```
EEEEEEEEEEEEEEE  RRRRRRRRRRRR     FFFFFFFFFFFFFFF
EEEEEEEEEEEEEEE  RRRRRRRRRRRR     FFFFFFFFFFFFFFF
EEEEEEEEEEEEEEE  RRRRRRRRRRRR     FFFFFFFFFFFFFFF
EEE              RRR         RRR  FFF
EEE              RRR         RRR  FFF
EEE              RRR         RRR  FFF
EEE              RRR         RRR  FFF
EEE              RRR         RRR  FFF
EEE              RRR         RRR  FFF
EEEEEEEEEEEE     RRRRRRRRRRRR     FFFFFFFFFFFF
EEEEEEEEEEEE     RRRRRRRRRRRR     FFFFFFFFFFFF
EEEEEEEEEEEE     RRRRRRRRRRRR     FFFFFFFFFFFF
EEE              RRR   RRR        FFF
EEE              RRR   RRR        FFF
EEE              RRR   RRR        FFF
EEE              RRR      RRR     FFF
EEE              RRR      RRR     FFF
EEE              RRR      RRR     FFF
EEEEEEEEEEEEEEE  RRR         RRR  FFF
EEEEEEEEEEEEEEE  RRR         RRR  FFF
EEEEEEEEEEEEEEE  RRR         RRR  FFF
```

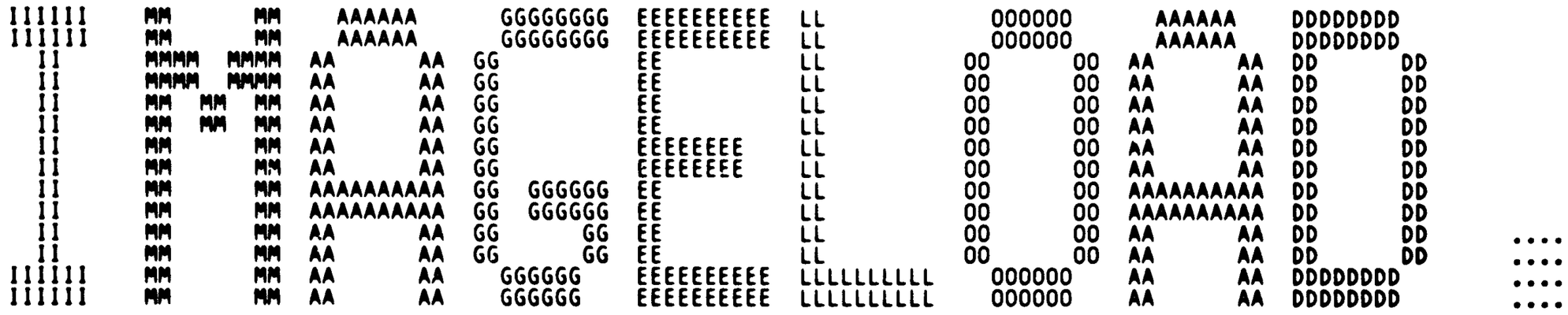
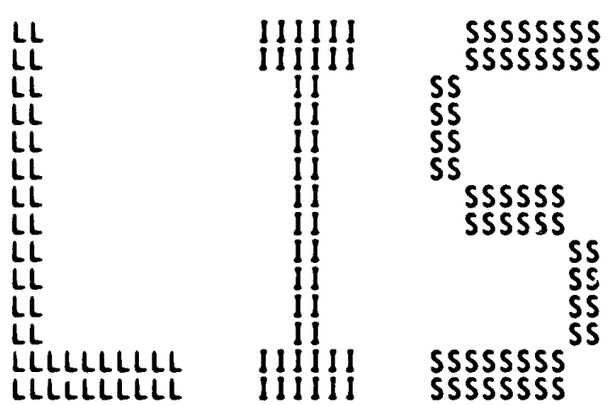


IMAGE LOAD


LOAD

```
;     1          0001  0 MODULE IMAGE_LOADER (%TITLE 'Errorlog Image Loader'
;     2          0002  0               IDENT = 'V04-000' ) =
;     3          0003  1 BEGIN
;     4          0004  1
;     5          0005  1 !*****************************************************************************
;     6          0006  1 !*                                                                           *
;     7          0007  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
;     8          0008  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                    *
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;    14          0014  1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY    *
;    15          0015  1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY    *
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;    19          0019  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT    *
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;    21          0021  1 !*                                                                           *
;    22          0022  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS    *
;    23          0023  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                   *
;    24          0024  1 !*                                                                           *
;    25          0025  1 !*                                                                           *
;    26          0026  1 !*****************************************************************************
;    27          0027  1
;    28          0028  1 !++
;    29          0029  1 ! FACILITY:  ERF, Errorlog Report Formatter
;    30          0030  1 !
;    31          0031  1 ! ABSTRACT:
;    32          0032  1 !       This routine determins if the requested image needs to be
;    33          0033  1 !       loaded. It will load an image and initialize the transfer
;    34          0034  1 !       vectors.
;    35          0035  1 !
;    36          0036  1 !
;    37          0037  1 ! ENVIRONMENT:
;    38          0038  1 !
;    39          0039  1 !       VAX/VMS operating system. unprivileged user mode,
;    40          0040  1 !
;    41          0041  1 ! AUTHOR:  Elliott A. Drayton                    Creation date: 23-Mar-1983
;    42          0042  1 !
;    43          0043  1 ! Modified by:
;    44          0044  1 !
;    45          0045  1 !       V03-002 EAD0181         Elliott A. Drayton              27-Jun-1984
;    46          0046  1 !               Added support for workstations.
;    47          0047  1 !
;    48          0048  1 !       V03-001 EAD0161         Elliott A. Drayton              20-Apr-1984
;    49          0049  1 !               Change bind of image name in map_image.
;    50          0050  1 !
;    51          0051  1 !--
```

```
;    53          0052  1 REQUIRE 'SRC$:ERFDEF.REQ';
;    54          0338  1
;    55          0339  1 FORWARD ROUTINE
;    56          0340  1         Get_image,                      ! Gets loaded image vector information
;    57          0341  1         Image_loader,                   ! Determines which image to load
;    58          0342  1         Map_image;                      ! Translates image name and loads it.
;    59          0343  1
;    60          0344  1 EXTERNAL ROUTINE
;    61          0345  1         Get_code,                       !
;    62          0346  1         Exec_image,                     ! Call loaded image with correct params.
;    63          0347  1         Lib$map_image;
;    64          0348  1
;    65          0349  1
;    66          0350  1 GLOBAL
;    67          0351  1   Bus_image:                  REF BLOCKVECTOR[,2] FIELD (desc_fields),
;    68          0352  1   Bus_version:                REF VECTOR[,WORD],
;    69          0353  1   Bus_xfer_addr:              REF VECTOR[,LONG],      ! Address of bus xfer address table
;    70          0354  1   Disk_image:                 REF BLOCKVECTOR[,2] FIELD (desc_fields),
;    71          0355  1   Disk_version:               REF VECTOR[,WORD],      . Address of version number of device dependent code
;    72          0356  1   Disk_xfer_addr:            REF VECTOR[,LONG],      ! Address of disk xfer address table
;    73          0357  1   Lp_image:                   REF BLOCKVECTOR[,2] FIELD (desc_fields),
;    74          0358  1   Lp_version:                 REF VECTOR[,WORD],
;    75          0359  1   Lp_xfer_addr:              REF VECTOR[,LONG],      ! Address of lp xfer address table
;    76          0360  1   Max_misc_type:             BYTE,
;    77          0361  1   Max_lp_type:               BYTE,
;    78          0362  1   Packet_processor_xfer_addr:  REF VECTOR[,LONG],    ! Address of realtime xfer address table
;    79          0363  1   Packet_processor_image:     REF BLOCKVECTOR[,2] FIELD (desc_fields),
;    80          0364  1   Packet_processor_version:   REF VECTOR[,WORD],
;    81          0365  1   Realtime_image:             REF BLOCKVECTOR[,2] FIELD (desc_fields),
;    82          0366  1   Realtime_version:           REF VECTOR[,WORD],
;    83          0367  1   Realtime_xfer_addr:        REF VECTOR[,LONG],      ! Address of realtime xfer address table
;    84          0368  1   Scom_image:                 REF BLOCKVECTOR[,2] FIELD (desc_fields),
;    85          0369  1   Scom_version:               REF VECTOR[,WORD],
;    86          0370  1   Scom_xfer_addr:            REF VECTOR[,LONG],      ! Address of scom xfer address table
;    87          0371  1   Tape_image:                 REF BLOCKVECTOR[,2] FIELD (desc_fields),
;    88          0372  1   Tape_version:               REF VECTOR[,WORD],
;    89          0373  1   Tape_xfer_addr:            REF VECTOR[,LONG],      ! Address of tape xfer address table
;    90          0374  1   Translate_entry_table:     REF VECTOR [,WORD],
;    91          0375  1   Workstation_image:         REF BLOCKVECTOR[,2] FIELD (desc_fields),
;    92          0376  1   Workstation_version:       REF VECTOR[,WORD],
;    93          0377  1   Workstation_xfer_addr:     REF VECTOR[,LONG],      ! Address of workstation  xfer address table
;    94          0378  1   Worst_error:                  $BBLOCK [LONG] INITIAL (1);
;    95          0379  1
;    96          0380  1
;    97          0381  1 LITERAL
;    98          0382  1   Word_size = 2,              ! Number of bytes in a word
;    99          0383  1   Longword = 4,               ! Number of bytes in a longword
;   100          0384  1   Descriptor_length = 8;      ! Number of bytes in a string descriptor
;   101          0385  1
;   102          0386  1
;   103          0387  1 EXTERNAL LITERAL
;   104          0388  1         Erf_loaderr,
;   105          0389  1         Erf_unkentry,
;   106          0390  1         Erf_unkclass;
;   107          0391  1
;   108          0392  1 SD ('Lnm$file_dev');
```

```
;  110          0393  1 Global routine MAP_IMAGE ( image_name, transfer_address) =
;  111          0394  2 Begin
;  112          0395  2
;  113          0396  2 !++
;  114          0397  2 ! Functional description
;  115          0398  2 !
;  116          0399  2 !       This is the control routine for the ERF facility.
;  117          0400  2 !       Any errors encountered will be passed back to this routine.
;  118          0401  2 !
;  119          0402  2 ! Calling sequence
;  120          0403  2 !
;  121          0404  2 !       ERF_CONTROL ()
;  122          0405  2 !
;  123          0406  2 ! Input parameters
;  124          0407  2 !
;  125          0408  2 !
;  126          0409  2 ! Output parameters
;  127          0410  2 !
;  128          0411  2 !       None
;  129          0412  2 !
;  130          0413  2 ! Routine value
;  131          0414  2 !
;  132          0415  2 !       Worst error is returned.
;  133          0416  2 !
;  134          0417  2 !----
;  135          0418  2
;  136          0419  2 Bind
;  137          0420  2     Image_name_addr = .image_name : $BBLOCK[dsc$k_d_bln],
;  138          0421  2     Addr = .transfer_address : LONG;
;  139          0422  2
;  140          0423  2 Literal
;  141          0424  2     Buffer_size = 80;
;  142          0425  2
;  143          0426  2 Local
;  144          0427  2     Buffer:                 $BBLOCK [buffer_size],
;  145          0428  2     Desc:                   $BBLOCK [dsc$k_d_bln],
;  146          0429  2     Filename_desc:          VECTOR [2,LONG] INITIAL (buffer_size,buffer),
;  147          0430  2     Filscalst:              $itmlst_decl (items = 1),
;  148          0431  2     Status,
;  149          0432  2     Trnlnmlst:              $itmlst_decl (items = 1);
;  150          0433  2
```

```
;  151          0434  2
;  152          0435  2 !
;  153          0436  2 ! Init DESC in case there is no translation.
;  154          0437  2 !
;  155          0438  2 Desc[dsc$w_length]  = .image_name_addr[dsc$w_length];
;  156          0439  2 Desc[dsc$a_pointer] = .image_name_addr[dsc$a_pointer];
;  157          0440  2
;  158          0441  2 !
;  159          0442  2 ! Initialize a item list for a call to file scan.
;  160          0443  2 !
;  161          0444  2 $Itmlst_init ( itmlst = filscalst,(itmcod = fscn$_name,bufadr = 0,bufsiz = 0) );
;  162          0445  2
;  163          0446  2 Status = $FILESCAN (srcstr = image_name_addr, valuelst = filscalst) ;
;  164          0447  2 If NOT .status then signal_stop (.status) ;
;  165          0448  2
;  166          0449  2
;  167          0450  2 !
;  168          0451  2 ! Use the descriptor from file scan in the translate to get
;  169          0452  2 ! the real image name in filename_desc.
;  170          0453  2 !
;  171        P 0454  2 $Itmlst_init ( itmlst = trnlnmlst, (itmcod = lnm$_string,
;  172        P 0455  2                                     bufsiz = .filename_desc[0],
;  173        P 0456  2                                     bufadr = .filename_desc[1],
;  174          0457  2                                     retlen = filename_desc[0]));
;  175          0458  2
;  176        P 0459  2 If $TRNLNM ( attr =    f(lnm$m_case_blind),
;  177        P 0460  2                tabnam = lnm$file_dev_desc,
;  178        P 0461  2                lognam = filscalst,
;  179          0462  3                itmlst = trnlnmlst)
;  180          0463  2 then
;  181          0464  3    ( desc[dsc$w_length] = .filename_desc[0] ;
;  182          0465  2      desc[dsc$a_pointer] = .filename_desc[1]) ;
;  183          0466  2
;  184          0467  2 !
;  185          0468  2 ! DESC now has the original image name or its translation.
;  186          0469  2 !
;  187          0470  2 Status = LIB$MAP_IMAGE ( desc, desc, addr );
;  188          0471  2 If NOT .status then (signal (erf_loaderr, 1, desc, .status); addr = 0 );
;  189          0472  2
;  190          0473  2 Return .status;
;  191          0474  1 End;


                                                        .TITLE  IMAGE_LOADER Errorlog Image Loader
                                                        .IDENT  \V04-000\

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

    76  65  64  5F  65  6C  69  66  24  6D  6E  4C  00000 P.AAB:  .ASCII  \lnm$file_dev\
                                        0000000C  0000C P.AAA:  .LONG   12
                                        00000000' 00010         .ADDRESS P.AAB

                                                        .PSECT  $GLOBAL$,NOEXE,  PIC,2

                                                00000 BUS_IMAGE::
                                                        .BLKB   4
                                                00004 BUS_VERSION::
```

```
                        .BLKB   4
00008 BUS_XFER_ADDR::
                        .BLKB   4
0000C DISK_IMAGE::
                        .BLKB   4
00010 DISK_VERSION::
                        .BLKB   4
00014 DISK_XFER_ADDR::
                        .BLKB   4
00018 LP_IMAGE::
                        .BLKB   4
0001C LP_VERSION::
                        .BLKB   4
00020 LP_XFER_ADDR::
                        .BLKB   4
00024 MAX_MISC_TYPE::
                        .BLKB   1
00025 MAX_LP_TYPE::
                        .BLKB   1
00026                   .BLKB   2
00028 PACKET_PROCESSOR_XFER_ADDR::
                        .BLKB   4
0002C PACKET_PROCESSOR_IMAGE::
                        .BLKB   4
00030 PACKET_PROCESSOR_VERSION::
                        .BLKB   4
00034 REALTIME_IMAGE::
                        .BLKB   4
00038 REALTIME_VERSION::
                        .BLKB   4
0003C REALTIME_XFER_ADDR::
                        .BLKB   4
00040 SCOM_IMAGE::
                        .BLKB   4
00044 SCOM_VERSION::
                        .BLKB   4
00048 SCOM_XFER_ADDR::
                        .BLKB   4
0004C TAPE_IMAGE::
                        .BLKB   4
00050 TAPE_VERSION::
                        .BLKB   4
00054 TAPE_XFER_ADDR::
                        .BLKB   4
00058 TRANSLATE_ENTRY_TABLE
                        .BLKB   4
0005C WORKSTATION_IMAGE::
                        .BLKB   4
00060 WORKSTATION_VERSION::
                        .BLKB   4
00064 WORKSTATION_XFER_ADDR::
                        .BLKB   4
00000001  00068 WORST_ERROR::
                        .LONG   1                                       ;

                LNM$FILE_DEV_DESC== P.AAA
                        .EXTRN  GET_CODE, EXEC_IMAGE
```

```
                                        .EXTRN  LIB$MAP_IMAGE, ERF_LOADERR
                                        .EXTRN  ERF_UNKENTRY, ERF_UNKCLASS
                                        .EXTRN  SYS$FILESCAN, SYS$TRNLNM

                                        .PSECT  $CODE,NOWRT,  PIC,2

                                0004 00000      .ENTRY  MAP_IMAGE, Save R2                      ; 0393
                            5E  FF7C    CE  9E 00002        MOVAB   -132(SP), SP
                            51    04    AC  D0 00007        MOVL    IMAGE_NAME, R1              ; 0420
                        24  AE    50    8F  9A 0000B        MOVZBL  #80, FILENAME_DESC          ; 0421
                        28  AE    34    AE  9E 00010        MOVAB   BUFFER, FILENAME_DESC+4
                        2C  AE          61  B0 00015        MOVW    (R1), DESC                  ; 0438
                        30  AE    04    A1  D0 00019        MOVL    4(R1), DESC+4               ; 0439
                            50    14    AE  9E 0001E        MOVAB   FILSCALST, $$ITMBLKPTR      ; 0444
                            80 00060000 8F  D0 00022        MOVL    #393216, ($$ITMBLKPTR)+
                                        80  7C 00029        CLRQ    ($$ITMBLKPTR)+
                                        80  D4 0002B        CLRL    ($$ITMBLKPTR)+
                                        7E  D4 0002D        CLRL    -(SP)                       ; 0446
                                  18    AE  9F 0002F        PUSHAB  FILSCALST
                                        51  DD 00032        PUSHL   R1
                    00000000G   00          03  FB 00034        CALLS   #3, SYS$FILESCAN
                                52          50  D0 0003B        MOVL    R0, STATUS
                                09          52  E8 0003E        BLBS    STATUS, 1$              ; 0447
                                            52  DD 00041        PUSHL   STATUS
                    00000000G   00          01  FB 00043        CALLS   #1, LIB$STOP
                                50    04    AE  9E 0004A 1$:    MOVAB   TRNLNMLST, $$ITMBLKPTR  ; 0457
                                80    24    AE  B0 0004E        MOVW    FILENAME_DESC, ($$ITMBLKPTR)+
                                80          02  B0 00052        MOVW    #2, ($$ITMBLKPTR)+
                                80    28    AE  D0 00055        MOVL    FILENAME_DESC+4, ($$ITMBLKPTR)+
                                80    24    AE  9E 00059        MOVAB   FILENAME_DESC, ($$ITMBLKPTR)+
                                            80  D4 0005D        CLRL    ($$ITMBLKPTR)+
                                  04    AE  9F 0005F        PUSHAB  TRNLNMLST               ; 0462
                                        7E  D4 00062        CLRL    -(SP)
                                  1C    AE  9F 00064        PUSHAB  FILSCALST
                                0000000C' 00  9F 00067        PUSHAB  LNM$FILE_DEV_DESC
                        10  AE 02000000    8F  D0 0006D        MOVL    #33554432, 16(SP)
                                  10    AE  9F 00075        PUSHAB  16(SP)
                    00000000G   00          05  FB 00078        CALLS   #5, SYS$TRNLNM
                                0A          50  E9 0007F        BLBC    R0, 2$
                        2C  AE    24    AE  B0 00082        MOVW    FILENAME_DESC, DESC         ; 0464
                        30  AE    28    AE  D0 00087        MOVL    FILENAME_DESC+4, DESC+4     ; 0465
                                  08    AC  DD 0008C 2$:    PUSHL   TRANSFER_ADDRESS            ; 0470
                                  30    AE  9F 0008F        PUSHAB  DESC
                                  34    AE  9F 00092        PUSHAB  DESC
                    00000000G   00          03  FB 00095        CALLS   #3, LIB$MAP_IMAGE
                                52          50  D0 0009C        MOVL    R0, STATUS
                                17          52  E8 0009F        BLBS    STATUS, 3$              ; 0471
                                            52  DD 000A2        PUSHL   STATUS
                                  30    AE  9F 000A5        PUSHAB  DESC
                                            01  DD 000A7        PUSHL   #1
                                0000000G    8F  DD 000A9        PUSHL   #ERF_LOADERR
                    00000000G   00          04  FB 000AF        CALLS   #4, LIB$SIGNAL
                                  08    BC  D4 000B6        CLRL    @TRANSFER_ADDRESS
                                50          52  D0 000B9 3$:    MOVL    STATUS, R0              ; 0473
                                            04  000BC          RET                             ; 0474

; Routine Size:  189 bytes,    Routine Base:  $CODE + 0000
```

```
1 Global routine IMAGE_LOADER ( Device_type, Device_class, Transfer_addr ) =
2 Begin
2 !++
2 ! Functional description
2 !
2 !       This routine checks to see if the loadable image needed
2 !       to process the error packet is available. If it is not then
2 !       it calls get_image to load it. If successful then it call the
2 !       image to obtain information as to what error packets the
2 !       loaded image supports and fills in table entries which will
2 !       allow subsequent access to the modules in the image.
2 !
2 ! Calling sequence
2 !
2 !       Image_loader (Type, Class, Transfer_addr)
2 !
2 ! Input parameters
2 !
2 !
2 !
2 ! Output parameters
2 !
2 !       None
2 !
2 ! Routine value
2 !
2 !       Worst error is returned.
2 !
2 !----
2
2
2 Bind
2    Xfer_addr = .Transfer_addr,
2    Type = .Device_type : word,
2    Class = .Device_class : word;
2
2
2 Selectoneu .class of set
2
2 [DC$_ZERO_CLASS]:
2         ! If Device_class is zero then Device_type is really entry type. Entry types
2         ! are not contigious so they should be mapped to a valid subscript. Thus
2         ! making device_type contigious.
2
3         Begin
3           Incr I from 1 to .max_misc_type do
4             Begin
4             If .Translate_entry_table [.I] EQL .Type then
5               Begin
5               If .Packet_processor_xfer_addr [.I] EQL 0 then
5                   Get_image ( Packet_processor_image[.I, desc_one]);
5               Xfer_addr = .Packet_processor_xfer_addr [.I];
5               .Device_class = -1;
5               Exitloop;
4               End;
3             End;
3
```

```
;  250          0532  3            If ..device_class LSS 0 then
;  251          0533  3              .device_class = 0
;  252          0534  3            Else
;  253          0535  4              Begin
;  254          0536  4              Signal (erf_unkentry, 1, .type);
;  255          0537  4              .device_class = 0
;  256          0538  3              End;
;  257          0539  2          End;
;  258          0540  2
;  259          0541  2
;  260          0542  2 [DC$_DISK]:
;  261          0543  3          Begin
;  262          0544  3          If .Disk_xfer_addr [.type] EQL 0 then
;  263          0545  3             Get_image ( Disk_image[.type, desc_one] );
;  264          0546  3          xfer_addr = .Disk_xfer_addr [.type];
;  265          0547  2          End;
;  266          0548  2
;  267          0549  2
;  268          0550  2
;  269          0551  2 [DC$_TAPE]:
;  270          0552  3          Begin
;  271          0553  3          If .Tape_xfer_addr [.type] EQL 0 then
;  272          0554  3             Get_image ( Tape_image[.type, desc_one] );
;  273          0555  3          xfer_addr = .Tape_xfer_addr [.type];
;  274          0556  2          End;
;  275          0557  2
;  276          0558  2
;  277          0559  2
;  278          0560  2 [DC$_SCOM]:
;  279          0561  3          Begin
;  280          0562  3          If .Scom_xfer_addr [.type] EQL 0 then
;  281          0563  3             Get_image ( Scom_image[.type, desc_one] );
;  282          0564  3          xfer_addr = .Scom_xfer_addr [.type];
;  283          0565  2          End;
;  284          0566  2
;  285          0567  2
;  286          0568  2
;  287          0569  2 [DC$_BUS]:
;  288          0570  3          Begin
;  289          0571  3          If .Bus_xfer_addr [.type] EQL 0 then
;  290          0572  3             Get_image ( Bus_image[.type, desc_one] );
;  291          0573  3          xfer_addr = .Bus_xfer_addr [.type];
;  292          0574  2          End;
;  293          0575  2
;  294          0576  2
;  295          0577  2 [DC$_REALTIME]:
;  296          0578  3          Begin
;  297          0579  3          If .Realtime_xfer_addr [.type] EQL 0 then
;  298          0580  3             GET_IMAGE ( Realtime_image[.type, desc_one] );
;  299          0581  3          xfer_addr = .Realtime_xfer_addr [.type];
;  300          0582  2          End;
;  301          0583  2
;  302          0584  2 [DC$_WORKSTATION]:
;  303          0585  3          Begin
;  304          0586  3          If .Workstation_xfer_addr [.type] EQL 0 then
;  305          0587  3             GET_IMAGE ( Workstation_image[.type, desc_one] );
;  306          0588  3          xfer_addr = .Workstation_xfer_addr [.type];
```

```
;  307          0589  2          End;
;  308          0590  2
;  309          0591  2 [OTHERWISE]:
;  310          0592  2 !
;  311          0593  2 !  If we get here then we have a unknown device class.
;  312          0594  2 !
;  313          0595  3          Begin
;  314          0596  3          Signal (erf_unkclass, 1, .class);
;  315          0597  2          End;
;  316          0598  2 TES;
;  317          0599  2 Return true;
;  318          0600  1 End;


                                        03FC 00000          .ENTRY  IMAGE_LOADER, Save R2,R3,R4,R5,R6,R7,R8,R9 ; 0475
                59 00000000G   00  9E 00002          MOVAB   LIB$SIGNAL, R9                                     ;
                58 00000000V   00  9E 00009          MOVAB   GET_IMAGE, R8                                      ;
                57 00000000'   00  9E 00010          MOVAB   PACKET_PROCESSOR_XFER_ADDR, R7                     ;
                55        0C   AC  D0 00017          MOVL    TRANSFER_ADDR, R5                                  ; 0507
                54        04   AC  D0 0001B          MOVL    DEVICE_TYPE, R4                                    ; 0508
                53        08   AC  D0 0001F          MOVL    DEVICE_CLASS, R3                                   ; 0509
                               63  B5 00023          TSTW    (R3)                                               ; 0514
                               4B  12 00025          BNEQ    6$                                                 ;
                56        FC   A7  9A 00027          MOVZBL  MAX_MISC_TYPE, R6                                  ; 0520
                               52  D4 0002B          CLRL    I                                                  ;
                               28  11 0002D          BRB     3$                                                 ;
                50        30   A7  D0 0002F 1$:      MOVL    TRANSLATE_ENTRY_TABLE, R0                          ; 0522
                64              6042 B1 00033        CMPW    (R0)[I], (R4)                                      ;
                                1E  12 00037         BNEQ    3$                                                 ;
                50              67  D0 00039         MOVL    PACKET_PROCESSOR_XFER_ADDR, R0                     ; 0524
                              6042  D5 0003C         TSTL    (R0)[I]                                            ;
                                0A  12 0003F         BNEQ    2$                                                 ;
                50        04   A7  D0 00041         MOVL    PACKET_PROCESSOR_IMAGE, R0                         ; 0525
                              6042  7F 00045         PUSHAQ  (R0)[I]                                            ;
                68              01  FB 00048         CALLS   #1, GET_IMAGE                                      ;
                50              67  D0 0004B 2$:     MOVL    PACKET_PROCESSOR_XFER_ADDR, R0                     ; 0526
                55            6042  D0 0004E         MOVL    (R0)[I], (R5)                                      ;
                63              01  CE 00052         MNEGL   #1, (R3)                                           ; 0527
                                04  11 00055         BRB     4$                                                 ; 0523
D4              52              56  F3 00057 3$:     AOBLEQ  R6, I, 1$                                          ; 0520
                                63  D5 0005B 4$:     TSTL    (R3)                                               ; 0532
                                0E  19 0005D         BLSS    5$                                                 ;
                7E              64  3C 0005F         MOVZWL  (R4), -(SP)                                        ; 0536
                                01  DD 00062         PUSHL   #1                                                 ;
                     00000000G  8F  DD 00064         PUSHL   #ERF_UNKENTRY                                      ;
                69              03  FB 0006A         CALLS   #3, LIB$SIGNAL                                     ;
                                63  D4 0006D 5$:     CLRL    (R3)                                               ; 0537
                              00DE  31 0006F         BRW     22$                                                ; 0512
                01              63  B1 00072 6$:     CMPW    (R3), #1                                           ; 0542
                                1C  12 00075         BNEQ    8$                                                 ;
                50        EC   A7  D0 00077         MOVL    DISK_XFER_ADDR, R0                                 ; 0544
                52              64  3C 0007B         MOVZWL  (R4), R2                                           ;
                              6042  D5 0007E         TSTL    (R0)[R2]                                           ;
                                0A  12 00081         BNEQ    7$                                                 ;
```

```
                        50    E4   A7  D0 00083          MOVL    DISK_IMAGE, R0                  ; 0545
                            6042  7F  00087              PUSHAQ  (R0)[R2]
                        68    01  FB  0008A              CALLS   #1, GET_IMAGE
                        50    EC   A7  D0 0008D 7$:      MOVL    DISK_XFER_ADDR, R0              ; 0546
                              63  11  00091              BRB     14$
                        02          63  B1 00093 8$:     CMPW    (R3), #2                        ; 0551
                              1C  12  00096              BNEQ    10$
                        50    2C   A7  D0 00098          MOVL    TAPE_XFER_ADDR, R0              ; 0553
                        52          64  3C 0009C          MOVZWL  (R4), R2
                            6042  D5  0009F              TSTL    (R0)[R2]
                              0A  12  000A2              BNEQ    9$
                        50    24   A7  D0 000A4          MOVL    TAPE_IMAGE, R0                  ; 0554
                            6042  7F  000A8              PUSHAQ  (R0)[R2]
                        68    01  FB  000AB              CALLS   #1, GET_IMAGE
                        50    2C   A7  D0 000AE 9$:      MOVL    TAPE_XFER_ADDR, R0              ; 0555
                              65  11  000B2              BRB     17$
                        20          63  B1 000B4 10$:     CMPW    (R3), #32                       ; 0560
                              1C  12  000B7              BNEQ    12$
                        50    20   A7  D0 000B9          MOVL    SCOM_XFER_ADDR, R0              ; 0562
                        52          64  3C 000BD          MOVZWL  (R4), R2
                            6042  D5  000C0              TSTL    (R0)[R2]
                              0A  12  000C3              BNEQ    11$
                        50    18   A7  D0 000C5          MOVL    SCOM_IMAGE, R0                  ; 0563
                            6042  7F  000C9              PUSHAQ  (R0)[R2]
                        68    01  FB  000CC              CALLS   #1, GET_IMAGE
                        50    20   A7  D0 000CF 11$:      MOVL    SCOM_XFER_ADDR, R0              ; 0564
                              67  11  000D3              BRB     20$
                  0080  8F          63  B1 000D5 12$:     CMPW    (R3), #128                      ; 0569
                              1C  12  000DA              BNEQ    15$
                        50    E0   A7  D0 000DC          MOVL    BUS_XFER_ADDR, R0               ; 0571
                        52          64  3C 000E0          MOVZWL  (R4), R2
                            6042  D5  000E3              TSTL    (R0)[R2]
                              0A  12  000E6              BNEQ    13$
                        50    D8   A7  D0 000E8          MOVL    BUS_IMAGE, R0                   ; 0572
                            6042  7F  000EC              PUSHAQ  (R0)[R2]
                        68    01  FB  000EF              CALLS   #1, GET_IMAGE
                        50    E0   A7  DC 000F2 13$:      MOVL    BUS_XFER_ADDR, R0               ; 0573
                              44  11  000F6 14$:      BRB     20$
                  0060  8F          63  B1 000F8 15$:     CMPW    (R3), #96                       ; 0577
                              1C  12  000FD              BNEQ    18$
                        50    14   A7  D0 000FF          MOVL    REALTIME_XFER_ADDR, R0          ; 0579
                        52          64  3C 00103          MOVZWL  (R4), R2
                            6042  D5  00106              TSTL    (R0)[R2]
                              0A  12  00109              BNEQ    16$
                        50    0C   A7  D0 0010B          MOVL    REALTIME_IMAGE, R0              ; 0580
                            6042  7F  0010F              PUSHAQ  (R0)[R2]
                        68    01  FB  00112              CALLS   #1, GET_IMAGE
                        50    14   A7  D0 00115 16$:      MOVL    REALTIME_XFER_ADDR, R0          ; 0581
                              21  11  00119 17$:      BRB     20$
                  0046  8F          63  B1 0011B 18$:     CMPW    (R3), #70                       ; 0584
                              20  12  00120              BNEQ    21$
                        50    3C   A7  D0 00122          MOVL    WORKSTATION_XFER_ADDR, R0       ; 0586
                        52          64  3C 00126          MOVZWL  (R4), R2
                            6042  D5  00129              TSTL    (R0)[R2]
                              0A  12  0012C              BNEQ    19$
                        50    34   A7  D0 0012E          MOVL    WORKSTATION_IMAGE, R0           ; 0587
                            6042  7F  00132              PUSHAQ  (R0)[R2]
```

```
68                01  FB 00135          CALLS   #1, GET_IMAGE                         ;
50          3C    A7  D0 00138  19$:    MOVL    WORKSTATION_XFER_ADDR, R0             ; 0588
65              6042  D0 0013C  20$:    MOVL    (R0)[R2], (R5)                        ;
                  0E  11 00140          BRB     22$                                   ; 0512
7E                63  3C 00142  21$:    MOVZWL  (R3), -(SP)                           ; 0596
                  01  DD 00145          PUSHL   #1                                    ;
        00000000G 8F  DD 00147          PUSHL   #ERF_UNKCLASS                         ;
69                03  FB 0014D          CALLS   #3, LIB$SIGNAL                        ;
50                01  D0 00150  22$:    MOVL    #1, R0                                ; 0599
                      04 00153          RET                                           ; 0600

; Routine Size:  340 bytes,    Routine Base:  $CODE + 00BD
```

```
;  320          0601  1 Routine GET_IMAGE (Image_name) =
;  321          0602  2 Begin
;  322          0603  2 !++
;  323          0604  2 ! Functional description
;  324          0605  2 !
;  325          0606  2 !       This routine takes the image name specified, test to see that it
;  326          0607  2 !       is not of zero length and then calls map_image to load the image.
;  327          0608  2 !       If the image gets loaded, it is called in order to obtain the
;  328          0609  2 !       the transfer vector information.
;  329          0610  2 !
;  330          0611  2 ! Calling sequence
;  331          0612  2 !
;  332          0613  2 !       Get_image (Image_name)
;  333          0614  2 !
;  334          0615  2 ! Input parameters
;  335          0616  2 !
;  336          0617  2 !       Image_name : Contains address of image_name descriptor
;  337          0618  2 !
;  338          0619  2 ! Output parameters
;  339          0620  2 !
;  340          0621  2 !       None
;  341          0622  2 !
;  342          0623  2 ! Routine value
;  343          0624  2 !
;  344          0625  2 !       Worst error is returned.
;  345          0626  2 !
;  346          0627  2 !----
;  347          0628  2
;  348          0629  2
;  349          0630  2 Local
;  350          0631  2         Array_addr,
;  351          0632  2         Array_size,
;  352          0633  2         Class:                  WORD SIGNED,
;  353          0634  2         Status,
;  354          0635  2         Temp_xfer_addr,
;  355          0636  2         Transfer_offset:        WORD,
;  356          0637  2         Type:                   WORD,
;  357          0638  2         Version:                WORD,
;  358          0639  2         Xfer_addr;
;  359          0640  2
;  360          0641  2 Bind
;  361          0642  2    Desc = .Image_name  : $BBLOCK[dsc$k_d_bln] ;
;  362          0643  2
;  363          0644  2 Literal
;  364          0645  2    Tran_vec_size = 8;
;  365          0646  2
```

```
;  367     0647  2 !
;  368     0648  2 ! If the Image name is not blank then try to load the image.
;  369     0649  2 !
;  370     0650  2
;  371     0651  2 If .desc[dsc$w_length] EQL 0 then (Xfer_addr = 0; Return true);
;  372     0652  2
;  373     0653  2 Status = map_image ( desc, Xfer_addr ) ;
;  374     0654  2 If NOT .status then (Xfer_addr = 0; Return true);
;  375     0655  2
;  376     0656  2
;  377     0657  2 !       Call the image that was just loaded and recieve from it
;  378     0658  2 !       the address and size of an array of longword codes. Each
;  379     0659  2 !       of these codes are of the form:
;  380     0660  2 !       31                              0
;  381     0661  2 !       --------------------------------
;  382     0662  2 !       ! Device_class  ! Device_type !
;  383     0663  2 !       --------------------------------
;  384     0664  2 !       !Transfer_offset!  Version    !
;  385     0665  2 !       --------------------------------
;  386     0666  2 !
;  387     0667  2 !       The first longword contains the class and type, while the
;  388     0668  2 !       second longword contains the version number of each
;  389     0669  2 !       device module in the loaded image, along with the transfer
;  390     0670  2 !       vector offset value.
;  391     0671  2 !
;  392     0672  2
;  393     0673  2 Exec_image ( Xfer_addr, Array_addr, Array_size);
;  394     0674  2
;  395     0675  2 Incr I from 1 to .Array_size do
;  396     0676  3   Begin
;  397     0677  3   Get_code ( Array_addr, Class, Type, Version, Transfer_offset );
;  398     0678  3
;  399     0679  3   Temp_xfer_addr = .xfer_addr + tran_vec_size * .transfer_offset;
;  400     0680  3
;  401     0681  3   Selectoneu .Class of set
;  402     0682  3
;  403     0683  3   [DC$_ZERO_CLASS]:
;  404     0684  4         Begin
;  405     0685  4         Incr J from 1 to .max_misc_type do
;  406     0686  5           Begin
;  407     0687  5           If .Translate_entry_table [.J] EQL .Type then
;  408     0688  6             Begin
;  409     0689  6             If .Packet_processor_version [.J] EQL .version then
;  410     0690  6                 Packet_processor_xfer_addr [.J] = .temp_xfer_addr
;  411     0691  6             Else
;  412     0692  6                 Packet_processor_xfer_addr [.J] = 0;
;  413     0693  6             Class = -1;
;  414     0694  6             Exitloop;
;  415     0695  5             End;
;  416     0696  4           End;
;  417     0697  4
;  418     0698  4           If .class LSS 0 then
;  419     0699  4             class = 0
;  420     0700  4           Else
;  421     0701  5             Begin
;  422     0702  5             Signal (erf_unkentry, 1, .type);
;  423     0703  5             Class = 0;
```

```
;  424     0704  4                End;
;  425     0705  4            End;
;  426     0706  4
;  427     0707  4
;  428     0708  3        [DC$_DISK]:
;  429     0709  4            Begin
;  430     0710  4            Disk_xfer_addr [.type] = .temp_xfer_addr;
;  431     0711  4            Disk_version [.type] = .version;
;  432     0712  3            End;
;  433     0713  3
;  434     0714  3
;  435     0715  3        [DC$_TAPE]:
;  436     0716  4            Begin
;  437     0717  4            Tape_xfer_addr [.type] = .temp_xfer_addr;
;  438     0718  4            Tape_version [.type] = .version;
;  439     0719  3            End;
;  440     0720  3
;  441     0721  3
;  442     0722  3        [DC$_BUS]:
;  443     0723  4            Begin
;  444     0724  4            Bus_xfer_addr [.type] = .temp_xfer_addr;
;  445     0725  4            Bus_version [.type] = .version;
;  446     0726  3            End;
;  447     0727  3
;  448     0728  3
;  449     0729  3        [DC$_SCOM]:
;  450     0730  4            Begin
;  451     0731  4            Scom_xfer_addr [.type] = .temp_xfer_addr;
;  452     0732  4            Scom_version [.type] = .version;
;  453     0733  3            End;
;  454     0734  3
;  455     0735  3        [DC$_REALTIME]:
;  456     0736  4            Begin
;  457     0737  4            Realtime_xfer_addr [.type] = .temp_xfer_addr;
;  458     0738  4            Realtime_version [.type] = .version;
;  459     0739  3            End;
;  460     0740  3
;  461     0741  3        [DC$_WORKSTATION]:
;  462     0742  4            Begin
;  463     0743  4            Workstation_xfer_addr [.type] = .temp_xfer_addr;
;  464     0744  4            Workstation_version [.type] = .version;
;  465     0745  3            End;
;  466     0746  3
;  467     0747  3        [OTHERWISE]:
;  468     0748  3    !signal maybe
;  469     0749  3        TES;
;  470     0750  2    End;
;  471     0751  2
;  472     0752  2    Return true;
;  473     0753  1    End;


                007C 00000 GET_IMAGE:
                                .WORD   Save R2,R3,R4,R5,R6                     ; 0601
```

```
                56 00000000'   00   9E 00002          MOVAB   MAX_MISC_TYPE, R6                                  ;
                5E             1C   C2 00009          SUBL2   #28, SP                                            ;
                         04    BC   B5 0000C          TSTW    @IMAGE_NAME                                        ; 0651
                               0E   13 0000F          BEQL    1$                                                 ;
                         04    AE   9F 00011          PUSHAB  XFER_ADDR                                          ; 0653
                         04    AC   DD 00014          PUSHL   IMAGE_NAME                                         ;
                      FDD3     CF   02 FB 00017       CALLS   #2, MAP_IMAGE                                      ;
                06             50   E8 0001C          BLBS    STATUS, 2$                                         ; 0654
                         04    AE   D4 0001F 1$:      CLRL    XFER_ADDR                                          ;
                            00EE   31 00022          BRW     20$                                                ;
                               5E   DD 00025 2$:      PUSHL   SP                                                 ; 0673
                         1C    AE   9F 00027          PUSHAB  ARRAY_ADDR                                         ;
                         0C    AE   9F 0002A          PUSHAB  XFER_ADDR                                          ;
                00000000G      00   03 FB 0002D       CALLS   #3, EXEC_IMAGE                                     ;
                               55   D4 00034          CLRL    I                                                  ; 0679
                               74   11 00036          BRB     10$                                                ;
                         08    AE   9F 00038 3$:      PUSHAB  TRANSFER_OFFSET                                    ; 0677
                         10    AE   9F 0003B          PUSHAB  VERSION                                            ;
                         18    AE   9F 0003E          PUSHAB  TYPE                                               ;
                         20    AE   9F 00041          PUSHAB  CLASS                                              ;
                         28    AE   9F 00044          PUSHAB  ARRAY_ADDR                                         ;
                00000000G      00   05 FB 00047       CALLS   #5, GET_CODE                                       ;
                               50   08    AE   3C 0004E          MOVZWL  TRANSFER_OFFSET, R0                      ; 0679
                               53   04 BE40   7E 00052          MOVAQ   @XFER_ADDR[R0], TEMP_XFER_ADDR           ;
                               51   14    AE   32 00057          CVTWL   CLASS, R1                                ; 0681
                                           51   12 0005B          BNEQ    11$                                      ; 0683
                               54                  66 9A 0005D          MOVZBL  MAX_MISC_TYPE, R4                ; 0685
                                                   50 D4 00060          CLRL    J                                ; 0687
                                                   29 11 00062          BRB     7$                               ;
                               51          34      A6 D0 00064 4$:      MOVL    TRANSLATE_ENTRY_TABLE, R1        ;
                         10    AE                6140 B1 00068          CMPW    (R1)[J], TYPE                    ;
                                                   1E 12 0006D          BNEQ    7$                               ;
                               51          04      A6 D0 0006F          MOVL    PACKET_PROCESSOR_XFER_ADDR, R1   ; 0690
                               52          0C      A6 D0 00073          MOVL    PACKET_PROCESSOR_VERSION, R2     ; 0689
                         0C    AE                6240 B1 00077          CMPW    (R2)[J], VERSION                 ;
                                                   06 12 0007C          BNEQ    5$                               ;
                            6140                   53 D0 0007E          MOVL    TEMP_XFER_ADDR, (R1)[J]          ; 0690
                                                   03 11 00082          BRB     6$                               ;
                                                6140 D4 00084 5$:       CLRL    (R1)[J]                          ; 0692
                         14    AE                   01 AE 00087 6$:      MNEGW   #1, CLASS                        ; 0693
                                                   04 11 0008B          BRB     8$                               ; 0688
                D3               50                54 F3 0008D 7$:      AOBLEQ  R4, J, 4$                        ; 0685
                                           14      AE B5 00091 8$:      TSTW    CLASS                            ; 0698
                                                   13 19 00094          BLSS    9$                               ;
                               7E          10      AE 3C 00096          MOVZWL  TYPE, -(SP)                      ; 0702
                                                   01 DD 0009A          PUSHL   #1                               ;
                                  00000000G        8F DD 0009C          PUSHL   #ERF_UNKENTRY                    ;
                   00000000G      00               03 FB 000A2          CALLS   #3, LIB$SIGNAL                   ;
                                           14      AE B4 000A9 9$:      CLRW    CLASS                            ; 0703
                                                   5F 11 000AC 10$:     BRB     19$                              ; 0681
                               01                  51 B1 000AE 11$:     CMPW    R1, #1                           ; 0708
                                                   0E 12 000B1          BNEQ    13$                              ;
                               51          EC      A6 7D 000B3          MOVQ    DISK_VERSION, R1                 ; 0711
                               50          10      AE 3C 000B7 12$:     MOVZWL  TYPE, R0                         ; 0710
                            6240                   53 D0 000BB          MOVL    TEMP_XFER_ADDR, (R2)[R0]         ;
                                                   47 11 000BF          BRB     18$                              ; 0711
                               02                  51 B1 000C1 13$:     CMPW    R1, #2                           ; 0715
```

```
                                          06  12 000C4          BNEQ    14$                                  ;
                         51         2C    A6  7D 000C6          MOVQ    TAPE_VERSION, R1                     ; 0718
                                          EB  11 000CA          BRB     12$                                  ; 0717
                 0080    8F               51  B1 000CC  14$:    CMPW    R1, #128                             ; 0722
                                          06  12 000D1          BNEQ    15$                                  ;
                         51         E0    A6  7D 000D3          MOVQ    BUS_VERSION, R1                      ; 0725
                                          DE  11 000D7          BRB     12$                                  ; 0724
                         20               51  B1 000D9  15$:    CMPW    R1, #32                              ; 0729
                                          06  12 000DC          BNEQ    16$                                  ;
                         51         20    A6  7D 000DE          MOVQ    SCOM_VERSION, R1                     ; 0732
                                          D3  11 000E2          BRB     12$                                  ; 0731
                 0060    8F               51  B1 000E4  16$:    CMPW    R1, #96                              ; 0735
                                          06  12 000E9          BNEQ    17$                                  ;
                         51         14    A6  7D 000EB          MOVQ    REALTIME_VERSION, R1                 ; 0738
                                          C6  11 000EF          BRB     12$                                  ; 0737
                 0046    8F               51  B1 000F1  17$:    CMPW    R1, #70                              ; 0741
                                          15  12 000F6          BNEQ    19$                                  ;
                         51         40    A6  D0 000F8          MOVL    WORKSTATION_XFER_ADDR, R1            ; 0743
                         50         10    AE  3C 000FC          MOVZWL  TYPE, R0                             ;
                       6140               53  D0 00100          MOVL    TEMP_XFER_ADDR, (R1)[R0]             ;
                         51         3C    A6  D0 00104          MOVL    WORKSTATION_VERSION, R1              ; 0744
                       6140         0C    AE  B0 00108  18$:    MOVW    VERSION, (R1)[R0]                    ;
      FF25          55   01               6E  F1 0010D  19$:    ACBL    ARRAY_SIZE, #1, I, 3$                ; 0675
                         50               01  D0 00113  20$:    MOVL    #1, R0                               ; 0752
                                              04 00116          RET                                          ; 0753
```

; Routine Size: 279 bytes,   Routine Base: $CODE + 0211

```
;  474          0754  1
;  475          0755  1 END
;  476          0756  0 ELUDOM
```

.EXTRN LIB$SIGNAL, LIB$STOP

; PSECT SUMMARY

Name	Bytes	Attributes
$GLOBAL$	108	NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON, PIC,ALIGN(2)
$PLIT	20	NOVEC,NOWRT, RD ,NOEXE,NOSHR, LCL, REL, CON, PIC,ALIGN(2)
$CODE	808	NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON, PIC,ALIGN(2)

; Library Statistics

File	Symbols Total	Symbols Loaded	Symbols Percent	Pages Mapped	Processing Time
_255DUA28:[SYSLIB]LIB.L32;1	18619	45	0	1000	00:02.0

```
;                                       COMMAND QUALIFIERS

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

;  477           0757  0
; Size:          808 code + 128 data bytes
; Run Time:        00:19.5
; Elapsed Time:    00:40.7
; Lines/CPU Min:    2332
; Lexemes/CPU-Min: 20268
; Memory Used:  180 pages
; Compilation Complete
```

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CONFIDENTIAL AND PROPRIETARY

GETCODE.LIS

INITPROC1.LIS

INITREAL.LIS

EXECIMAGE.LIS

ERFSUMM.LIS

INITBUS.LIS

INITPROC4.LIS

KMS3271.LIS

ERFTAPEVE.LIS

HEADER.LIS

FILES.LIS

ERLLOGSYS.LIS

INITPROC2.LIS

INIT_TAPE.LIS

ERLLOGMSG.LIS

INITDISK.LIS

INITPROC5.LIS

IMAGELOAD.LIS

INITPROC3.LIS

INTERVENE.LIS

ERFRTVEC.LIS

ERFSUMVEC.LIS