1005
                                    FF1C    CD     0178   C7  9E 000AF              MOVAB   376(R7), ATTRIBUTES+20                          ; 1006
                                    FF20    CD 00130008   8F  D0 000B6              MOVL    #1245192, ATTRIBUTES+24                         ; 1008
                                    FF24    CD     0180   C7  9E 000BF              MOVAB   384(R7), ATTRIBUTES+28                          ; 1009
                                    FF28    CD 00140008   8F  D0 000C6              MOVL    #1310728, ATTRIBUTES+32                         ; 1011
                                    FF2C    CD     0188   C7  9E 000CF              MOVAB   392(R7), ATTRIBUTES+36                          ; 1012
                                    FF30    CD 00090020   8F  D0 000D6              MOVL    #589856, ATTRIBUTES+40                          ; 1014
                                    FF34    CD     FEE8   CD  9E 000DF              MOVAB   ACP_STATISTICS, ATTRIBUTES+44                   ; 1015
                                    FF38    CD 00150004   8F  D0 000E6              MOVL    #1376260, ATTRIBUTES+48                         ; 1017
                                    FF3C    CD     014E   C7  9E 000EF              MOVAB   334(R7), ATTRIBUTES+52                          ; 1018
                                    FF40    CD 00160002   8F  D0 000F6              MOVL    #1441794, ATTRIBUTES+56                         ; 1020
                                    FF44    CD     0152   C7  9E 000FF              MOVAB   338(R7), ATTRIBUTES+60                          ; 1021
                                    FF48    CD 00030004   8F  D0 00106              MOVL    #196612, ATTRIBUTES+64                          ; 1023
                                    FF4C    CD     0149   C7  9E 0010F              MOVAB   329(R7), ATTRIBUTES+68                          ; 1024
                                    FF50    CD 000D0002   8F  D0 00116              MOVL    #851970, ATTRIBUTES+72                          ; 1026
                                    FF54    CD     016E   C7  9E 0011F              MOVAB   366(R7), ATTRIBUTES+76                          ; 1027
                                    FF58    CD 001D0002   8F  D0 00126              MOVL    #1900546, ATTRIBUTES+80                         ; 1029
                                    FF5C    CD     0154   C7  9E 0012F              MOVAB   340(R7), ATTRIBUTES+84                          ; 1030
                                    FF60    CD 002300FF   8F  D0 00136              MOVL    #2294015, ATTRIBUTES+88                         ; 1032
                                    FF64    CD     0208   CE  9E 0013F              MOVAB   AI_JNLACE, ATTRIBUTES+92                        ; 1033
                                    FF68    CD 002300FF   8F  D0 00146              MOVL    #2294015, ATTRIBUTES+96                         ; 1035
                                    FF6C    CD     0108   CE  9E 0014F              MOVAB   BI_JNLACE, ATTRIBUTES+100                       ; 1036
                                    FF70    CD 002300FF   8F  D0 00156              MOVL    #2294015, ATTRIBUTES+104                        ; 1038
                                    FF74    CD        08   AE  9E 0015F              MOVAB   AT_JNLACE, ATTRIBUTES+108                       ; 1039
                                    FF78    CD 00260004   8F  D0 00165              MOVL    #2490372, ATTRIBUTES+112                        ; 1041
                                    FF7C    CD 00000000'  EF  9E 0016E              MOVAB   ACL_LENGTH, ATTRIBUTES+116                      ; 1042
                                    0208    CE     0300   8F  B0 00177              MOVW    #768, AI_JNLACE                                 ; 1047
                                    0108    CE     0200   8F  B0 0017E              MOVW    #512, BI_JNLACE                                 ; 1049
                                       08   AE     0400   8F  B0 00185              MOVW    #1024, AT_JNLACE                                ; 1051
    0040    8F          00                   6E  00  2C 0018B              MOVC5   #0, (SP), #0, #64, FIB                                  ; 1056
                                             A8    AD        00192                                                                           ;
```

```
                08              00              6E              00  2C 00194        MOVC5   #0, (SP), #0, #8, FIB_DESC                      ; 1057
                                                        E8      AD      00199
                                        E8      AD      40      8F  9B 0019B        MOVZBW  #64, FIB_DESC                                   ; 1058
                                        EC      AD      A8      AD  9E 001A0        MOVAB   FIB, FIB_DESC+4                                 ; 1059
                                31 00000000'    EF              01  E1 001A5        BBC     #1, QUAL_FLAGS+1, 4$                            ; 1061
                                2C              04      A7      01  EC 001AD        BBS     #1, 4(R7), 4$                                   ; 1062
                                        B2      AD      2A      A6  D0 001B2        MOVL    42(R6), FIB+10                                  ; 1065
                                        B6      AD      2E      A6  B0 001B7        MOVW    46(R6), FIB+14                                  ; 1067
                08              00              6E              00  2C 001BC        MOVC5   #0, (SP), #0, #8, FILE_DESC                     ; 1068
                                                        F0      AD      001C1
                                                50      3B      A6  9A 001C3        MOVZBL  59(R6), R0                                      ; 1070
                                                51      3C      A6  9A 001C7        MOVZBL  60(R6), R1
                                                50              51  C0 001CB        ADDL2   R1, R0
                                                52      3D      A6  9A 001CE        MOVZBL  61(R6), R2                                      ; 1071
                        F0      AD                      50      52  A1 001D2        ADDW3   R2, R0, FILE_DESC
                                        F4      AD      4C      A6  D0 001D7        MOVL    76(R6), FILE_DESC+4                             ; 1072
                                                        0A      11  001DC        BRB     5$                                              ; 1061
                                        AC      AD      24      A6  D0 001DE 4$:    MOVL    36(R6), FIB+4                                   ; 1076
                                        B0      AD      28      A6  B0 001E3        MOVW    40(R6), FIB+8                                   ; 1078
                                                        7E      D4  001E8 5$:       CLRL    -(SP)                                           ; 1088
                                                FF08    CD      9F  001EA        PUSHAB  ATTRIBUTES
                                                        7E      7C  001EE        CLRQ    -(SP)
                                0D 00000000'    EF              01  E1 001F0        BBC     #1, QUAL_FLAGS+1, 6$
                                08              04      A7      01  E0 001F8        BBS     #1, 4(R7), 6$
                                                50      F0      AD  9E 001FD        MOVAB   FILE_DESC, R0
                                                        50      DD  00201        PUSHL   R0
                                                        02      11  00203        BRB     7$
                                                        7E      D4  00205 6$:       CLRL    -(SP)
                                                E8      AD      9F  00207 7$:       PUSHAB  FIB_DESC
                                                        7E      7C  0020A        CLRQ    -(SP)
                                                20      AE      9F  0020C        PUSHAB  IOSTS
                                                        32      DD  0020F        PUSHL   #50
                                            00000000'   EF      DD  00211        PUSHL   CHANNEL
                                                        7E      D4  00217        CLRL    -(SP)
                00000000G       00                      0C      FB  00219        CALLS   #12, SYS$QIOW
                                58                      50      D0  00220        MOVL    R0, STATUS
                                06                      58      E9  00223        BLBC    STATUS, 8$                                      ; 1089
                                58                      6E      3C  00226        MOVZWL  IOSTS, STATUS
                                16                      58      E8  00229        BLBS    STATUS, 10$                                     ; 1090
                                            00000000'   EF      DD  0022C 8$:       PUSHL   CHANNEL                                         ; 1093
                00000000G       00                      01      FB  00232        CALLS   #1, SYS$DASSGN
                                            00000000'   EF      D4  00239 9$:       CLRL    CHANNEL                                         ; 1094
                                                    027B    31      0023F        BRW     32$                                             ; 1095
                                56 00000000'    EF              D0  00242 10$:      MOVL    DISPLAY_BLOCK, R6                               ; 1100
                                59      012D    C6              9E  00249        MOVAB   301(R6), R9                                     ; 1103
                                58      0131    C6              9E  0024E        MOVAB   305(R6), R8                                     ; 1104
                08      04      A6                      01      E1  00253        BBC     #1, 4(R6), 11$                                  ; 1100
                69      FEEC    CD                      10      9C  00258        ROTL    #16, ACP_STATISTICS+4, (R9)                     ; 1103
                                                        0A      11  0025E        BRB     12$                                             ; 1104
                69              69                      10      9C  00260 11$:      ROTL    #16, (R9), (R9)                                 ; 1108
                68              68                      10      9C  00264        ROTL    #16, (R8), (R8)                                 ; 1109
                                                        05      12  00268        BNEQ    13$
                                68                      69      D0  0026A 12$:      MOVL    (R9), (R8)                                      ; 1110
                                                        08      11  0026D        BRB     14$
                                        0135    C6              B5  0026F 13$:      TSTW    309(R6)                                         ; 1111
                                                        02      12  00273        BNEQ    14$
                                                        68      D7  00275        DECL    (R8)                                            ; 1112
```

```
                                5A    012B   C6  9E 00277 14$:    MOVAB   299(R6), R10                    ; 1115
                                             6A  B5 0027C        TSTW    (R10)                           ;
                                             05  12 0027E        BNEQ    15$                             ;
                                6A    0139   C6  B0 00280        MOVW    313(R6), (R10)                  ; 1116
                         011D   C6    D4     AD  B0 00285 15$:    MOVW    FIB+44, 285(R6)                 ; 1117
                                50    0208   CE  9A 0028B        MOVZBL  AI_JNLACE, R0                   ; 1121
                                             13  13 00290        BEQL    16$                             ;
          0198  C6                 50         04  83 00292        SUBB3   #4, R0, 408(R6)                 ; 1124
                                50    0198   C6  9A 00298        MOVZBL  408(R6), R0                     ; 1126
          0199  C6    020C       CE         50  28 0029D        MOVC3   R0, AI_JNLACE+4, 409(R6)        ; 1127
                                50    0108   CE  9A 002A5 16$:    MOVZBL  BI_JNLACE, R0                   ; 1129
                                             13  13 002AA        BEQL    17$                             ;
          01A9  C6                 50         04  83 002AC        SUBB3   #4, R0, 425(R6)                 ; 1132
                                50    01A9   C6  9A 002B2        MOVZBL  425(R6), R0                     ; 1134
          01AA  C6    010C       CE         50  28 002B7        MOVC3   R0, BI_JNLACE+4, 426(R6)        ; 1135
                                      08     AE  95 002BF 17$:    TSTB    AT_JNLACE                       ; 1137
                                             13  13 002C2        BEQL    18$                             ;
          01BA  C6      08         AE         04  83 002C4        SUBB3   #4, AT_JNLACE, 442(R6)          ; 1140
                                50    01BA   C6  9A 002CB        MOVZBL  442(R6), R0                     ; 1142
          01BB  C6      0C         AE         50  28 002D0        MOVC3   R0, AT_JNLACE+4, 443(R6)        ; 1143
                03 00000000'       EF         06  E0 002D7 18$:    BBS     #6, QUAL_FLAGS+3, 19$           ; 1151
                                             016B  31 002DF        BRW     29$                             ;
                                51    0149   C6  9E 002E2 19$:    MOVAB   329(R6), R1                     ; 1157
                                             61  95 002E7        TSTB    (R1)                            ;
                                             08  18 002E9        BGEQ    20$                             ;
                                50      04   AC  D0 002EB        MOVL    FILE_FAB, R0                    ;
                                   06   A0         10  88 002EF        BISB2   #16, 6(R0)                      ;
                                08           61      05  E1 002F3 20$:    BBC     #5, (R1), 21$           ; 1158
                                50      04   AC  D0 002F7        MOVL    FILE_FAB, R0                    ;
                                   06   A0         20  88 002FB        BISB2   #32, 6(R0)                      ;
                                09           61      03  E1 002FF 21$:    BBC     #3, (R1), 22$           ; 1159
                                50      04   AC  D0 00303        MOVL    FILE_FAB, R0                    ;
                                   06   A0    80   8F  88 00307        BISB2   #128, 6(R0)                     ;
                                             61  B5 0030C 22$:    TSTW    (R1)                            ; 1160
                                             09  18 0030E        BGEQ    23$                             ;
                                50      04   AC  D0 00310        MOVL    FILE_FAB, R0                    ;
                                   04   A0         08  88 00314        BISB2   #8, 4(R0)                       ;
                                08           61      04  E1 00318 23$:    BBC     #4, (R1), 24$           ; 1161
                                50      04   AC  D0 0031C        MOVL    FILE_FAB, R0                    ;
                                   05   A0         02  88 00320        BISB2   #2, 5(R0)                       ;
                                57      04   AC  D0 00324 24$:    MOVL    FILE_FAB, R7                    ; 1163
                                   10   A7         69  D0 00328        MOVL    (R9), 16(R7)                    ;
                                   14   A7    013B   C6  B0 0032C        MOVW    315(R6), 20(R7)         ; 1165
                                   3E   A7    0137   C6  B0 00332        MOVW    311(R6), 62(R7)         ; 1164
                                   48   A7    013D   C6  B0 00338        MOVW    317(R6), 72(R7)         ; 1167
                                   36   A7           6A  B0 0033E        MOVW    (R10), 54(R7)           ; 1168
                                             06  12 00342        BNEQ    25$                             ;
                                   36   A7    0139   C6  B0 00344        MOVW    313(R6), 54(R7)         ; 1169
     50         0129  C6                 04          04  EF 0034A 25$:    EXTZV   #4, #4, 297(R6), R0     ; 1170
                                   1D   A7           50  90 00351        MOVB    R0, 29(R7)              ;
                                   1E   A7    012A   C6  90 00355        MOVB    298(R6), 30(R7)         ; 1171
     50         0129  C6                 04          00  EF 0035B        EXTZV   #0, #4, 297(R6), R0     ; 1172
                                   1F   A7           50  90 00362        MOVB    R0, 31(R7)              ;
                                   24   A7 00000000' EF  D0 00366        MOVL    FIRST_XAB, 36(R7)       ; 1173
          00000000'  EF    0188   C6                 08  28 0036E        MOVC3   #8, 392(R6), INFO_XABDAT+36 ; 1177
          00000000'  EF    0170   C6                 08  28 00378        MOVC3   #8, 368(R6), INFO_XABDAT+20 ; 1178
          00000000'  EF    0180   C6                 08  28 00382        MOVC3   #8, 384(R6), INFO_XABDAT+28 ; 1179
```

```
                00000000'  EF     0178   C6          08  28 0038C          MOVC3   #8, 376(R6), INFO_XABDAT+12                ; 1180
                           00000000'  EF     016E   C6  B0 00396          MOVW    366(R6), INFO_XABDAT+8                     ; 1181
                           00000000'  EF       1D   A7  B0 0039F          MOVW    29(R7), INFO_XABFHC+8                      ; 1194
                           00000000'  EF       14   A7  B0 003A7          MOVW    20(R7), INFO_XABFHC+26                     ; 1187
                           00000000'  EF            68  D0 003AF          MOVL    (R8), INFO_XABFHC+16                       ; 1188
                           00000000'  EF     0135   C6  B0 003B6          MOVW    309(R6), INFO_XABFHC+20                    ; 1189
                           00000000'  EF       48   A7  B0 003BF          MOVW    72(R7), INFO_XABFHC+28                     ; 1190
                           00000000'  EF            69  D0 003C7          MOVL    (R9), INFO_XABFHC+12                       ; 1191
                           00000000'  EF       3E   A7  B0 003CE          MOVW    62(R7), INFO_XABFHC+22                     ; 1186
                           00000000'  EF       36   A7  B0 003D6          MOVW    54(R7), INFO_XABFHC+24                     ; 1193
                           00000000'  EF     FEE8   CD  D0 003DE          MOVL    ACP_STATISTICS, INFO_XABFHC+40             ; 1195
                           00000000'  EF     011D   C6  B0 003E7          MOVW    285(R6), INFO_XABFHC+38                    ; 1196
                                      50     0198   C6  9A 003F0          MOVZBL  408(R6), R0                                ; 1200
                           00000000'  EF                50  90 003F5          MOVB    R0, INFO_XABJNL+21                         ;
                                                        50  D5 003FC          TSTL    R0                                         ;
                                                        09  15 003FE          BLEQ    26$                                        ;
                           00000000'  EF     0199   C6  9E 00400          MOVAB   409(R6), INFO_XABJNL+24                    ; 1201
                                      50     01A9   C6  9A 00409  26$:       MOVZBL  425(R6), R0                                ; 1202
                           00000000'  EF                50  90 0040E          MOVB    R0, INFO_XABJNL+13                         ;
                                                        50  D5 00415          TSTL    R0                                         ;
                                                        09  15 00417          BLEQ    27$                                        ;
                           00000000'  EF     01AA   C6  9E 00419          MOVAB   426(R6), INFO_XABJNL+16                    ; 1203
                                      50     01BA   C6  9A 00422  27$:       MOVZBL  442(R6), R0                                ; 1204
                           00000000'  EF                50  90 00427          MOVB    R0, INFO_XABJNL+29                         ;
                                                        50  D5 0042E          TSTL    R0                                         ;
                                                        09  15 00430          BLEQ    28$                                        ;
                           00000000'  EF     01BB   C6  9E 00432          MOVAB   443(R6), INFO_XABJNL+32                    ; 1205
                           00000000'  EF     0152   C6  B0 0043B  28$:       MOVW    338(R6), INFO_XABPRO+8                     ; 1209
                           00000000'  EF     014E   C6  D0 00444          MOVL    334(R6), INFO_XABPRO+12                    ; 1210
                01     0129   C6                   04  04  ED 0044D  29$:       CMPZV   #4, #4, 297(R6), #1                        ; 1216
                                                        09  13 00454          BEQL    30$                                        ;
                02     0129   C6                   04  04  ED 00456          CMPZV   #4, #4, 297(R6), #2                        ; 1217
                                                        5E  12 0045D          BNEQ    32$                                        ;
                                56 00000000'  EF           01  E1 0045F  30$:       BBC     #1, QUAL_FLAGS+1, 32$                      ; 1218
                                              52     04    AC  D0 00467          MOVL    FILE_FAB, R2                               ; 1223
                                              54     24    A2  D0 0046B          MOVL    36(R2), OLD_FAB_LNK                        ;
                                              53 00000000'  EF  D0 0046F          MOVL    INFO_XABSUM+4, OLD_XAB_LNK                 ; 1224
                                                   14       A2  B4 00476          CLRW    20(R2)                                     ; 1225
                                                24    A2 00000000'  EF  9E 00479          MOVAB   INFO_XABSUM, 36(R2)                ; 1226
                                                   00000000'  EF  D4 00481          CLRL    INFO_XABSUM+4                              ; 1227
                                                              52  DD 00487          PUSHL   R2                                         ; 1228
                                         00000000G   00           01  FB 00489          CALLS   #1, SYS$OPEN                       ;
                                                     1F           50  E9 00490          BLBC    R0, 31$                            ;
                                                     50 00000000'  EF  D0 00493          MOVL    DISPLAY_BLOCK, R0                  ; 1231
                                                0190 C0       38    A2  D0 0049A          MOVL    56(R2), 400(R0)                    ;
                                                0194 C0 00000000'  EF  D0 004A0          MOVL    INFO_XABSUM+8, 404(R0)             ; 1234
                                                              52  DD 004A9          PUSHL   R2                                         ; 1235
                                         00000000G   00           01  FB 004AB          CALLS   #1, SYS$CLOSE                      ;
                                                  24 A2           54  D0 004B2  31$:       MOVL    OLD_FAB_LNK, 36(R2)                ; 1237
                                         00000000'  EF           53  D0 004B6          MOVL    OLD_XAB_LNK, INFO_XABSUM+4         ; 1238
                                                     50           5B  D0 004BD  32$:       MOVL    STATUS, R0                         ; 1241
                                                                  04  004C0          RET                                        ; 1243

; Routine Size:  1217 bytes,    Routine Base:  $CODE$ + 0285
```

```
;  848          1244  1 ROUTINE DIR$SHOW_INFO =
;  849          1245  1
;  850          1246  1 !++
;  851          1247  1 !
;  852          1248  1 ! FUNCTIONAL DESCRIPTION:
;  853          1249  1 !       Display gathered information
;  854          1250  1 !
;  855          1251  1 ! CALLING SEQUENCE:
;  856          1252  1 !       DIR$SHOW_INFO ()
;  857          1253  1 !
;  858          1254  1 ! INPUT PARAMETERS:
;  859          1255  1 !       none
;  860          1256  1 !
;  861          1257  1 ! IMPLICIT INPUTS:
;  862          1258  1 !       none
;  863          1259  1 ! OUTPUT PARAMETERS:
;  864          1260  1 !       none
;  865          1261  1 !
;  866          1262  1 ! IMPLICIT OUTPUTS:
;  867          1263  1 !       none
;  868          1264  1 !
;  869          1265  1 ! ROUTINE VALUE:
;  870          1266  1 !       1
;  871          1267  1 !
;  872          1268  1 ! SIDE EFFECTS:
;  873          1269  1 !       none
;  874          1270  1 !
;  875          1271  1 !--
;  876          1272  1
;  877          1273  2 BEGIN
;  878          1274  2
;  879          1275  2 LOCAL
;  880          1276  2         HEADER_LEN,                             ! Length of file prefix
;  881          1277  2         FILENAME_LEN,                           ! Length of the file name
;  882          1278  2         NAME_LEN,                               ! File name length minus version
;  883          1279  2         SPACE_COUNT,                            ! Number of spaces to pad
;  884          1280  2         LOCAL_DESC      : $BBLOCK [DSC$C_S_BLN],        ! Local text descriptor
;  885          1281  2         MARK_POSITION,                          ! Saved line position
;  886          1282  2         COLUMN_BEGIN;                           ! Beginning position of column
;  887          1283  2
;  888          1284  2 EXTERNAL ROUTINE
;  889          1285  2         DIR$OUTPUT;                             ! General output routine
;  890          1286  2
;  891          1287  2 ! See if it is necessary and time to do the header & trailer information.
;  892          1288  2
;  893          1289  2 HEADER_LEN = .DISPLAY_BLOCK[DIR_B_NODE] +
;  894          1290  2                .DISPLAY_BLOCK[DIR_B_DEV] +
;  895          1291  2                .DISPLAY_BLOCK[DIR_B_DIR];
;  896          1292  2 FILENAME_LEN = .DISPLAY_BLOCK[DIR_B_FNS] - .HEADER_LEN;
;  897          1293  2 NAME_LEN = .DISPLAY_BLOCK[DIR_B_FNS] - .DISPLAY_BLOCK[DIR_B_VER];
;  898          1294  2
;  899          1295  2 IF CH$NEQ (.PREV_DIR_LEN, PREV_DIR, .HEADER_LEN, DISPLAY_BLOCK[DIR_T_FILENAME])
;  900          1296  2 THEN
;  901          1297  3     BEGIN
;  902          1298  3     IF .LINE_DESC[DSC$W_LENGTH] GTR 0
;  903          1299  3     THEN
;  904          1300  4         BEGIN
```

```
;  905     1301  4          DIR$OUTPUT (0, LINE_DESC);
;  906     1302  4          COLUMN_INDEX = 0
;  907     1303  3          END;
;  908     1304  3      IF .PREV_DIR_LEN NEQ 0 THEN DIR$TOTAL ();
;  909     1305  3      PREV_DIR_LEN = .HEADER_LEN;
;  910     1306  3      CH$MOVE (.HEADER_LEN, DISPLAY_BLOCK[DIR_T_FILENAME], PREV_DIR);
;  911     1307  3      IF .QUAL_FLAGS[DIR_V_QUAL_HEAD]
;  912     1308  3      AND NOT .QUAL_FLAGS[DIR_V_QUAL_GRAN]
;  913     1309  3      THEN
;  914     1310  4          BEGIN
;  915     1311  4          WRITE (0, '');
;  916     1312  4          WRITE (DIR$_NEWDIRECT, 0, .PREV_DIR_LEN, PREV_DIR);
;  917     1313  4          IF NOT .QUAL_FLAGS[DIR_V_QUAL_TOTL] THEN WRITE (0, '');
;  918     1314  3          END;
;  919     1315  2      END;
;  920     1316  2
;  921     1317  2 ! Check for another version of the same file.
;  922     1318  2
;  923     1319  2 IF .VERSION_COUNT GTR 0
;  924     1320  2 THEN
;  925     1321  3      BEGIN
;  926     1322  3      IF CH$EQL (.PREV_FILE_LEN, PREV_FILE,
;  927     1323  3                 .NAME_LEN, DISPLAY_BLOCK[DIR_T_FILENAME], 0)
;  928     1324  3      THEN VERSION_INDEX = .VERSION_INDEX + 1
;  929     1325  3      ELSE
;  930     1326  4          BEGIN
;  931     1327  4          PREV_FILE_LEN = .NAME_LEN;
;  932     1328  4          CH$MOVE (.NAME_LEN, DISPLAY_BLOCK[DIR_T_FILENAME], PREV_FILE);
;  933     1329  4          VERSION_INDEX = 0;
;  934     1330  3          END;
;  935     1331  3      IF .VERSION_INDEX GEQ .VERSION_COUNT THEN RETURN 1;
;  936     1332  2      END;
;  937     1333  2
;  938     1334  2 ! Update the running totals.
;  939     1335  2
;  940     1336  2 TOTAL_USED = .TOTAL_USED + .DISPLAY_BLOCK[DIR_L_EFBLK];
;  941     1337  2 TOTAL_ALLOC = .TOTAL_ALLOC + .DISPLAY_BLOCK[DIR_L_HIBLK];
;  942     1338  2 TOTAL_FILES = .TOTAL_FILES + 1;
;  943     1339  2
;  944     1340  2 IF .QUAL_FLAGS[DIR_V_QUAL_TOTL] OR .QUAL_FLAGS[DIR_V_QUAL_GRAN] THEN RETURN 1;
;  945     1341  2
;  946     1342  2 ! Build the line using the requested informatation.
;  947     1343  2
;  948     1344  2 IF .COLUMN_INDEX GEQ .COLUMN_COUNT
;  949     1345  2 THEN
;  950     1346  3      BEGIN
;  951     1347  3      IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN DIR$OUTPUT (0, LINE_DESC);
;  952     1348  3      COLUMN_INDEX = 0;
;  953     1349  2      END;
;  954     1350  2 COLUMN_BEGIN = MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  955     1351  2
;  956     1352  2 IF NOT .QUAL_FLAGS[DIR_V_QUAL_HEAD]
;  957     1353  2 THEN APPEND (0, '!AD', .HEADER_LEN, DISPLAY_BLOCK[DIR_T_FILENAME]);
;  958   P 1354  2 APPEND (0, '!AD', .FILENAME_LEN, VECTOR [DISPLAY_BLOCK[DIR_T_FILENAME],
;  959     1355  2                                          .HEADER_LEN, .BYTE]);
;  960     1356  2 IF .LINE_DESC[DSC$W_LENGTH] GEQ .DISPLAY_WIDTH
;  961     1357  2 THEN
```

```
;  962          1358  3     BEGIN
;  963          1359  3     LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  964          1360  3     DIR$OUTPUT (0, LINE_DESC);
;  965          1361  3     COLUMN_BEGIN = MARK_POSITION = 0;
;  966          1362  3     COLUMN_INDEX = 0;
;  967          1363  3     IF NOT .QUAL_FLAGS[DIR_V_QUAL_HEAD]
;  968          1364  3     THEN APPEND (0, '!AD', .HEADER_LEN, DISPLAY_BLOCK[DIR_T_FILENAME]);
;  969        P 1365  3     APPEND (0, '!AD', FILENAME_LEN, VECTOR [DISPLAY_BLOCK[DIR_T_FILENAME],
;  970          1366  3                                            .HEADER_LEN; ,BYTE]);
;  971          1367  2     END;
;  972          1368  2
;  973          1369  2 SPACE_COUNT = .FILENAME_WIDTH - .LINE_DESC[DSC$W_LENGTH] +
;  974          1370  2                               .MARK_POSITION;
;  975          1371  2 IF .SPACE_COUNT LEQ 0
;  976          1372  2 THEN
;  977          1373  3     BEGIN
;  978          1374  3     IF .COLUMN_COUNT EQL 1
;  979          1375  3     THEN
;  980          1376  4         BEGIN
;  981          1377  4         DIR$OUTPUT (0, LINE_DESC);
;  982          1378  4         COLUMN_BEGIN = 0;
;  983          1379  4         IF .QUAL_FLAGS[DIR_V_QUAL_FID] OR .QUAL_FLAGS[DIR_V_QUAL_SIZE]
;  984          1380  4         OR .QUAL_FLAGS[DIR_V_QUAL_DATE] OR .QUAL_FLAGS[DIR_V_QUAL_OWNE]
;  985          1381  4         OR .QUAL_FLAGS[DIR_V_QUAL_PROT]
;  986          1382  4         THEN APPEND (0, '!#* ', .FILENAME_WIDTH);
;  987          1383  4         END
;  988          1384  3     ELSE
;  989          1385  4         BEGIN
;  990          1386  4         IF .QUAL_FLAGS[DIR_V_QUAL_BRIE]
;  991          1387  4         AND NOT .QUAL_FLAGS[DIR_V_QUAL_SIZE]
;  992          1388  4         AND NOT .QUAL_FLAGS[DIR_V_QUAL_DATE]
;  993          1389  4         AND NOT .QUAL_FLAGS[DIR_V_QUAL_OWNE]
;  994          1390  4         AND NOT .QUAL_FLAGS[DIR_V_QUAL_PROT]
;  995          1391  4         AND NOT .QUAL_FLAGS[DIR_V_QUAL_FID]
;  996          1392  4         THEN
;  997          1393  5             BEGIN
;  998          1394  5             COLUMN_INDEX = .COLUMN_INDEX +
;  999          1395  6                            ((.LINE_DESC[DSC$W_LENGTH] - .COLUMN_BEGIN) /
; 1000          1396  5                            .COLUMN_WIDTH);
; 1001          1397  5             COLUMN_BEGIN = .COLUMN_BEGIN +
; 1002          1398  6                            ((.LINE_DESC[DSC$W_LENGTH] - .COLUMN_BEGIN) /
; 1003          1399  5                            .COLUMN_WIDTH) * .COLUMN_WIDTH;
; 1004          1400  5             END
; 1005          1401  4         ELSE
; 1006          1402  5             BEGIN
; 1007          1403  5             LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION + .FILENAME_WIDTH;
; 1008          1404  5             LINE_BUFFER[.LINE_DESC[DSC$W_LENGTH] - 1] = '!'
; 1009          1405  4             END;
; 1010          1406  3         END;
; 1011          1407  3     END
; 1012          1408  2 ELSE APPEND (0, '!#* ', .SPACE_COUNT);
; 1013          1409  2
; 1014          1410  2 ! Check to see if an error occurred opening the file.
; 1015          1411  2
; 1016          1412  2 IF NOT .DISPLAY_BLOCK[DIR_L_STATUS]
; 1017          1413  2 THEN
; 1018          1414  3     BEGIN
```

```
;  1019          1415  3      CH$FILL (0, DSC$C_S_BLN, LOCAL_DESC);
;  1020          1416  3      LOCAL_DESC[DSC$W_LENGTH] = 1024 - .LINE_DESC[DSC$W_LENGTH];
;  1021          1417  3      LOCAL_DESC[DSC$A_POINTER] = LINE_BUFFER[.LINE_DESC[DSC$W_LENGTH]];
;  1022        P 1418  3      $GETMSG (MSGID = .DISPLAY_BLOCK[DIR_L_STATUS],
;  1023        P 1419  3               MSGLEN = LOCAL_DESC,
;  1024        P 1420  3               BUFADR = LOCAL_DESC,
;  1025          1421  3               FLAGS = 1);
;  1026          1422  3      LINE_DESC[DSC$W_LENGTH] = .LINE_DESC[DSC$W_LENGTH] + .LOCAL_DESC[DSC$W_LENGTH];
;  1027          1423  3      IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1028          1424  3      THEN
;  1029          1425  4          BEGIN
;  1030          1426  4          LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1031          1427  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN DIR$OUTPUT (0, LINE_DESC);
;  1032          1428  4          LINE_DESC[DSC$W_LENGTH] = .LOCAL_DESC[DSC$A_POINTER] +
;  1033          1429  4                                    .LOCAL_DESC[DSC$W_LENGTH] -
;  1034          1430  4                                    LINE_BUFFER[.MARK_POSITION];
;  1035          1431  4          CH$MOVE (.LINE_DESC[DSC$W_LENGTH], LINE_BUFFER[.MARK_POSITION],
;  1036          1432  4                                             LINE_BUFFER);
;  1037          1433  3          END;
;  1038          1434  3      DIR$OUTPUT (0, LINE_DESC);
;  1039          1435  3      COLUMN_INDEX = 0;
;  1040          1436  3      RETURN 1;
;  1041          1437  2      END;
;  1042          1438  2
;  1043          1439  2  ! No errors were encountered.  Fill the line with the requested information.
;  1044          1440  2
;  1045          1441  2  IF .QUAL_FLAGS[DIR_V_QUAL_FID]
;  1046          1442  2  THEN
;  1047          1443  3      BEGIN
;  1048          1444  3      IF .DISPLAY_BLOCK[DIR_W_FID_NUM] NEQ 0
;  1049          1445  3      OR .DISPLAY_BLOCK[DIR_W_FID_SEQ] NEQ 0
;  1050          1446  3      OR .DISPLAY_BLOCK[DIR_W_FID_RVN] NEQ 0
;  1051        P 1447  3      THEN APPEND (0, '  !19<(!UW,!UW,!UW)!>', .DISPLAY_BLOCK[DIR_W_FID_NUM],
;  1052        P 1448  3                                            .DISPLAY_BLOCK[DIR_W_FID_SEQ],
;  1053          1449  3                                            .DISPLAY_BLOCK[DIR_W_FID_RVN])
;  1054          1450  3      ELSE APPEND (DIR$_NOBRFILEID);
;  1055          1451  2      END;
;  1056          1452  2
;  1057          1453  2  IF .QUAL_FLAGS[DIR_V_QUAL_SIZE]
;  1058          1454  2  THEN
;  1059          1455  3      BEGIN
;  1060          1456  3      IF .QUAL_FLAGS[DIR_V_SIZE_ALL]
;  1061        P 1457  3      THEN APPEND (0, '  !#UL/!#<!UL!>', .SIZE_WIDTH,
;  1062        P 1458  3                                         .DISPLAY_BLOCK[DIR_L_EFBLK],
;  1063        P 1459  3                                         .SIZE_WIDTH,
;  1064          1460  3                                         .DISPLAY_BLOCK[DIR_L_HIBLK])
;  1065        P 1461  3      ELSE APPEND (0, '  !#UL', .SIZE_WIDTH,
;  1066        P 1462  3                                (IF .QUAL_FLAGS[DIR_V_SIZE_USED]
;  1067        P 1463  3                                THEN .DISPLAY_BLOCK[DIR_L_EFBLK]
;  1068          1464  3                                ELSE .DISPLAY_BLOCK[DIR_L_HIBLK]));
;  1069          1465  2      END;
;  1070          1466  2
;  1071          1467  2  IF .QUAL_FLAGS[DIR_V_QUAL_DATE]
;  1072          1468  2  THEN
;  1073          1469  3      BEGIN
;  1074          1470  3      IF .QUAL_FLAGS[DIR_V_DATE_CRE]
;  1075          1471  3      THEN IF .DISPLAY_BLOCK[DIR_L_CDT0] EQL 0 AND .DISPLAY_BLOCK[DIR_L_CDT4] EQL 0
```

```
;  1076     1472  3            THEN APPEND (DIR$_NOBRCREDAT)
;  1077     1473  3            ELSE APPEND (0, '  !17%D', DISPLAY_BLOCK[DIR_L_CDT0]);
;  1078     1474  3        IF .QUAL_FLAGS[DIR_V_DATE_MOD]
;  1079     1475  3        THEN IF .DISPLAY_BLOCK[DIR_L_RDT0] EQL 0 AND .DISPLAY_BLOCK[DIR_L_RDT4] EQL 0
;  1080     1476  3            THEN APPEND (DIR$_NOBRREVDAT)
;  1081     1477  3            ELSE APPEND (0, '  !17%D', DISPLAY_BLOCK[DIR_L_RDT0]);
;  1082     1478  3        IF .QUAL_FLAGS[DIR_V_DATE_EXP]
;  1083     1479  3        THEN IF .DISPLAY_BLOCK[DIR_L_EDT0] EQL 0 AND .DISPLAY_BLOCK[DIR_L_EDT4] EQL 0
;  1084     1480  3            THEN APPEND (DIR$_NOBREXPDAT)
;  1085     1481  3            ELSE APPEND (0, '  !17%D', DISPLAY_BLOCK[DIR_L_EDT0]);
;  1086     1482  3        IF .QUAL_FLAGS[DIR_V_DATE_BAK]
;  1087     1483  3        THEN IF .DISPLAY_BLOCK[DIR_L_BDT0] EQL 0 AND .DISPLAY_BLOCK[DIR_L_BDT4] EQL 0
;  1088     1484  3            THEN APPEND (DIR$_NOBRBAKDAT)
;  1089     1485  3            ELSE APPEND (0, '  !17%D', DISPLAY_BLOCK[DIR_L_BDT0]);
;  1090     1486  2        END;
;  1091     1487  2    MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1092     1488  2
;  1093     1489  2    IF .QUAL_FLAGS[DIR_V_QUAL_OWNE]
;  1094     1490  2    THEN IF .DISPLAY_BLOCK[DIR_B_NODE] EQL 0
;  1095     1491  2         THEN APPEND (0, '  !#?!%I!>', .OWNER_WIDTH, .DISPLAY_BLOCK[DIR_L_FILEOWNER])
;  1096     1492  2         ELSE APPEND (0, '  !#%U', .OWNER_WIDTH, .DISPLAY_BLOCK[DIR_L_FILEOWNER]);
;  1097     1493  2
;  1098     1494  2    IF .QUAL_FLAGS[DIR_V_QUAL_PROT]
;  1099     1495  2    THEN
;  1100     1496  3        BEGIN
;  1101     1497  3        APPEND (0, '  (');
;  1102     1498  3        INCR J FROM 0 TO 3
;  1103     1499  3        DO
;  1104     1500  4            BEGIN
;  1105     1501  4            DIR$APPEND (0, .PROT_TABLE[.(DISPLAY_BLOCK[DIR_W_FILEPROT])<.J*4,4>]);
;  1106     1502  4            IF .J LSS 3 THEN APPEND (0, ',');
;  1107     1503  3            END;
;  1108     1504  3        APPEND (0, ')');
;  1109     1505  2        END;
;  1110     1506  2
;  1111     1507  2    IF .QUAL_FLAGS[DIR_V_QUAL_ACL] AND .ACL_LENGTH GTR 0
;  1112     1508  2    THEN
;  1113     1509  3        BEGIN
;  1114     1510  3        IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN DIR$OUTPUT (0, LINE_DESC);
;  1115     1511  3        DIR$SHOW_ACL ();
;  1116     1512  2        END;
;  1117     1513  2
;  1118     1514  2    COLUMN_INDEX = .COLUMN_INDEX + 1;
;  1119     1515  2    SPACE_COUNT = .COLUMN_WIDTH - .LINE_DESC[DSC$W_LENGTH] + .COLUMN_BEGIN;
;  1120     1516  2    IF .COLUMN_COUNT GTR 1
;  1121     1517  2    AND .COLUMN_INDEX LSS .COLUMN_COUNT
;  1122     1518  2    THEN APPEND (0, '!#* ', .SPACE_COUNT);
;  1123     1519  2
;  1124     1520  2    RETURN 1;
;  1125     1521  2
;  1126     1522  1    END;                                        ! End of routine DIR$SHOW_INFO


                                                                .PSECT  $PLIT$,NOWRT,NOEXE,2
                                                    000BC P.ABH:  .BLKB   0                                         ;
```

```
                00000000  000BC P.ABG:  .LONG   0                                                                ;
                00000000' 000C0         .ADDRESS P.ABH                                                         ;
                      00  000C4 P.ABJ:  .BYTE   0                                                               ;
                          000C5         .BLKB   3                                                              ;
                00000001  000C8 P ABI:  .LONG   1                                                               ;
                00000000' 000CC         .ADDRESS P.ABJ                                                         ;
                          000D0 P.ABL:  .BLKB   0                                                               ;
                00000000  000D0 P.ABK:  .LONG   0                                                               ;
                00000000' 000D4         .ADDRESS P.ABL                                                         ;
             44  41  21   000D8 P.ABN:  .ASCII  \!AD\                                                          ;
                          000DB         .BLKB   1                                                              ;
                00000003  000DC P.ABM:  .LONG   3                                                               ;
                00000000' 000E0         .ADDRESS P.ABN                                                         ;
             44  41  21   000E4 P.ABP:  .ASCII  \!AD\                                                          ;
                          000E7         .BLKB   1                                                              ;
                00000003  000E8 P.ABO:  .LONG   3                                                               ;
                00000000' 000EC         .ADDRESS P.ABP                                                         ;
             44  41  21   000F0 P.ABR:  .ASCII  \!AD\                                                          ;
                          000F3         .BLKB   1                                                              ;
                00000003  000F4 P.ABQ:  .LONG   3                                                               ;
                00000000' 000F8         .ADDRESS P.ABR                                                         ;
             44  41  21   000FC P.ABT:  .ASCII  \!AD\                                                          ;
                          000FF         .BLKB   1                                                              ;
                00000003  00100 P.ABS:  .LONG   3                                                               ;
                00000000' 00104         .ADDRESS P.ABT                                                         ;
          20  2A  23  21  00108 P.ABV:  .ASCII  \!#* \                                                         ;
                00000004  0010C P.ABU:  .LONG   4                                                               ;
                00000000' 00110         .ADDRESS P.ABV                                                         ;
          20  2A  23  21  00114 P.ABX:  .ASCII  \!#* \                                                         ;
                00000004  00118 P.ABW:  .LONG   4                                                               ;
                00000000' 0011C         .ADDRESS P.ABX                                                         ;
2C  57  55  21  2C  57  55  21  28  3C  39  31  21  20  20  00120 P.ABZ:  .ASCII  \  !19<(!UW,!UW,!UW)!>\                                ;
                            3E  21  29  57  55  21  0012F                                                       ;
                                        00135       .BLKB   3                                                   ;
                                00000015  00138 P.ABY:  .LONG   21                                              ;
                                00000000' 0013C         .ADDRESS P.ABZ                                          ;
3E  21  4C  55  21  3C  23  21  2F  4C  55  23  21  20  20  00140 P.ABB:  .ASCII  \  !#UL/:#<!UL!>\                                ;
                                                    0014F       .BLKB   1                                       ;
                                0000000F  00150 P.ACA:  .LONG   15                                              ;
                                00000000' 00154         .ADDRESS P.ACB                                          ;
                                    4C  55  23  21  20  20  00158 P.ACD:  .ASCII  \  !#UL\                       ;
                                                    0015E       .BLKB   2                                       ;
                                0000000C  00160 P.ACC:  .LONG   6                                               ;
                                00000000' 00164         .ADDRESS P.ACD                                          ;
                            44  25  37  31  21  20  20  00168 P.ACF:  .ASCII  \  !17%D\                          ;
                                                    0016F       .BLKB   1                                       ;
                                00000007  00170 P.ACE:  .LONG   7                                               ;
                                00000000' 00174         .ADDRESS P.ACF                                          ;
                            44  25  37  31  21  20  20  00178 P.ACH:  .ASCII  \  !17%D\                          ;
                                                    0017F       .BLKB   1                                       ;
                                00000007  00180 P.ACG:  .LONG   7                                               ;
                                00000000' 00164         .ADDRESS P.ACH                                          ;
                            44  25  37  31  21  20  20  00188 P.ACJ:  .ASCII  \  !17%D\                          ;
                                                    0018F       .BLKB   1                                       ;
                                00000007  00190 P.ACI:  .LONG   7                                               ;
                                00000000' 00194         .ADDRESS P.ACJ                                          ;
                            44  25  37  31  21  20  20  00198 P.ACL:  .ASCII  \  !17%D\                          ;
```

```
                                        0019F          .BLKB   1
                                00000007 001A0 P.ACK:  .LONG   7
                                00000000' 001A4        .ADDRESS P.ACL                                          ;
                  3E 21 49 25 21 3C 23 21 20 20 001A8 P.ACN:  .ASCII  \  '#<!%I!>\                               ;
                                        001B2          .BLKB   2                                               ;
                                0000000A 001B4 P.ACM:  .LONG   10                                              ;
                                00000000' 001B8        .ADDRESS P.ACN                                          ;
                        55 25 23 21 20 20 001BC P.ACP:  .ASCII  \  !#%U\                                       ;
                                        001C2          .BLKB   2                                               ;
                                00000006 001C4 P.ACO:  .LONG   6                                               ;
                                00000000' 001C8        .ADDRESS P.ACP                                          ;
                              28 20 20   001CC P.ACR:  .ASCII  \  (\                                           ;
                                        001CF          .BLKB   1                                               ;
                                00000003 001D0 P.ACQ:  .LONG   3                                               ;
                                C0000000' 001D4        .ADDRESS P.ACR                                          ;
                                     2C 001D8 P.ACT:   .ASCII  \,\                                             ;
                                        001D9          .BLKB   3                                               ;
                                00000001 001DC P.ACS:  .LONG   1                                               ;
                                00000000' 001E0        .ADDRESS P.ACT                                          ;
                                     29 001E4 P.ACV:   .ASCII  \)\                                             ;
                                        001E5          .BLKB   3                                               ;
                                00000001 001E8 P.ACU:  .LONG   1                                               ;
                                00000000' 001EC        .ADDRESS P.ACV                                          ;
                           20 2A 23 21 001F0 P.ACX:    .ASCII  \!#* \                                          ;
                                00000004 001F4 P.ACW:  .LONG   4                                               ;
                                00000000' 001F8        .ADDRESS P.ACX                                          ;

                                                       .EXTRN  DIR$OUTPUT, SYS$GETMSG

                                                       .PSECT  $CODE$,NOWRT,2

                                        0FFC 00000 DIR$SHOW_INFO:
                                                       .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11            ; 1244
                          5B     0000V CF  9E 00002    MOVAB   DIR$APPEND, R11
                          5A 00000000' EF  9E 00007    MOVAB   QUAL_FLAGS, R10
                          5E           08  C2 0000E    SUBL2   #8, SP
                          50        1C AA  D0 00011    MOVL    DISPLAY_BLOCK, R0                               ; 1289
                          51      0119 C0  9A 00015    MOVZBL  281(R0), R1                                     ; 1290
                          52      011A C0  9A 0001A    MOVZBL  282(R0), R2
                          51           52  C0 0001F    ADDL2   R2, R1
                          56      011B C0  9A 00022    MOVZBL  283(R0), HEADER_LEN                             ; 1291
                          56           51  C0 00027    ADDL2   R1, HEADER_LEN
                          59        18 A0  9A 0002A    MOVZBL  24(R0), FILENAME_LEN                            ; 1292
                          59           56  C2 0002E    SUBL2   HEADER_LEN, FILENAME_LEN
                          58        18 A0  9A 00031    MOVZBL  24(R0), NAME_LEN                                ; 1293
                          51      011C C0  9A 00035    MOVZBL  284(R0), R1
                          58           51  C2 0003A    SUBL2   R1, NAME_LEN
56        00    0458 CA     0558 CA  2D 0003D    CMPC5   PREV_DIR_LEN, PREV_DIR, #0, HEADER_LEN, -           ; 1295
                             19 A0     00046             25(R0)
                                69 13 00048    BEQL    3$
                             34 AA  B5 0004A    TSTW    LINE_DESC                                               ; 1298
                                0D 13 0004D    BEQL    1$
                             34 AA  9F 0004F    PUSHAB  LINE_DESC                                               ; 1301
                                7E  D4 00052    CLRL    -(SP)
                    0000G CF    02  FB 00054    CALLS   #2, DIR$OUTPUT
                             0C AA  D4 00059    CLRL    COLUMN_INDEX                                            ; 1302
                           0558 CA  D5 0005C 1$:  TSTL    PREV_DIR_LEN                                            ; 1304
```

```
                                                05  13 00060          BEQL    2$                                                      ;
                                0000V   CF      00  FB 00062          CALLS   #0, DIR$TOTAL                                           ;
                                0558    CA      56  D0 00067 2$:      MOVL    HEADER_LEN, PREV_DIR_LEN                        ;1305
                                        50  1C  AA  D0 0006C          MOVL    DISPLAY_BLOCK, R0                               ;1306
                        0458    CA      19  A0  56  28 00070          MOVC3   HEADER_LEN, 25(R0), PREV_DIR                            ;
                                37      01  AA  03  E1 00077          BBC     #3, QUAL_FLAGS+1, 3$                            ;1307
                                32      01  AA  02  E0 0007C          BBS     #2, QUAL_FLAGS+1, 3$                            ;1308
                                            0000' CF 9F 00081          PUSHAB  P.ABG                                           ;1311
                                                7E  D4 00085          CLRL    -(SP)                                                   ;
                                0000G   CF      02  FB 00087          CALLS   #2, DIR$OUTPUT                                          ;
                                            0458    CA 9F 0008C        PUSHAB  PREV_DIR                                        ;1312
                                            0558    CA DD 00090        PUSHL   PREV_DIR_LEN                                            ;
                                            0000'   CF 9F 00094        PUSHAB  P.ABI                                                   ;
                                        00000000G   8F DD 00098        PUSHL   #DIR$_NEWDIRECT                                         ;
                                0000G   CF          04 FB 0009E        CALLS   #4, DIR$OUTPUT                                          ;
                                            02      AA 95 000A3        TSTB    QUAL_FLAGS+2                                    ;1313
                                                0B  19 000A6          BLSS    3$                                                      ;
                                            0000'   CF 9F 000A8        PUSHAB  P.ABK                                                   ;
                                                7E  D4 000AC          CLRL    -(SP)                                                   ;
                                0000G   CF          02 FB 000AE        CALLS   #2, DIR$OUTPUT                                          ;
                                        57  0660    CA D0 000B3 3$:     MOVL    VERSION_COUNT, R7                               ;1319
                                                31  15 000B8          BLEQ    7$                                                      ;
                                        54  1C      AA D0 000BA        MOVL    DISPLAY_BLOCK, R4                               ;1323
        58              00      055C    CA  065C    CA 2D 000BE        CMPC5   PREV_FILE_LEN, PREV_FILE, #0, NAME_LEN, -               ;
                                            19      A4  000C7                  25(R7)                                                  ;
                                                06  12 000C9          BNEQ    4$                                                      ;
                                            0664    CA D6 000CB        INCL    VERSION_INDEX                                   ;1324
                                                10  11 000CF          BRB     5$                                                      ;
                                0065C   CA          58 D0 000D1 4$:     MOVL    NAME_LEN, PREV_FILE_LEN                         ;1327
                        055C    CA      19  A4      58 28 000D6        MOVC3   NAME_LEN, 25(R7), PREV_FILE                     ;1328
                                            0664    CA D4 000DD        CLRL    VERSION_INDEX                                   ;1329
                                        57  0664    CA D1 000E1 5$:     CMPL    VERSION_INDEX, R7                               ;1331
                                                03  19 000E6          BLSS    7$                                                      ;
                                                    03AF 31 000E8 6$:   BRW     46$                                                     ;
                                        50  1C      AA D0 000EB 7$:     MOVL    DISPLAY_BLOCK, R0                               ;1336
                                0043C   CA      0131    C0 C0 000EF    ADDL2   305(R0), TOTAL_USED                                     ;
                                0440    CA      012D    C0 C0 000F6    ADDL2   301(R0), TOTAL_ALLOC                            ;1337
                                            0444    CA D6 000FD        INCL    TOTAL_FILES                                     ;1338
                                            02      AA 95 00101        TSTB    QUAL_FLAGS+2                                    ;1340
                                                E2  19 00104          BLSS    6$                                                      ;
        DD              01      AA              02  E0 00106          BBS     #2, QUAL_FLAGS+1, 6$                                    ;
                                08      AA      0C  AA D1 0010B        CMPL    COLUMN_INDEX, COLUMN_COUNT                      ;1344
                                                12  19 00110          BLSS    9$                                                      ;
                                            34  AA B5 00112          TSTW    LINE_DESC                                       ;1347
                                                0A  13 00115          BEQL    8$                                                      ;
                                            34  AA 9F 00117          PUSHAB  LINE_DESC                                               ;
                                                7E  D4 0011A          CLRL    -(SP)                                                   ;
                                0000G   CF          02 FB 0011C        CALLS   #2, DIR$OUTPUT                                          ;
                                            0C  AA D4 00121 8$:     CLRL    COLUMN_INDEX                                    ;1348
                                        57  34  AA 3C 00124 9$:     MOVZWL  LINE_DESC, MARK_POSITION                        ;1350
                                        58      57 D0 00128        MOVL    MARK_POSITION, COLUMN_BEGIN                             ;
        10              01      AA              03 E0 0012B        BBS     #3, QUAL_FLAGS+1, 10$                           ;1352
        7E              1C      AA              19 C1 00130        ADDL3   #25, DISPLAY_BLOCK, -(SP)                       ;1353
                                                56 DD 00135        PUSHL   HEADER_LEN                                              ;
                                            0000'   CF 9F 00137        PUSHAB  P.ABM                                                   ;
                                                7E  D4 0013B          CLRL    -(SP)                                                   ;
                                        6B              04 FB 0013D        CALLS   #4, DIR$APPEND                                          ;
```

```
                50              56          1C  AA  C1 00140 10$:    ADDL3   DISPLAY_BLOCK, HEADER_LEN, R0                   ; 1355
                                            19  A0  9F 00145         PUSHAB  25(R0)
                                            59  DD  00148           PUSHL   FILENAME_LEN
                                      0000' CF  9F  0014A           PUSHAB  P.ABO
                                            7E  D4  0014E           CLRL    -(SP)
                                        6B      04  FB  00150       CALLS   #4, DIR$APPEND
    0814    CA          34  AA          10      00  ED  00153       CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH             ; 1356
                                            3B  19  0015B           BLSS    12$
                            34  AA          57  B0  0015D           MOVW    MARK_POSITION, LINE_DESC                        ; 1359
                                        34  AA  9F  00161           PUSHAB  LINE_DESC                                       ; 1360
                                            7E  D4  00164           CLRL    -(SP)
                        0000G   CF          02  FB  00166           CALLS   #2, DIR$OUTPUT
                                            57  7C  0016B           CLRQ    MARK_POSITION                                   ; 1361
                                        0C  AA  D4  0016D           CLRL    COLUMN_INDEX                                    ; 1362
                10          01  AA          03  E0  00170           BBS     #3, QUAL_FLAGS+1, 11$                           ; 1363
                7E          1C  AA          19  C1  00175           ADDL3   #25, DISPLAY_BLOCK, -(SP)                       ; 1364
                                            56  DD  0017A           PUSHL   HEADER_LEN
                                      0000' CF  9F  0017C           PUSHAB  P.ABQ
                                            7E  D4  00180           CLRL    -(SP)
                                        6B      04  FB  00182       CALLS   #4, DIR$APPEND
                50              56          1C  AA  C1 00185 11$:    ADDL3   DISPLAY_BLOCK, HEADER_LEN, R0                   ; 1366
                                            19  A0  9F 0018A         PUSHAB  25(R0)
                                            59  DD  0018D           PUSHL   FILENAME_LEN
                                      0000' CF  9F  0018F           PUSHAB  P.ABS
                                            7E  D4  00193           CLRL    -(SP)
                                        6B      04  FB  00195       CALLS   #4, DIR$APPEND
                                        50  34  AA  3C  00198 12$:    MOVZWL  LINE_DESC, R0                                   ; 1369
                50          0818    CA          50  C3  0019C       SUBL3   R0, FILENAME_WIDTH, R0
                56              50              57  C1  001A2       ADDL3   MARK_POSITION, R0, SPACE_COUNT                  ; 1370
                                                79  14  001A6       BGTR    16$                                             ; 1371
                                        01  08  AA  D1  001A8       CMPL    COLUMN_COUNT, #1                                ; 1374
                                                2D  12  001AC       BNEQ    14$
                                            34  AA  9F  001AE       PUSHAB  LINE_DESC                                       ; 1377
                                            7E  D4  001B1           CLRL    -(SP)
                        0000G   CF          02  FB  001B3           CALLS   #2, DIR$OUTPUT
                                            58  D4  001B8           CLRL    COLUMN_BEGIN                                    ; 1378
                                        13  01  AA  E8  001BA       BLBS    QUAL_FLAGS+1, 13$                               ; 1379
    0E          02  AA                      03  E0  001BE           BBS     #3, QUAL_FLAGS+2, 13$
    0A              6A                      03  E0  001C3           BBS     #3, QUAL_FLAGS, 13$                             ; 1380
    05          01  AA                      05  E0  001C7           BBS     #5, QUAL_FLAGS+1, 13$
                                        01  AA  95  001CC           TSTB    QUAL_FLAGS+1                                    ; 1381
                                            5B  18  001CF           BGEQ    18$
                                    0818    CA  DD  001D1 13$:      PUSHL   FILENAME_WIDTH                                  ; 1382
                                    0000'   CF  9F  001D5           PUSHAB  P.ABU
                                            4C  11  001D9           BRB     17$
    2F              6A                      01  E1  001DB 14$:      BBC     #1, QUAL_FLAGS, 15$                             ; 1386
    2A          02  AA                      03  E0  001DF           BBS     #3, QUAL_FLAGS+2, 15$                           ; 1387
    26              6A                      03  E0  001E4           BBS     #3, QUAL_FLAGS, 15$                             ; 1388
    21          01  AA                      05  E0  001E8           BBS     #5, QUAL_FLAGS+1, 15$                           ; 1389
                                        01  AA  95  001ED           TSTB    QUAL_FLAGS+1                                    ; 1390
                                            1C  19  001F0           BLSS    15$
                                        18  01  AA  E8  001F2       BLBS    QUAL_FLAGS+1, 15$                               ; 1391
                                        50  34  AA  3C  001F6       MOVZWL  LINE_DESC, R0                                   ; 1395
                                        50          58  C2  001FA   SUBL2   COLUMN_BEGIN, R0
                                        50  10  AA  C6  001FD       DIVL2   COLUMN_WIDTH, R0                                ; 1396
                                    0C  AA          50  C0  00201   ADDL2   R0, COLUMN_INDEX                                ; 1395
                                        50  10  AA  C4  00205       MULL2   COLUMN_WIDTH, R0                                ; 1399
```

```
                                                58              50  C0 00209          ADDL2   R0, COLUMN_BEGIN                                        ;
                                                                1E  11 0020C          BRB     18$                                                     ; 1386
                                34    AA          57    0818    CA  A1 0020E 15$:     ADDW3   FILENAME_WIDTH, MARK_POSITION, LINE_DESC                ; 1403
                                                50      34    AA  3C 00215          MOVZWL  LINE_DESC, R0                                           ; 1404
                                          3B AA40       7C    8F  90 00219          MOVB    #124, LINE_BUFFER-1[R0]                                 ;
                                                                0B  11 0021F          BRB     18$                                                     ; 1371
                                                                56  DD 00221 16$:     PUSHL   SPACE_COUNT                                             ; 1408
                                                        0000'   CF  9F 00223          PUSHAB  P.ABW                                                   ;
                                                                7E  D4 00227 17$:     CLRL    -(SP)                                                   ;
                                                6B              03  FB 00229          CALLS   #3, DIR$APPEND                                          ;
                                                72              1C  BA  E8 0022C 18$:     BLBS    @DISPLAY_BLOCK, 21$                                     ; 1412
                        08              00      6E              00  2C 00230          MOVC5   #0, (SP), #0, #8, LOCAL_DESC                            ; 1415
                                                                6E  00235                                                                             ;
                                                6E      0400    8F      34    AA  A3 00236          SUBW3   LINE_DESC, #1024, LOCAL_DESC                    ; 1416
                                                50      3C      AA  9E 0023D          MOVAB   LINE_BUFFER, R0                                         ; 1417
                                                51      34      AA  3C 00241          MOVZWL  LINE_DESC, R1                                           ;
                                    04  AE          50              C1 00245          ADDL3   R1, R0, LOCAL_DESC+4                                    ;
                                                7E              01  7D 0024A          MOVQ    #1, -(SP)                                               ; 1421
                                                        08      AE  9F 0024D          PUSHAB  LOCAL_DESC                                              ;
                                                        0C      AE  9F 00250          PUSHAB  LOCAL_DESC                                              ;
                                                        1C      BA  DD 00253          PUSHL   @DISPLAY_BLOCK                                          ;
                                    00000000G           00          05  FB 00256          CALLS   #5, SYS$GETMSG                                          ;
                                                34      AA          6E  A0 0025D          ADDW2   LOCAL_DESC, LINE_DESC                                   ; 1422
                        0814    CA      34      AA      10          00  ED 00261          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       ; 1423
                                                                    27  15 00269          BLEQ    20$                                                     ;
                                                34      AA          57  B0 0026B          MOVW    MARK_POSITION, LINE_DESC                                ; 1426
                                                                    0A  13 0026F          BEQL    19$                                                     ; 1427
                                                        34      AA  9F 00271          PUSHAB  LINE_DESC                                               ;
                                                                7E  D4 00274          CLRL    -(SP)                                                   ;
                                            0000G       CF          02  FB 00276          CALLS   #2, DIR$OUTPUT                                          ;
                                                51              6E  3C 0027B 19$:     MOVZWL  LOCAL_DESC, R1                                          ; 1429
                                                51      04      AE  C0 0027E          ADDL2   LOCAL_DESC+4, R1                                        ;
                                                50      3C  AA47    9E 00282          MOVAB   LINE_BUFFER[MARK_POSITION], R0                          ; 1430
                        34      AA              51              50  A3 00287          SUBW3   R0, R1, LINE_DESC                                       ;
                        3C      AA              60      34      AA  28 0028C          MOVC3   LINE_DESC, (R0), LINE_BUFFER                            ; 1431
                                                        34      AA  9F 00292 20$:     PUSHAB  LINE_DESC                                               ; 1434
                                                                7E  D4 00295          CLRL    -(SP)                                                   ;
                                            0000G       CF          02  FB 00297          CALLS   #2, DIR$OUTPUT                                          ;
                                                        0C      AA  D4 0029C          CLRL    COLUMN_INDEX                                            ; 1435
                                                    01F8        31  0029F          BRW     46$                                                     ; 1436
                                                37      01      AA  E9 002A2 21$:     BLBC    QUAL_FLAGS+1, 24$                                       ; 1441
                                                50      1C      AA  D0 002A6          MOVL    DISPLAY_BLOCK, R0                                       ; 1444
                                                51      0123    C0  3C 002AA          MOVZWL  291(R0), R1                                             ;
                                                                0C  12 002AF          BNEQ    22$                                                     ;
                                                        0125    C0  B5 002B1          TSTW    293(R0)                                                 ; 1445
                                                                06  12 002B5          BNEQ    22$                                                     ;
                                                        0127    C0  B5 002B7          TSTW    295(R0)                                                 ; 1446
                                                                17  13 002BB          BEQL    23$                                                     ;
                                                7E      0127    C0  3C 002BD 22$:     MOVZWL  295(R0), -(SP)                                          ; 1449
                                                7E      0125    C0  3C 002C2          MOVZWL  293(R0), -(SP)                                          ;
                                                                51  DD 002C7          PUSHL   R1                                                      ;
                                                        0000'   CF  9F 002C9          PUSHAB  P.ABY                                                   ;
                                                                7E  D4 002CD          CLRL    -(SP)                                                   ;
                                                6B              05  FB 002CF          CALLS   #5, DIR$APPEND                                          ;
                                                                09  11 002D2          BRB     24$                                                     ;
                                            00000000G       8F      DD 002D4 23$:     PUSHL   #DIR$_NOBRFILEID                                        ; 1450
                                                6B              01  FB 002DA          CALLS   #1, DIR$APPEND                                          ;
```

```
                3F      02      AA      03      E1  002DD 24$:     BBC     #3, QUAL_FLAGS+2, 28$                   ; 1453
                                50  1C  AA      D0  002E2           MOVL    DISPLAY_BLOCK, R0                       ; 1460
                                51  0820  CA     D0  002E6           MOVL    SIZE_WIDTH, R1
                17      02      AA      04      E1  002EB           BBC     #4, QUAL_FLAGS+2, 25$                   ; 1456
                            012D  C0      DD  002F0               PUSHL   301(R0)                                 ; 1460
                                51      DD  002F4               PUSHL   R1
                            0131  C0      DD  002F6               PUSHL   305(R0)
                                51      DD  002FA               PUSHL   R1
                            0000'  CF   9F  002FC               PUSHAB  P.ACA
                                7E      D4  00300               CLRL    -(SP)
                        6B              06  FB  00302           CALLS   #6, DIR$APPEND
                                        1A  11  00305           BRB     28$
                06      02      AA      06      E1  00307 25$:  BBC     #6, QUAL_FLAGS+2, 26$                   ; 1464
                            0131  C0      DD  0030C               PUSHL   305(R0)
                                04      11  00310               BRB     27$
                            012D  C0      DD  00312 26$:          PUSHL   301(R0)
                                51      DD  00316 27$:          PUSHL   R1
                            0000'  CF   9F  00318               PUSHAB  P.ACC
                                7E      D4  0031C               CLRL    -(SP)
                        6B              04  FB  0031E           CALLS   #4, DIR$APPEND
                03              6A              03  E0  00321 28$:  BBS     #3, QUAL_FLAGS, 29$                     ; 1467
                                    00B0        31  00325         BRW     37$
                28              6A              04  E1  00328 29$:  BBC     #4, QUAL_FLAGS, 31$                     ; 1470
                                50  1C  AA      D0  0032C           MOVL    DISPLAY_BLOCK, R0                       ; 1471
                            0170  C0      D5  00330               TSTL    368(R0)
                                11      12  00334               BNEQ    30$
                            0174  C0      D5  00336               TSTL    372(R0)
                                0B      12  0033A               BNEQ    30$
                        000000000G      8F  DD  0033C           PUSHL   #DIR$_NOBRCREDAT                        ; 1472
                        6B              01  FB  00342           CALLS   #1, DIR$APPEND
                                        0D  11  00345           BRB     31$
                            0170  C0      9F  00347 30$:          PUSHAB  368(R0)                                 ; 1473
                            0000'  CF   9F  0034B               PUSHAB  P.ACE
                                7E      D4  0034F               CLRL    -(SP)
                        6B              03  FB  00351           CALLS   #3, DIR$APPEND
                28              6A              06  E1  00354 31$:  BBC     #6, QUAL_FLAGS, 33$                     ; 1474
                                50  1C  AA      D0  00358           MOVL    DISPLAY_BLOCK, R0                       ; 1475
                            0178  C0      D5  0035C               TSTL    376(R0)
                                11      12  00360               BNEQ    32$
                            017C  C0      D5  00362               TSTL    380(R0)
                                0B      12  00366               BNEQ    32$
                        000000000G      8F  DD  00368           PUSHL   #DIR$_NOBRREVDAT                        ; 1476
                        6B              01  FB  0036E           CALLS   #1, DIR$APPEND
                                        0D  11  00371           BRB     33$
                            0178  C0      9F  00373 32$:          PUSHAB  376(R0)                                 ; 1477
                            0000'  CF   9F  00377               PUSHAB  P.ACG
                                7E      D4  0037B               CLRL    -(SP)
                        6B              03  FB  0037D           CALLS   #3, DIR$APPEND
                28              6A              05  E1  00380 33$:  BBC     #5, QUAL_FLAGS, 35$                     ; 1478
                                50  1C  AA      D0  00384           MOVL    DISPLAY_BLOCK, R0                       ; 1479
                            0180  C0      D5  00388               TSTL    384(R0)
                                11      12  0038C               BNEQ    34$
                            0184  C0      D5  0038E               TSTL    388(R0)
                                0B      12  00392               BNEQ    34$
                        000000000G      8F  DD  00394           PUSHL   #DIR$_NOBREXPDAT                        ; 1480
                        6B              01  FB  0039A           CALLS   #1, DIR$APPEND
                                        0D  11  0039D           BRB     35$
```

```
                0180   C0  9F 0039F 34$:    PUSHAB  384(R0)                          ; 1481
                0000'  CF  9F 003A3          PUSHAB  F.ACI
                       7E  D4 003A7          CLRL    -(SP)
                6B             03  FB 003A9          CALLS   #3, DIR$APPEND
                       6A  95 003AC 35$:    TSTB    QUAL_FLAGS                      ; 1482
                       28  18 003AE          BGEQ    37$
                50      1C     AA  D0 003B0          MOVL    DISPLAY_BLOCK, R0       ; 1483
                0188   C0  D5 003B4          TSTL    392(R0)
                       11  12 003B8          BNEQ    36$
                018C   C0  D5 003BA          TSTL    396(R0)
                       0B  12 003BE          BNEQ    36$
             00000000G  8F  DD 003C0          PUSHL   #DIR$_NOBRBAKDAT                ; 1484
                6B             01  FB 003C6          CALLS   #1, DIR$APPEND
                       0D  11 003C9          BRB     37$
                0188   C0  9F 003CB 36$:    PUSHAB  392(R0)                         ; 1485
                0000'  CF  9F 003CF          PUSHAB  P.ACK
                       7E  D4 003D3          CLRL    -(SP)
                6B             03  FB 003D5          CALLS   #3, DIR$APPEND
                57      34     AA  3C 003D8 37$:    MOVZWL  LINE_DESC, MARK_POSITION        ; 1487
          2D    01    AA             05  E1 003DC          BBC     #5, QUAL_FLAGS+1, 40$   ; 1489
                50      1C     AA  D0 003E1          MOVL    DISPLAY_BLOCK, R0       ; 1491
                51      1C     AA  D0 003E5          MOVL    DISPLAY_BLOCK, R1       ; 1490
                0119   C1  95 003E9          TSTB    281(R1)
                       0E  12 003ED          BNEQ    38$
                014E   C0  DD 003EF          PUSHL   334(R0)                         ; 1491
                081C   CA  DD 003F3          PUSHL   OWNER_WIDTH
                0000'  CF  9F 003F7          PUSHAB  P.ACM
                       0C  11 003FB          BRB     39$
                014E   C0  DD 003FD 38$:    PUSHL   334(R0)                         ; 1492
                081C   CA  DD 00401          PUSHL   OWNER_WIDTH
                0000'  CF  9F 00405          PUSHAB  P.ACO
                       7E  D4 00409 39$:    CLRL    -(SP)
                6B             04  FB 0040B          CALLS   #4, DIR$APPEND
                  01    AA  95 0040E 40$:    TSTB    QUAL_FLAGS+1                    ; 1494
                       42  18 00411          BGEQ    43$
                0000'  CF  9F 00413          PUSHAB  P.ACQ                           ; 1497
                       7E  D4 00417          CLRL    -(SP)
                6B             02  FB 00419          CALLS   #2, DIR$APPEND
                       52  D4 0041C          CLRL    J                               ; 1498
                50      1C     AA  D0 0041E 41$:    MOVL    DISPLAY_BLOCK, R0       ; 1501
                53      0152   C0  9E 00422          MOVAB   338(R0), R3
          51            52             02  78 00427          ASHL    #2, J, R1
    50    63    04             51  EF 00428          EXTZV   R1, #4, (R3), R0
                0000'CF40      DD 00430          PUSHL   PROT_TABLE[R0]
                       7E  D4 00435          CLRL    -(SP)
                6B             02  FB 00437          CALLS   #2, DIR$APPEND
                03             52  D1 0043A          CMPL    J, #3                   ; 1502
                       09  18 0043D          BGEQ    42$
                0000'  CF  9F 0043F          PUSHAB  P.ACS
                       7E  D4 00443          CLRL    -(SP)
                6B             02  FB 00445          CALLS   #2, DIR$APPEND
          D2    52             03  F3 00448 42$:    AOBLEQ  #3, J, 41$              ; 1498
                0000'  CF  9F 0044C          PUSHAB  P.ACU                           ; 1504
                       7E  D4 00450          CLRL    -(SP)
                6B             02  FB 00452          CALLS   #2, DIR$APPEND
                1A             6A  E9 00455 43$:    BLBC    QUAL_FLAGS, 45$         ; 1507
                082C   CA  D5 00458          TSTL    ACL_LENGTH
```

```
                                    14  15 0045C                BLEQ    45$                                             ;
                                34  AA  B5 0045E                TSTW    LINE_DESC                                       ; 1510
                                    0A  13 00461                BEQL    44$                                             ;
                                34  AA  9F 00463                PUSHAB  LINE_DESC                                       ;
                                    7E  D4 00466                CLRL    -(SP)                                           ;
                      0000G     CF        02  FB 00468          CALLS   #2, DIR$OUTPUT                                  ;
                      0000V     CF        00  FB 0046D 44$:     CALLS   #0, DIR$SHOW_ACL                                ; 1511
                                0C  AA    D6 00472 45$:         INCL    COLUMN_INDEX                                    ; 1514
                            50  34  AA    3C 00475              MOVZWL  LINE_DESC, R0                                   ; 1515
                    50      10  AA        50  C3 00479          SUBL3   R0, COLUMN_WIDTH, R0                            ;
                    56          50        58  C1 0047E          ADDL3   COLUMN_BEGIN, R0, SPACE_COUNT                   ;
                            01  08  AA    D1 00482              CMPL    COLUMN_COUNT, #1                                ; 1516
                                    12  15 00486                BLEQ    46$                                             ;
                                08  AA    0C  AA  D1 00488      CMPL    COLUMN_INDEX, COLUMN_COUNT                      ; 1517
                                    0B  18 0048D                BGEQ    46$                                             ;
                                    56  DD 0048F                PUSHL   SPACE_COUNT                                     ; 1518
                                0000'   CF  9F 00491            PUSHAB  P.ACW                                           ;
                                    7E  D4 00495                CLRL    -(SP)                                           ;
                            6B          03  FB 00497            CALLS   #3, DIR$APPEND                                  ;
                            50          01  D0 0049A 46$:       MOVL    #1, R0                                          ; 1520
                                        04  0049D               RET                                                     ; 1522

; Routine Size:  1182 bytes,    Routine Base:  $CODE$ + 0746
```

```
;  1128          1523  1 ROUTINE DIR$SHOW_FULL =
;  1129          1524  1
;  1130          1525  1 !++
;  1131          1526  1 !
;  1132          1527  1 ! FUNCTIONAL DESCRIPTION:
;  1133          1528  1 !       Display all of the information
;  1134          1529  1 !
;  1135          1530  1 ! CALLING SEQUENCE:
;  1136          1531  1 !       DIR$SHOW_FULL ()
;  1137          1532  1 !
;  1138          1533  1 ! INPUT PARAMETERS:
;  1139          1534  1 !       none
;  1140          1535  1 !
;  1141          1536  1 ! IMPLICIT INPUTS:
;  1142          1537  1 !       none
;  1143          1538  1 ! OUTPUT PARAMETERS:
;  1144          1539  1 !       none
;  1145          1540  1 !
;  1146          1541  1 ! IMPLICIT OUTPUTS:
;  1147          1542  1 !       none
;  1148          1543  1 !
;  1149          1544  1 ! ROUTINE VALUE:
;  1150          1545  1 !       1
;  1151          1546  1 !
;  1152          1547  1 ! SIDE EFFECTS:
;  1153          1548  1 !       none
;  1154          1549  1 !
;  1155          1550  1 !--
;  1156          1551  1
;  1157          1552  2 BEGIN
;  1158          1553  2
;  1159          1554  2 OWN
;  1160          1555  2         JOURNAL_FLAG;                           ! Disable journaling
;  1161          1556  2
;  1162          1557  2 LOCAL
;  1163          1558  2         HEADER_LEN,                             ! Length of file prefix
;  1164          1559  2         FILENAME_LEN,                           ! Length of the file name
;  1165          1560  2         NAME_LEN,                               ! Filename length minus version
;  1166          1561  2         SPACE_COUNT,                            ! Number of spaces to pad
;  1167          1562  2         LOCAL_DESC      : $BBLOCK [DSC$C_S_BLN],        ! Local text descriptor
;  1168          1563  2         MARK_POSITION;                          ! Saved line position
;  1169          1564  2
;  1170          1565  2 EXTERNAL ROUTINE
;  1171          1566  2         DIR$OUTPUT;                             ! General output routine
;  1172          1567  2
;  1173          1568  2 ! See if it is necessary and time to do the header & trailer information.
;  1174          1569  2
;  1175          1570  2 HEADER_LEN = .DISPLAY_BLOCK[DIR_B_NODE] +
;  1176          1571  2                .DISPLAY_BLOCK[DIR_B_DEV] +
;  1177          1572  2                .DISPLAY_BLOCK[DIR_B_DIR];
;  1178          1573  2 FILENAME_LEN = .DISPLAY_BLOCK[DIR_B_FNS] - .HEADER_LEN;
;  1179          1574  2 NAME_LEN = .DISPLAY_BLOCK[DIR_B_FNS] - .DISPLAY_BLOCK[DIR_B_VER];
;  1180          1575  2
;  1181          1576  2 IF CH$NEQ (.PREV_DIR_LEN, PREV_DIR, .HEADER_LEN, DISPLAY_BLOCK[DIR_T_FILENAME])
;  1182          1577  2 THEN
;  1183          1578  3     BEGIN
;  1184          1579  3     IF .LINE_DESC[DSC$W_LENGTH] GTR 0
```

```
;  1185          1580  3      THEN
;  1186          1581  4          BEGIN
;  1187          1582  4          DIR$OUTPUT (0, LINE_DESC);
;  1188          1583  4          COLUMN_INDEX = 0
;  1189          1584  3          END;
;  1190          1585  3      IF .PREV_DIR_LEN NEQ 0 THEN DIR$TOTAL ();
;  1191          1586  3      PREV_DIR_LEN = .HEADER_LEN;
;  1192          1587  3      CH$MOVE (.HEADER_LEN, DISPLAY_BLOCK[DIR_T_FILENAME], PREV_DIR);
;  1193          1588  3      IF .QUAL_FLAGS[DIR_V_QUAL_HEAD]
;  1194          1589  3      AND NOT .QUAL_FLAGS[DIR_V_QUAL_GRAN]
;  1195          1590  3      THEN
;  1196          1591  4          BEGIN
;  1197          1592  4          WRITE (0, '');
;  1198          1593  4          WRITE (DIR$_NEWDIRECT, 0, .PREV_DIR_LEN, PREV_DIR);
;  1199          1594  3          END;
;  1200          1595  2      END;
;  1201          1596  2
;  1202          1597  2  ! Check for another version of the same file.
;  1203          1598  2
;  1204          1599  2  IF .VERSION_COUNT GTR 0
;  1205          1600  2  THEN
;  1206          1601  3      BEGIN
;  1207          1602  3      IF CH$EQL (.PREV_FILE_LEN, PREV_FILE,
;  1208          1603  3                 .NAME_LEN, DISPLAY_BLOCK[DIR_T_FILENAME], 0)
;  1209          1604  3      THEN VERSION_INDEX = .VERSION_INDEX + 1
;  1210          1605  3      ELSE
;  1211          1606  4          BEGIN
;  1212          1607  4          PREV_FILE_LEN = .NAME_LEN;
;  1213          1608  4          CH$MOVE (.NAME_LEN, DISPLAY_BLOCK[DIR_T_FILENAME], PREV_FILE);
;  1214          1609  4          VERSION_INDEX = 0;
;  1215          1610  3          END;
;  1216          1611  3      IF .VERSION_INDEX GEQ .VERSION_COUNT THEN RETURN 1;
;  1217          1612  2      END;
;  1218          1613  2
;  1219          1614  2  ! Update the running totals.
;  1220          1615  2
;  1221          1616  2  TOTAL_USED = .TOTAL_USED + .DISPLAY_BLOCK[DIR_L_EFBLK];
;  1222          1617  2  TOTAL_ALLOC = .TOTAL_ALLOC + .DISPLAY_BLOCK[DIR_L_HIBLK];
;  1223          1618  2  TOTAL_FILES = .TOTAL_FILES + 1;
;  1224          1619  2
;  1225          1620  2  IF .QUAL_FLAGS[DIR_V_QUAL_TOTL] OR .QUAL_FLAGS[DIR_V_QUAL_GRAN] THEN RETURN 1;
;  1226          1621  2
;  1227          1622  2  WRITE (0, '');
;  1228          1623  2
;  1229          1624  2  CH$FILL (0, DSC$C_S_BLN, LINE_DESC);
;  1230          1625  2  LINE_DESC[DSC$W_LENGTH] = 0;
;  1231          1626  2  LINE_DESC[DSC$A_POINTER] = LINE_BUFFER;
;  1232          1627  2
;  1233          1628  2  IF NOT .QUAL_FLAGS[DIR_V_QUAL_HEAD]
;  1234          1629  2  THEN APPEND (0, '!AD', .HEADER_LEN, DISPLAY_BLOCK[DIR_T_FILENAME]);
;  1235        P 1630  2  APPEND (0, '!AD', .FILENAME_LEN, VECTOR [DISPLAY_BLOCK[DIR_T_FILENAME],
;  1236          1631  2                                      .HEADER_LEN; .BYTE]);
;  1237          1632  2  SPACE_COUNT = ((.LINE_DESC[DSC$W_LENGTH] / 20) + 1) * 20 - .LINE_DESC[DSC$W_LENGTH];
;  1238          1633  2  IF .SPACE_COUNT EQL 0 THEN SPACE_COUNT = 20;
;  1239          1634  2  APPEND (0, '!#* ', .SPACE_COUNT);
;  1240          1635  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1241          1636  2
```

```
;  1242          1637  2 ! Check to see if an error occurred opening the file.
;  1243          1638  2
;  1244          1639  2 IF NOT .DISPLAY_BLOCK[DIR_L_STATUS]
;  1245          1640  2 THEN
;  1246          1641  3     BEGIN
;  1247          1642  3     CH$FILL (0, DSC$C_S_BLN, LOCAL_DESC);
;  1248          1643  3     LOCAL_DESC[DSC$W_LENGTH] = 1024 - .LINE_DESC[DSC$W_LENGTH];
;  1249          1644  3     LOCAL_DESC[DSC$A_POINTER] = LINE_BUFFER[.LINE_DESC[DSC$W_LENGTH]];
;  1250        P 1645  3     $GETMSG (MSGID = .DISPLAY_BLOCK[DIR_L_STATUS],
;  1251        P 1646  3              MSGLEN = LOCAL_DESC,
;  1252        P 1647  3              BUFADR = LOCAL_DESC,
;  1253          1648  3              FLAGS = 1);
;  1254          1649  3     LINE_DESC[DSC$W_LENGTH] = .LINE_DESC[DSC$W_LENGTH] + .LOCAL_DESC[DSC$W_LENGTH];
;  1255          1650  3     IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1256          1651  3     THEN
;  1257          1652  4         BEGIN
;  1258          1653  4         LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1259          1654  4         DIR$OUTPUT (0, LINE_DESC);
;  1260          1655  4         CH$FILL (' ', 20, LINE_BUFFER);
;  1261          1656  4         LOCAL_DESC[DSC$W_LENGTH] = 1024 - 20;
;  1262          1657  4         LOCAL_DESC[DSC$A_POINTER] = LINE_BUFFER[20];
;  1263        P 1658  4         $GETMSG (MSGID = .DISPLAY_BLOCK[DIR_L_STATUS],
;  1264        P 1659  4                  MSGLEN = LOCAL_DESC,
;  1265        P 1660  4                  BUFADR = LOCAL_DESC,
;  1266          1661  4                  FLAGS = 1);
;  1267          1662  4         LINE_DESC[DSC$W_LENGTH] = .LINE_DESC[DSC$W_LENGTH] + 20;
;  1268          1663  3         END;
;  1269          1664  3     DIR$OUTPUT (0, LINE_DESC);
;  1270          1665  3     RETURN 1;
;  1271          1666  2     END;
;  1272          1667  2
;  1273          1668  2 IF .MARK_POSITION + 28 GTR .DISPLAY_WIDTH
;  1274          1669  2 THEN
;  1275          1670  3     BEGIN
;  1276          1671  3     LINE_DESC[DSC$W_LENGTH] = .LINE_DESC[DSC$W_LENGTH] - .SPACE_COUNT;
;  1277          1672  3     DIR$OUTPUT (0, LINE_DESC);
;  1278          1673  2     END;
;  1279          1674  2 IF .LINE_DESC[DSC$W_LENGTH] LEQ 28
;  1280          1675  2 THEN SPACE_COUNT = 30 - .LINE_DESC[DSC$W_LENGTH]
;  1281          1676  2 ELSE SPACE_COUNT = 2;
;  1282          1677  2 IF .DISPLAY_BLOCK[DIR_W_FID_NUM] NEQ 0
;  1283          1678  2 OR .DISPLAY_BLOCK[DIR_W_FID_SEQ] NEQ 0
;  1284          1679  2 OR .DISPLAY_BLOCK[DIR_W_FID_RVN] NEQ 0
;  1285        P 1680  2 THEN APPEND (DIR$_FUL[FILEID, 0, .SPACE_COUNT,
;  1286        P 1681  2                                  .DISPLAY_BLOCK[DIR_W_FID_NUM],
;  1287        P 1682  2                                  .DISPLAY_BLOCK[DIR_W_FID_SEQ],
;  1288          1683  2                                  .DISPLAY_BLOCK[DIR_W_FID_RVN])
;  1289          1684  2 ELSE APPEND (DIR$_NOFUFILEID, 0, .SPACE_COUNT);
;  1290          1685  2 DIR$OUTPUT (0, LINE_DESC);
;  1291          1686  2
;  1292        P 1687  2 APPEND (DIR$_FULLSIZE, 0, .DISPLAY_BLOCK[DIR_L_EFBLK],
;  1293          1688  2                         .DISPLAY_BLOCK[DIR_L_HIBLK]);
;  1294          1689  2 MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1295          1690  2 IF .DISPLAY_BLOCK[DIR_B_NODE] EQL 0
;  1296          1691  2 THEN APPEND (DIR$_FULOWNERID, 0, .DISPLAY_BLOCK[DIR_L_FILEOWNER])
;  1297          1692  2 ELSE APPEND (DIR$_FULLOWNERUIC, 0, .DISPLAY_BLOCK[DIR_L_FILEOWNER]);
;  1298          1693  2 IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
```

```
;  1299          1694  2 THEN
;  1300          1695  3     BEGIN
;  1301          1696  3     LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1302          1697  3     DIR$OUTPUT (0, LINE_DESC);
;  1303          1698  3     IF .DISPLAY_BLOCK[DIR_B_NODE] EQL 0
;  1304          1699  3     THEN APPEND (DIR$_FULLOWNERID, 0, .DISPLAY_BLOCK[DIR_L_FILEOWNER])
;  1305          1700  3     ELSE APPEND (DIR$_FULLOWNERUIC, 0, .DISPLAY_BLOCK[DIR_L_FILEOWNER]);
;  1306          1701  2     END;
;  1307          1702  2 DIR$OUTPUT (0, LINE_DESC);
;  1308          1703  2 IF .DISPLAY_BLOCK[DIR_L_CDT0] EQL 0 AND .DISPLAY_BLOCK[DIR_L_CDT4] EQL 0
;  1309          1704  2 THEN APPEND (DIR$_NOFORCREDAT)
;  1310          1705  2 ELSE APPEND (DIR$_FULLCREDAT, 0, DISPLAY_BLOCK[DIR_L_CDT0]);
;  1311          1706  2 IF .DISPLAY_BLOCK[DIR_L_RDT0] EQL 0 AND .DISPLAY_BLOCK[DIR_L_RDT4] EQL 0
;  1312          1707  2 THEN APPEND (DIR$_NOFOREVDAT)
;  1313        P 1708  2 ELSE APPEND (DIR$_FULLREVDAT, 0, DISPLAY_BLOCK[DIR_L_RDT0],
;  1314          1709  2                                 .DISPLAY_BLOCK[DIR_W_REVISION]);
;  1315          1710  2 DIR$OUTPUT (0, LINE_DESC);
;  1316          1711  2
;  1317          1712  2 IF .DISPLAY_BLOCK[DIR_L_EDT0] EQL 0 AND .DISPLAY_BLOCK[DIR_L_EDT4] EQL 0
;  1318          1713  2 THEN APPEND (DIR$_NOFOREXPDAT)
;  1319          1714  2 ELSE APPEND (DIR$_FULLEXPDAT, 0, DISPLAY_BLOCK[DIR_L_EDT0]);
;  1320          1715  2 IF .DISPLAY_BLOCK[DIR_L_BDT0] EQL 0 AND .DISPLAY_BLOCK[DIR_L_BDT4] EQL 0
;  1321          1716  2 THEN APPEND (DIR$_NOFORBAKDAT)
;  1322          1717  2 ELSE APPEND (DIR$_FULLBAKDAT, 0, DISPLAY_BLOCK[DIR_L_BDT0]);
;  1323          1718  2 DIR$OUTPUT (0, LINE_DESC);
;  1324          1719  2
;  1325          1720  2 APPEND (DIR$_FILEORG);
;  1326          1721  2 SELECTONEU .DISPLAY_BLOCK[DIR_V_FILEORG] OF
;  1327          1722  2 SET
;  1328          1723  2     [DIR_C_SEQ  ,TIAL]: APPEND (DIR$_FILORGSEQ);
;  1329          1724  2     [DIR_C_RELATIVE]:   APPEND (DIR$_FILORGREL, 0, .DISPLAY_BLOCK[DIR_L_MRN]);
;  1330          1725  3     [DIR_C_INDEXED]:    BEGIN
;  1331          1726  3                         APPEND (DIR$_FILORGIDX);
;  1332          1727  3                         IF .DISPLAY_BLOCK[DIR_B_NOKEYS] NEQ 0
;  1333          1728  3                         THEN
;  1334          1729  4                             BEGIN
;  1335        P 1730  4                             APPEND (DIR$_IDXPROLOG, 0, .DISPLAY_BLOCK[DIR_W_PVN],
;  1336          1731  4                                                        .DISPLAY_BLOCK[DIR_B_NOKEYS]);
;  1337          1732  4                             IF .DISPLAY_BLOCK[DIR_B_NOAREAS] GTRU 1
;  1338          1733  4                             THEN
;  1339          1734  5                                 BEGIN
;  1340          1735  5                                 DIR$OUTPUT (0, LINE_DESC);
;  1341          1736  5                                 APPEND (DIR$_IDXAREA, 0, .DISPLAY_BLOCK[DIR_B_NOAREAS]);
;  1342          1737  4                                 END;
;  1343          1738  3                             END;
;  1344          1739  2                         END;
;  1345          1740  2     [OTHERWISE]:        APPEND (DIR$_FILORGUNK, 0, .DISPLAY_BLOCK[DIR_V_FILEORG]);
;  1346          1741  2     TES;
;  1347          1742  2 DIR$OUTPUT (0, LINE_DESC);
;  1348          1743  2
;  1349          1744  2 APPEND (DIR$_FILEATTR, 0, .DISPLAY_BLOCK[DIR_L_HIBLK], .DISPLAY_BLOCK[DIR_W_DEFEXT]);
;  1350          1745  2 MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1351          1746  2 IF .DISPLAY_BLOCK[DIR_B_BKTSIZE] NEQ 0
;  1352          1747  2 THEN
;  1353          1748  3     BEGIN
;  1354          1749  3     INCR J FROM 1 TO 2
;  1355          1750  3     DO
```

```
;  1356     1751  4          BEGIN
;  1357     1752  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1358     1753  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1359     1754  4          IF .DISPLAY_BLOCK[DIR_V_FILEORG] EQL DIR_C_INDEXED
;  1360     1755  4          THEN APPEND (DIR$_MAXBKTSIZ, 0, .DISPLAY_BLOCK[DIR_B_BKTSIZE])
;  1361     1756  4          ELSE APPEND (DIR$_BUCKETSIZ, 0, .DISPLAY_BLOCK[DIR_B_BKTSIZE]);
;  1362     1757  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1363     1758  4          THEN
;  1364     1759  5              BEGIN
;  1365     1760  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1366     1761  5              DIR$OUTPUT (0, LINE_DESC);
;  1367     1762  5              END
;  1368     1763  4          ELSE EXITLOOP;
;  1369     1764  3          END;
;  1370     1765  2      END;
;  1371     1766  2 MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1372     1767  2 INCR J FROM 1 TO 2
;  1373     1768  2 DO
;  1374     1769  3      BEGIN
;  1375     1770  3      IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1376     1771  3      IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1377     1772  3      APPEND (DIR$_GBLBUFCNT, 0, .DISPLAY_BLOCK[DIR_W_GBC]);
;  1378     1773  3      IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1379     1774  3      THEN
;  1380     1775  4          BEGIN
;  1381     1776  4          LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1382     1777  4          DIR$OUTPUT (0, LINE_DESC);
;  1383     1778  4          END
;  1384     1779  3      ELSE EXITLOOP;
;  1385     1780  2      END;
;  1386     1781  2 MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1387     1782  2 INCR J FROM 1 TO 2
;  1388     1783  2 DO
;  1389     1784  3      BEGIN
;  1390     1785  3      IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1391     1786  3      IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1392     1787  3      IF .DISPLAY_BLOCK[DIR_W_VERLIMIT] EQL %X'7FFF'
;  1393     1788  3      THEN APPEND (DIR$_NOVERLIMIT)
;  1394     1789  3      ELSE APPEND (DIR$_VERLIMIT, 0, .DISPLAY_BLOCK[DIR_W_VERLIMIT]);
;  1395     1790  3      IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1396     1791  3      THEN
;  1397     1792  4          BEGIN
;  1398     1793  4          LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1399     1794  4          DIR$OUTPUT (0, LINE_DESC);
;  1400     1795  4          END
;  1401     1796  3      ELSE EXITLOOP;
;  1402     1797  2      END;
;  1403     1798  2 MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1404     1799  2 IF .DISPLAY_BLOCK[DIR_V_CONTIG]
;  1405     1800  2 THEN
;  1406     1801  3      BEGIN
;  1407     1802  3      INCR J FROM 1 TO 2
;  1408     1803  3      DO
;  1409     1804  4          BEGIN
;  1410     1805  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1411     1806  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1412     1807  4          APPEND (DIR$_FILATRCTG);
```

```
;  1413          1808  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1414          1809  4          THEN
;  1415          1810  5              BEGIN
;  1416          1811  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1417          1812  5              DIR$OUTPUT (0, LINE_DESC);
;  1418          1813  5              END
;  1419          1814  4          ELSE EXITLOOP;
;  1420          1815  3          END;
;  1421          1816  2      END;
;  1422          1817  2 MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1423          1818  2 IF .DISPLAY_BLOCK[DIR_V_CONTIGB]
;  1424          1819  2 THEN
;  1425          1820  3      BEGIN
;  1426          1821  3      INCR J FROM 1 TO 2
;  1427          1822  3      DO
;  1428          1823  4          BEGIN
;  1429          1824  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1430          1825  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1431          1826  4          APPEND (DIR$_FILATR[TB);
;  1432          1827  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1433          1828  4          THEN
;  1434          1829  5              BEGIN
;  1435          1830  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1436          1831  5              DIR$OUTPUT (0, LINE_DESC);
;  1437          1832  5              END
;  1438          1833  4          ELSE EXITLOOP;
;  1439          1834  3          END;
;  1440          1835  2      END;
;  1441          1836  2 MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1442          1837  2 IF .DISPLAY_BLOCK[DIR_V_LOCKED]
;  1443          1838  2 THEN
;  1444          1839  3      BEGIN
;  1445          1840  3      INCR J FROM 1 TO 2
;  1446          1841  3      DO
;  1447          1842  4          BEGIN
;  1448          1843  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1449          1844  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1450          1845  4          APPEND (DIR$_FILATR[CK);
;  1451          1846  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1452          1847  4          THEN
;  1453          1848  5              BEGIN
;  1454          1849  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1455          1850  5              DIR$OUTPUT (0, LINE_DESC);
;  1456          1851  5              END
;  1457          1852  4          ELSE EXITLOOP;
;  1458          1853  3          END;
;  1459          1854  2      END;
;  1460          1855  2 MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1461          1856  2 IF .DISPLAY_BLOCK[DIR_V_NOBACKUP]
;  1462          1857  2 THEN
;  1463          1858  3      BEGIN
;  1464          1859  3      INCR J FROM 1 TO 2
;  1465          1860  3      DO
;  1466          1861  4          BEGIN
;  1467          1862  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1468          1863  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1469          1864  4          APPEND (DIR$_FILATRNOBAK);
```

```
;  1470          1865  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1471          1866  4          THEN
;  1472          1867  5              BEGIN
;  1473          1868  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1474          1869  5              DIR$OUTPUT (0, LINE_DESC);
;  1475          1870  5              END
;  1476          1871  4          ELSE EXITLOOP;
;  1477          1872  3          END;
;  1478          1873  2      END;
;  1479          1874  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1480          1875  2  IF .DISPLAY_BLOCK[DIR_V_WRITEBACK]
;  1481          1876  2  THEN
;  1482          1877  3      BEGIN
;  1483          1878  3      INCR J FROM 1 TO 2
;  1484          1879  3      DO
;  1485          1880  4          BEGIN
;  1486          1881  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1487          1882  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1488          1883  4          APPEND (DIR$_FILATRWRBAK);
;  1489          1884  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1490          1885  4          THEN
;  1491          1886  5              BEGIN
;  1492          1887  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1493          1888  5              DIR$OUTPUT (0, LINE_DESC);
;  1494          1889  5              END
;  1495          1890  4          ELSE EXITLOOP;
;  1496          1891  3          END;
;  1497          1892  2      END;
;  1498          1893  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1499          1894  2  IF .DISPLAY_BLOCK[DIR_V_READCHECK]
;  1500          1895  2  THEN
;  1501          1896  3      BEGIN
;  1502          1897  3      INCR J FROM 1 TO 2
;  1503          1898  3      DO
;  1504          1899  4          BEGIN
;  1505          1900  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1506          1901  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1507          1902  4          APPEND (DIR$_FILATRRDCHK);
;  1508          1903  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1509          1904  4          THEN
;  1510          1905  5              BEGIN
;  1511          1906  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1512          1907  5              DIR$OUTPUT (0, LINE_DESC);
;  1513          1908  5              END
;  1514          1909  4          ELSE EXITLOOP;
;  1515          1910  3          END;
;  1516          1911  2      END;
;  1517          1912  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1518          1913  2  IF .DISPLAY_BLOCK[DIR_V_WRITCHECK]
;  1519          1914  2  THEN
;  1520          1915  3      BEGIN
;  1521          1916  3      INCR J FROM 1 TO 2
;  1522          1917  3      DO
;  1523          1918  4          BEGIN
;  1524          1919  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1525          1920  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1526          1921  4          APPEND (DIR$_FILATRWRCHK);
```

```
;  1527          1922  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1528          1923  4          THEN
;  1529          1924  5              BEGIN
;  1530          1925  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1531          1926  5              DIR$OUTPUT (0, LINE_DESC);
;  1532          1927  5              END
;  1533          1928  4          ELSE EXITLOOP;
;  1534          1929  3          END;
;  1535          1930  2      END;
;  1536          1931  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1537          1932  2  IF .DISPLAY_BLOCK[DIR_V_BADACL]
;  1538          1933  2  THEN
;  1539          1934  3      BEGIN
;  1540          1935  3      INCR J FROM 1 TO 2
;  1541          1936  3      DO
;  1542          1937  4          BEGIN
;  1543          1938  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1544          1939  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1545          1940  4          APPEND (DIR$_FILATRBADACL);
;  1546          1941  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1547          1942  4          THEN
;  1548          1943  5              BEGIN
;  1549          1944  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1550          1945  5              DIR$OUTPUT (0, LINE_DESC);
;  1551          1946  5              END
;  1552          1947  4          ELSE EXITLOOP;
;  1553          1948  3          END;
;  1554          1949  2      END;
;  1555          1950  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1556          1951  2  IF .DISPLAY_BLOCK[DIR_V_DIRECTORY]
;  1557          1952  2  THEN
;  1558          1953  3      BEGIN
;  1559          1954  3      INCR J FROM 1 TO 2
;  1560          1955  3      DO
;  1561          1956  4          BEGIN
;  1562          1957  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1563          1958  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1564          1959  4          APPEND (DIR$_FILATRDIR);
;  1565          1960  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1566          1961  4          THEN
;  1567          1962  5              BEGIN
;  1568          1963  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1569          1964  5              DIR$OUTPUT (0, LINE_DESC);
;  1570          1965  5              END
;  1571          1966  4          ELSE EXITLOOP;
;  1572          1967  3          END;
;  1573          1968  2      END;
;  1574          1969  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1575          1970  2  IF .DISPLAY_BLOCK[DIR_V_BADBLOCK]
;  1576          1971  2  THEN
;  1577          1972  3      BEGIN
;  1578          1973  3      INCR J FROM 1 TO 2
;  1579          1974  3      DO
;  1580          1975  4          BEGIN
;  1581          1976  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1582          1977  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1583          1978  4          APPEND (DIR$_FILATRBADBLK);
```

```
;  1584          1979  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1585          1980  4          THEN
;  1586          1981  5              BEGIN
;  1587          1982  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1588          1983  5              DIR$OUTPUT (0, LINE_DESC);
;  1589          1984  5              END
;  1590          1985  4          ELSE EXITLOOP;
;  1591          1986  3          END;
;  1592          1987  2      END;
;  1593          1988  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1594          1989  2  IF .DISPLAY_BLOCK[DIR_V_NOCHARGE]
;  1595          1990  2  THEN
;  1596          1991  3      BEGIN
;  1597          1992  3      INCR J FROM 1 TO 2
;  1598          1993  3      DO
;  1599          1994  4          BEGIN
;  1600          1995  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1601          1996  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1602          1997  4          APPEND (DIR$_FILATRNOCHRG);
;  1603          1998  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1604          1999  4          THEN
;  1605          2000  5              BEGIN
;  1606          2001  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1607          2002  5              DIR$OUTPUT (0, LINE_DESC);
;  1608          2003  5              END
;  1609          2004  4          ELSE EXITLOOP;
;  1610          2005  3          END;
;  1611          2006  2      END;
;  1612          2007  2  MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1613          2008  2  IF .DISPLAY_BLOCK[DIR_V_ERASE]
;  1614          2009  2  THEN
;  1615          2010  3      BEGIN
;  1616          2011  3      INCR J FROM 1 TO 2
;  1617          2012  3      DO
;  1618          2013  4          BEGIN
;  1619          2014  4          IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN APPEND (0, ', ');
;  1620          2015  4          IF .LINE_DESC[DSC$W_LENGTH] EQL 0 THEN APPEND (0, '!20* ');
;  1621          2016  4          APPEND (DIR$_FILATRERASE);
;  1622          2017  4          IF .LINE_DESC[DSC$W_LENGTH] GTR .DISPLAY_WIDTH
;  1623          2018  4          THEN
;  1624          2019  5              BEGIN
;  1625          2020  5              LINE_DESC[DSC$W_LENGTH] = .MARK_POSITION;
;  1626          2021  5              DIR$OUTPUT (0, LINE_DESC);
;  1627          2022  5              END
;  1628          2023  4          ELSE EXITLOOP;
;  1629          2024  3          END;
;  1630          2025  2      END;
;  1631          2026  2  IF .LINE_DESC[DSC$W_LENGTH] GTR 0 THEN DIR$OUTPUT (0, LINE_DESC);
;  1632          2027  2
;  1633          2028  2  APPEND (DIR$_RECFORMAT);
;  1634          2029  2  SELECTONEU .DISPLAY_BLOCK[DIR_V_RTYPE] OF SET
;  1635          2030  2      [DIR_C_FIXED]:      APPEND (DIR$_RECFMTFIX, 0, .DISPLAY_BLOCK[DIR_W_RSIZE]);
;  1636          2031  2      [DIR_C_VARIABLE]:   APPEND (DIR$_RECFMTVAR);
;  1637          2032  2      [DIR_C_VFC]:        APPEND (DIR$_RECFMTVFC, 0, .DISPLAY_BLOCK[DIR_B_VFCSIZE]);
;  1638          2033  2      [DIR_C_UNDEFINED]:  APPEND (DIR$_RECFMTUDF);
;  1639          2034  2      [DIR_C_STREAM]:     APPEND (DIR$_RECFMTSTM);
;  1640          2035  2      [DIR_C_STREAMLF]:   APPEND (DIR$_RECFMTSTMLF);
```

```
;  1641          2036  2      [DIR_C_STREAMCR]:   APPEND (DIR$_RECFMTSTMCR);
;  1642          2037  2      [OTHERWISE]:        APPEND (DIR$_RECFMTUNK, 0, .DISPLAY_BLOCK[DIR_V_RTYPE]);
;  1643          2038  2      TES;
;  1644          2039  2  IF .DISPLAY_BLOCK[DIR_V_RTYPE] NEQ DIR_C_FIXED
;  1645          2040  2  AND .DISPLAY_BLOCK[DIR_W_RSIZE] NEQ 0
;  1646          2041  2  THEN APPEND (DIR$_MAXRECSIZ, 0, .DISPLAY_BLOCK[DIR_W_RSIZE]);
;  1647          2042  2  DIR$OUTPUT (0, LINE_DESC);
;  1648          2043  2
;  1649          2044  2  APPEND (DIR$_RECATTR);
;  1650          2045  2  IF .DISPLAY_BLOCK[DIR_B_RATTRIB] EQL 0
;  1651          2046  2  THEN APPEND (DIR$_NORECATTR)
;  1652          2047  2  ELSE
;  1653          2048  3      BEGIN
;  1654          2049  3      MARK_POSITION = .LINE_DESC[DSC$W_LENGTH];
;  1655          2050  3      IF .DISPLAY_BLOCK[DIR_V_IMPLIEDC] NEQ 0
;  1656          2051  3      THEN APPEND (DIR$_CRCARCTL)
;  1657          2052  3      ELSE IF .DISPLAY_BLOCK[DIR_V_FORTRANCC] NEQ 0
;  1658          2053  3      THEN APPEND (DIR$_FTNCARCTL)
;  1659          2054  3      ELSE IF .DISPLAY_BLOCK[DIR_V_PRINTCC] NEQ 0
;  1660          2055  3      THEN APPEND (DIR$_PRICARCTL)
;  1661          2056  3      ELSE APPEND (DIR$_NOCARCTL);
;  1662          2057  3      IF .DISPLAY_BLOCK[DIR_V_NOSPAN] NEQ 0
;  1663          2058  3      THEN
;  1664          2059  4          BEGIN
;  1665          2060  4          IF .MARK_POSITION NEQ .LINE_DESC[DSC$W_LENGTH] THEN APPEND (0, ', ');
;  1666          2061  4          APPEND (DIR$_NOSPAN);
;  1667          2062  3          END;
;  1668          2063  2      END;
;  1669          2064  2  DIR$OUTPUT (0, LINE_DESC);
;  1670          2065  2
;  1671          2066  2  IF .JOURNAL_FLAG
;  1672          2067  2  THEN
;  1673          2068  3      BEGIN
;  1674          2069  3      APPEND (DIR$_JNLENABLED);
;  1675          2070  3      IF .DISPLAY_BLOCK[DIR_W_JOURNAL] EQL 0
;  1676          2071  3      THEN APPEND (DIR$_NOJNLENB)
;  1677          2072  3      ELSE
;  1678          2073  4          BEGIN
;  1679          2074  4          IF .DISPLAY_BLOCK[DIR_V_AIJNL] THEN APPEND (0, 'AI,');
;  1680          2075  4          IF .DISPLAY_BLOCK[DIR_V_BIJNL] THEN APPEND (0, 'BI,');
;  1681          2076  4          IF .DISPLAY_BLOCK[DIR_V_ATJNL] THEN APPEND (0, 'AT,');
;  1682          2077  4          IF .DISPLAY_BLOCK[DIR_V_RUJNL] THEN APPEND (0, 'RU,');
;  1683          2078  4          IF .DISPLAY_BLOCK[DIR_V_ONLY_RU] THEN APPEND (0, 'ONLY_RU,');
;  1684          2079  4          IF .DISPLAY_BLOCK[DIR_V_NEVER_RU] THEN APPEND (0, 'NEVER_RU,');
;  1685          2080  4          LINE_DESC[DSC$W_LENGTH] = .LINE_DESC[DSC$W_LENGTH] - 1;
;  1686          2081  3          END;
;  1687          2082  3      DIR$OUTPUT (0, LINE_DESC);
;  1688          2083  3      IF .DISPLAY_BLOCK[DIR_B_BI_SIZE] NEQ 0
;  1689          2084  3      THEN WRITE (DIR$_BIJNLNAME, 0, DISPLAY_BLOCK[DIR_T_BI_JNLNAME])
;  1690          2085  3      ELSE IF .DISPLAY_BLOCK[DIR_V_BIJNL]
;  1691          2086  3           THEN WRITE (DIR$_NOBIJNL);
;  1692          2087  3      IF .DISPLAY_BLOCK[DIR_B_AI_SIZE] NEQ 0
;  1693          2088  3      THEN WRITE (DIR$_AIJNLNAME, 0, DISPLAY_BLOCK[DIR_T_AI_JNLNAME])
;  1694          2089  3      ELSE IF .DISPLAY_BLOCK[DIR_V_AIJNL]
;  1695          2090  3           THEN WRITE (DIR$_NOAIJNL);
;  1696          2091  3      IF .DISPLAY_BLOCK[DIR_B_AT_SIZE] NEQ 0
;  1697          2092  3      THEN WRITE (DIR$_ATJNLNAME, 0, DISPLAY_BLOCK[DIR_T_AT_JNLNAME])
```

```
;1698        2093  3     ELSE IF .DISPLAY_BLOCK[DIR_V_ATJNL]
;1699        2094  3          THEN WRITE (DIR$_NOATJN[);
;1700        2095  2     END;
;1701        2096  2
;1702        2097  2 APPEND (DIR$_FILEPROT);
;1703        2098  2 INCR J FROM 0 TO 3
;1704        2099  2 DO
;1705        2100  3     BEGIN
;1706        2101  3     SELECTONE .J OF
;1707        2102  3     SET
;1708        2103  3         [0]:    APPEND (DIR$_SYSPROT);
;1709        2104  3         [1]:    APPEND (DIR$_OWNPROT);
;1710        2105  3         [2]:    APPEND (DIR$_GRPPROT);
;1711        2106  3         [3]:    APPEND (DIR$_WORPROT);
;1712        2107  3     TES;
;1713        2108  3     DIR$APPEND (0, .PROT_TABLE[.(DISPLAY_BLOCK[DIR_W_FILEPROT])<.J*4,4>]);
;1714        2109  2     END;
;1715        2110  2 DIR$OUTPUT (0, LINE_DESC);
;1716        2111  2
;1717        2112  2 IF .ACL_LENGTH GTR 0
;1718        2113  2 THEN DIR$SHOW_ACL ()
;1719        2114  2 ELSE WRITE (DIR$_NOFILEACL);
;1720        2115  2
;1721        2116  2 RETURN 1;
;1722        2117  2
;1723        2118  1 END;                                    ! End of routine DIR$SHOW_FULL


                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

                    001FC P.ACZ:    .BLKB   0                                       ;
          00000000  001FC P.ACY:    .LONG   0                                       ;
          00000000' 00200           .ADDRESS P.ACZ                                  ;
                 00 00204 P.ADB:    .BYTE   0                                       ;
                    00205           .BLKB   3                                       ;
          00000001  00208 P.ADA:    .LONG   1                                       ;
          00000000' 0020C           .ADDRESS P.ADB                                  ;
                    00210 P.ADD:    .BLKB   0                                       ;
          00000000  00210 P.ADC:    .LONG   0                                       ;
          00000000' 00214           .ADDRESS P.ADD                                  ;
             44  41  21  00218 P.ADF:    .ASCII  \!AD\                               ;
                    0021B           .BLKB   1                                       ;
          00000003  0021C P.ADE:    .LONG   3                                       ;
          00000000' 00220           .ADDRESS P.ADF                                  ;
             44  41  21  00224 P.ADH:    .ASCII  \!AD\                               ;
                    00227           .BLKB   1                                       ;
          00000003  00228 P.ADG:    .LONG   3                                       ;
          00000000' 0022C           .ADDRESS P.ADH                                  ;
          20 2A  23  21  00230 P.ADJ:    .ASCII  \!#* \                              ;
          00000004  00234 P.ADI:    .LONG   4                                       ;
          00000000' 00238           .ADDRESS P.ADJ                                  ;
                 00 0023C P.ADL:    .BYTE   0                                       ;
                    0023D           .BLKB   3                                       ;
          00000001  00240 P.ADK:    .LONG   1                                       ;
          00000000' 00244           .ADDRESS P.ADL                                  ;
                 00 00248 P.ADN:    .BYTE   0                                       ;
```

```
                00249                   .BLKB   3
00000001        0024C P.ADM:    .LONG   1
00000000'       00250                   .ADDRESS P.ADN
        00      00254 P.ADP:    .BYTE   0
                00255                   .BLKB   3
00000001        00258 P.ADO:    .LONG   1
00000000'       0025C                   .ADDRESS P.ADP
        00      00260 P.ADR:    .BYTE   0
                00261                   .BLKB   3
00000001        00264 P.ADQ:    .LONG   1
00000000'       00268                   .ADDRESS P.ADR
        00      0026C P.ADT:    .BYTE   0
                0026D                   .BLKB   3
00000001        00270 P.ADS:    .LONG   1
00000000'       00274                   .ADDRESS P.ADT
        00      00278 P.ADV:    .BYTE   0
                00279                   .BLKB   3
00000001        0027C P.ADU:    .LONG   1
00000000'       00280                   .ADDRESS P.ADV
        00      00284 P.ADX:    .BYTE   0
                00285                   .BLKB   3
00000001        00288 P.ADW:    .LONG   1
00000000'       0028C                   .ADDRESS P.ADX
        00      00290 P.ADZ:    .BYTE   0
                00291                   .BLKB   3
00000001        00294 P.ADY:    .LONG   1
00000000'       00298                   .ADDRESS P.ADZ
        00      0029C P.AEB:    .BYTE   0
                0029D                   .BLKB   3
00000001        002A0 P.AEA:    .LONG   1
00000000'       002A4                   .ADDRESS P.AEB
        00      002A8 P.AED:    .BYTE   0
                002A9                   .BLKB   3
00000001        002AC P.AEC:    .LONG   1
00000000'       002B0                   .ADDRESS P.AED
        00      002B4 P.AEF:    .BYTE   0
                002B5                   .BLKB   3
0C000001        002B8 P.AEE:    .LONG   1
00000000'       002BC                   .ADDRESS P.AEF
        00      002C0 P.AEH:    .BYTE   0
                002C1                   .BLKB   3
00000001        002C4 P.AEG:    .LONG   1
00000000'       002C8                   .ADDRESS P.AEH
        00      002CC P.AEJ:    .BYTE   0
                002CD                   .BLKB   3
00000001        002D0 P.AEI:    .LONG   1
00000000'       002D4                   .ADDRESS P.AEJ
        00      002D8 P.AEL:    .BYTE   0
                002D9                   .BLKB   3
00000001        002DC P.AEK:    .LONG   1
00000000'       002E0                   .ADDRESS P.AEL
        00      002E4 P.AEN:    .BYTE   0
                002E5                   .BLKB   3
00000001        002E8 P.AEM:    .LONG   1
00000000'       002EC                   .ADDRESS P.AEN
        00      002F0 P.AEP:    .BYTE   0
                002F1                   .BLKB   3
```

```
                00000001  002F4 P.AEO:  .LONG   1                                ;
                00000000' 002F8         .ADDRESS P.AEP                          ;
                  20  2C  002FC P.AER:  .ASCII  \, \                            ;
                           002FE         .BLKB   2                               ;
                00000002  00300 P.AEQ:  .LONG   2                                ;
                00000000' 00304         .ADDRESS P.AER                          ;
      20  2A  30  32  21  00308 P.AET:  .ASCII  \!20* \                          ;
                           0030D         .BLKB   3                               ;
                00000005  00310 P.AES:  .LONG   5                                ;
                00000000' 00314         .ADDRESS P.AET                          ;
                      00  00318 P.AEV:  .BYTE   0                                ;
                           00319         .BLKB   3                               ;
                00000001  0031C P.AEU:  .LONG   1                                ;
                00000000' 00320         .ADDRESS P.AEV                          ;
                      00  00324 P.AEX:  .BYTE   0                                ;
                           00325         .BLKB   3                               ;
                00000001  00328 P.AEW:  .LONG   1                                ;
                00000000' 0032C         .ADDRESS P.AEX                          ;
                  20  2C  00330 P.AEZ:  .ASCII  \, \                            ;
                           00332         .BLKB   2                               ;
                00000002  00334 P.AEY:  .LONG   2                                ;
                00000000' 00338         .ADDRESS P.AEZ                          ;
      20  2A  30  32  21  0033C P.AFB:  .ASCII  \!20* \                          ;
                           00341         .BLKB   3                               ;
                00000005  00344 P.AFA:  .LONG   5                                ;
                00000000' 00348         .ADDRESS P.AFB                          ;
                      00  0034C P.AFD:  .BYTE   0                                ;
                           0034D         .BLKB   3                               ;
                00000001  00350 P.AFC:  .LONG   1                                ;
                00000000' 00354         .ADDRESS P.AFD                          ;
                  20  2C  00358 P.AFF:  .ASCII  \, \                            ;
                           0035A         .BLKB   2                               ;
                00000002  0035C P.AFE:  .LONG   2                                ;
                00000000' 00360         .ADDRESS P.AFF                          ;
      20  2A  30  32  21  00364 P.AFH:  .ASCII  \!20* \                          ;
                           00369         .BLKB   3                               ;
                00000005  0036C P.AFG:  .LONG   5                                ;
                00000000' 00370         .ADDRESS P.AFH                          ;
                      00  00374 P.AFJ:  .BYTE   0                                ;
                           00375         .BLKB   3                               ;
                00000001  00378 P.AFI:  .LONG   1                                ;
                00000000' 0037C         .ADDRESS P.AFJ                          ;
                  20  2C  00380 P.AFL:  .ASCII  \, \                            ;
                           00382         .BLKB   2                               ;
                00000002  00384 P.AFK:  .LONG   2                                ;
                00000000' 00388         .ADDRESS P.AFL                          ;
      20  2A  30  32  21  0038C P.AFN:  .ASCII  \!20* \                          ;
                           00391         .BLKB   3                               ;
                00000005  00394 P.AFM:  .LONG   5                                ;
                00000000' 00398         .ADDRESS P.AFN                          ;
                  20  2C  0039C P.AFP:  .ASCII  \, \                            ;
                           0039E         .BLKB   2                               ;
                00000002  003A0 P.AFO:  .LONG   2                                ;
                00000000' 003A4         .ADDRESS P.AFP                          ;
      20  2A  30  32  21  003A8 P.AFR:  .ASCII  \!20* \                          ;
                           003AD         .BLKB   3                               ;
                00000005  003B0 P.AFQ:  .LONG   5                                ;
```

```
                00000000'  003B4          .ADDRESS P.AFR                          ;
                  20  2C   003B8 P.AFT:   .ASCII  \, \                            ;
                           003BA          .BLKB   2                               ;
                00000002   003BC P.AFS:   .LONG   2                               ;
                00000000'  003C0          .ADDRESS P.AFT                          ;
20  2A  30  32  21         003C4 P.AFV:   .ASCII  \.20* \                         ;
                           003C9          .BLKB   3                               ;
                00000005   003CC P.AFU:   .LONG   5                               ;
                00000000'  003D0          .ADDRESS P.AFV                          ;
                  20  2C   003D4 P.AFX:   .ASCII  \, \                            ;
                           003D6          .BLKB   2                               ;
                00000002   003D8 P.AFW:   .LONG   2                               ;
                00000000'  003DC          .ADDRESS P.AFX                          ;
20  2A  30  32  21         003E0 P.AFZ:   .ASCII  \!20* \                         ;
                           003E5          .BLKB   3                               ;
                00000005   003E8 P.AFY:   .LONG   5                               ;
                00000000'  003EC          .ADDRESS P.AFZ                          ;
                  20  2C   003F0 P.AGB:   .ASCII  \, \                            ;
                           003F2          .BLKB   2                               ;
                00000002   003F4 P.AGA:   .LONG   2                               ;
                00000000'  003F8          .ADDRESS P.AGB                          ;
20  2A  30  32  21         003FC P.AGD:   .ASCII  \!20* \                         ;
                           00401          .BLKB   3                               ;
                00000005   00404 P.AG~:   .LONG   5                               ;
                00000000'  00408          .ADDRESS P.AGD                          ;
                  20  2C   0040C P.AGF:   .ASCII  \, \                            ;
                           0040E          .BLKB   2                               ;
                00000002   00410 P.AGE:   .LONG   2                               ;
                00000000'  00414          .ADDRESS P.AGF                          ;
20  2A  30  32  21         00418 P.AGH:   .ASCII  \!20* \                         ;
                           0041D          .BLKB   3                               ;
                00000005   00420 P.AGG:   .LONG   5                               ;
                00000000'  00424          .ADDRESS P.AGH                          ;
                  20  2C   00428 P.AGJ:   .ASCII  \, \                            ;
                           0042A          .BLKB   2                               ;
                00000002   0042C P.AGI:   .LONG   2                               ;
                00000000'  00430          .ADDRESS P.AGJ                          ;
20  2A  30  32  21         00434 P.AGL:   .ASCII  \!20* \                         ;
                           00439          .BLKB   3                               ;
                00000005   0043C P.AGK:   .LONG   5                               ;
                00000000'  00440          .ADDRESS P.AGL                          ;
                  20  2C   00444 P.AGN:   .ASCII  \, \                            ;
                           00446          .BLKB   2                               ;
                00000002   00448 P.AGM:   .LONG   2                               ;
                00000000'  0044C          .ADDRESS P.AGN                          ;
20  2A  30  32  21         00450 P.AGP:   .ASCII  \!20* \                         ;
                           00455          .BLKB   3                               ;
                00000005   00458 P.AGO:   .LONG   5                               ;
                00000000'  0045C          .ADDRESS P.AGP                          ;
                  20  2C   00460 P.AGR:   .ASCII  \, \                            ;
                           00462          .BLKB   2                               ;
                00000002   00464 P.AGQ:   .LONG   2                               ;
                00000000'  00468          .ADDRESS P.AGR                          ;
20  2A  30  32  21         0046C P.AGT:   .ASCII  \!20* \                         ;
                           00471          .BLKB   3                               ;
                00000005   00474 P.AGS:   .LONG   5                               ;
                00000000'  00478          .ADDRESS P.AGT                          ;
```

```
                20  2C  0047C P.AGV:   .ASCII  \, \                                 ;
                        0047E          .BLKB   2
            00000002    00480 P.AGU:   .LONG   2                                    ;
            00000000'   00484          .ADDRESS P.AGV                               ;
20  2A  30  32  21      00488 P.AGX:   .ASCII  \!20* \                              ;
                        0048D          .BLKB   3
            00000005    00490 P.AGW:   .LONG   5                                    ;
            00000000'   00494          .ADDRESS P.AGX                               ;
                20  2C  00498 P.AGZ:   .ASCII  \, \                                 ;
                        0049A          .BLKB   2
            00000002    0049C P.AGY:   .LONG   2                                    ;
            00000000'   004A0          .ADDRESS P.AGZ                               ;
20  2A  30  32  21      004A4 P.AHB:   .ASCII  \!20* \                              ;
                        004A9          .BLKB   3
            00000005    004AC P.AHA:   .LONG   5                                    ;
            00000000'   004B0          .ADDRESS P.AHB                               ;
                20  2C  004B4 P.AHD:   .ASCII  \, \                                 ;
                        004B6          .BLKB   2
            00000002    004B8 P.AHC:   .LONG   2                                    ;
            00000000'   004BC          .ADDRESS P.AHD                               ;
20  2A  30  32  21      004C0 P.AHF:   .ASCII  \!20* \                              ;
                        004C5          .BLKB   3
            00000005    004C8 P.AHE:   .LONG   5                                    ;
            00000000'   004CC          .ADDRESS P.AHF                               ;
                  00    004D0 P.AHH:   .BYTE   0                                    ;
                        004D1          .BLKB   3
            00000001    004D4 P.AHG:   .LONG   1                                    ;
            00000000'   004D8          .ADDRESS P.AHH                               ;
                  00    004DC P.AHJ:   .BYTE   0                                    ;
                        004DD          .BLKB   3
            00000001    004E0 P.AHI:   .LONG   1                                    ;
            00000000'   004E4          .ADDRESS P.AHJ                               ;
                  00    004E8 P.AHL:   .BYTE   0                                    ;
                        004E9          .BLKB   3
            00000001    004EC P.AHK:   .LONG   1                                    ;
            00000000'   004F0          .ADDRESS P.AHL                               ;
                  00    004F4 P.AHN:   .BYTE   0                                    ;
                        004F5          .BLKB   3
            00000001    004F8 P.AHM:   .LONG   1                                    ;
            00000000'   004FC          .ADDRESS P.AHN                               ;
              20  2C    00500 P.AHP:   .ASCII  \, \                                 ;
                        00502          .BLKB   2
            00000002    00504 P.AHO:   .LONG   2                                    ;
            00000000'   00508          .ADDRESS P.AHP                               ;
2C  49  41              0050C P.AHR:   .ASCII  \AI,\                                ;
                        0050F          .BLKB   1
            00000003    00510 P.AHQ:   .LONG   3                                    ;
            00000000'   00514          .ADDRESS P.AHR                               ;
2C  49  42              00518 P.AHT:   .ASCII  \BI,\                                ;
                        0051B          .BLKB   1
            00000003    0051C P.AHS:   .LONG   3                                    ;
            00000000'   00520          .ADDRESS P.AHT                               ;
2C  54  41              00524 P.AHV:   .ASCII  \AT,\                                ;
                        00527          .BLKB   1
            00000003    00528 P.AHU:   .LONG   3                                    ;
            00000000'   0052C          .ADDRFSS P.AHV                               ;
2C  55  52              00530 P.AHX:   .ASCII  \RU,\                                ;
```

```
                                00533          .BLKB   1
                       00000003 00534 P.AHW:   .LONG   3
                       00000000' 00538         .ADDRESS P.AHX
                  2C 55 52 5F 59 4C 4E 4F 0053C P.AHZ:  .ASCII  \ONLY_RU,\
                       00000008 00544 P.AHY:   .LONG   8
                       00000000' 00548         .ADDRESS P.AHZ
              2C 55 52 5F 52 45 56 45 4E 0054C P.AIB:   .ASCII  \NEVER_RU,\
                                00555          .BLKB   3
                       00000009 00558 P.AIA:   .LONG   9
                       00000000' 0055C         .ADDRESS P.AIB
                             00 00560 P.AID:   .BYTE   0
                                00561          .BLKB   3
                       00000001 00564 P.AIC:   .LONG   1
                       00000000' 00568         .ADDRESS P.AID
                             00 0056C P.AIF:   .BYTE   0
                                0056D          .BLKB   3
                       00000001 00570 P.AIE:   .LONG   1
                       00000000' 00574         .ADDRESS P.AIF
                             00 00578 P.AIH:   .BYTE   0
                                00579          .BLKB   3
                       00000001 0057C P.AIG:   .LONG   1
                       00000000' 00580         .ADDRESS P.AIH

                                               .PSECT  $OWN$,NOEXE,2

                                00040 JOURNAL_FLAG:
                                               .BLKB   4


                                               .PSECT  $CODE$,NOWRT,2

                                    OFFC 00000 DIR$SHOW_FULL:
                                               .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11          ; 1523
                  5B      0000V CF   9E 00002          MOVAB   DIR$APPEND, R11
                  5A 00000000' EF   9E 00007          MOVAB   LINE_DESC, R10
                  5E            08   C2 0000E          SUBL2   #8, SP
                  50         E8 AA   D0 00011          MOVL    DISPLAY_BLOCK, R0                     ; 1570
                  51       0119 C0   9A 00015          MOVZBL  281(R0), R1                           ; 1571
                  52       011A C0   9A 0001A          MOVZBL  282(R0), R2
                  51            52   C0 0001F          ADDL2   R2, R1
                  56       011B C0   9A 00022          MOVZBL  283(R0), HEADER_LEN                   ; 1572
                  56            51   C0 00027          ADDL2   R1, HEADER_LEN
                  59         18 A0   9A 0002A          MOVZBL  24(R0), FILENAME_LEN                  ; 1573
                  59            56   C2 0002E          SUBL2   HEADER_LEN, FILENAME_LEN
                  57         18 A0   9A 00031          MOVZBL  24(R0), NAME_LEN                      ; 1574
                  51       011C C0   9A 00035          MOVZBL  284(R0), R1
                  57            51   C2 0003A          SUBL2   R1, NAME_LEN
56                00 0424 CA 0524 CA   2D 0003D          CMPC5   PREV_DIR_LEN, PREV_DIR, #0, HEADER_LEN, - ; 1576
                                 19 A0      00046                25(R0)
                                    57   13 00048          BEQL    3$
                                    6A   B5 0004A          TSTW    LINE_DESC                         ; 1579
                                    0C   13 0004C          BEQL    1$
                                    5A   DD 0004E          PUSHL   R10                               ; 1582
                                    7E   D4 00050          CLRL    -(SP)
                       0000G CF            02   FB 00052  CALLS   #2, DIR$OUTPUT
                                 D8 AA   D4 00057          CLRL    COLUMN_INDEX                      ; 1583
```

```
                                0524   CA  D5 0005A 1$:    TSTL    PREV_DIR_LEN                                    ; 1585
                                       05  13 0005E        BEQL    2$
                        00C0V   CF         00  FB 00060    CALLS   #0, DIR$TOTAL                                   ;
                        0524    CA         56  D0 00065 2$:  MOVL    HEADER_LEN, PREV_DIR_LEN                        ; 1586
                                50    E8   AA  D0 0006A    MOVL    DISPLAY_BLOCK, R0                               ; 1587
                0424    CA      19    A0   56  28 0006E    MOVC3   HEADER_LEN, 25(R0), PREV_DIR                    ;
                        27      CD    AA   03  E1 00075    BBC     #3, QUAL_FLAGS+1, 3$                            ; 1588
                        22      CD    AA   02  E0 0007A    BBS     #2, QUAL_FLAGS+1, 3$                            ; 1589
                                0000'  CF  9F 0007F        PUSHAB  P.ACY                                           ; 1592
                                       7E  D4 00083        CLRL    -(SP)                                           ;
                        0000G   CF         02  FB 00085    CALLS   #2, DIR$OUTPUT                                  ;
                                0424   CA  9F 0008A        PUSHAB  PREV_DIR                                        ; 1593
                                0524   CA  DD 0008E        PUSHL   PREV_DIR_LEN                                    ;
                                0000'  CF  9F 00092        PUSHAB  P.ADA                                           ;
                            000000000G 8F  DD 00096        PUSHL   #DIR$_NEWDIRECT                                 ;
                        0000G   CF         04  FB 0009C    CALLS   #4, DIR$OUTPUT                                  ;
                                58    062C CA  D0 000A1 3$:  MOVL    VERSION_COUNT, R8                               ; 1599
                                       31  15 000A6        BLEQ    7$
                                54    E8   AA  D0 000A8    MOVL    DISPLAY_BLOCK, R4                               ; 1603
        57      00      0528    CA   0628  CA  2D 000AC    CMPC5   PREV_FILE_LEN, PREV_FILE, #0, NAME_LEN, -       ;
                                      19   A4   000B5              25(R4)
                                       06  12 000B7        BNEQ    4$
                                0630   CA  D6 000B9        INCL    VERSION_INDEX                                   ; 1604
                                       10  11 000BD        BRB     5$
                        0628    CA         57  D0 000BF 4$:  MOVL    NAME_LEN, PREV_FILE_LEN                         ; 1607
                0528    CA      19    A4   57  28 000C4    MOVC3   NAME_LEN, 25(R4), PREV_FILE                     ; 1608
                                0630   CA  D4 000CB        CLRL    VERSION_INDEX                                   ; 1609
                                58    0630 CA  D1 000CF 5$:  CMPL    VERSION_INDEX, R8                               ; 1611
                                       03  19 000D4        BLSS    7$
                                     0B38  31 000D6 6$:     BRW     142$
                                50    E8   AA  D0 000D9 7$:  MOVL    DISPLAY_BLOCK, R0                               ; 1616
                        0408    CA   0131  C0  C0 000DD    ADDL2   305(R0), TOTAL_USED                             ;
                        040C    CA   012D  C0  C0 000E4    ADDL2   301(R0), TOTAL_ALLOC                            ; 1617
                                0410   CA  D6 000EB        INCL    TOTAL_FILES                                     ; 1618
                                  CE   AA  95 000EF        TSTB    QUAL_FLAGS+2                                    ; 1620
                                       E2  19 000F2        BLSS    6$
                DD      CD      AA         02  E0 000F4    BBS     #2, QUAL_FLAGS+1, 6$                            ;
                                0000'  CF  9F 000F9        PUSHAB  P.ADC                                           ; 1622
                                       7E  D4 000FD        CLRL    -(SP)                                           ;
                        0000G   CF         02  FB 000FF    CALLS   #2, DIR$OUTPUT                                  ;
        08      00              6E         00  2C 00104    MOVC5   #0, (SP), #0, #8, LINE_DESC                     ; 1624
                                       6A      00109
                                       6A  B4 0010A        CLRW    LINE_DESC                                       ; 1625
                        04      AA     08  AA  9E 0010C    MOVAB   LINE_BUFFER, LINE_DESC+4                        ; 1626
                10      CD      AA         03  E0 00111    BBS     #3, QUAL_FLAGS+1, 8$                            ; 1628
                7E      E8      AA         19  C1 00116    ADDL3   #25, DISPLAY_BLOCK, -(SP)                       ; 1629
                                       56  DD 0011B        PUSHL   HEADER_LEN                                      ;
                                0000'  CF  9F 0011D        PUSHAB  P.ADE                                           ;
                                       7E  D4 00121        CLRL    -(SP)                                           ;
                                6B         04  FB 00123    CALLS   #4, DIR$APPEND                                  ;
                50              56    E8   AA  C1 00126 8$:  ADDL3   DISPLAY_BLOCK, HEADER_LEN, R0                   ; 1631
                                      19   A0  9F 0012B        PUSHAB  25(R0)                                          ;
                                       59  DD 0012E        PUSHL   FILENAME_LEN                                    ;
                                0000'  CF  9F 00130        PUSHAB  P.ADG                                           ;
                                       7E  D4 00134        CLRL    -(SP)                                           ;
                                6B         04  FB 00136    CALLS   #4, DIR$APPEND                                  ;
                                56         6A  3C 00139    MOVZWL  LINE_DESC, R6                                   ; 1632
```

```
                          56     14  C6 0013C          DIVL2   #20, R6                                ;
                          56     14  C4 0013F          MULL2   #20, R6                                ;
                          50     6A  3C 00142          MOVZWL  LINE_DESC, R0                          ;
                          56     50  C2 00145          SUBL2   R0, R6                                 ;
                          56     14  C0 00148          ADDL2   #20, SPACE_COUNT                       ;
                                 03  12 0014B          BNEQ    9$                                     ; 1633
                          56     14  D0 0014D          MOVL    #20, SPACE_COUNT                       ;
                                 56  DD 00150 9$:      PUSHL   SPACE_COUNT                            ; 1634
                       0000'     CF  9F 00152          PUSHAB  P.ADI                                  ;
                                 7E  D4 00156          CLRL    -(SP)                                  ;
                          6B     03  FB 00158          CALLS   #3, DIR$APPEND                         ;
                          58     6A  3C 0015B          MOVZWL  LINE_DESC, R8                          ; 1635
                          57     58  D0 0015E          MOVL    R8, MARK_POSITION                      ;
                          70  E8 BA  E8 00161          BLBS    @DISPLAY_BLOCK, 11$                    ; 1639
      08        00        6E     00  2C 00165          MOVC5   #0, (SP), #0, #8, LOCAL_DESC           ; 1642
                                 6E     0016A
                6E  0400  8F     58  A3 0016B          SUBW3   R8, #1024, LOCAL_DESC                  ; 1643
                      04  AE  08 AA48  9E 00171        MOVAB   LINE_BUFFER[R8], LOCAL_DESC+4          ; 1644
                          7E     01  7D 00177          MOVQ    #1, -(SP)                              ; 1648
                             08  AE  9F 0017A          PUSHAB  LOCAL_DESC                             ;
                             0C  AE  9F 0017D          PUSHAB  LOCAL_DESC                             ;
                             E8  BA  DD 00180          PUSHL   @DISPLAY_BLOCK                         ;
                000000000G  00   05  FB 00183          CALLS   #5, SYS$GETMSG                         ;
                          6A     6E  A0 0018A          ADDW2   LOCAL_DESC, LINE_DESC                  ; 1649
 07E0     CA        6A    10     00  ED 0018D          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH      ; 1650
                                 33  15 00194          BLEQ    10$                                    ;
                          6A     57  B0 00196          MOVW    MARK_POSITION, LINE_DESC               ; 1653
                                 5A  DD 00199          PUSHL   R10                                    ; 1654
                                 7E  D4 0019B          CLRL    -(SP)                                  ;
                     0000G  CF   02  FB 0019D          CALLS   #2, DIR$OUTPUT                         ;
      14        20        6E     00  2C 001A2          MOVC5   #0, (SP), #32, #20, LINE_BUFFER        ; 1655
                             08  AA     001A7
                    6E     03EC  8F  B0 001A9          MOVW    #1004, LOCAL_DESC                      ; 1656
                      04  AE  1C  AA  9E 001AE         MOVAB   LINE_BUFFER+20, LOCAL_DESC+4           ; 1657
                          7E     01  7D 001B3          MOVQ    #1, -(SP)                              ; 1661
                             08  AE  9F 001B6          PUSHAB  LOCAL_DESC                             ;
                             0C  AE  9F 001B9          PUSHAB  LOCAL_DESC                             ;
                             E8  BA  DD 001BC          PUSHL   @DISPLAY_BLOCK                         ;
                000000000G  00   05  FB 001BF          CALLS   #5, SYS$GETMSG                         ;
                          6A     14  A0 001C6          ADDW2   #20, LINE_DESC                         ; 1662
                                 5A  DD 001C9 10$:     PUSHL   R10                                    ; 1664
                                 7E  D4 001CB          CLRL    -(SP)                                  ;
                     0000G  CF   02  FB 001CD          CALLS   #2, DIR$OUTPUT                         ;
                               0A3C  31 001D2          BRW     142$                                   ; 1665
                          50  1C A7  9E 001D5 11$:     MOVAB   28(R7), R0                             ; 1668
                      07E0  CA   50  D1 001D9          CMPL    R0, DISPLAY_WIDTH                      ;
                                 0C  15 001DE          BLEQ    12$                                    ;
                          6A     56  A2 001E0          SUBW2   SPACE_COUNT, LINE_DESC                 ; 1671
                                 5A  DD 001E3          PUSHL   R10                                    ; 1672
                                 7E  D4 001E5          CLRL    -(SP)                                  ;
                     0000G  CF   02  FB 001E7          CALLS   #2, DIR$OUTPUT                         ;
                          1C     6A  B1 001EC 12$:     CMPW    LINE_DESC, #28                         ; 1674
                                 09  1A 001EF          BGTRU   13$                                    ;
                          56     6A  3C 001F1          MOVZWL  LINE_DESC, SPACE_COUNT                 ; 1675
                56        1E     56  C3 001F4          SUBL3   SPACE_COUNT, #30, SPACE_COUNT          ;
                                 03  11 001F8          BRB     14$                                    ;
                          56     02  D0 001FA 13$:     MOVL    #2, SPACE_COUNT                        ; 1676
```

```
                50      E8   AA   D0 001FD 14$:    MOVL    DISPLAY_BLOCK, R0                       ; 1677
                51   0123    C0   3C 00201         MOVZWL  291(R0), R1
                             0C   12 00206         BNEQ    15$
                     0125    C0   B5 00208         TSTW    293(R0)                                 ; 1678
                             06   12 0020C         BNEQ    15$
                     0127    C0   B5 0020E         TSTW    295(R0)                                 ; 1679
                             1D   13 00212         BEQL    16$
                7E   0127    C0   3C 00214 15$:    MOVZWL  295(R0), -(SP)                          ; 1683
                7E   0125    C0   3C 00219         MOVZWL  293(R0), -(SP)
                             51   DD 0021E         PUSHL   R1
                             56   DD 00220         PUSHL   SPACE_COUNT
                     0000'   CF   9F 00222         PUSHAB  P.ADK
                00000000G    8F   DD 00226         PUSHL   #DIR$_FULLFILEID
                6B           06   FB 0022C         CALLS   #6, DIR$APPEND
                             0F   11 0022F         BRB     17$
                             56   DD 00231 16$:    PUSHL   SPACE_COUNT                             ; 1684
                     0000'   CF   9F 00233         PUSHAB  P.ADM
                00000000G    8F   DD 00237         PUSHL   #DIR$_NOFUFILEID
                6B           03   FB 0023D         CALLS   #3, DIR$APPEND
                             5A   DD 00240 17$:    PUSHL   R10                                     ; 1685
                             7E   D4 00242         CLRL    -(SP)
          0000G CF           02   FB 00244         CALLS   #2, DIR$OUTPUT
                50      E8   AA   D0 00249         MOVL    DISPLAY_BLOCK, R0                       ; 1688
                     012D    C0   DD 0024D         PUSHL   301(R0)
                     0131    C0   DD 00251         PUSHL   305(R0)
                     0000'   CF   9F 00255         PUSHAB  P.ADO
                00000000G    8F   DD 00259         PUSHL   #DIR$_FULLSIZE
                6B           04   FB 0025F         CALLS   #4, DIR$APPEND
                57           6A   3C 00262         MOVZWL  LINE_DESC, MARK_POSITION                ; 1689
                50      E8   AA   D0 00265         MOVL    DISPLAY_BLOCK, R0                       ; 1691
                51      E8   AA   D0 00269         MOVL    DISPLAY_BLOCK, R1                       ; 1690
                     0119    C1   95 0026D         TSTB    281(R1)
                             10   12 00271         BNEQ    18$
                     014E    C0   DD 00273         PUSHL   334(R0)                                 ; 1691
                     0000'   CF   9F 00277         PUSHAB  P.ADQ
                0000000CG    8F   DD 0027B         PUSHL   #DIR$_FULLOWNERID
                             0E   11 00281         BRB     19$
                     014E    C0   DD 00283 18$:    PUSHL   334(R0)                                 ; 1692
                     0000'   CF   9F 00287         PUSHAB  P.ADS
                00000000G    8F   DD 0028B         PUSHL   #DIR$_FULLOWNERUIC
                6B           03   FB 00291 19$:    CALLS   #3, DIR$APPEND
     07E0  CA        6A      10   00   ED 00294    CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH        ; 1693
                             3B   15 0029B         BLEQ    22$
                6A           57   B0 0029D         MOVW    MARK_POSITION, LINE_DESC                ; 1696
                             5A   DD 002A0         PUSHL   R10                                     ; 1697
                             7E   D4 002A2         CLRL    -(SP)
          0000G CF           02   FB 002A4         CALLS   #2, DIR$OUTPUT
                50      E8   AA   D0 002A9         MOVL    DISPLAY_BLOCK, R0                       ; 1699
                51      E8   AA   D0 002AD         MOVL    DISPLAY_BLOCK, R1                       ; 1698
                     0119    C1   95 002B1         TSTB    281(R1)
                             10   12 002B5         BNEQ    20$
                     014E    C0   DD 002B7         PUSHL   334(R0)                                 ; 1699
                     0000'   CF   9F 002BB         PUSHAB  P.ADU
                00000000G    8F   DD 002BF         PUSHL   #DIR$_FULLOWNERID
                             0E   11 002C5         BRB     21$
                     014E    C0   DD 002C7 20$:    PUSHL   334(R0)                                 ; 1700
                     0000'   CF   9F 002CB         PUSHAB  P.ADW
```

```
                00000000G  8F  DD 002CF          PUSHL   #DIR$_FULLOWNERUIC                                    ;
            6B              03  FB 002D5 21$:     CALLS   #3, DIR$APPEND                                       ;
                            5A  DD 002D8 22$:     PUSHL   R10                                          ;  1702
                            7E  D4 002DA          CLRL    -(SP)                                                ;
    0000G   CF              02  FB 002DC          CALLS   #2, DIR$OUTPUT                                       ;
            50      E8      AA  D0 002E1          MOVL    DISPLAY_BLOCK, R0                            ;  1703
                    0170    C0  D5 002E5          TSTL    368(R0)                                              ;
                            11  12 002E9          BNEQ    23$                                                  ;
                    0174    C0  D5 002EB          TSTL    372(R0)                                              ;
                            0B  12 002EF          BNEQ    23$                                                  ;
                00000000G  8F  DD 002F1          PUSHL   #DIR$_NOFUCREDAT                             ;  1704
            6B              01  FB 002F7          CALLS   #1, DIR$APPEND                                       ;
                            11  11 002FA          BRB     24$                                                  ;
                    0170    C0  9F 002FC 23$:     PUSHAB  368(R0)                                      ;  1705
                    0000'   CF  9F 00300          PUSHAB  P.ADY                                                ;
                00000000G  8F  DD 00304          PUSHL   #DIR$_FULLCREDAT                                     ;
            6B              03  FB 0030A          CALLS   #3, DIR$APPEND                                       ;
            52      E8      AA  D0 0030D 24$:     MOVL    DISPLAY_BLOCK, R2                            ;  1706
                    0178    C2  D5 00311          TSTL    376(R2)                                              ;
                            11  12 00315          BNEQ    25$                                                  ;
                    017C    C2  D5 00317          TSTL    380(R2)                                              ;
                            0B  12 0031B          BNEQ    25$                                                  ;
                00000000G  8F  DD 0031D          PUSHL   #DIR$_NOFUREVDAT                             ;  1707
            6B              01  FB 00323          CALLS   #1, DIR$APPEND                                       ;
                            16  11 00326          BRB     26$                                                  ;
            7E      016E    C2  3C 00328 25$:     MOVZWL  366(R2), -(SP)                               ;  1709
                    0178    C2  9F 0032D          PUSHAB  376(R2)                                              ;
                    0000'   CF  9F 00331          PUSHAB  P.AEA                                                ;
                00000000G  8F  DD 00335          PUSHL   #DIR$_FULLREVDAT                                     ;
            6B              04  FB 0033B          CALLS   #4, DIR$APPEND                                       ;
                            5A  DD 0033E 26$:     PUSHL   R10                                          ;  1710
                            7E  D4 00340          CLRL    -(SP)                                                ;
    0000G   CF              02  FB 00342          CALLS   #2, DIR$OUTPUT                                       ;
            50      E8      AA  D0 00347          MOVL    DISPLAY_BLOCK, R0                            ;  1712
                    0180    C0  D5 0034B          TSTL    384(R0)                                              ;
                            11  12 0034F          BNEQ    27$                                                  ;
                    0184    C0  D5 00351          TSTL    388(R0)                                              ;
                            0B  12 00355          BNEQ    27$                                                  ;
                00000000G  8F  DD 00357          PUSHL   #DIR$_NOFUEXPDAT                             ;  1713
            6B              01  FB 0035D          CALLS   #1, DIR$APPEND                                       ;
                            11  11 00360          BRB     28$                                                  ;
                    0180    C0  9F 00362 27$:     PUSHAB  384(R0)                                      ;  1714
                    0000'   CF  9F 00366          PUSHAB  P.AEC                                                ;
                00000C00G  8F  DD 0036A          PUSHL   #DIR$_FULLEXPDAT                                     ;
            6B              03  FB 00370          CALLS   #3, DIR$APPEND                                       ;
            50      E8      AA  D0 00373 28$:     MOVL    DISPLAY_BLOCK, R0                            ;  1715
                    0188    C0  D5 00377          TSTL    392(R0)                                              ;
                            11  12 0037B          BNEQ    29$                                                  ;
                    018C    C0  D5 0037D          TSTL    396(R0)                                              ;
                            0B  12 00381          BNEQ    29$                                                  ;
                00000000G  8F  DD 00383          PUSHL   #DIR$_NOFUBAKDAT                             ;  1716
            6B              01  FB 00389          CALLS   #1, DIR$APPEND                                       ;
                            11  11 0038C          BRB     30$                                                  ;
                    0188    C0  9F 0038E 29$:     PUSHAB  392(R0)                                      ;  1717
                    0000'   CF  9F 00392          PUSHAB  P.AEE                                                ;
                00000000G  8F  DD 00396          PUSHL   #DIR$_FULLBAKDAT                                     ;
            6B              03  FB 0039C          CALLS   #3, DIR$APPEND                                       ;
```

```
                                                 5A  DD 0039F 30$:    PUSHL   R10                                     ; 1718
                                                 7E  D4 003A1          CLRL    -(SP)
                                  0000G  CF      02  FB 003A3          CALLS   #2, DIR$OUTPUT
                                         00000000G 8F  DD 003A8          PUSHL   #DIR$_FILEORG                           ; 1720
                                         6B        01  FB 003AE          CALLS   #1, DIR$APPEND
                                         52    E8  AA  D0 003B1          MOVL    DISPLAY_BLOCK, R2                       ; 1721
                          53     0129  C2          04  EF 003B5          EXTZV   #4, #4, 297(R2), R3
                                                 0B  12 003BC          BNEQ    31$                                     ; 1723
                                         00000000G 8F  DD 003BE          PUSHL   #DIR$_FILORGSEQ
                                         6B        01  FB 003C4          CALLS   #1, DIR$APPEND
                                                 7A  11 003C7          BRB     35$
                                         01        53  D1 003C9 31$:     CMPL    R3, #1                                  ; 1724
                                                 10  12 003CC          BNEQ    32$
                                             0190  C2  DD 003CE          PUSHL   400(R2)
                                             0000' CF  9F 003D2          PUSHAB  P.AEG
                                         00000000G 8F  DD 003D6          PUSHL   #DIR$_FILORGREL
                                                 62  11 003DC          BRB     34$
                                         02        53  D1 003DE 32$:     CMPL    R3, #2                                  ; 1725
                                                 51  12 003E1          BNEQ    33$
                                         00000000G 8F  DD 003E3          PUSHL   #DIR$_FILORGIDX                         ; 1726
                                         6B        01  FB 003E9          CALLS   #1, DIR$APPEND
                                         50    E8  AA  D0 003EC          MOVL    DISPLAY_BLOCK, R0                       ; 1727
                                         51  0195  C0  9A 003F0          MOVZBL  405(R0), R1
                                                 4C  13 003F5          BEQL    35$
                                                 51  DD 003F7          PUSHL   R1                                      ; 1731
                                         7E  0196  C0  3C 003F9          MOVZWL  406(R0), -(SP)
                                             0000' CF  9F 003FE          PUSHAB  P.AEI
                                         00000000G 8F  DD 00402          PUSHL   #DIR$_IDXPROLOG
                                         6B        04  FB 00408          CALLS   #4, DIR$APPEND
                                         50    E8  AA  D0 0040B          MOVL    DISPLAY_BLOCK, R0                       ; 1732
                                         01  0194  C0  91 0040F          CMPB    404(R0), #1
                                                 2D  1B 00414          BLEQU   35$
                                                 5A  DD 00416          PUSHL   R10                                     ; 1735
                                                 7E  D4 00418          CLRL    -(SP)
                                  0000G  CF      02  FB 0041A          CALLS   #2, DIR$OUTPUT
                                         50    E8  AA  D0 0041F          MOVL    DISPLAY_BLOCK, R0                       ; 1736
                                         7E  0194  C0  9A 00423          MOVZBL  404(R0), -(SP)
                                             0000' CF  9F 00428          PUSHAB  P.AEK
                                         00000000G 8F  DD 0042C          PUSHL   #DIR$_IDXAREA
                                                 0C  11 00432          BRB     34$
                                                 53  DD 00434 33$:     PUSHL   R3                                      ; 1740
                                             0000' CF  9F 00436          PUSHAB  P.AEM
                                         00000000G 8F  DD 0043A          PUSHL   #DIR$_FILORGUNK
                                         6B        03  FB 00440 34$:     CALLS   #3, DIR$APPEND
                                                 5A  DD 00443 35$:     PUSHL   R10                                     ; 1742
                                                 7E  D4 00445          CLRL    -(SP)
                                  0000G  CF      02  FB 00447          CALLS   #2, DIR$OUTPUT
                                         50    E8  AA  D0 0044C          MOVL    DISPLAY_BLOCK, R0                       ; 1744
                                         7E  013B  C0  3C 00450          MOVZWL  315(R0), -(SP)
                                             012D  C0  DD 00455          PUSHL   301(R0)
                                             0000' CF  9F 00459          PUSHAB  P.AEO
                                         00000000G 8F  DD 0045D          PUSHL   #DIR$_FILEATTR
                                         6B        04  FB 00463          CALLS   #4, DIR$APPEND
                                         57            6A  3C 00466          MOVZWL  LINE_DESC, MARK_POSITION        ; 1745
                                         50    E8  AA  D0 00469          MOVL    DISPLAY_BLOCK, R0                       ; 1746
                                             0137  C0  95 0046D          TSTB    311(R0)
                                                 6A  13 00471          BEQL    41$
```

```
                                52              01 D0 00473          MOVL    #1, J                                   ; 1749
                                                6A B5 00476 36$:     TSTW    LINE_DESC                               ; 1752
                                                09 13 00478          BEQL    37$
                                      0000'     CF 9F 0047A          PUSHAB  P.AEQ
                                                7E D4 0047E          CLRL    -(SP)
                                6B              02 FB 00480          CALLS   #2, DIR$APPEND
                                                6A B5 00483 37$:     TSTW    LINE_DESC                               ; 1753
                                                09 12 00485          BNEQ    38$
                                      0000'     CF 9F 00487          PUSHAB  P.AES
                                                7E D4 0048B          CLRL    -(SP)
                                6B              02 FB 0048D          CALLS   #2, DIR$APPEND
                                50        E8    AA D0 00490 38$:     MOVL    DISPLAY_BLOCK, R0                       ; 1755
                                51        E8    AA D0 00494          MOVL    DISPLAY_BLOCK, R1                       ; 1754
        02      0129    C1      04              04 ED 00498          CMPZV   #4, #4, 297(R1), #2
                                                11 12 0049F          BNEQ    39$
                                7E      0137    C0 9A 004A1          MOVZBL  311(R0), -(SP)                          ; 1755
                                      0000'     CF 9F 004A6          PUSHAB  P.AEU
                                00000000G       8F DD 004AA          PUSHL   #DIR$_MAXBKTSIZ
                                                0F 11 004B0          BRB     40$
                                7E      0137    C0 9A 004B2 39$:     MOVZBL  311(R0), -(SP)                          ; 1756
                                      0000'     CF 9F 004B7          PUSHAB  P.AEW
                                00000000G       8F DD 004BB          PUSHL   #DIR$_BUCKETSIZ
                                6B              03 FB 004C1 40$:     CALLS   #3, DIR$APPEND
    07E0        CA      6A      10              00 ED 004C4          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH       ; 1757
                                                10 15 004CB          BLEQ    41$
                                6A              57 B0 004CD          MOVW    MARK_POSITION, LINE_DESC                ; 1760
                                                5A DD 004D0          PUSHL   R10                                     ; 1761
                                                7E D4 004D2          CLRL    -(SP)
                        0000G   CF              02 FB 004D4          CALLS   #2, DIR$OUTPUT
                99              52              02 F3 004D9          AOBLEQ  #2, J, 36$                              ; 1749
                                57              6A 3C 004DD 41$:     MOVZWL  LINE_DESC, MARK_POSITION                ; 1766
                                52              01 D0 004E0          MOVL    #1, J                                   ; 1767
                                                6A B5 004E3 42$:     TSTW    LINE_DESC                               ; 1770
                                                09 13 004E5          BEQL    43$
                                      0000'     CF 9F 004E7          PUSHAB  P.AEY
                                                7E D4 004EB          CLRL    -(SP)
                                6B              02 FB 004ED          CALLS   #2, DIR$APPEND
                                                6A B5 004F0 43$:     TSTW    LINE_DESC                               ; 1771
                                                09 12 004F2          BNEQ    44$
                                      0000'     CF 9F 004F4          PUSHAB  P.AFA
                                                7E D4 004F8          CLRL    -(SP)
                                6B              02 FB 004FA          CALLS   #2, DIR$APPEND
                                50        E8    AA D0 004FD 44$:     MOVL    DISPLAY_BLOCK, R0                       ; 1772
                                7E      013D    C0 3C 00501          MOVZWL  317(R0), -(SP)
                                      0000'     CF 9F 00506          PUSHAB  P.AFC
                                00000000G       8F DD 0050A          PUSHL   #DIR$_GBLBUFCNT
                                6B              03 FB 00510          CALLS   #3, DIR$APPEND
    07E0        CA      6A      10              00 ED 00513          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH       ; 1773
                                                10 15 0051A          BLEQ    45$
                                6A              57 B0 0051C          MOVW    MARK_POSITION, LINE_DESC                ; 1776
                                                5A DD 0051F          PUSHL   R10                                     ; 1777
                                                7E D4 00521          CLRL    -(SP)
                        0000G   CF              02 FB 00523          CALLS   #2, DIR$OUTPUT
                B7              52              02 F3 00528          AOBLEQ  #2, J, 42$                              ; 1767
                                57              6A 3C 0052C 45$:     MOVZWL  LINE_DESC, MARK_POSITION                ; 1781
                                52              01 D0 0052F          MOVL    #1, J                                   ; 1782
                                                6A B5 00532 46$:     TSTW    LINE_DESC                               ; 1785
```

```
                                                09  13 00534          BEQL    47$                                                     :
                                        0000'   CF  9F 00536          PUSHAB  P.AFE                                                   :
                                                7E  D4 0053A          CLRL    -(SP)                                                   :
                                    6B          02  FB 0053C          CALLS   #2, DIR$APPEND                                          :
                                                6A  B5 0053F 47$:     TSTW    LINE_DESC                                               : 1786
                                                09  12 00541          BNEQ    48$                                                     :
                                        0000'   CF  9F 00543          PUSHAB  P.AFG                                                   :
                                                7E  D4 00547          CLRL    -(SP)                                                   :
                                    6B          02  FB 00549          CALLS   #2, DIR$APPEND                                          :
                                    50      E8  AA  D0 0054C 48$:     MOVL    DISPLAY_BLOCK, R0                                       : 1787
                                7FFF    8F  011D  C0  B1 00550          CMPW    285(R0), #32767                                         :
                                                0B  12 00557          BNEQ    49$                                                     :
                                00000000G       8F  DD 00559          PUSHL   #DIR$_NOVERLIMIT                                        : 1788
                                    6B          01  FB 0055F          CALLS   #1, DIR$APPEND                                          :
                                                12  11 00562          BRB     50$                                                     :
                                    7E  011D    C0  3C 00564 49$:     MOVZWL  285(R0), -(SP)                                          : 1789
                                        0000'   CF  9F 00569          PUSHAB  P.AFI                                                   :
                                00000000G       8F  DD 0056D          PUSHL   #DIR$_VERLIMIT                                          :
                                    6B          03  FB 00573          CALLS   #3, DIR$APPEND                                          :
    07E0    CA          6A          10          00  ED 00576 50$:     CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       : 1790
                                                10  15 0057D          BLEQ    51$                                                     :
                                    6A          57  B0 0057F          MOVW    MARK_POSITION, LINE_DESC                                : 1793
                                                5A  DD 00582          PUSHL   R10                                                     : 1794
                                                7E  D4 00584          CLRL    -(SP)                                                   :
                                0000G   CF          02  FB 00586          CALLS   #2, DIR$OUTPUT                                          :
                        A3              52          02  F3 0058B          AOBLEQ  #2, J, 46$                                              : 1782
                                        57          6A  3C 0058F 51$:     MOVZWL  LINE_DESC, MARK_POSITION                                : 1798
                                    50      E8      AA  D0 00592          MOVL    DISPLAY_BLOCK, R0                                       : 1799
                                        0149    C0  95 00596          TSTB    329(R0)                                                 :
                                                3F  18 0059A          BGEQ    55$                                                     :
                                    52          01  D0 0059C          MOVL    #1, J                                                   : 1802
                                                6A  B5 0059F 52$:     TSTW    LINE_DESC                                               : 1805
                                                09  13 005A1          BEQL    53$                                                     :
                                        0000'   CF  9F 005A3          PUSHAB  P.AFK                                                   :
                                                7E  D4 005A7          CLRL    -(SP)                                                   :
                                    6B          02  FB 005A9          CALLS   #2, DIR$APPEND                                          :
                                                6A  B5 005AC 53$:     TSTW    LINE_DESC                                               : 1806
                                                09  12 005AE          BNEQ    54$                                                     :
                                        0000'   CF  9F 005B0          PUSHAB  P.AFM                                                   :
                                                7E  D4 005B4          CLRL    -(SP)                                                   :
                                    6B          02  FB 005B6          CALLS   #2, DIR$APPEND                                          :
                                00000000G       8F  DD 005B9 54$:     PUSHL   #DIR$_FILATRCTG                                         : 1807
                                    6B          01  FB 005BF          CALLS   #1, DIR$APPEND                                          :
    07E0    CA          6A          10          00  ED 005C2          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       : 1808
                                                10  15 005C9          BLEQ    55$                                                     :
                                    6A          57  B0 005CB          MOVW    MARK_POSITION, LINE_DESC                                : 1811
                                                5A  DD 005CE          PUSHL   R10                                                     : 1812
                                                7E  D4 005D0          CLRL    -(SP)                                                   :
                                0000G   CF          02  FB 005D2          CALLS   #2, DIR$OUTPUT                                          :
                        C4              52          02  F3 005D7          AOBLEQ  #2, J, 52$                                              : 1802
                                        57          6A  3C 005DB 55$:     MOVZWL  LINE_DESC, MARK_POSITION                                : 1817
                                    50      E8      AA  D0 005DE          MOVL    DISPLAY_BLOCK, R0                                       : 1818
                        3F          0149    C0  05 E1 005E2          BBC     #5, 329(R0), 59$                                        :
                                    52          01  D0 005E8          MOVL    #1, J                                                   : 1821
                                                6A  B5 005EB 56$:     TSTW    LINE_DESC                                               : 1824
                                                09  13 005ED          BEQL    57$                                                     :
                                        0000'   CF  9F 005EF          PUSHAB  P.AFO                                                   :
```

```
                                                7E  D4 005F3          CLRL    -(SP)
                                        6B      02  FB 005F5          CALLS   #2, DIR$APPEND
                                                6A  B5 005F8 57$:     TSTW    LINE_DESC                                       ;  1825
                                                09  12 005FA          BNEQ    58$
                                          0000' CF  9F 005FC          PUSHAB  P.AFQ
                                                7E  D4 00600          CLRL    -(SP)
                                        6B      02  FB 00602          CALLS   #2, DIR$APPEND
                                    00000000G   8F  DD 00605 58$:     PUSHL   #DIR$_FILATRCTB                                 ;  1826
                                        6B      01  FB 0060B          CALLS   #1, DIR$APPEND
07E0  CA                        6A      10      00  ED 0060E          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH               ;  1827
                                                10  15 00615          BLEQ    59$
                                        6A      57  B0 00617          MOVW    MARK_POSITION, LINE_DESC                        ;  1830
                                                5A  DD 0061A          PUSHL   R10                                             ;  1831
                                                7E  D4 0061C          CLRL    -(SP)
                                0000G   CF      02  FB 0061E          CALLS   #2, DIR$OUTPUT
                                C4      52      02  F3 00623          AOBLEQ  #2, J, 56$                                      ;  1821
                                        57      6A  3C 00627 59$:     MOVZWL  LINE_DESC, MARK_POSITION                        ;  1836
                                        50  E8  AA  D0 0062A          MOVL    DISPLAY_BLOCK, R0                               ;  1837
                                3F      0149    C0  06 E1 0062E      BBC     #6, 329(R0), 63$
                                        52      01  D0 00634          MOVL    #1, J                                           ;  1840
                                                6A  B5 00637 60$:     TSTW    LINE_DESC                                       ;  1843
                                                09  13 00639          BEQL    61$
                                          0000' CF  9F 0063B          PUSHAB  P.AFS
                                                7E  D4 0063F          CLRL    -(SP)
                                        6B      02  FB 00641          CALLS   #2, DIR$APPEND
                                                6A  B5 00644 61$:     TSTW    LINE_DESC                                       ;  1844
                                                09  12 00646          BNEQ    62$
                                          0000' CF  9F 00648          PUSHAB  P.AFU
                                                7E  D4 0064C          CLRL    -(SP)
                                        6B      02  FB 0064E          CALLS   #2, DIR$APPEND
                                    00000000G   8F  DD 00651 62$:     PUSHL   #DIR$_FILATRLCK                                 ;  1845
                                        6B      01  FB 00657          CALLS   #1, DIR$APPEND
07E0  CA                        6A      10      00  ED 0065A          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH               ;  1846
                                                10  15 00661          BLEQ    63$
                                        6A      57  B0 00663          MOVW    MARK_POSITION, LINE_DESC                        ;  1849
                                                5A  DD 00666          PUSHL   R10                                             ;  1850
                                                7E  D4 00668          CLRL    -(SP)
                                0000G   CF      02  FB 0066A          CALLS   #2, DIR$OUTPUT
                                C4      52      02  F3 0066F          AOBLEQ  #2, J, 60$                                      ;  1840
                                        57      6A  3C 00673 63$:     MOVZWL  LINE_DESC, MARK_POSITION                        ;  1855
                                        50  E8  AA  D0 00676          MOVL    DISPLAY_BLOCK, R0                               ;  1856
                                3F      0149    C0  01 E1 0067A      BBC     #1, 329(R0), 67$
                                        52      01  D0 00680          MOVL    #1, J                                           ;  1859
                                                6A  B5 00683 64$:     TSTW    LINE_DESC                                       ;  1862
                                                09  13 00685          BEQL    65$
                                          0000' CF  9F 00687          PUSHAB  P.AFW
                                                7E  D4 0068B          CLRL    -(SP)
                                        6B      02  FB 0068D          CALLS   #2, DIR$APPEND
                                                6A  B5 00690 65$:     TSTW    LINE_DESC                                       ;  1863
                                                09  12 00692          BNEQ    66$
                                          0000' CF  9F 00694          PUSHAB  P.AFY
                                                7E  D4 00698          CLRL    -(SP)
                                        6B      02  FB 0069A          CALLS   #2, DIR$APPEND
                                    00000000G   8F  DD 0069D 66$:     PUSHL   #DIR$_FILATRNOBAK                               ;  1864
                                        6B      01  FB 006A3          CALLS   #1, DIR$APPEND
07E0  CA                        6A      10      00  ED 006A6          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH               ;  1865
                                                10  15 006AD          BLEQ    67$
```

```
                        6A              57  B0 006AF          MOVW    MARK_POSITION, LINE_DESC                                ; 1868
                                        5A  DD 006B2          PUSHL   R10                                                     ; 1869
                                        7E  D4 006B4          CLRL    -(SP)                                                   ;
                    0000G               CF  02 FB 006B6       CALLS   #2, DIR$OUTPUT                                          ;
                C4                      52  02 F3 006BB       AOBLEQ  #2, J, 64$                                              ; 1859
                                        57  6A 3C 006BF 67$:   MOVZWL  LINE_DESC, MARK_POSITION                                ; 1874
                                        50      E8  AA D0 006C2       MOVL    DISPLAY_BLOCK, R0                               ; 1875
                3F      0149            C0  02 E1 006C6       BBC     #2, 329(R0), 71$                                        ;
                                        52  01 D0 006CC       MOVL    #1, J                                                   ; 1878
                                        6A  B5 006CF 68$:     TSTW    LINE_DESC                                               ; 1881
                                            09 13 006D1       BEQL    69$                                                     ;
                                    0000'   CF  9F 006D3      PUSHAB  P.AGA                                                   ;
                                            7E  D4 006D7      CLRL    -(SP)                                                   ;
                                        6B  02 FB 006D9       CALLS   #2, DIR$APPEND                                          ;
                                        6A  B5 006DC 69$:     TSTW    LINE_DESC                                               ; 1882
                                            09 12 006DE       BNEQ    70$                                                     ;
                                    C000'   CF  9F 006E0      PUSHAB  P.AGC                                                   ;
                                            7E  D4 006E4      CLRL    -(SP)                                                   ;
                                        6B  02 FB 006E6       CALLS   #2, DIR$APPEND                                          ;
                                00000000G   8F  DD 006E9 70$: PUSHL   #DIR$_FILATRWRBAK                                       ; 1883
                                        6B  01 FB 006EF       CALLS   #1, DIR$APPEND                                          ;
    07E0    CA          6A              10  00 ED 006F2      CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       ; 1884
                                            10 15 006F9       BLEQ    71$                                                     ;
                                        6A  57  B0 006FB      MOVW    MARK_POSITION, LINE_DESC                                ; 1887
                                        5A  DD 006FE          PUSHL   R10                                                     ; 1888
                                        7E  D4 00700          CLRL    -(SP)                                                   ;
                    0000G               CF  02 FB 00702       CALLS   #2, DIR$OUTPUT                                          ;
                C4                      52  02 F3 00707       AOBLEQ  #2, J, 68$                                              ; 1878
                                        57  6A 3C 0070B 71$:   MOVZWL  LINE_DESC, MARK_POSITION                                ; 1893
                                        50      E8  AA D0 0070E       MOVL    DISPLAY_BLOCK, R0                               ; 1894
                3F      0149            C0  03 E1 00712       BBC     #3, 329(R0), 75$                                        ;
                                        52  01 D0 00718       MOVL    #1, J                                                   ; 1897
                                        6A  B5 0071B 72$:     TSTW    LINE_DESC                                               ; 1900
                                            09 13 0071D       BEQL    73$                                                     ;
                                    0000'   CF  9F 0071F      PUSHAB  P.AGE                                                   ;
                                            7E  D4 00723      CLRL    -(SP)                                                   ;
                                        6B  02 FB 00725       CALLS   #2, DIR$APPEND                                          ;
                                        6A  B5 00728 73$:     TSTW    LINE_DESC                                               ; 1901
                                            09 12 0072A       BNEQ    74$                                                     ;
                                    0000'   CF  9F 0072C      PUSHAB  P.AGG                                                   ;
                                            7E  D4 00730      CLRL    -(SP)                                                   ;
                                        6B  02 FB 00732       CALLS   #2, DIR$APPEND                                          ;
                                00000000G   8F  DD 00735 74$: PUSHL   #DIR$_FILATRRDCHK                                       ; 1902
                                        6B  01 FB 0073B       CALLS   #1, DIR$APPEND                                          ;
    07E0    CA          6A              10  00 ED 0073E      CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       ; 1903
                                            10 15 00745       BLEQ    75$                                                     ;
                                        6A  57  B0 00747      MOVW    MARK_POSITION, LINE_DESC                                ; 1906
                                        5A  DD 0074A          PUSHL   R10                                                     ; 1907
                                        7E  D4 0074C          CLRL    -(SP)                                                   ;
                    0000G               CF  02 FB 0074E       CALLS   #2, DIR$OUTPUT                                          ;
                C4                      52  02 F3 00753       AOBLEQ  #2, J, 72$                                              ; 1897
                                        57  6A 3C 00757 75$:   MOVZWL  LINE_DESC, MARK_POSITION                                ; 1912
                                        50      E8  AA D0 0075A       MOVL    DISPLAY_BLOCK, R0                               ; 1913
                3F      0149            C0  04 E1 0075E       BBC     #4, 329(R0), 79$                                        ;
                                        52  01 D0 00764       MOVL    #1, J                                                   ; 1916
                                        6A  B5 00767 76$:     TSTW    LINE_DESC                                               ; 1919
                                            09 13 00769       BEQL    77$                                                     ;
```

```
                        0000'  CF  9F 0076B          PUSHAB  P.AGI                                                   ;
                               7E  D4 0076F          CLRL    -(SP)                                                   ;
                    6B         02  FB 00771          CALLS   #2, DIR$APPEND                                          ;
                               6A  B5 00774 77$:     TSTW    LINE_DESC                                               ; 1920
                               09  12 00776          BNEQ    78$                                                     ;
                        0000'  CF  9F 00778          PUSHAB  P.AGK                                                   ;
                               7E  D4 0077C          CLRL    -(SP)                                                   ;
                    6B         02  FB 0077E          CALLS   #2, DIR$APPEND                                          ;
                 00000000G     8F  DD 00781 78$:     PUSHL   #DIR$_FILATRWRCHK                                       ; 1921
                    6B         01  FB 00787          CALLS   #1, DIR$APPEND                                          ;
07E0  CA            6A     10  00  ED 0078A          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       ; 1922          ; R
                               10  15 00791          BLEQ    79$                                                     ;
                    6A         57  B0 00793          MOVW    MARK_POSITION, LINE_DESC                                ; 1925
                               5A  DD 00796          PUSHL   R10                                                     ; 1926
                               7E  D4 00798          CLRL    -(SP)                                                   ;
                 0000G         CF  02  FB 0079A      CALLS   #2, DIR$OUTPUT                                          ;
                        C4     52  02  F3 0079F      AOBLEQ  #2, J, 76$                                              ; 1916
                               57  6A  3C 007A3 79$:  MOVZWL  LINE_DESC, MARK_POSITION                               ; 1931
                               50     E8  AA  D0 007A6      MOVL    DISPLAY_BLOCK, R0                                ; 1932
                        3F  014A       C0  03  E1 007AA      BBC     #3, 330(R0), 83$                                 ;
                               52      01  D0 007B0      MOVL    #1, J                                            ; 1935
                               6A  B5 007B3 80$:     TSTW    LINE_DESC                                               ; 1938
                               09  13 007B5          BEQL    81$                                                     ;
                        0000'  CF  9F 007B7          PUSHAB  P.AGM                                                   ;
                               7E  D4 007BB          CLRL    -(SP)                                                   ;
                    6B         02  FB 007BD          CALLS   #2, DIR$APPEND                                          ;
                               6A  B5 007C0 81$:     TSTW    LINE_DESC                                               ; 1939
                               09  12 007C2          BNEQ    82$                                                     ;
                        0000'  CF  9F 007C4          PUSHAB  P.AGO                                                   ;
                               7E  D4 007C8          CLRL    -(SP)                                                   ;
                    6B         02  FB 007CA          CALLS   #2, DIR$APPEND                                          ;
                 00000000G     8F  DD 007CD 82$:     PUSHL   #DIR$_FILATRBADACL                                      ; 1940
                    6B         01  FB 007D3          CALLS   #1, DIR$APPEND                                          ;
07E0  CA            6A     10  00  ED 007D6          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       ; 1941
                               10  15 007DD          BLEQ    83$                                                     ;
                    6A         57  B0 007DF          MOVW    MARK_POSITION, LINE_DESC                                ; 1944
                               5A  DD 007E2          PUSHL   R10                                                     ; 1945
                               7E  D4 007E4          CLRL    -(SP)                                                   ;
                 0000G         CF  02  FB 007E6      CALLS   #2, DIR$OUTPUT                                          ;
                        C4     52  02  F3 007EB      AOBLEQ  #2, J, 80$                                              ; 1935
                               57  6A  3C 007EF 83$:  MOVZWL  LINE_DESC, MARK_POSITION                               ; 1950
                               50     E8  AA  D0 007F2      MOVL    DISPLAY_BLOCK, R0                                ; 1951
                        3F  014A       C0  05  E1 007F6      BBC     #5, 330(R0), 87$                                 ;
                               52      01  D0 007FC      MOVL    #1, J                                            ; 1954
                               6A  B5 007FF 84$:     TSTW    LINE_DESC                                               ; 1957
                               09  13 00801          BEQL    85$                                                     ;
                        0000'  CF  9F 00803          PUSHAB  P.AGQ                                                   ;
                               7E  D4 00807          CLRL    -(SP)                                                   ;
                    6B         02  FB 00809          CALLS   #2, DIR$APPEND                                          ;
                               6A  B5 0080C 85$:     TSTW    LINE_DESC                                               ; 1958
                               09  12 0080E          BNEQ    86$                                                     ;
                        0000'  CF  9F 00810          PUSHAB  P.AGS                                                   ;
                               7E  D4 00814          CLRL    -(SP)                                                   ;
                    6B         02  FB 00816          CALLS   #2, DIR$APPEND                                          ;
                 00000000G     8F  DD 00819 86$:     PUSHL   #DIR$_FILATRDIR                                         ; 1959
                    6B         01  FB 0081F          CALLS   #1, DIR$APPEND                                          ;
07E0  CA            6A     10  00  ED 00822          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       ; 1960
```

```
                                        10 15 00829          BLEQ    87$                                                     ;
                                    6A  57 B0 00828          MOVW    MARK_POSITION, LINE_DESC                                ; 1963
                                        5A DD 0082E          PUSHL   R10                                                     ; 1964
                                        7E D4 00830          CLRL    -(SP)                                                   ;
                                0000G   CF 02 FB 00832       CALLS   #2, DIR$OUTPUT                                          ;
                                C4      52 02 F3 00837       AOBLEQ  #2, J, 84$                                              ; 1954
                                        57 6A 3C 0083B 87$:  MOVZWL  LINE_DESC, MARK_POSITION                                ; 1969
                                        50 E8 AA D0 0083E    MOVL    DISPLAY_BLOCK, R0                                       ; 1970
                                3F  014A CO 06 E1 00842      BBC     #6, 330(R0), 91$                                        ;
                                        52 01 D0 00848       MOVL    #1, J                                                   ; 1973
                                        6A B5 0084B 88$:     TSTW    LINE_DESC                                               ; 1976
                                        09 13 0084D          BEQL    89$                                                     ;
                                  0000' CF 9F 0084F          PUSHAB  P.AGU                                                   ;
                                        7E D4 00853          CLRL    -(SP)                                                   ;
                                    6B  02 FB 00855          CALLS   #2, DIR$APPEND                                          ;
                                        6A B5 00858 89$:     TSTW    LINE_DESC                                               ; 1977
                                        09 12 0085A          BNEQ    90$                                                     ;
                                  0000' CF 9F 0085C          PUSHAB  P.AGW                                                   ;
                                        7E D4 00860          CLRL    -(SP)                                                   ;
                                    6B  02 FB 00862          CALLS   #2, DIR$APPEND                                          ;
                             00000000G  8F DD 00865 90$:     PUSHL   #DIR$_FILATRBADBLK                                      ; 1978
                                    6B  01 FB 0086B          CALLS   #1, DIR$APPEND                                          ;
07E0    CA                      6A  10  00 ED 0086E          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       ; 1979
                                        10 15 00875          BLEQ    91$                                                     ;
                                    6A  57 B0 00877          MOVW    MARK_POSITION, LINE_DESC                                ; 1982
                                        5A DD 0087A          PUSHL   R10                                                     ; 1983
                                        7E D4 0087C          CLRL    -(SP)                                                   ;
                                0000G   CF 02 FB 0087E       CALLS   #2, DIR$OUTPUT                                          ;
                                C4      52 02 F3 00883       AOBLEQ  #2, J, 88$                                              ; 1973
                                        57 6A 3C 00887 91$:  MOVZWL  LINE_DESC, MARK_POSITION                                ; 1988
                                        50 E8 AA D0 0088A    MOVL    DISPLAY_BLOCK, R0                                       ; 1989
                                3F  014B CO E9 0088E         BLBC    331(R0), 95$                                            ;
                                        52 01 D0 00893       MOVL    #1, J                                                   ; 1992
                                        6A B5 00896 92$:     TSTW    LINE_DESC                                               ; 1995
                                        09 13 00898          BEQL    93$                                                     ;
                                  0000' CF 9F 0089A          PUSHAB  P.AGY                                                   ;
                                        7E D4 0089E          CLRL    -(SP)                                                   ;
                                    6B  02 FB 008A0          CALLS   #2, DIR$APPEND                                          ;
                                        6A B5 008A3 93$:     TSTW    LINE_DESC                                               ; 1996
                                        09 12 008A5          BNEQ    94$                                                     ;
                                  0000' CF 9F 008A7          PUSHAB  P.AHA                                                   ;
                                        7E D4 008AB          CLRL    -(SP)                                                   ;
                                    6B  02 FB 008AD          CALLS   #2, DIR$APPEND                                          ;
                             00000000G  8F DD 008B0 94$:     PUSHL   #DIR$_FILATRNOCHRG                                      ; 1997
                                    6B  01 FB 008B6          CALLS   #1, DIR$APPEND                                          ;
07E0    CA                      6A  10  00 ED 008B9          CMPZV   #0, #16, LINE_DESC, DISPLAY_WIDTH                       ; 1998
                                        10 15 008C0          BLEQ    95$                                                     ;
                                    6A  57 B0 008C2          MOVW    MARK_POSITION, LINE_DESC                                ; 2001
                                        5A DD 008C5          PUSHL   R10                                                     ; 2002
                                        7E D4 008C7          CLRL    -(SP)                                                   ;
                                0000G   CF 02 FB 008C9       CALLS   #2, DIR$OUTPUT                                          ;
                                C4      52 02 F3 008CE       AOBLEQ  #2, J, 92$                                              ; 1992
                                        57 6A 3C 008D2 95$:  MOVZWL  LINE_DESC, MARK_POSITION                                ; 2007
                                        50 E8 AA D0 008D5    MOVL    DISPLAY_BLOCK, R0                                       ; 2008
                                3F  014B CO 01 E1 008D9      BBC     #1, 331(R0), 99$                                        ;
                                        52 01 D0 008DF       MOVL    #1, J                                                   ; 2011
                                        6A B5 008E2 96$:     TSTW    LINE_DESC                                               ; 2014
```

```
                                                09  13 008E4          BEQL    97$                                                     ;
                                          0000' CF  9F 008E6          PUSHAB  P.AHC                                                   ;
                                                7E  D4 008EA          CLRL    -(SP)                                                   ;
                                             6B     02 008EC          CALLS   #2, DIR$APPEND                                          ;
                                                6A  B5 008EF 97$:     TSTW    LINE_DESC                                               ; 2015
                                                09  12 008F1          BNEQ    98$                                                     ;
                                          0000' CF  9F 008F3          PUSHAB  P.AHE                                                   ;
                                                7E  D4 008F7          CLRL    -(SP)                                                   ;
                                             6B     02 008F9          CALLS   #2, DIR$APPEND                                          ;
                                    00000000G   8F  DD 008FC 98$:     PUSHL   #DIR$_FILATRERASE                                       ; 2016
                                             6B     01 00902          CALLS   #1, DIR$APPEND                                          ;
                07E0    CA          6A          10  00 00905          CMPZV   #0, #15, LINE_DESC, DISPLAY_WIDTH                       ; 2017
                                                10  15 0090C          BLEQ    99$                                                     ;
                                                6A  57 B0 0090E       MOVW    MARK_POSITION, LINE_DESC                                ; 2020
                                                5A  DD 00911          PUSHL   R10                                                     ; 2021
                                                7E  D4 00913          CLRL    -(SP)                                                   ;
                                      0000G  CF     02 FB 00915       CALLS   #2, DIR$OUTPUT                                          ;
                                          C4        52  02 F3 0091A    AOBLEQ  #2, J, 96$                                              ; 2011
                                                6A  B5 0091E 99$:     TSTW    LINE_DESC                                               ; 2026
                                                09  13 00920          BEQL    100$                                                    ;
                                                5A  DD 00922          PUSHL   R10                                                     ;
                                                7E  D4 00924          CLRL    -(SP)                                                   ;
                                      0000G  CF     02 FB 00926       CALLS   #2, DIR$OUTPUT                                          ;
                                    00000000G   8F  DD 0092B 100$:    PUSHL   #DIR$_RECFORMAT                                         ; 2028
                                             6B     01 FB 00931       CALLS   #1, DIR$APPEND                                          ;
                                             52        E8  AA D0 00934 MOVL    DISPLAY_BLOCK, R2                                       ; 2029
                    53      0129    C2          04  00 EF 00938       EXTZV   #0, #4, 297(R2), R3                                     ;
                                                01  53 D1 0093F       CMPL    R3, #1                                                  ; 2030
                                                11  12 00942          BNEQ    101$                                                    ;
                                             7E     012B C2  3C 00944 MOVZWL  299(R2), -(SP)                                          ;
                                                0000' CF  9F 00949    PUSHAB  P.AHG                                                   ;
                                    00000000G   8F  DD 0094D          PUSHL   #DIR$_RECFMTFIX                                         ;
                                                65  11 00953          BRB     109$                                                    ;
                                             02     53 D1 00955 101$:  CMPL    R3, #2                                                  ; 2031
                                                08  12 00958          BNEQ    102$                                                    ;
                                    00000000G   8F  DD 0095A          PUSHL   #DIR$_RECFMTVAR                                         ;
                                                47  11 00960          BRB     107$                                                    ;
                                             03     53 D1 00962 102$:  CMPL    R3, #3                                                  ; 2032
                                                11  12 00965          BNEQ    103$                                                    ;
                                             7E     0138 C2  9A 00967 MOVZBL  312(R2), -(SP)                                          ;
                                                0000' CF  9F 0096C    PUSHAB  P.AHI                                                   ;
                                    00000000G   8F  DD 00970          PUSHL   #DIR$_RECFMTVFC                                         ;
                                                42  11 00976          BRB     109$                                                    ;
                                                53  D5 00978 103$:    TSTL    R3                                                      ; 2033
                                                08  12 0097A          BNEQ    104$                                                    ;
                                    00000000G   8F  DD 0097C          PUSHL   #DIR$_RECFMTUDF                                         ;
                                                25  11 00982          BRB     107$                                                    ;
                                             04     53 D1 00984 104$:  CMPL    R3, #4                                                  ; 2034
                                                08  12 00987          BNEQ    105$                                                    ;
                                    00000000G   8F  DD 00989          PUSHL   #DIR$_RECFMTSTM                                         ;
                                                18  11 0098F          BRB     107$                                                    ;
                                             05     53 D1 00991 105$:  CMPL    R3, #5                                                  ; 2035
                                                08  12 00994          BNEQ    106$                                                    ;
                                    00000000G   8F  DD 00996          PUSHL   #DIR$_RECFMTSTMLF                                       ;
                                                0B  11 0099C          BRB     107$                                                    ;
                                             06     53 D1 0099E 106$:  CMPL    R3, #6                                                  ; 2036
                                                0B  12 009A1          BNEQ    108$                                                    ;
```

```
                                00000000G  8F  DD 009A3          PUSHL   #DIR$_RECFMTSTMCR                                    ;
                             6B            01  FB 009A9 107$:    CALLS   #1, DIR$APPEND                                      ;
                                           0F  11 009AC          BRB     110$                                                ;
                                           53  DD 009AE 108$:    PUSHL   R3                                                  ; 2037
                                     0000' CF  9F 009B0          PUSHAB  P.AHK                                               ;
                                00000000G  8F  DD 009B4          PUSHL   #DIR$_RECFMTUNK                                     ;
                             6B            03  FB 009BA 109$:    CALLS   #3, DIR$APPEND                                      ;
                             50      E8    AA  D0 009BD 110$:    MOVL    DISPLAY_BLOCK, R0                                   ; 2039
        01      0129 C0              04            00  ED 009C1          CMPZV   #0, #4, 297(R0), #1                         ;
                                           18  13 009C8          BEQL    111$                                                ;
                                 012B  C0  B5 009CA          TSTW    299(R0)                                                 ; 2040
                                           12  13 009CE          BEQL    111$                                                ;
                             7E  012B  C0  3C 009D0          MOVZWL  299(R0), -(SP)                                      ; 2041
                                 0000' CF  9F 009D5          PUSHAB  P.AHM                                               ;
                                00000000G  8F  DD 009D9          PUSHL   #DIR$_MAXRECSIZ                                     ;
                             6B            03  FB 009DF          CALLS   #3, DIR$APPEND                                      ;
                                           5A  DD 009E2 111$:    PUSHL   R10                                                 ; 2042
                                           7E  D4 009E4          CLRL    -(SP)                                               ;
                          0000G CF         02  FB 009E6          CALLS   #2, DIR$OUTPUT                                      ;
                                00000000G  8F  DD 009EB          PUSHL   #DIR$_RECATTR                                       ; 2044
                             6B            01  FB 009F1          CALLS   #1, DIR$APPEND                                      ;
                             50      E8    AA  D0 009F4          MOVL    DISPLAY_BLOCK, R0                                   ; 2045
                             52  012A  C0  9E 009F8          MOVAB   298(R0), R2                                         ;
                                           62  95 009FD          TSTB    (R2)                                                ;
                                           08  12 009FF          BNEQ    112$                                                ;
                                00000000G  8F  DD 00A01          PUSHL   #DIR$_NORECATTR                                     ; 2046
                                           4F  11 00A07          BRB     118$                                                ;
                             57            6A  3C 00A09 112$:    MOVZWL  LINE_DESC, MARK_POSITION                            ; 2049
              08             62            01  E1 00A0C          BBC     #1, (R2), 113$                                      ; 2050
                                00000000G  8F  DD 00A10          PUSHL   #DIR$_CRCARCTL                                      ; 2051
                                           1D  11 00A16          BRB     116$                                                ;
                             08            62  E9 00A18 113$:    BLBC    (R2), 114$                                          ; 2052
                                00000000G  8F  DD 00A1B          PUSHL   #DIR$_FTNCARCTL                                     ; 2053
                                           12  11 0CA21          BRB     116$                                                ;
              08             62            02  E1 00A23 114$:    BBC     #2, (R2), 115$                                      ; 2054
                                00000000G  8F  DD 00A27          PUSHL   #DIR$_PRICARCTL                                     ; 2055
                                           06  11 00A2D          BRB     116$                                                ;
                                00000000G  8F  DD 00A2F 115$:    PUSHL   #DIR$_NOCARCTL                                      ; 2056
                             6B            01  FB 00A35 116$:    CALLS   #1, DIR$APPEND                                      ;
                             50      E8    AA  D0 00A38          MOVL    DISPLAY_BLOCK, R0                                   ; 2057
              19             03  E1 00A3C          BBC     #3, 298(R0), 119$                                           ;
57            6A             10            00  ED 00A42          CMPZV   #0, #16, LINE_DESC, MARK_POSITION                   ; 2060
                                           09  13 00A47          BEQL    117$                                                ;
                                     0000' CF  9F 00A49          PUSHAB  P.AHO                                               ;
                                           7E  D4 00A4D          CLRL    -(SP)                                               ;
                             6B            02  FB 00A4F          CALLS   #2, DIR$APPEND                                      ;
                                00000000G  8F  DD 00A52 117$:    PUSHL   #DIR$_NOSPAN                                        ; 2061
                             6B            01  FB 00A58 118$:    CALLS   #1, DIR$APPEND                                      ;
                                           5A  DD 00A5B 119$:    PUSHL   R10                                                 ; 2064
                                           7E  D4 00A5D          CLRL    -(SP)                                               ;
                          0000G CF         02  FB 00A5F          CALLS   #2, DIR$OUTPUT                                      ;
                             03      0000' CF  E8 00A64          BLBS    JOURNAL_FLAG, 120$                                  ; 2066
                                     0127  31  00A69          BRW     134$                                                ;
                                00000000G  8F  DD 00A6C 120$:    PUSHL   #DIR$_JNLENABLED                                    ; 2069
                             6B            01  FB 00A72          CALLS   #1, DIR$APPEND                                      ;
                             50      E8    AA  D0 00A75          MOVL    DISPLAY_BLOCK, R0                                   ; 2070
                             52  0154  C0  9E 00A79          MOVAB   340(R0), R2                                         ;
```

```
                        62  B5 00A7E          TSTW    (R2)                                    ;
                        0B  12 00A80          BNEQ    121$                                    ;
                 00000000G  8F  DD 00A82          PUSHL   #DIR$_NOJNLENB                      ; 2071
                        6B      01  FB 00A88          CALLS   #1, DIR$APPEND                  ;
                                6D  11 00A8B          BRB     128$                            ;
                        09      62      03  E1 00A8D 121$:   BBC     #3, (R2), 122$          ; 2074
                             0000'  CF  9F 00A91          PUSHAB  P.AHQ                       ;
                                    7E  D4 00A95          CLRL    -(SP)                       ;
                                6B      02  FB 00A97          CALLS   #2, DIR$APPEND          ;
                                50  E8  AA  D0 00A9A 122$:   MOVL    DISPLAY_BLOCK, R0       ; 2075
                        09  0154  C0      02  E1 00A9E          BBC     #2, 340(R0), 123$       ;
                             0000'  CF  9F 00AA4          PUSHAB  P.AHS                       ;
                                    7E  D4 00AA8          CLRL    -(SP)                       ;
                                6B      02  FB 00AAA          CALLS   #2, DIR$APPEND          ;
                                50  E8  AA  D0 00AAD 123$:   MOVL    DISPLAY_BLOCK, R0       ; 2076
                        09  0154  C0      04  E1 00AB1          BBC     #4, 340(R0), 124$       ;
                             0000'  CF  9F 00AB7          PUSHAB  P.AHU                       ;
                                    7E  D4 00ABB          CLRL    -(SP)                       ;
                                6B      02  FB 00ABD          CALLS   #2, DIR$APPEND          ;
                                50  E8  AA  D0 00AC0 124$:   MOVL    DISPLAY_BLOCK, R0       ; 2077
                        09  0154  C0      01  E1 00AC4          BBC     #1, 340(R0), 125$       ;
                             0000'  CF  9F 00ACA          PUSHAB  P.AHW                       ;
                                    7E  D4 00ACE          CLRL    -(SP)                       ;
                                6B      02  FB 00AD0          CALLS   #2, DIR$APPEND          ;
                                50  E8  AA  D0 00AD3 125$:   MOVL    DISPLAY_BLOCK, R0       ; 2078
                                09  0154  C0  E9 00AD7          BLBC    340(R0), 126$           ;
                             0000'  CF  9F 00ADC          PUSHAB  P.AHY                       ;
                                    7E  D4 00AE0          CLRL    -(SP)                       ;
                                6B      02  FB 00AE2          CALLS   #2, DIR$APPEND          ;
                                50  E8  AA  D0 00AE5 126$:   MOVL    DISPLAY_BLOCK, R0       ; 2079
                        09  0154  C0      05  E1 00AE9          BBC     #5, 340(R0), 127$       ;
                             0000'  CF  9F 00AEF          PUSHAB  P.AIA                       ;
                                    7E  D4 00AF3          CLRL    -(SP)                       ;
                                6B      02  FB 00AF5          CALLS   #2, DIR$APPEND          ;
                                6A  B7 00AF8 127$:   DECW    LINE_DESC                       ; 2080
                                5A  DD 00AFA 128$:   PUSHL   R10                             ; 2082
                                    7E  D4 00AFC          CLRL    -(SP)                       ;
                        0000G   CF      02  FB 00AFE          CALLS   #2, DIR$OUTPUT          ;
                                50  E8  AA  D0 00B03          MOVL    DISPLAY_BLOCK, R0       ; 2083
                                    01A9  C0  95 00B07          TSTB    425(R0)                 ;
                                          15  13 00B0B          BEQL    129$                    ;
                                    01A9  C0  9F 00B0D          PUSHAB  425(R0)                 ; 2084
                                    0000' CF  9F 00B11          PUSHAB  P.AIC                   ;
                                 00000000G  8F  DD 00B15          PUSHL   #DIR$_BIJNLNAME         ;
                        0000G   CF      03  FB 00B1B          CALLS   #3, DIR$OUTPUT          ;
                                        11  11 00B20          BRB     130$                    ;
                    0B  0154    C0      02  E1 00B22 129$:   BBC     #2, 340(R0), 130$       ; 2085
                             00000000G  8F  DD 00B28          PUSHL   #DIR$_NOBIJNL           ; 2086
                        0000G   CF      01  FB 00B2E          CALLS   #1, DIR$OUTPUT          ;
                                50  E8  AA  D0 00B33 130$:   MOVL    DISPLAY_BLOCK, R0       ; 2087
                                    0198  C0  95 00B37          TSTB    408(R0)                 ;
                                          15  13 00B3B          BEQL    131$                    ;
                                    0198  C0  9F 00B3D          PUSHAB  408(R0)                 ; 2088
                                    0000' CF  9F 00B41          PUSHAB  P.AIE                   ;
                                 00000000G  8F  DD 00B45          PUSHL   #DIR$_AIJNLNAME         ;
                        0000G   CF      03  FB 00B4B          CALLS   #3, DIR$OUTPUT          ;
                                        11  11 00B50          BRB     132$                    ;
```

```
                0B  0154  CO                    03 E1 00B52 131$:   BBC     #3, 340(R0), 132$                       ; 2089
                                 00000000G      8F DD 00B58         PUSHL   #DIR$_NOAIJNL                           ; 2090
                    0000G CF                    01 FB 00B5E         CALLS   #1, DIR$OUTPUT
                          50          E8        AA D0 00B63 132$:   MOVL    DISPLAY_BLOCK, R0                       ; 2091
                                     01BA       CO 95 00B67         TSTB    442(R0)
                                                15 13 00B6B         BEQL    133$
                                     01BA       CO 9F 00B6D         PUSHAB  442(R0)                                 ; 2092
                                     0000'      CF 9F 00B71         PUSHAB  P.AIG
                                 00000000G      8F DD 00B75         PUSHL   #DIR$_ATJNLNAME
                    0000G CF                    03 FB 00B7B         CALLS   #3, DIR$OUTPUT
                                                11 11 00B80         BRB     134$
                0B  0154  CO                    04 E1 00B82 133$:   BBC     #4, 340(R0), 134$                       ; 2093
                                 00000000G      8F DD 00B88         PUSHL   #DIR$_NOATJNL                           ; 2094
                    0000G CF                    01 FB 00B8E         CALLS   #1, DIR$OUTPUT
                                 00000000G      8F DD 00B93 134$:   PUSHL   #DIR$_FILEPROT                          ; 2097
                          6B                    01 FB 00B99         CALLS   #1, DIR$APPEND
                                                52 D4 00B9C         CLRL    J                                       ; 2098
                                                08 12 00B9E 135$:   BNEQ    136$                                    ; 2103
                                 00000000G      8F DD 00BA0         PUSHL   #DIR$_SYSPROT
                                                25 11 00BA6         BRB     139$
                          01                    52 D1 00BA8 136$:   CMPL    J, #1                                   ; 2104
                                                08 12 00BAB         BNEQ    137$
                                 00000000G      8F DD 00BAD         PUSHL   #DIR$_OWNPROT
                                                18 11 00BB3         BRB     139$
                          02                    52 D1 00BB5 137$:   CMPL    J, #2                                   ; 2105
                                                08 12 00BB8         BNEQ    138$
                                 00000000G      8F DD 00BBA         PUSHL   #DIR$_GRPPROT
                                                0B 11 00BC0         BRB     139$
                          03                    52 D1 00BC2 138$:   CMPL    J, #3                                   ; 2106
                                                09 12 00BC5         BNEQ    140$
                                 00000000G      8F DD 00BC7         PUSHL   #DIR$_WORPROT
                          6B                    01 FB 00BCD 139$:   CALLS   #1, DIR$APPEND
                          50          E8        AA D0 00BD0 140$:   MOVL    DISPLAY_BLOCK, R0                       ; 2108
                          53        0152        CO 9E 00BD4         MOVAB   338(R0), R3
                    51                          52 02 78 00BD9      ASHL    #2, J, R1
                50  63                          04 51 EF 00BDD      EXTZV   R1, #4, (R3), R0
                                         0000'CF40 DD 00BE2         PUSHL   PROT_TABLE[R0]
                                                7E D4 00BE7         CLRL    -(SP)
                          6B                    02 FB 00BE9         CALLS   #2, DIR$APPEND
                    AE                          52 03 F3 00BEC      AOBLEQ  #3, J, 135$                             ; 2098
                                                5A DD 00BF0         PUSHL   R10                                     ; 2110
                                                7E D4 00BF2         CLRL    -(SP)
                    0000G CF                    02 FB 00BF4         CALLS   #2, DIR$OUTPUT
                                       07F8     CA D5 00BF9         TSTL    ACL_LENGTH                              ; 2112
                                                07 15 00BFD         BLEQ    141$
                    0000V CF                    00 FB 00BFF         CALLS   #0, DIR$SHOW_ACL                        ; 2113
                                                0B 11 00C04         BRB     142$
                                 00000000G      8F DD 00C06 141$:   PUSHL   #DIR$_NOFILEACL                         ; 2114
                    0000G CF                    01 FB 00C0C         CALLS   #1, DIR$OUTPUT
                          50                    01 D0 00C11 142$:   MOVL    #1, R0                                  ; 2116
                                                04 00C14            RET                                             ; 2118

; Routine Size:  3093 bytes,    Routine Base:  $CODE$ + 0BE4
```

```
;1725     2119  1 ROUTINE DIR$SHOW_ACL =
;1726     2120  1
;1727     2121  1 !++
;1728     2122  1 !
;1729     2123  1 ! FUNCTIONAL DESCRIPTION:
;1730     2124  1 !
;1731     2125  1 !       This routine is called to display the file's ACL.  The output
;1732     2126  1 !       format differs depending on whether or not a full directory
;1733     2127  1 !       listing is required.
;1734     2128  1 !
;1735     2129  1 ! CALLING SEQUENCE:
;1736     2130  1 !       DIR$SHOW_ACL ()
;1737     2131  1 !
;1738     2132  1 ! INPUT PARAMETERS:
;1739     2133  1 !       none
;1740     2134  1 !
;1741     2135  1 ! IMPLICIT INPUTS:
;1742     2136  1 !       none
;1743     2137  1 !
;1744     2138  1 ! OUTPUT PARAMETERS:
;1745     2139  1 !       none
;1746     2140  1 !
;1747     2141  1 ! IMPLICIT OUTPUTS:
;1748     2142  1 !       none
;1749     2143  1 !
;1750     2144  1 ! ROUTINE VALUE:
;1751     2145  1 !       1
;1752     2146  1 !
;1753     2147  1 ! SIDE EFFECTS:
;1754     2148  1 !       none
;1755     2149  1 !
;1756     2150  1 !--
;1757     2151  1
;1758     2152  2 BEGIN
;1759     2153  2
;1760     2154  2 LOCAL
;1761     2155  2         ACL_BUFFER      : REF $BBLOCK,  ! Address of ACL storage
;1762     2156  2         ACE_POINTER     : REF $BBLOCK,  ! Pointer to binary ACE
;1763     2157  2         ACE_BINDESC     : $BBLOCK [8],  ! Descriptor to binary ACE
;1764     2158  2         ACE_TXTDESC     : $BBLOCK [8],  ! Descriptor to converted ACE
;1765     2159  2         ACE_TEXT        : $BBLOCK [3072],       ! Converted ACE text storage
;1766     2160  2         ACL_FIBDESC     : $BBLOCK [8],  ! FIB descriptor
;1767     2161  2         ACL_FIB         : $BBLOCK [FIB$C_LENGTH],       ! File FIB
;1768     2162  2         ATR_DESC        : $BBLOCK [12], ! Attribute descriptor
;1769     2163  2         STATUS,                         ! Routine exit status
;1770     2164  2         IOSB            : VECTOR [4, WORD];     ! I/O status block
;1771     2165  2
;1772     2166  2 EXTERNAL ROUTINE
;1773     2167  2         DIR$OUTPUT;                             ! General output routine
;1774     2168  2
;1775     2169  2 IF .DISPLAY_BLOCK[DIR_B_NODE] EQL 0
;1776     2170  2 THEN
;1777     2171  3     BEGIN
;1778     2172  3
;1779     2173  3 ! Allocate a block of storage for the file's ACL.
;1780     2174  3
;1781     2175  3     STATUS = LIB$GET_VM (%REF (512), ACL_BUFFER);
```

```
;  1782          2176  3      IF NOT .STATUS
;  1783          2177  3      THEN
;  1784          2178  4          BEGIN
;  1785          2179  4          SIGNAL (.STATUS);
;  1786          2180  4          RETURN .STATUS;
;  1787          2181  3          END;
;  1788          2182  3
;  1789          2183  3  ! Set up the FIB to read the ACL.
;  1790          2184  3
;  1791          2185  3      CH$FILL (0, FIB$C_LENGTH, ACL_FIB);
;  1792          2186  3      ACL_FIBDESC[DSC$W_LENGTH] = FIB$C_LENGTH;
;  1793          2187  3      ACL_FIBDESC[DSC$A_POINTER] = ACL_FIB;
;  1794          2188  3      ACL_FIB[FIB$W_FID_NUM] = .DISPLAY_BLOCK[DIR_W_FID_NUM];
;  1795          2189  3      ACL_FIB[FIB$W_FID_SEQ] = .DISPLAY_BLOCK[DIR_W_FID_SEQ];
;  1796          2190  3      ACL_FIB[FIB$W_FID_RVN] = .DISPLAY_BLOCK[DIR_W_FID_RVN];
;  1797          2191  3      WHILE 1
;  1798          2192  3      DO
;  1799          2193  4          BEGIN
;  1800          2194  4          CH$FILL (0, .ACL_LENGTH, .ACL_BUFFER);
;  1801          2195  4          ATR_DESC[ATR$W_SIZE] = 512;
;  1802          2196  4          ATR_DESC[ATR$W_TYPE] = ATR$C_READACL;
;  1803          2197  4          ATR_DESC[ATR$L_ADDR] = .ACL_BUFFER;
;  1804          2198  4          ATR_DESC[8,0,32,0] = 0;
;  1805          2199  4
;  1806        P 2200  4          STATUS = $QIOW (CHAN = .CHANNEL,
;  1807        P 2201  4                          FUNC = IO$_ACCESS,
;  1808        P 2202  4                          IOSB = IOSB,
;  1809        P 2203  4                          P1 = ACL_FIBDESC,
;  1810          2204  4                          P5 = ATR_DESC);
;  1811          2205  4          IF .STATUS THEN STATUS = .IOSB[0];
;  1812          2206  4          IF .STATUS THEN STATUS = .ACL_FIB[FIB$L_ACL_STATUS];
;  1813          2207  4          IF NOT .STATUS THEN EXITLOOP;
;  1814          2208  4          ACE_POINTER = .ACL_BUFFER;
;  1815          2209  4          CH$FILL (0, 8, ACE_BINDESC);
;  1816          2210  4          CH$FILL (0, 8, ACE_TXTDESC);
;  1817          2211  4          UNTIL .ACE_POINTER[ACE$B_SIZE] EQL 0
;  1818          2212  4             OR .ACE_POINTER GEQA ACL_BUFFER + .ACL_LENGTH
;  1819          2213  4          DO
;  1820          2214  5              BEGIN
;  1821          2215  5              IF NOT .ACE_POINTER[ACE$V_HIDDEN]
;  1822          2216  5              THEN
;  1823          2217  6                  BEGIN
;  1824          2218  6                  ACE_BINDESC[DSC$W_LENGTH] = .ACE_POINTER[ACE$B_SIZE];
;  1825          2219  6                  ACE_BINDESC[DSC$A_POINTER] = .ACE_POINTER;
;  1826          2220  6                  ACE_TXTDESC[DSC$W_LENGTH] = 3072;
;  1827          2221  6                  ACE_TXTDESC[DSC$A_POINTER] = ACE_TEXT;
;  1828        P 2222  6                  STATUS = $FORMAT_ACL (ACLENT = ACE_BINDESC,
;  1829        P 2223  6                                        ACLLEN = ACE_TXTDESC[DSC$W_LENGTH],
;  1830        P 2224  6                                        ACLSTR = ACE_TXTDESC,
;  1831        P 2225  6                                        WIDTH = DISPLAY_WIDTH,
;  1832        P 2226  6                                        TRMDSC = $DESCRIPTOR (%CHAR (13), %CHAR(10)),
;  1833        P 2227  6                                        INDENT = %REF (IF .QUAL_FLAGS[DIR_V_QUAL_FULL]
;  1834          2228  6                                                       THEN 20 ELSE 10));
;  1835          2229  6                  IF NOT .STATUS
;  1836          2230  6                  THEN
;  1837          2231  7                      BEGIN
;  1838          2232  7                      SIGNAL (.STATUS);
```

```
;  1839          2233  7                   RETURN .STATUS;
;  1840          2234  6                   END;
;  1841          2235  6               IF .ACE_POINTER EQL .ACL_BUFFER AND .QUAL_FLAGS[DIR_V_QUAL_FULL]
;  1842          2236  6               THEN
;  1843          2237  7                   BEGIN
;  1844        P 2238  7                   $GETMSG (MSGID = DIR$_FILEACL,
;  1845        P 2239  7                            MSGLEN = %REF (0),          ! Length is a throw-away
;  1846        P 2240  7                            BUFADR = ACE_TXTDESC,
;  1847          2241  7                            FLAGS = 1);
;  1848          2242  6                   END;
;  1849          2243  6               WRITE (0, '!AS', ACE_TXTDESC);
;  1850          2244  5               END;
;  1851          2245  5           ACE_POINTER = .ACE_POINTER + .ACE_POINTER[ACE$B_SIZE];
;  1852          2246  4           END;
;  1853          2247  3       END;
;  1854          2248  2   END;
;  1855          2249  2
;  1856          2250  2 RETURN 1;
;  1857          2251  2
;  1858          2252  1 END;                                ! End of routine DIR$SHOW_ACL;


                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

                                      0D  00584 P.AIJ:  .ASCII  <13>                                    ;
                                      0A  00585         .ASCII  <10>                                    ;
                                          00586         .BLKB   2                                       ;
                                00000002  00588 P.AII:  .LONG   2                                       ;
                                00000000' 0058C         .ADDRESS P.AIJ                                  ;
                              53  41  21  00590 P.AIL:  .ASCII  \!AS\                                   ;
                                          00593         .BLKB   1                                       ;
                                00000003  00594 P.AIK:  .LONG   3                                       ;
                                00000000' 00598         .ADDRESS P.AIL                                  ;

                                                .EXTRN  LIB$SIGNAL, SYS$FLUSH
                                                .EXTRN  SYS$WAIT, SYS$FORMAT_ACL

                                                .PSECT  $CODE$,NOWRT,2

                                          0FFC 00000 DIR$SHOW_ACL:
                                                .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11            ; 2119
                                5B 00000000G   00  9E 00002         MOVAB   LIB$SIGNAL, R11             ;
                                5A 00000000G   00  9E 00009         MOVAB   SYS$WAIT, R10               ;
                                59 00000000G   00  9E 00010         MOVAB   SYS$FLUSH, R9               ;
                                58 00000000'   EF  9E 00017         MOVAB   OUTPUT_RAB, R8              ;
                                5E      F38C   CE  9E 0001E         MOVAB   -3188(SP), SP               ;
                                50      F7EC   C8  D0 00023         MOVL    DISPLAY_BLOCK, R0           ; 2169
                                        0119   C0  95 00028         TSTB    281(R0)                     ;
                                               03  13 0002C         BEQL    1$                          ;
                                             0190  31 0002E         BRW     17$                         ;
                                          04   AE  9F 00031 1$:     PUSHAB  ACL_BUFFER                  ; 2175
                                04    AE      0200  8F  3C 00034    MOVZWL  #512, 4(SP)                 ;
                                          04   AE  9F 0003A         PUSHAB  4(SP)                       ;
                00000000G       00              02  FB 0003D      CALLS   #2, LIB$GET_VM                 ;
                                57              50  D0 00044      MOVL    R0, STATUS                     ;
                                28              57  E8 00047      BLBS    STATUS, 4$                     ; 2176
```

```
                                                58 DD 0004A         PUSHL   R8                                      ; 2179
                                             69    01 FB 0004C         CALLS   #1, SYS$FLUSH                           ;
                                                58 DD 0004F         PUSHL   R8                                      ;
                                             6A    01 FB 00051         CALLS   #1, SYS$WAIT                            ;
                                                57 DD 00054         PUSHL   STATUS                                  ;
                                             6B    01 FB 00056         CALLS   #1, LIB$SIGNAL                          ;
                                             07    57 93 00059         BITB    STATUS, #7                              ;
                                                03 12 0005C         BNEQ    3$                                      ;
                                              0120 31 0005E 2$:      BRW     13$                                     ;
                50      57                    03    00 EF 00061 3$:   EXTZV   #0, #3, STATUS, R0                      ;
                50    F7E4    CB              03    00 ED 00066       CMPZV   #0, #3, WORST_ERROR, R0                  ;
                                                EF 18 00067D         BGEQ    2$                                      ;
                                              0105 31 0006F         BRW     12$                                     ;
        0040    8F              00            6E    00 2C 00072 4$:   MOVC5   #0, (SP), #0, #64, ACL_FIB              ; 2185
                                                1C AE       00079                                                     ;
                                          5C    AE    40    8F 9B 0007B       MOVZBW  #64, ACL_FIBDESC                ; 2186
                                          60    AE    1C    AE 9E 00080       MOVAB   ACL_FIB, ACL_FIBDESC+4          ; 2187
                                                50  F7EC    C8 D0 00085       MOVL    DISPLAY_BLOCK, R0               ; 2188
                                          20    AE  0123    C0 D0 0008A       MOVL    291(R0), ACL_FIB+4              ;
                                          24    AE  0127    C0 B0 00090       MOVW    295(R0), ACL_FIB+8              ; 2190
          FC    A8              00            6E    00 2C 00096 5$:   MOVC5   #0, (SP), #0, ACL_LENGTH, @ACL_BUFFER  ; 2194
                                                04 BE       0009C                                                     ;
                                          10    AE 00250200 8F D0 0009E       MOVL    #2425344, ATR_DESC              ; 2195
                                          14    AE    04    AE D0 000A6       MOVL    ACL_BUFFER, ATR_DESC+4          ; 2197
                                                18    AE    D4 000AB         CLRL    ATR_DESC+8                      ; 2198
                                                   7E    D4 000AE         CLRL    -(SP)                           ; 2204
                                                14    AE    9F 000B0         PUSHAB  ATR_DESC                        ;
                                                   7E    7C 000B3         CLRQ    -(SP)                           ;
                                                   7E    D4 000B5         CLRL    -(SP)                           ;
                                                70    AE    9F 000B7         PUSHAB  ACL_FIBDESC                     ;
                                                   7E    7C 000BA         CLRQ    -(SP)                           ;
                                                28    AE    9F 000BC         PUSHAB  IOSB                            ;
                                                   32    DD 000BF         PUSHL   #50                             ;
                                                F7F0    C8    DD 000C1         PUSHL   CHANNEL                         ;
                                                   7E    D4 000C5         CLRL    -(SP)                           ;
                                          00000000G     00    0C FB 000C7         CALLS   #12, SYS$QIOW           ;
                                                57          50 D0 000CE         MOVL    R0, STATUS                      ;
                                                0B          57 E9 000D1         BLBC    STATUS, 6$                      ; 2205
                                                57    08    AE 3C 000D4         MOVZWL  IOSB, STATUS                    ;
                                                04          57 E9 000D8         BLBC    STATUS, 6$                      ; 2206
                                                57    50    AE D0 000DB         MOVL    ACL_FIB+52, STATUS              ;
                                                03          57 E8 000DF 6$:   BLBS    STATUS, 7$                      ; 2207
                                                         00DC 31 000E2         BRW     17$                             ;
                                                56    04    AE D0 000E5 7$:   MOVL    ACL_BUFFER, ACE_POINTER         ; 2208
    08          00                            6E    00 2C 000E9       MOVC5   #0, (SP), #0, #8, ACE_BINDESC           ; 2209
                                                F8 AD       000EE                                                     ;
    08          00                            6E    00 2C 000F0       MOVC5   #0, (SP), #0, #8, ACE_TXTDESC           ; 2210
                                                F0 AD       000F5                                                     ;
                                                   66 95 000F7 8$:   TSTB    (ACE_POINTER)                           ; 2211
                                                   9B 13 000F9       BEQL    5$                                      ;
                                                50    04    AE 9E 000FB       MOVAB   ACL_BUFFER, R0                  ; 2212
                                                50    FC    A8 C0 000FF       ADDL2   ACL_LENGTH, R0                  ;
                                                50          56 D1 00103       CMPL    ACE_POINTER, R0                 ;
                                                            8E 1E 00106       BGEQU   5$                              ;
                    03          03              A6          02 E1 00108       BBC     #2, 3(ACE_POINTER), 9$          ; 2215
                                                         00A8 31 0010D       BRW     16$                             ;
                                                   F8 AD       66 9B 00110 9$:   MOVZBW  (ACE_POINTER), ACE_BINDESC  ; 2218
```

```
                        FC   AD            56  D0 00114          MOVL    ACE_POINTER, ACE_BINDESC+4                  ; 2219
                        F0   AD      0C00   8F  B0 00118          MOVW    #3072, ACE_TXTDESC                          ; 2220
                        F4   AD        64   AE  9E 0011E          MOVAB   ACE_TEXT, ACE_TXTDESC+4                     ; 2221
                                            7E  D4 00123          CLRL    -(SP)                                       ; 2228
                 06     F7D1 C8             01  E1 00125          BBC     #1, QUAL_FLAGS+1, 10$
                        04   AE             14  D0 00128          MOVL    #20, 4(SP)
                                            04  11 0012F          BRB     11$                                                 LBR
                        04   AE             0A  D0 00131 10$:     MOVL    #10, 4(SP)
                                      04    AE  9F 00135 11$:     PUSHAB  4(SP)
                                    0000'   CF  9F 00138          PUSHAB  P.AII
                                      E4    A8  9F 0013C          PUSHAB  DISPLAY_WIDTH
                                      F0    AD  9F 0013F          PUSHAB  ACE_TXTDESC                                         DEF
                                      F0    AD  9F 00142          PUSHAB  ACE_TXTDESC
                                      F8    AD  9F 00145          PUSHAB  ACE_BINDESC
                    00000000G         00      07  FB 00148          CALLS   #7, SYS$FORMAT_ACL
                                      57      50  D0 0014F          MOVL    R0, STATUS
                                      30      57  E8 00152          BLBS    STATUS, 14$                                 ; 2229
                                              58  DD 00155          PUSHL   R8                                          ; 2232      LIB
                                      69      01  FB 00157          CALLS   #1, SYS$FLUSH
                                              58  DD 0015A          PUSHL   R8
                                      6A      01  FB 0015C          CALLS   #1, SYS$WAIT
                                              57  DD 0015F          PUSHL   STATUS
                                      6B      01  FB 00161          CALLS   #1, LIB$SIGNAL
                                      07      57  93 00164          BITB    STATUS, #7
                                              18  13 00167          BEQL    13$
           50           57                  03      00  EF 00169          EXTZV   #0, #3, STATUS, R0
           50   F7E4    C8                  03      00  ED 0016E          CMPZV   #0, #3, WORST_ERROR, R0
                                              0A  18 00175          BGEQ    13$
                F7E4    C8                  57 10000000   8F  C9 00177 12$:     BISL3   #268435456, STATUS, WORST_ERROR
                                              50      57  D0 00181 13$:     MOVL    STATUS, R0                          ; 2233
                                                  04 00184          RET
                        04   AE                 56  D1 00185 14$:     CMPL    ACE_POINTER, ACL_BUFFER                     ; 2235
                                              1F  12 00189          BNEQ    15$
                 19     F7D1 C8             01  E1 0018B          BBC     #1, QUAL_FLAGS+1, 15$
                                      7E      01  7D 00191          MOVQ    #1, -(SP)                                   ; 2241
                                        F0    AD  9F 00194          PUSHAB  ACE_TXTDESC
                                        0C    AE  D4 00197          CLRL    12(SP)
                                        0C    AE  9F 0019A          PUSHAB  12(SP)
                                00000000G     8F  DD 0019D          PUSHL   #DIR$_FILEACL
                    00000000G   00              05  FB 001A3          CALLS   #5, SYS$GETMSG
                                        F0    AD  9F 001AA 15$:     PUSHAB  ACE_TXTDESC                                 ; 2243
                                      0000'   CF  9F 001AD          PUSHAB  P.AIK
                                              7E  D4 001B1          CLRL    -(SP)
                        0000G   CF              03  FB 001B3          CALLS   #3, DIR$OUTPUT
                                      50      66  9A 001B8 16$:     MOVZBL  (ACE_POINTER), R0                           ; 2245
                                      56      50  C0 001BB          ADDL2   R0, ACE_POINTER
                                            FF36  31 001BE          BRW     8$                                          ; 2211
                                      50      01  D0 001C1 17$:     MOVL    #1, R0                                      ; 2250
                                                  04 001C4          RET                                                 ; 2252

; Routine Size:  453 bytes,    Routine Base:  $CODE$ + 17F9
```

```
;  1860          2253  1 GLOBAL ROUTINE DIR$TOTAL =
;  1861          2254  1
;  1862          2255  1 !++
;  1863          2256  1 !
;  1864          2257  1 ! FUNCTIONAL DESCRIPTION:
;  1865          2258  1 !       Display the per directory total
;  1866          2259  1 !
;  1867          2260  1 ! CALLING SEQUENCE:
;  1868          2261  1 !       DIR$TOTAL ()
;  1869          2262  1 !
;  1870          2263  1 ! INPUT PARAMETERS:
;  1871          2264  1 !       none
;  1872          2265  1 !
;  1873          2266  1 ! IMPLICIT INPUTS:
;  1874          2267  1 !       none
;  1875          2268  1 ! OUTPUT PARAMETERS:
;  1876          2269  1 !       none
;  1877          2270  1 !
;  1878          2271  1 ! IMPLICIT OUTPUTS:
;  1879          2272  1 !       none
;  1880          2273  1 !
;  1881          2274  1 ! ROUTINE VALUE:
;  1882          2275  1 !       1
;  1883          2276  1 !
;  1884          2277  1 ! SIDE EFFECTS:
;  1885          2278  1 !       none
;  1886          2279  1 !
;  1887          2280  1 !--
;  1888          2281  1
;  1889          2282  2 BEGIN
;  1890          2283  2
;  1891          2284  2 EXTERNAL ROUTINE
;  1892          2285  2         DIR$OUTPUT;                             ! General output routine
;  1893          2286  2
;  1894          2287  2 IF NOT .QUAL_FLAGS[DIR_V_QUAL_GRAN]
;  1895          2288  2 AND .QUAL_FLAGS[DIR_V_QUAL_TRAI]
;  1896          2289  2 THEN
;  1897          2290  3     BEGIN
;  1898          2291  3     WRITE (0, '');
;  1899          2292  3     IF .QUAL_FLAGS[DIR_V_QUAL_SIZE] OR .QUAL_FLAGS[DIR_V_QUAL_FULL]
;  1900          2293  3     THEN
;  1901          2294  4         BEGIN
;  1902          2295  4         IF .QUAL_FLAGS[DIR_V_SIZE_ALL] OR .QUAL_FLAGS[DIR_V_QUAL_FULL]
;  1903          2296  4         THEN WRITE (DIR$_TOTSIZAL[, 0, .TOTAL_FILES, .TOTAL_USED, .TOTAL_ALLOC)
;  1904        P 2297  4         ELSE WRITE (DIR$_TOTSIZ, 0, .TOTAL_FILES, (IF .QUAL_FLAGS[DIR_V_SIZE_USED]
;  1905          2298  4                                                     THEN .TOTAL_USED ELSE .TOTAL_ALLOC));
;  1906          2299  4         END
;  1907          2300  3     ELSE WRITE (DIR$_TOTNOSIZ, 0, .TOTAL_FILES);
;  1908          2301  2     END;
;  1909          2302  2 GRAND_USED = .GRAND_USED + .TOTAL_USED;
;  1910          2303  2 GRAND_ALLOC = .GRAND_ALLOC + .TOTAL_ALLOC;
;  1911          2304  2 GRAND_FILES = .GRAND_FILES + .TOTAL_FILES;
;  1912          2305  2 GRAND_DIRS = .GRAND_DIRS + 1;
;  1913          2306  2 TOTAL_USED = TOTAL_ALLOC = TOTAL_FILES = 0;
;  1914          2307  2
;  1915          2308  2 RETURN 1;
;  1916          2309  2
```

```
; 1917          2310  1 END;                                  ! End of routine DIR$TOTAL


                                                              .PSECT  $PLIT$,NOWRT,NOEXE,2

                                                    0059C P.AIN:  .BLKB   0                                       ;
                                           00000000 0059C P.AIM:  .LONG   0                                       ;
                                           00000000' 005A0        .ADDRESS P.AIN                                  ;
                                                 00  005A4 P.AIP: .BYTE   0                                       ;
                                                     005A5        .BLKB   3                                       ;
                                           00000001  005A8 P.AIO: .LONG   1                                       ;
                                           00000000' 005AC        .ADDRESS P.AIP                                  ;
                                                 00  005B0 P.AIR: .BYTE   0                                       ;
                                                     005B1        .BLKB   3                                       ;
                                           00000001  005B4 P.AIQ: .LONG   1                                       ;
                                           00000000' 005B8        .ADDRESS P.AIR                                  ;
                                                 00  005BC P.AIT: .BYTE   0                                       ;
                                                     005BD        .BLKB   3                                       ;
                                           00000001  005C0 P.AIS: .LONG   1                                       ;
                                           00000000' 005C4        .ADDRESS P.AIT                                  ;


                                                              .PSECT  $CODE$,NOWRT,2

                                                      000C 00000        .ENTRY  DIR$TOTAL, Save R2,R3               ; 2253
                                                53      0000G   CF   9E 00002     MOVAB   DIR$OUTPUT, R3              ;
                                                52 00000000'    EF   9E 00007     MOVAB   QUAL_FLAGS, R2              ;
                                          68          01    A2       02  E0 0000E     BBS     #2, QUAL_FLAGS+1, 7$        ; 2287
                                                67          A2       03  E9 00013     BLBC    QUAL_FLAGS+3, 7$            ; 2288
                                                      0000' CF   9F 00017     PUSHAB  P.AIM                       ; 2291
                                                            7E   D4 0001B     CLRL    -(SP)                       ;
                                                63          02   FB 0001D     CALLS   #2, DIR$OUTPUT              ;
                                                50      0444    C2   D0 00020     MOVL    TOTAL_FILES, R0             ; 2296
                                          05          02    A2       03  E0 00025     BBS     #3, QUAL_FLAGS+2, 1$        ; 2292
                                          40          01    A2       01  E1 0002A     BBC     #1, QUAL_FLAGS+1, 6$        ;
                                          05          02    A2       04  E0 0002F 1$:  BBS     #4, QUAL_FLAGS+2, 2$        ; 2295
                                          16          01    A2       01  E1 00034     BBC     #1, QUAL_FLAGS+1, 3$        ;
                                                7E      043C    C2   7D 00039 2$:  MOVQ    TOTAL_USED, -(SP)           ; 2296
                                                            50   DD 0003E     PUSHL   R0                          ;
                                                      0000' CF   9F 00040     PUSHAB  P.AIO                       ;
                                                00000000G   8F   DD 00044     PUSHL   #DIR$_TOTSIZALL             ;
                                                63          05   FB 0004A     CALLS   #5, DIR$OUTPUT              ;
                                                            2F   11 0004D     BRB     7$                          ;
                                          06          02    A2       06  E1 0004F 3$:  BBC     #6, QUAL_FLAGS+2, 4$        ; 2298
                                                      043C    C2   DD 00054     PUSHL   TOTAL_USED                  ;
                                                            04   11 00058     BRB     5$                          ;
                                                      0440    C2   DD 0005A 4$:  PUSHL   TOTAL_ALLOC             ;
                                                            50   DD 0005E 5$:  PUSHL   R0                          ;
                                                      0000' CF   9F 00060     PUSHAB  P.AIQ                       ;
                                                00000000G   8F   DD 00064     PUSHL   #DIR$_TOTSIZ                ;
                                                63          04   FB 0006A     CALLS   #4, DIR$OUTPUT              ;
                                                            0F   11 0006D     BRB     7$                          ; 2292
                                                            50   DD 0006F 6$:  PUSHL   R0                          ; 2300
                                                      0000' CF   9F 00071     PUSHAB  P.AIS                       ;
                                                00000000G   8F   DD 00075     PUSHL   #DIR$_TOTNOSIZ              ;
```

Sym

ACT
ACT
ACT
ACT
ACT
ACT
ACT
ACT
ACT
ACT
CHE
CHE
COM
DEF
DIS
ERA
EXI
GET
GET
IOC
IOC
KEY
LBR
LBR
LBR
LEF
LIB
LIB
LIB
LIB
LIB
LIB
LIB
MAI
PMS
REB
SGN
SGN
SGN
STA
STA
SYS
SYS
SYS
SYS
SYS
SYS
SYS

```
                63              03  FB 0007B          CALLS   #3, DIR$OUTPUT                          ;
          0448  C2      043C    C2  C0 0007E 7$:      ADDL2   TOTAL_USED, GRAND_USED                  ; 2302
          044C  C2      0440    C2  C0 00085          ADDL2   TOTAL_ALLOC, GRAND_ALLOC                ; 2303
          0450  C2      0444    C2  C0 0008C          ADDL2   TOTAL_FILES, GRAND_FILES                ; 2304
                        0454    C2  D6 00093          INCL    GRAND_DIRS                              ; 2305
                        0440    C2  7C 00097          CLRQ    TOTAL_ALLOC                             ; 2306
                        043C    C2  D4 0009B          CLRL    TOTAL_USED                              ;
                50              01  D0 0009F          MOVL    #1, R0                                  ; 2308
                                    04 000A2          RET                                             ; 2310

; Routine Size:  163 bytes,    Routine Base:  $CODE$ + 19BE
```

```
;  1919     2311  1 GLOBAL ROUTINE DIR$GRAND_TOTAL =
;  1920     2312  1
;  1921     2313  1 !++
;  1922     2314  1 !
;  1923     2315  1 ! FUNCTIONAL DESCRIPTION:
;  1924     2316  1 !       Display the overall totals
;  1925     2317  1 !
;  1926     2318  1 ! CALLING SEQUENCE:
;  1927     2319  1 !       DIR$GRAND_TOTAL ()
;  1928     2320  1 !
;  1929     2321  1 ! INPUT PARAMETERS:
;  1930     2322  1 !       none
;  1931     2323  1 !
;  1932     2324  1 ! IMPLICIT INPUTS:
;  1933     2325  1 !       none
;  1934     2326  1 ! OUTPUT PARAMETERS:
;  1935     2327  1 !       none
;  1936     2328  1 !
;  1937     2329  1 ! IMPLICIT OUTPUTS:
;  1938     2330  1 !       none
;  1939     2331  1 !
;  1940     2332  1 ! ROUTINE VALUE:
;  1941     2333  1 !       1
;  1942     2334  1 !
;  1943     2335  1 ! SIDE EFFECTS:
;  1944     2336  1 !       none
;  1945     2337  1 !
;  1946     2338  1 !--
;  1947     2339  1
;  1948     2340  2 BEGIN
;  1949     2341  2
;  1950     2342  2 EXTERNAL ROUTINE
;  1951     2343  2         DIR$OUTPUT;                             ! General output routine
;  1952     2344  2
;  1953     2345  2 IF NOT .QUAL_FLAGS[DIR_V_QUAL_TRAI] THEN RETURN 1;
;  1954     2346  2
;  1955     2347  2 WRITE (0, '');
;  1956     2348  2 IF .QUAL_FLAGS[DIR_V_QUAL_SIZE] OR .QUAL_FLAGS[DIR_V_QUAL_FULL]
;  1957     2349  2 THEN
;  1958     2350  3     BEGIN
;  1959     2351  3     IF .QUAL_FLAGS[DIR_V_SIZE_ALL] OR .QUAL_FLAGS[DIR_V_QUAL_FULL]
;  1960     2352  3     THEN
;  1961     2353  4         BEGIN
;  1962     2354  4         IF .GRAND_DIRS NEQ 1
;  1963   P 2355  4         THEN WRITE (DIR$_GTOTSIZALL, 0, .GRAND_DIRS, .GRAND_FILES,
;  1964     2356  4                                         .GRAND_USED, .GRAND_ALLOC)
;  1965   P 2357  4         ELSE WRITE (DIR$_GTOTSIZALL1, 0, .GRAND_DIRS, .GRAND_FILES,
;  1966     2358  4                                         .GRAND_USED, .GRAND_ALLOC);
;  1967     2359  4         END
;  1968     2360  3     ELSE
;  1969     2361  4         BEGIN
;  1970     2362  4         IF .GRAND_DIRS NEQ 1
;  1971   P 2363  4         THEN WRITE (DIR$_GTOTSIZ, 0, .GRAND_DIRS, .GRAND_FILES,
;  1972   P 2364  4                                     (IF .QUAL_FLAGS[DIR_V_SIZE_USED]
;  1973     2365  4                                      THEN .GRAND_USED ELSE .GRAND_ALLOC))
;  1974   P 2366  4         ELSE WRITE (DIR$_GTOTSIZ1, 0, .GRAND_DIRS, .GRAND_FILES,
;  1975   P 2367  4                                     (IF .QUAL_FLAGS[DIR_V_SIZE_USED]
```

```
;  1976     2368  4                                   THEN .GRAND_USED ELSE .GRAND_ALLOC));
;  1977     2369  3          END;
;  1978     2370  3      END
;  1979     2371  2 ELSE
;  1980     2372  3      BEGIN
;  1981     2373  3      IF .GRAND_DIRS NEQ 1
;  1982     2374  3      THEN WRITE (DIR$_GTOTNOSIZ, 0, .GRAND_DIRS, .GRAND_FILES)
;  1983     2375  3      ELSE WRITE (DIR$_GTOTNOSIZ1, 0, .GRAND_DIRS, .GRAND_FILES);
;  1984     2376  2      END;
;  1985     2377  2
;  1986     2378  2 RETURN 1;
;  1987     2379  2
;  1988     2380  1 END;                                    ! End of routine DIR$GRAND_TOTAL


                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

                        005C8 P.AIV:    .BLKB   0                                       ;
00000000                005C8 P.AIU:    .LONG   0                                       ;
00000000'               005CC           .ADDRESS P.AIV                                  ;
      00                005D0 P.AIX:    .BYTE   0                                       ;
                        005D1           .BLKB   3
00000001                005D4 P.AIW:    .LONG   1                                       ;
00000000'               005D8           .ADDRESS P.AIX                                  ;
      00                005DC P.AIZ:    .BYTE   0                                       ;
                        005DD           .BLKB   3
00000001                005E0 P.AIY:    .LONG   1                                       ;
00000000'               005E4           .ADDRESS P.AIZ                                  ;
      00                005E8 P.AJB:    .BYTE   0                                       ;
                        005E9           .BLKB   3
00000001                005EC P.AJA:    .LONG   1                                       ;
00000000'               005F0           .ADDRESS P.AJB                                  ;
      00                005F4 P.AJD:    .BYTE   0                                       ;
                        005F5           .BLKB   3
00000001                005F8 P.AJC:    .LONG   1                                       ;
00000000'               005FC           .ADDRESS P.AJD                                  ;
      00                00600 P.AJF:    .BYTE   0                                       ;
                        00601           .BLKB   3
00000001                00604 P.AJE:    .LONG   1                                       ;
00000000'               00608           .ADDRESS P.AJF                                  ;
      00                0060C P.AJH:    .BYTE   0                                       ;
                        0060D           .BLKB   3
00000001                00610 P.AJG:    .LONG   1                                       ;
00000000'               00614           .ADDRESS P.AJH                                  ;


                                        .PSECT  $CODE$,NOWRT,2

                  007C 00000            .ENTRY  DIR$GRAND_TOTAL, Save R2,R3,R4,R5,R6    ; 2311
56      0000G   CF   9E 00002           MOVAB   DIR$OUTPUT, R6                          ;
55      0000'   CF   9E 00007           MOVAB   P.AIU, R5                               ;
54 00000000'    EF   9E 0000C           MOVAB   QUAL_FLAGS, R4                          ;
4F        03    A4   E9 00013           BLBC    QUAL_FLAGS+3, 5$                        ; 2345
              55   DD 00017             PUSHL   R5                                      ; 2347
              7E   D4 00019             CLRL    -(SP)                                   ;
```

```
                66              02  FB 0001B          CALLS   #2, DIR$OUTPUT                                  ;
                52      0454    C4  D0 0001E          MOVL    GRAND_DIRS, R2                                  ; 2354
                53      0450    C4  D0 00023          MOVL    GRAND_FILES, R3                                 ; 2356
05      02      A4              03  E0 00028          BBS     #3, QUAL_FLAGS+2, 1$                            ; 2348
76      01      A4              01  E1 0002D          BBC     #1, QUAL_FLAGS+1, 13$
05      02      A4              04  E0 00032 1$:      BBS     #4, QUAL_FLAGS+2, 2$                            ; 2351
2C      01      A4              01  E1 00037          BBC     #1, QUAL_FLAGS+1, 6$
                01              52  D1 0003C 2$:      CMPL    R2, #1                                          ; 2354
                                12  13 0003F          BEQL    3$
                7E      0448    C4  7D 00041          MOVQ    GRAND_USED, -(SP)                               ; 2356
                                0C  BB 00046          PUSHR   #^M<R2,R3>
                          0C    A5  9F 00048          PUSHAB  P.AIW
                00000000G       8F  DD 0004B          PUSHL   #DIR$_GTOTSIZALL
                                10  11 00051          BRB     4$
                7E      0448    C4  7D 00053 3$:      MOVQ    GRAND_USED, -(SP)                               ; 2358
                                0C  BB 00058          PUSHR   #^M<R2,R3>
                          18    A5  9F 0005A          PUSHAB  P.AIY
                00000000G       8F  DD 0005D          PUSHL   #DIR$_GTOTSIZALL1
                66              06  FB 00063 4$:      CALLS   #6, DIR$OUTPUT
                                60  11 00066 5$:      BRB     16$                                             ; 2351
                01              52  D1 00068 6$:      CMPL    R2, #1                                          ; 2362
                                1C  13 0006B          BEQL    9$
06      02      A4              06  E1 0006D          BBC     #6, QUAL_FLAGS+2, 7$                            ; 2365
                0448    C4      DD 00072              PUSHL   GRAND_USED                                      ;
                                04  11 00076          BRB     8$                                              ;
                044C    C4      DD 00078 7$:          PUSHL   GRAND_ALLOC                                     ;
                                0C  BB 0007C 8$:      PUSHR   #^M<R2,R3>                                      ;
                          24    A5  9F 0007E          PUSHAB  P.AJA                                           ;
                00000000G       8F  DD 00081          PUSHL   #DIR$_GTOTSIZ                                   ;
                                1A  11 00087          BRB     12$                                             ;
06      02      A4              06  E1 00089 9$:      BBC     #6, QUAL_FLAGS+2, 10$                           ; 2368
                0448    C4      DD 0008E              PUSHL   GRAND_USED                                      ;
                                04  11 00092          BRB     11$                                             ;
                044C    C4      DD 00094 10$:         PUSHL   GRAND_ALLOC                                     ;
                                0C  BB 00098 11$:     PUSHR   #^M<R2,R3>                                      ;
                          30    A5  9F 0009A          PUSHAB  P.AJC                                           ;
                00000000G       8F  DD 0009D          PUSHL   #DIR$_GTOTSIZ1                                  ;
                66              05  FB 000A3 12$:     CALLS   #5, DIR$OUTPUT                                  ;
                                20  11 000A6          BRB     16$                                             ; 2348
                01              52  D1 000A8 13$:     CMPL    R2, #1                                          ; 2373
                                0D  13 000AB          BEQL    14$                                             ;
                                0C  BB 000AD          PUSHR   #^M<R2,R3>                                      ; 2374
                          3C    A5  9F 000AF          PUSHAB  P.AJE                                           ;
                00000000G       8F  DD 000B2          PUSHL   #DIR$_GTOTNOSIZ                                 ;
                                0B  11 000B8          BRB     15$                                             ;
                                0C  BB 000BA 14$:     PUSHR   #^M<R2,R3>                                      ; 2375
                          48    A5  9F 000BC          PUSHAB  P.AJG                                           ;
                00000000G       8F  DD 000BF          PUSHL   #DIR$_GTOTNOSIZ1                                ;
                66              04  FB 000C5 15$:     CALLS   #4, DIR$OUTPUT                                  ;
                50              01  D0 000C8 16$:     MOVL    #1, R0                                          ; 2378
                                    04 000CB          RET                                                     ; 2380

; Routine Size:  204 bytes,    Routine Base:  $CODE$ + 1A61
```

```
;  1990          2381  1 GLOBAL ROUTINE DIR$APPEND (MESSAGE_CODE, CONTROL_STRING, ARGS) =
;  1991          2382  1
;  1992          2383  1 !++
;  1993          2384  1 !
;  1994          2385  1 ! FUNCTIONAL DESCRIPTION:
;  1995          2386  1 !
;  1996          2387  1 !       This routine accepts, as input, an $FAO control string and any
;  1997          2388  1 !       arguments to be formatted by the control string.  The formatted
;  1998          2389  1 !       line is then appended to the current line.
;  1999          2390  1 !
;  2000          2391  1 ! CALLING SEQUENCE:
;  2001          2392  1 !       DIR$APPEND (ARG1, ARG2, ..., ARGn)
;  2002          2393  1 !
;  2003          2394  1 ! INPUT PARAMETERS:
;  2004          2395  1 !       ARG1: message code for the text to display
;  2005          2396  1 !       ARG2: address of the $FAO control string
;  2006          2397  1 !       ARG3 - ARGn: arguments to be formatted
;  2007          2398  1 !
;  2008          2399  1 ! IMPLICIT INPUTS:
;  2009          2400  1 !       none
;  2010          2401  1 !
;  2011          2402  1 ! OUTPUT PARAMETERS:
;  2012          2403  1 !       none
;  2013          2404  1 !
;  2014          2405  1 ! IMPLICIT OUTPTUS:
;  2015          2406  1 !       none
;  2016          2407  1 !
;  2017          2408  1 ! ROUTINE VALUE:
;  2018          2409  1 !       1
;  2019          2410  1 !
;  2020          2411  1 ! SIDE EFFECTS:
;  2021          2412  1 !       none
;  2022          2413  1 !
;  2023          2414  1 !--
;  2024          2415  1
;  2025          2416  2 BEGIN
;  2026          2417  2
;  2027          2418  2 MAP
;  2028          2419  2         CONTROL_STRING  : REF $BBLOCK;          ! Address of the control string
;  2029          2420  2
;  2030          2421  2 LOCAL
;  2031          2422  2         FAO_CTL_STRING  : REF $BBLOCK,          ! Addr of $FAO control string
;  2032          2423  2         MESSAGE_DESC    : $BBLOCK [DSC$C_S_BLN],        ! Message text descr
;  2033          2424  2         MESSAGE_TEXT    : VECTOR [256, BYTE],   ! Message text
;  2034          2425  2         LOCAL_DESC      : $BBLOCK [DSC$C_S_BLN];        ! Local copy of line descriptor
;  2035          2426  2
;  2036          2427  2 ! If there is a message code present, get the message text via a $GETMSG.
;  2037          2428  2 ! Otherwise, use the descriptor supplied.
;  2038          2429  2
;  2039          2430  2 IF .MESSAGE_CODE NEQ 0
;  2040          2431  2 THEN
;  2041          2432  3     BEGIN
;  2042          2433  3     CH$FILL (0, DSC$C_S_BLN, MESSAGE_DESC);
;  2043          2434  3     MESSAGE_DESC[DSC$W_LENGTH] = 256;
;  2044          2435  3     MESSAGE_DESC[DSC$A_POINTER] = MESSAGE_TEXT;
;  2045        P 2436  3     $GETMSG (MSGID = .MESSAGE_CODE,
;  2046        P 2437  3              MSGLEN = MESSAGE_DESC[DSC$W_LENGTH],
```

```
;  2047        P 2438  3                BUFADR = MESSAGE_DESC,
;  2048          2439  3                FLAGS = 1);
;  2049          2440  3            FAO_CTL_STRING = MESSAGE_DESC;
;  2050          2441  3            END
;  2051          2442  2    ELSE FAO_CTL_STRING = .CONTROL_STRING;
;  2052          2443  2
;  2053          2444  2    ! Format the line.
;  2054          2445  2
;  2055          2446  2    CH$FILL (0, DSC$C_S_BLN, LOCAL_DESC);
;  2056          2447  2    LOCAL_DESC[DSC$W_LENGTH] = 1024 - .LINE_DESC[DSC$W_LENGTH];
;  2057          2448  2    LOCAL_DESC[DSC$A_POINTER] = LINE_BUFFER[.LINE_DESC[DSC$W_LENGTH]];
;  2058          2449  2
;  2059        P 2450  2    $FAOL (CTRSTR = .FAO_CTL_STRING,
;  2060        P 2451  2           OUTLEN = LOCAL_DESC,
;  2061        P 2452  2           OUTBUF = LOCAL_DESC,
;  2062          2453  2           PRMLST = ARGS);
;  2063          2454  2
;  2064          2455  2    LINE_DESC[DSC$W_LENGTH] = .LINE_DESC[DSC$W_LENGTH] + .LOCAL_DESC[DSC$W_LENGTH];
;  2065          2456  2
;  2066          2457  2    RETURN 1;
;  2067          2458  2
;  2068          2459  1    END;                                    ! End of routine DIR$APPEND


                                                                    .EXTRN  SYS$FAOL

                                                00FC 00000      DIR$APPEND::                    ;
                                    57 00000000'  EF   9E 00002         MOVAB   LINE_DESC, R7   ;
                                    5E     FEF0   CE   9E 00009         MOVAB   -272(SP), SP    ;
                                              04   AC   D5 0000E         TSTL    MESSAGE_CODE    ; 2430
                                                   2B   13 00011         BEQL    1$              ;
                08                  00             6E   00   2C 00013   1$:   MOVC5   #0, (SP), #0, #8, MESSAGE_DESC ; 2433
                                                        F8   AD    00018                        ;
                                              F8   AD 0100   8F   B0 0001A         MOVW    #256, MESSAGE_DESC      ; 2434
                                              FC   AD   08   AE   9E 00020         MOVAB   MESSAGE_TEXT, MESSAGE_DESC+4 ; 2435
                                              7E         01   7D   00025         MOVQ    #1, -(SP)               ; 2439
                                                        F8   AD   9F 00028         PUSHAB  MESSAGE_DESC            ;
                                                        F8   AD   9F 0002B         PUSHAB  MESSAGE_DESC            ;
                                                        04   AC   DD 0002E         PUSHL   MESSAGE_CODE            ;
                                    00000000G           00        FB 00031         CALLS   #5, SYS$GETMSG          ;
                                                        56   F8   AD   9E 00038   MOVAB   MESSAGE_DESC, FAO_CTL_STRING ; 2440
                                                             04   11   0003C     BRB     2$                      ; 2430
                                                        56   08   AC   D0 0003E 1$: MOVL    CONTROL_STRING, FAO_CTL_STRING ; 2442
                08                  00             6E        00   2C 00042 2$:   MOVC5   #0, (SP), #0, #8, LOCAL_DESC ; 2446
                                                             6E        00047      ;
                                    6E       0400  8F             67   A3 00048   SUBW3   LINE_DESC, #1024, LOCAL_DESC ; 2447
                                                        50   08   A7   9E 0004E   MOVAB   LINE_BUFFER, R0            ; 2448
                                                        51        67   3C 00052   MOVZWL  LINE_DESC, R1            ;
                              04    AE              50        51   C1 00055   ADDL3   R1, R0, LOCAL_DESC+4        ;
                                                        0C   AC   9F 0005A         PUSHAB  ARGS                    ; 2453
                                                        04   AE   9F 0005D         PUSHAB  LOCAL_DESC              ;
                                                        08   AE   9F 00060         PUSHAB  LOCAL_DESC              ;
                                                        56        DD   00063         PUSHL   FAO_CTL_STRING          ;
                                    00000000G           00        FB   00065         CALLS   #4, SYS$FAOL            ;
                                                        67        6E   A0 0006C   ADDW2   LOCAL_DESC, LINE_DESC    ; 2455
                                                        50        01   D0 0006F   MOVL    #1, R0                  ; 2457
```

```
                                04 00072        RET                                             ; 2459

; Routine Size:  115 bytes,    Routine Base:  $CODE$ + 1B2D

; 2069          2460  1
; 2070          2461  1 END
; 2071          2462  0 ELUDOM
```

```
;                                   PSECT SUMMARY

;       Name                    Bytes                           Attributes

;  DIR$COMMON                    2164  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  OVR,NOPIC,ALIGN(0)
;  $PLIT$                        1560  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $OWN$                           68  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $CODE$                        7072  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       237         1        1000        00:01.7
```

```
;                                       COMMAND QUALIFIERS

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

; Size:          7072 code + 3792 data bytes
; Run Time:        02:08.7
; Elapsed Time:    06:07.6
; Lines/CPU Min:    1147
; Lexemes/CPU-Min: 24552
; Memory Used:  898 pages
; Compilation Complete
```

DISMOUNT
MAP

DISKQUOTA
CLS

DISMOU

DISKQ

DISMNTSHR
MAP

DISKQUOTA
MAP

DISPLAY
CLS