```
   AAAAAAAAA     NNN         NNN     AAAAAAAAA     LLL                YYY         YYY  ZZZZZZZZZZZZZZZ
   AAAAAAAAA     NNN         NNN     AAAAAAAAA     LLL                YYY         YYY  ZZZZZZZZZZZZZZZ
   AAAAAAAAA     NNN         NNN     AAAAAAAAA     LLL                YYY         YYY  ZZZZZZZZZZZZZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                YYY         YYY              ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                YYY         YYY              ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                YYY         YYY              ZZZ
AAA         AAA  NNNNNN      NNN  AAA         AAA  LLL                   YYY   YYY                ZZZ
AAA         AAA  NNNNNN      NNN  AAA         AAA  LLL                   YYY   YYY                ZZZ
AAA         AAA  NNNNNN      NNN  AAA         AAA  LLL                   YYY   YYY                ZZZ
AAA         AAA  NNN  NNN   NNN  AAA         AAA  LLL                      YYY                  ZZZ
AAA         AAA  NNN  NNN   NNN  AAA         AAA  LLL                      YYY                  ZZZ
AAA         AAA  NNN  NNN   NNN  AAA         AAA  LLL                      YYY                  ZZZ
AAAAAAAAAAAAAAA  NNN     NNNNNN  AAAAAAAAAAAAAAA  LLL                      YYY               ZZZ
AAAAAAAAAAAAAAA  NNN     NNNNNN  AAAAAAAAAAAAAAA  LLL                      YYY               ZZZ
AAAAAAAAAAAAAAA  NNN     NNNNNN  AAAAAAAAAAAAAAA  LLL                      YYY               ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                      YYY            ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                      YYY            ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                      YYY            ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLLLLLLLLLLLLLL          YYY            ZZZZZZZZZZZZZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLLLLLLLLLLLLLL          YYY            ZZZZZZZZZZZZZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLLLLLLLLLLLLLL          YYY            ZZZZZZZZZZZZZZZ
```

FILEID**EXEDRIVE

```
EEEEEEEEEE  XX      XX  EEEEEEEEEE  DDDDDDDD    RRRRRRRR     IIIIII   VV      VV  EEEEEEEEEE
EEEEEEEEEE  XX      XX  EEEEEEEEEE  DDDDDDDD    RRRRRRRR     IIIIII   VV      VV  EEEEEEEEEE
EE          XX      XX  EE          DD      DD  RR      RR     II     VV      VV  EE
EE          XX      XX  EE          DD      DD  RR      RR     II     VV      VV  EE
EE            XX  XX    EE          DD      DD  RR      RR     II     VV      VV  EE
EE            XX  XX    EE          DD      DD  RR      RR     II     VV      VV  EE
EEEEEEEE        XX      EEEEEEEE    DD      DD  RRRRRRRR     II     VV      VV  EEEEEEEE
EEEEEEEE        XX      EEEEEEEE    DD      DD  RRRRRRRR     II     VV      VV  EEEEEEEE
EE            XX  XX    EE          DD      DD  RR  RR       II     VV      VV  EE
EE            XX  XX    EE          DD      DD  RR  RR       II     VV      VV  EE
EE          XX      XX  EE          DD      DD  RR    RR     II       VV  VV    EE              ....
EE          XX      XX  EE          DD      DD  RR    RR     II       VV  VV    EE              ....
EEEEEEEEEE  XX      XX  EEEEEEEEEE  DDDDDDDD    RR      RR   IIIIII     VV      EEEEEEEEEE     ....
EEEEEEEEEE  XX      XX  EEEEEEEEEE  DDDDDDDD    RR      RR   IIIIII     VV      EEEEEEEEEE     ....
```

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

```
;  1     0001  0 %title 'EXEDRIVE - Drive Analysis of Image Files'
;  2     0002  0       module exedrive (
;  3     0003  1                       ident='V04-000') = begin
;  4     0004  1
;  5     0005  1 !
;  6     0006  1 !*****************************************************************************
;  7     0007  1 !*                                                                           *
;  8     0008  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
;  9     0009  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                    *
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; 15     0015  1 !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY  *
; 16     0016  1 !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY  *
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; 18     0018  1 !*                                                                           *
; 19     0019  1 !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE  *
; 20     0020  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT  *
; 21     0021  1 !*  CORPORATION.                                                             *
; 22     0022  1 !*                                                                           *
; 23     0023  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS  *
; 24     0024  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
; 25     0025  1 !*                                                                           *
; 26     0026  1 !*                                                                           *
; 27     0027  1 !*****************************************************************************
; 28     0028  1 !
; 29     0029  1
; 30     0030  1 !++
; 31     0031  1 ! Facility:     VAX/VMS Analyze Facility, Image File Analyzer
; 32     0032  1 !
; 33     0033  1 ! Abstract:     This module is the main control for the analysis of image
; 34     0034  1 !               files.
; 35     0035  1 !
; 36     0036  1 !
; 37     0037  1 ! Environment:
; 38     0038  1 !
; 39     0039  1 ! Author: Paul C. Anagnostopoulos, Creation Date: 31 March 1981
; 40     0040  1 !
; 41     0041  1 ! Modified By:
; 42     0042  1 !
; 43     0043  1 !       V03-002 DGB0068         Donald G. Blair         03-Jul-1984
; 44     0044  1 !               Allow the /NOOUTPUT qualifier.
; 45     0045  1 !
; 46     0046  1 !       V03-001 PCA1011         Paul C. Anagnostopoulos  1-Apr-1983
; 47     0047  1 !               Change the message prefix to ANLOBJ$ to ensure that
; 48     0048  1 !               message symbols are unique across all ANALYZEs.  This
; 49     0049  1 !               is necessitated by the new merged message files.
; 50     0050  1 !--
```

```
;    52          0051  1 %sbttl 'Module Declarations'
;    53          0052  1 !
;    54          0053  1 ! Libraries and Requires:
;    55          0054  1 !
;    56          0055  1
;    57          0056  1 library 'starlet';
;    58          0057  1 require 'objexereq';
;    59          0493  1
;    60          0494  1 !
;    61          0495  1 ! Table of Contents:
;    62          0496  1 !
;    63          0497  1
;    64          0498  1 forward routine
;    65          0499  1         anl$image: novalue,
;    66          0500  1         anl$image_positionals: novalue,
;    67          0501  1         anl$image2: novalue;
;    68          0502  1
;    69          0503  1 !
;    70          0504  1 ! External References:
;    71          0505  1 !
;    72          0506  1
;    73          0507  1 external routine
;    74          0508  1         anl$error_count,
;    75          0509  1         anl$format_error,
;    76          0510  1         anl$format_hex,
;    77          0511  1         anl$format_line,
;    78          0512  1         anl$image_fixup_info,
;    79          0513  1         anl$image_gst,
;    80          0514  1         anl$image_header,
;    81          0515  1         anl$image_patch_text,
;    82          0516  1         anl$open_next_image_file,
;    83          0517  1         anl$prepare_report_file,
;    84          0518  1         anl$report_line,
;    85          0519  1         cli$get_value: addressing_mode(general),
;    86          0520  1         cli$present: addressing_mode(general),
;    87          0521  1         str$trim: addressing_mode(general);
;    88          0522  1
;    89          0523  1 external
;    90          0524  1         anl$gb_interactive: byte;
;    91          0525  1
;    92          0526  1 !
;    93          0527  1 ! Own Variables:
;    94          0528  1 !
;    95          0529  1 ! The following variables contain various positional qualifier values.
;    96          0530  1
;    97          0531  1 own
;    98          0532  1         fixup_section_flag: byte,
;    99          0533  1         gst_flag: byte,
;   100          0534  1         patch_text_flag: byte;
```

```
;  102          0535  1 %sbttl 'ANL$IMAGE - Control Analysis of Image Files'
;  103          0536  1 !++
;  104          0537  1 ! Functional Description:
;  105          0538  1 !       This routine is responsible for controlling the analysis of image
;  106          0539  1 !       files.
;  107          0540  1 !
;  108          0541  1 ! Formal Parameters:
;  109          0542  1 !       none
;  110          0543  1 !
;  111          0544  1 ! Implicit Inputs:
;  112          0545  1 !       global data
;  113          0546  1 !
;  114          0547  1 ! Implicit Outputs:
;  115          0548  1 !       global data
;  116          0549  1 !
;  117          0550  1 ! Returned Value:
;  118          0551  1 !       none
;  119          0552  1 !
;  120          0553  1 ! Side Effects:
;  121          0554  1 !
;  122          0555  1 !--
;  123          0556  1
;  124          0557  1
;  125          0558  2 global routine anl$image: novalue = begin
;  126          0559  2
;  127          0560  2 own
;  128          0561  2         own_described_buffer(report_file_spec,nam$c_maxrss);
;  129          0562  2
;  130          0563  2 local
;  131          0564  2         status: long;
;  132          0565  2
;  133          0566  2
;  134          0567  2 ! Get the global qualifiers that can be specified for ANALYZE/OBJECT.
;  135          0568  2 ! The first one is the /INTERACTIVE qualifier.
;  136          0569  2
;  137          0570  2 anl$gb_interactive = cli$present(describe('INTERACTIVE'));
;  138          0571  2
;  139          0572  2 ! If the user wants us to generate output, get the name of the report
;  140          0573  2 ! file.  If this is an interactive session, we always use SYS$OUTPUT.
;  141          0574  2
;  142          0575  2 if cli$present(describe('OUTPUT')) then
;  143          0576  2         if .anl$gb_interactive then
;  144          0577  2                 ch$copy(10,uplit byte ('SYS$OUTPUT'),
;  145          0578  2                         ' ',.report_file_spec[len],.report_file_spec[ptr])
;  146          0579  2         else
;  147          0580  2                 cli$get_value(describe('OUTPUT'),report_file_spec);
;  148          0581  2
;  149          0582  2 ! We go into a loop, once through for each image file.
;  150          0583  2
;  151          0584  3 loop (
;  152          0585  3         local
;  153          0586  3                 local_described_buffer(resultant_file_spec,nam$c_maxrss);
;  154          0587  3
;  155          0588  3         status = anl$open_next_image_file(resultant_file_spec);
;  156          0589  3
;  157          0590  3 exitif (not .status);
;  158          0591  3
```

```
;  159          0592  3          ! Prepare the file to receive the image analysis report.
;  160          0593  3
;  161          0594  3          anl$prepare_report_file(report_file_spec,resultant_file_spec,anlobj$_exeheading);
;  162          0595  3
;  163          0596  3          ! Analyze the image file.
;  164          0597  3
;  165          0598  3          anl$image2();
;  166          0599  2 );
;  167          0600  2
;  168          0601  2 return;
;  169          0602  2
;  170          0603  1 end;


                                                                .TITLE  EXEDRIVE EXEDRIVE - Drive Analysis of Image Fil
;                                                                       es
                                                                .IDENT  \V04-000\

                                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

                45  56  49  54  43  41  52  45  54  4E  49  00000 P.AAB:  .ASCII  \INTERACTIVE\                          ;
                                                            0000B       .BLKB   1
                                                 0000000B   0000C P.AAA:  .LONG   11                                    ;
                                                 00000000'  00010        .ADDRESS P.AAB                                 ;
                                    54  55  50  54  55  4F  00014 P.AAD:  .ASCII  \OUTPUT\                              ;
                                                            0001A       .BLKB   2
                                                 00000006   0001C P.AAC:  .LONG   6                                     ;
                                                 00000000'  00020        .ADDRESS P.AAD                                 ;
                    54  55  50  54  55  4F  24  53  59  53  00024 P.AAE:  .ASCII  \SYS$OUTPUT\                          ;
                                    54  55  50  54  55  4F  0002E P.AAG:  .ASCII  \OUTPUT\                              ;
                                                 00000006   00034 P.AAF:  .LONG   6                                     ;
                                                 00000000'  00038        .ADDRESS P.AAG                                 ;

                                                                .PSECT  $OWN$,NOEXE,2

                                                00000 FIXUP_SECTION_FLAG:
                                                            .BLKB   1
                                                00001 GST_FLAG:
                                                            .BLKB   1
                                                00002 PATCH_TEXT_FLAG:
                                                            .BLKB   1
                                                00003       .BLKB   1
                                      000000FF  00004 REPORT_FILE_SPEC:
                                                            .LONG   255
                                      00000000' 00008       .ADDRESS REPORT_FILE_SPEC+8                                 ;
                                                0000C       .BLKB   255

                                                            .EXTRN  ANLOBJ$_OK, ANLOBJ$_ANYTHING
                                                            .EXTRN  ANLOBJ$_DATATYPE
                                                            .EXTRN  ANLOBJ$_ERRORCOUNT
                                                            .EXTRN  ANLOBJ$_ERRORNONE
                                                            .EXTRN  ANLOBJ$_ERRORS, ANLOBJ$_EXEFIXA
                                                            .EXTRN  ANLOBJ$_EXEFIXAIMAGE
                                                            .EXTRN  ANLOBJ$_EXEFIXALINE
                                                            .EXTRN  ANLOBJ$_EXEFIXCOUNT
                                                            .EXTRN  ANLOBJ$_EXEFIXEXTRA
                                                            .EXTRN  ANLOBJ$_EXEFIXFIXED
```

```
                .EXTRN  ANLOBJ$_EXEFIXFLAGS
                .EXTRN  ANLOBJ$_EXEFIXG
                .EXTRN  ANLOBJ$_EXEFIXGIMAGE
                .EXTRN  ANLOBJ$_EXEFIXGLINE
                .EXTRN  ANLOBJ$_EXEFIXLIST
                .EXTRN  ANLOBJ$_EXEFIXNAME
                .EXTRN  ANLOBJ$_EXEFIXNAMEO
                .EXTRN  ANLOBJ$_EXEFIXP
                .EXTRN  ANLOBJ$_EXEFIXPSECT
                .EXTRN  ANLOBJ$_EXEFIXUP
                .EXTRN  ANLOBJ$_EXEFIXUPNONE
                .EXTRN  ANLOBJ$_EXEGST, ANLOBJ$_EXEHDR
                .EXTRN  ANLOBJ$_EXEHDRACTIVE
                .EXTRN  ANLOBJ$_EXEHDRBLKCOUNT
                .EXTRN  ANLOBJ$_EXEHDRCHANCOUNT
                .EXTRN  ANLOBJ$_EXEHDRCHANDEF
                .EXTRN  ANLOBJ$_EXEHDRDECECO
                .EXTRN  ANLOBJ$_EXEHDRDMT
                .EXTRN  ANLOBJ$_EXEHDRDST
                .EXTRN  ANLOBJ$_EXEHDRFILEID
                .EXTRN  ANLOBJ$_EXEHDRFIXED
                .EXTRN  ANLOBJ$_EXEHDRFLAGS
                .EXTRN  ANLOBJ$_EXEHDRGBLIDENT
                .EXTRN  ANLOBJ$_EXEHDRGST
                .EXTRN  ANLOBJ$_EXEHDRIDENT
                .EXTRN  ANLOBJ$_EXEHDRIMAGEID
                .EXTRN  ANLOBJ$_EXEHDRISD
                .EXTRN  ANLOBJ$_EXEHDRISDBASE
                .EXTRN  ANLOBJ$_EXEHDRISDCOUNT
                .EXTRN  ANLOBJ$_EXEHDRISDFLAGS
                .EXTRN  ANLOBJ$_EXEHDRISDGBLNAM
                .EXTRN  ANLOBJ$_EXEHDRISDNUM
                .EXTRN  ANLOBJ$_EXEHDRISDPFCDEF
                .EXTRN  ANLOBJ$_EXEHDRISDPFCSIZ
                .EXTRN  ANLOBJ$_EXEHDRISDTYPE
                .EXTRN  ANLOBJ$_EXEHDRISDVBN
                .EXTRN  ANLOBJ$_EXEHDRLINKID
                .EXTRN  ANLOBJ$_EXEHDRMATCH
                .EXTRN  ANLOBJ$_EXEHDRNAME
                .EXTRN  ANLOBJ$_EXEHDRNOPATCH
                .EXTRN  ANLOBJ$_EXEHDRPAGECOUNT
                .EXTRN  ANLOBJ$_EXEHDRPAGEDEF
                .EXTRN  ANLOBJ$_EXEHDRPATCH
                .EXTRN  ANLOBJ$_EXEHDRPATCHDATE
                .EXTRN  ANLOBJ$_EXEHDRPRIV
                .EXTRN  ANLOBJ$_EXEHDRROPATCH
                .EXTRN  ANLOBJ$_EXEHDRRWPATCH
                .EXTRN  ANLOBJ$_EXEHDRSYMDBG
                .EXTRN  ANLOBJ$_EXEHDRSYSVER
                .EXTRN  ANLOBJ$_EXEHDRTEXTVBN
                .EXTPN  ANLOBJ$_EXEHDRTIME
                .EXTRN  ANLOBJ$_EXEHDRTYPEEXE
                .EXTRN  ANLOBJ$_EXEHDRTYPELIM
                .EXTRN  ANLOBJ$_EXEHDRUSERECO
                .EXTRN  ANLOBJ$_EXEHDRXFER1
                .EXTRN  ANLOBJ$_EXEHDRXFER2
                .EXTRN  ANLOBJ$_EXEHDRXFER3
```

```
                .EXTRN  ANLOBJ$_EXEHEADING
                .EXTRN  ANLOBJ$_EXEPATCH
                .EXTRN  ANLOBJ$_FLAG, ANLOBJ$_HEXDATA
                .EXTRN  ANLOBJ$_HEXHEADING1
                .EXTRN  ANLOBJ$_HEXHEADING2
                .EXTRN  ANLOBJ$_INDMSGSEC
                .EXTRN  ANLOBJ$_INTERACT
                .EXTRN  ANLOBJ$_MASK, ANLOBJ$_OBJCPRREC
                .EXTRN  ANLOBJ$_OBJDBGREC
                .EXTRN  ANLOBJ$_OBJENV, ANLOBJ$_OBJEOMFLAGS
                .EXTRN  ANLOBJ$_OBJEOMREC
                .EXTRN  ANLOBJ$_OBJEOMSEVABT
                .EXTRN  ANLOBJ$_OBJEOMSEVERR
                .EXTRN  ANLOBJ$_OBJEOMSEVIGN
                .EXTRN  ANLOBJ$_OBJEOMSEVRES
                .EXTRN  ANLOBJ$_OBJEOMSEVSUC
                .EXTRN  ANLOBJ$_OBJEOMSEVWRN
                .EXTRN  ANLOBJ$_OBJEOMWREC
                .EXTRN  ANLOBJ$_OBJFADPASSMECH
                .EXTRN  ANLOBJ$_OBJGSDENV
                .EXTRN  ANLOBJ$_OBJGSDENVFLAGS
                .EXTRN  ANLOBJ$_OBJGSDENVPAR
                .EXTRN  ANLOBJ$_OBJGSDEPM
                .EXTRN  ANLOBJ$_OBJGSDEPMW
                .EXTRN  ANLOBJ$_OBJGSDIDC
                .EXTRN  ANLOBJ$_OBJGSDIDCENT
                .EXTRN  ANLOBJ$_OBJGSDIDCFLAGS
                .EXTRN  ANLOBJ$_OBJGSDIDCMATCH
                .EXTRN  ANLOBJ$_OBJGSDIDCOBJ
                .EXTRN  ANLOBJ$_OBJGSDIDCVALA
                .EXTRN  ANLOBJ$_OBJGSDIDCVALB
                .EXTRN  ANLOBJ$_OBJGSDLEPM
                .EXTRN  ANLOBJ$_OBJGSDLPRO
                .EXTRN  ANLOBJ$_OBJGSDLSY
                .EXTRN  ANLOBJ$_OBJGSDPRO
                .EXTRN  ANLOBJ$_OBJGSDPROW
                .EXTRN  ANLOBJ$_OBJGSDPSC
                .EXTRN  ANLOBJ$_OBJGSDPSCALIGN
                .EXTRN  ANLOBJ$_OBJGSDPSCALLOC
                .EXTRN  ANLOBJ$_OBJGSDPSCBASE
                .EXTRN  ANLOBJ$_OBJGSDPSCFLAGS
                .EXTRN  ANLOBJ$_OBJGSDREC
                .EXTRN  ANLOBJ$_OBJGSDSPSC
                .EXTRN  ANLOBJ$_OBJGSDSYM
                .EXTRN  ANLOBJ$_OBJGSDSYMW
                .EXTRN  ANLOBJ$_OBJGTXREC
                .EXTRN  ANLOBJ$_OBJHDRIGNREC
                .EXTRN  ANLOBJ$_OBJHEADING
                .EXTRN  ANLOBJ$_OBJLITINDEX
                .EXTRN  ANLOBJ$_OBJLNKREC
                .EXTRN  ANLOBJ$_OBJLNMREC
                .EXTRN  ANLOBJ$_OBJMHDCREATE
                .EXTRN  ANLOBJ$_OBJMHDNAME
                .EXTRN  ANLOBJ$_OBJMHDPATCH
                .EXTRN  ANLOBJ$_OBJMHDREC
                .EXTRN  ANLOBJ$_OBJMHDRECSIZ
                .EXTRN  ANLOBJ$_OBJMHDSTRLVL
```

```
.EXTRN  ANLOBJ$_OBJMHDVERSION
.EXTRN  ANLOBJ$_OBJMTCCORRECT
.EXTRN  ANLOBJ$_OBJMTCINPUT
.EXTRN  ANLOBJ$_OBJMTCNAME
.EXTRN  ANLOBJ$_OBJMTCREC
.EXTRN  ANLOBJ$_OBJMTCSEQNUM
.EXTRN  ANLOBJ$_OBJMTCUIC
.EXTRN  ANLOBJ$_OBJMTCVERSION
.EXTRN  ANLOBJ$_OBJMTCWHEN
.EXTRN  ANLOBJ$_OBJPROARGCOUNT
.EXTRN  ANLOBJ$_OBJPROARGNUM
.EXTRN  ANLOBJ$_OBJPSECT
.EXTRN  ANLOBJ$_OBJSRCREC
.EXTRN  ANLOBJ$_OBJSTATHEADING1
.EXTRN  ANLOBJ$_OBJSTATHEADING2
.EXTRN  ANLOBJ$_OBJSTATLINE
.EXTRN  ANLOBJ$_OBJSTATTOTAL
.EXTRN  ANLOBJ$_OBJSYMBOL
.EXTRN  ANLOBJ$_OBJSYMFLAGS
.EXTRN  ANLOBJ$_OBJTIRARGINDEX
.EXTRN  ANLOBJ$_OBJTIRCMD
.EXTRN  ANLOBJ$_OBJTIRCMDSTK
.EXTRN  ANLOBJ$_OBJTBTREC
.EXTRN  ANLOBJ$_OBJTIRREC
.EXTRN  ANLOBJ$_OBJTIRSTOIM
.EXTRN  ANLOBJ$_OBJTIRVIELD
.EXTRN  ANLOBJ$_OBJTTLREC
.EXTRN  ANLOBJ$_OBJVALUE
.EXTRN  ANLOBJ$_OBJUVALUE
.EXTRN  ANLOBJ$_PROTECTION
.EXTRN  ANLOBJ$_SEVERITY
.EXTRN  ANLOBJ$_TEXT, ANLOBJ$_TEXTHDR
.EXTRN  ANLOBJ$_NOSUCHMOD
.EXTRN  ANLOBJ$_BADDATE
.EXTRN  ANLOBJ$_BADHDRBLKCOUNT
.EXTRN  ANLOBJ$_BADSEVERITY
.EXTRN  ANLOBJ$_BADSYM1ST
.EXTRN  ANLOBJ$_BADSYMCHAR
.EXTRN  ANLOBJ$_BADSYMLEN
.EXTRN  ANLOBJ$_EXEBADFIXUPEND
.EXTRN  ANLOBJ$_EXEBADFIXUPISD
.EXTRN  ANLOBJ$_EXEBADFIXUPVBN
.EXTRN  ANLOBJ$_EXEBADISDS1
.EXTRN  ANLOBJ$_EXEBADISDTYPE
.EXTRN  ANLOBJ$_EXEBADMATCH
.EXTRN  ANLOBJ$_EXEBADPATCHLEN
.EXTRN  ANLOBJ$_EXEBADOBJ
.EXTRN  ANLOBJ$_EXEBADTYPE
.EXTRN  ANLOBJ$_EXEBADXFERO
.EXTRN  ANLOBJ$_EXEHDRISDLONG
.EXTRN  ANLOBJ$_EXEHDRLONG
.EXTRN  ANLOBJ$_EXEISDLENDZRO
.EXTRN  ANLOBJ$_EXEISDLENGBL
.EXTRN  ANLOBJ$_EXEISDLENPRIV
.EXTRN  ANLOBJ$_EXENOTNATIVE
.EXTRN  ANLOBJ$_EXTRABYTES
.EXTRN  ANLOBJ$_FIELDFIT
```

```
                                                .EXTRN  ANLOBJ$_FLAGERROR
                                                .EXTRN  ANLOBJ$_NOTOK, ANLOBJ$_OBJBADIDCMATCH
                                                .EXTRN  ANLOBJ$_OBJBADNUM
                                                .EXTRN  ANLOBJ$_OBJBADPOP
                                                .EXTRN  ANLOBJ$_OBJBADPUSH
                                                .EXTRN  ANLOBJ$_OBJBADTYPE
                                                .EXTRN  ANLOBJ$_OBJBADVIELD
                                                .EXTRN  ANLOBJ$_OBJEOMBADSEV
                                                .EXTRN  ANLOBJ$_OBJEOMMISSING
                                                .EXTRN  ANLOBJ$_OBJFADBADAVC
                                                .EXTRN  ANLOBJ$_OBJFADBADRBC
                                                .EXTRN  ANLOBJ$_OBJGSDBADALIGN
                                                .EXTRN  ANLOBJ$_OBJGSDBADSUBTYP
                                                .EXTRN  ANLOBJ$_OBJHDRRES
                                                .EXTRN  ANLOBJ$_OBJMHDBADRECSIZ
                                                .EXTRN  ANLOBJ$_OBJMHDBADSTRLVL
                                                .EXTRN  ANLOBJ$_OBJMHDMISSING
                                                .EXTRN  ANLOBJ$_OBJNONTIRCMD
                                                .EXTRN  ANLOBJ$_OBJNOPSC
                                                .EXTRN  ANLOBJ$_OBJNULLREC
                                                .EXTRN  ANLOBJ$_OBJPOSPACE
                                                .EXTRN  ANLOBJ$_OBJPROMINMAX
                                                .EXTRN  ANLOBJ$_OBJPSCABSLEN
                                                .EXTRN  ANLOBJ$_OBJRECTOOBIG
                                                .EXTRN  ANLOBJ$_OBJTIRRES
                                                .EXTRN  ANLOBJ$_OBJUNDEFENV
                                                .EXTRN  ANLOBJ$_OBJUNDEFLIT
                                                .EXTRN  ANLOBJ$_OBJUNDEFPSC
                                                .EXTRN  ANALYZE$_FACILITY
                                                .EXTRN  ANL$ERROR_COUNT
                                                .EXTRN  ANL$FORMAT_ERROR
                                                .EXTRN  ANL$FORMAT_HEX, ANL$FORMAT_LINE
                                                .EXTRN  ANL$IMAGE_FIXUP_INFO
                                                .EXTRN  ANL$IMAGE_GST, ANL$IMAGE_HEADER
                                                .EXTRN  ANL$IMAGE_PATCH_TEXT
                                                .EXTRN  ANL$OPEN_NEXT_IMAGE_FILE
                                                .EXTRN  ANL$PREPARE_REPORT_FILE
                                                .EXTRN  ANL$REPORT_LINE
                                                .EXTRN  CLI$GET_VALUE, CLI$PRESENT
                                                .EXTRN  STR$TRIM, ANL$GB_INTERACTIVE

                                                .PSECT  $CODE$,NOWRT,2

                                    00FC 00000  .ENTRY  ANL$IMAGE, Save R2,R3,R4,R5,R6,R7                   ; 0558
                            57      0000'  CF   9E 00002  MOVAB  REPORT_FILE_SPEC, R7                       ;
                            56 00000000G   00   9E 00007  MOVAB  CLI$PRESENT, R6                            ;
                            5E      FEF8   CE   9E 0000E  MOVAB  -264(SP), SP                               ;
                                    0000'  CF   9F 00013  PUSHAB P.AAA                                      ; 0570
                            66             01   FB 00017  CALLS  #1, CLI$PRESENT                           ;
                      0000G CF             50   90 0001A  MOVB   R0, ANL$GB_INTERACTIVE                    ;
                                    0000'  CF   9F 0001F  PUSHAB P.AAC                                      ; 0575
                            66             01   FB 00023  CALLS  #1, CLI$PRESENT                           ;
                            1D             50   E9 00026  BLBC   R0, 2$                                    ;
                            0B      0000G  CF   E9 00029  BLBC   ANL$GB_INTERACTIVE, 1$                     ; 0576
67                  20      0000'  CF         0A   2C 0002E  MOVC5  #10, P.AAE, #32, REPORT_FILE_SPEC, -    ; 0578
                                         04    B7 00035                @REPORT_FILE_SPEC+4                  ;
                                               0D   11 00037  BRB    2$                                     ; 0577
```

```
                                                57  DD 00039 1$:     PUSHL   R7                                              ; 0580
                                          0000' CF  9F 0003B         PUSHAB  P.AAF                                           ;
                                00000000G   00    02 0003F         CALLS   #2, CLI$GET_VALUE                               ;
                                            6E  FF 8F  9A 00046 2$:  MOVZBL  #255, RESULTANT_FILE_SPEC                       ; 0586
                                      04    AE    08 AE  9E 0004A    MOVAB   RESULTANT_FILE_SPEC+8, -                        ;
                                                                             RESULTANT_FILE_SPEC+4                           ;
                                                5E  DD 0004F         PUSHL   SP                                              ; 0588
                                0000G   CF        01  FB 00051     CALLS   #1, ANL$OPEN_NEXT_IMAGE_FILE                    ;
                                            52    50  D0 00056     MOVL    R0, STATUS                                      ;
                                            17    52  E9 00059     BLBC    STATUS, 3$                                      ; 0590
                                         00000000G  8F  DD 0005C     PUSHL   #ANLOBJ$_EXEHEADING                             ; 0594
                                               04   AE  9F 00062     PUSHAB  RESULTANT_FILE_SPEC                             ;
                                                57  DD 00065         PUSHL   R7                                              ;
                                0000G   CF        03  FB 00067     CALLS   #3, ANL$PREPARE_REPORT_FILE                     ;
                                0000V   CF        00  FB 0006C     CALLS   #0, ANL$IMAGE2                                  ; 0598
                                                D3  11 00071         BRB     2$                                              ; 0580
                                                    04 00073 3$:     RET                                                     ; 0603

; Routine Size:  116 bytes,    Routine Base:  $CODE$ + 0000
```

```
;  172          0604  1 %sbttl 'ANL$IMAGE_POSITIONALS - Process Positional Qualifiers'
;  173          0605  1 !++
;  174          0606  1 ! Functional Description:
;  175          0607  1 !       This routine is called by the EXEINPUT module whenever it scans
;  176          0608  1 !       off the next file spec from the command line.  We need to process
;  177          0609  1 !       positional qualifiers.
;  178          0610  1 !
;  179          0611  1 ! Formal Parameters:
;  180          0612  1 !       none
;  181          0613  1 !
;  182          0614  1 ! Implicit Inputs:
;  183          0615  1 !       global data
;  184          0616  1 !
;  185          0617  1 ! Implicit Outputs:
;  186          0618  1 !       global data
;  187          0619  1 !
;  188          0620  1 ! Returned Value:
;  189          0621  1 !       none
;  190          0622  1 !
;  191          0623  1 ! Side Effects:
;  192          0624  1 !
;  193          0625  1 !--
;  194          0626  1
;  195          0627  1
;  196          0628  2 global routine anl$image_positionals: novalue = begin
;  197          0629  2
;  198          0630  2 local
;  199          0631  2         all_portions: byte;
;  200          0632  2
;  201          0633  2
;  202          0634  2 ! We process the qualifiers that specify which portions of the image are
;  203          0635  2 ! to be analyzed.  If none are specified, we analyze everything.  If any are
;  204          0636  2 ! specified, we analyze only those specified.
;  205          0637  2
;  206          0638  2 all_portions = not cli$present(describe('FIXUP_SECTION')) and
;  207          0639  2                not cli$present(describe('GST')) and
;  208          0640  2                not cli$present(describe('HEADER')) and
;  209          0641  2                not cli$present(describe('PATCH_TEXT'));
;  210          0642  2
;  211          0643  2 fixup_section_flag = .all_portions or cli$present(describe('FIXUP_SECTION'));
;  212          0644  2 gst_flag = .all_portions or cli$present(describe('GST'));
;  213          0645  2 patch_text_flag = .all_portions or cli$present(describe('PATCH_TEXT'));
;  214          0646  2
;  215          0647  2 return;
;  216          0648  2
;  217          0649  1 end;


                                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

        4E  4F  49  54  43  45  53  5F  50  55  58  49  46  0003C P.AAI:   .ASCII  \FIXUP_SECTION\                          ;
                                                            00049         .BLKB   3                                       ;
                                                  0000000D  0004C P.AAH:  .LONG   13                                      ;
                                                  00000000' 00050         .ADDRESS P.AAI                                  ;
                                              54  53  47    00054 P.AAK:  .ASCII  \GST\                                   ;
                                                            00057         .BLKB   1
```

```
                                                00000003  00058 P.AAJ:   .LONG   3                                                ;
                                                00000000' 0005C          .ADDRESS P.AAK                                         ;
                                        52 45 44 41 45 48 00060 P.AAM:   .ASCII  \HEADER\                                       ;
                                                          00066          .BLKB   2
                                                00000006  00068 P.AAL:   .LONG   6                                              ;
                                                00000000' 0006C          .ADDRESS P.AAM                                         ;
                                  54 58 45 54 5F 48 43 54 41 50 00070 P.AAO:   .ASCII  \PATCH_TEXT\                             ;
                                                          0007A          .BLKB   2
                                                0000000A  0007C P.AAN:   .LONG   10                                             ;
                                                00000000' 00080          .ADDRESS P.AAO                                         ;
                        4E 4F 49 54 43 45 53 5F 50 55 58 49 46 00084 P.AAQ:   .ASCII  \FIXUP_SECTION\                          ;
                                                          00091          .BLKB   3
                                                0000000D  00094 P.AAP:   .LONG   13                                             ;
                                                00000000' 00098          .ADDRESS P.AAQ                                         ;
                                              54 53 47    0009C P.AAS:   .ASCII  \GST\                                           ;
                                                          0009F          .BLKB   1
                                                00000003  000A0 P.AAR:   .LONG   3                                              ;
                                                00000000' 000A4          .ADDRESS P.AAS                                         ;
                                  54 58 45 54 5F 48 43 54 41 50 000A8 P.AAU:   .ASCII  \PATCH_TEXT\                             ;
                                                          000B2          .BLKB   2
                                                0000000A  000B4 P.AAT:   .LONG   10                                             ;
                                                00000000' 000B8          .ADDRESS P.AAU                                         ;



                                                          .PSECT  $CODE$,NOWRT,2

                                                   007C 00000            .ENTRY  ANL$IMAGE_POSITIONALS, Save R2,R3,R4,R5,R6     ; 0628
                                  56      0000'  CF  9E 00002            MOVAB   P.AAH, R6                                      ;
                                  55 00000000G   00  9E 00007            MOVAB   CLI$PRESENT, R5                                ;
                                                 56  DD 0000E            PUSHL   R6                                             ; 0638
                                  65             01  FB 00010            CALLS   #1, CLI$PRESENT                                ;
                                  52             50  D0 00013            MOVL    R0, R2                                         ;
                                                 0C  A6 9F 00016            PUSHAB  P.AAJ                                          ; 0639
                                  65             01  FB 00019            CALLS   #1, CLI$PRESENT                                ;
                                  53             50  D0 0001C            MOVL    R0, R3                                         ;
                                  53             52  C8 0001F            BISL2   R2, R3                                         ;
                                                 1C  A6 9F 00022            PUSHAB  P.AAL                                          ; 0640
                                  65             01  FB 00025            CALLS   #1, CLI$PRESENT                                ;
                                  52             50  D0 00028            MOVL    R0, R2                                         ;
                                  52             53  C8 0002B            BISL2   R3, R2                                         ;
                                                 30  A6 9F 0002E            PUSHAB  P.AAN                                          ; 0641
                                  65             01  FB 00031            CALLS   #1, CLI$PRESENT                                ;
                                  50             52  C8 00034            BISL2   R2, R0                                         ;
                                  54             50  92 00037            MCOMB   R0, ALL_PORTIONS                               ; 0640
                                                 48  A6 9F 0003A            PUSHAB  P.AAP                                          ; 0643
                                  65             01  FB 0003D            CALLS   #1, CLI$PRESENT                                ;
                        0000'  CF                50  54 89 00040            BISB3   ALL_PORTIONS, R0, FIXUP_SECTION_FLAG           ;
                                                 54  A6 9F 00046            PUSHAB  P.AAR                                          ; 0644
                                  65             01  FB 00049            CALLS   #1, CLI$PRESENT                                ;
                        0000'  CF                50  54 89 0004C            BISB3   ALL_PORTIONS, R0, GST_FLAG                     ;
                                                 68  A6 9F 00052            PUSHAB  P.AAT                                          ; 0645
                                  65             01  FB 00055            CALLS   #1, CLI$PRESENT                                ;
                        0000'  CF                50  54 89 00058            BISB3   ALL_PORTIONS, R0, PATCH_TEXT_FLAG              ;
                                                     04 0005E            RET                                                    ; 0649

; Routine Size:  95 bytes,    Routine Base:  $CODE$ + 0074
```

```
;   219         0650  1 %sbttl 'ANL$IMAGE2: Produce Analysis of One Image'
;   220         0651  1 !++
;   221         0652  1 ! Functional Description:
;   222         0653  1 !       This routine is responsible for producing the analysis report for
;   223         0654  1 !       one image.
;   224         0655  1 !
;   225         0656  1 ! Formal Parameters:
;   226         0657  1 !       none
;   227         0658  1 !
;   228         0659  1 ! Implicit Inputs:
;   229         0660  1 !       global data
;   230         0661  1 !
;   231         0662  1 ! Implicit Outputs:
;   232         0663  1 !       global data
;   233         0664  1 !
;   234         0665  1 ! Returned Value:
;   235         0666  1 !       none
;   236         0667  1 !
;   237         0668  1 ! Side Effects:
;   238         0669  1 !
;   239         0670  1 !--
;   240         0671  1
;   241         0672  1
;   242         0673  2 global routine anl$image2: novalue = begin
;   243         0674  2
;   244         0675  2 local
;   245         0676  2         hp: ref block[,byte],
;   246         0677  2         continue: long,
;   247         0678  2         image_base: long, fixup_size: long, fixup_vbn: long;
;   248         0679  2
;   249         0680  2
;   250         0681  2 ! As we analyze each portion of the image, we get a return status that tells
;   251         0682  2 ! us whether or not to continue (false if interactive and user says quit).
;   252         0683  2 ! We always analyze the image header.
;   253         0684  2 ! The header analysis routine will return info about the starting address
;   254         0685  2 ! of the image and its fixup section.
;   255         0686  2
;   256         0687  2 continue = anl$image_header(image_base,fixup_size,fixup_vbn);
;   257         0688  2
;   258         0689  2 ! Now if the user wants us to print the patch text, let's do it.
;   259         0690  2
;   260         0691  2 if .continue and .patch_text_flag then
;   261         0692  2         continue = anl$image_patch_text();
;   262         0693  2
;   263         0694  2 ! Now if the user wants us to analyze the global symbol table, let's do it.
;   264         0695  2
;   265         0696  2 if .continue and .gst_flag then
;   266         0697  2         continue = anl$image_gst();
;   267         0698  2
;   268         0699  2 ! If the user wants us to analyze the fixup section, do it.
;   269         0700  2
;   270         0701  2 if .continue and .fixup_section_flag then
;   271         0702  2         continue = anl$image_fixup_info(.image_base,.fixup_size,.fixup_vbn);
;   272         0703  2
;   273         0704  2 ! Tell the user how many errors were uncovered.
;   274         0705  2
;   275         0706  2 anl$report_line(-1);
```

```
;  276          0707  2 anl$report_line(-1);
;  277          0708  2 anl$report_line(-1);
;  278          0709  2 anl$error_count();
;  279          0710  2
;  280          0711  2 ! Finally, print the command line that was used to generate the report.
;  281          0712  2
;  282          0713  3 begin
;  283          0714  3 local
;  284          0715  3         local_described_buffer(command_line,80);
;  285          0716  3
;  286          0717  3 cli$get_value(describe('$LINE'),command_line);
;  287          0718  3 anl$format_line(0,0,anlobj$_anything,command_line);
;  288          0719  2 end;
;  289          0720  2
;  290          0721  2 return;
;  291          0722  2
;  292          0723  1 end;


                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

                                  45 4E 49 4C 24  000BC P.AAW:  .ASCII  \$LINE\                                 ;
                                                  000C1         .BLKB   3                                       ;
                                        00000005  000C4 P.AAV:  .LONG   5                                       ;
                                        00000000' 000C8         .ADDRESS P.AAW                                  ;


                                                        .PSECT  $CODE$,NOWRT,2

                                             0004 00000         .ENTRY  ANL$IMAGE2, Save R2                     ; 0673
                                     52 0000G CF  9E 00002      MOVAB   ANL$REPORT_LINE, R2                     ;
                                     5E   9C AE  9E 00007      MOVAB   -100(SP), SP                            ;
                                              5E  DD 0000B      PUSHL   SP                                      ; 0687
                                           08 AE  9F 0000D      PUSHAB  FIXUP_SIZE                              ;
                                           10 AE  9F 00010      PUSHAB  IMAGE_BASE                              ;
                                0000G CF      03 FB 00013      CALLS   #3, ANL$IMAGE_HEADER                    ;
                                      2C      50 E9 00018      BLBC    CONTINUE, 3$                            ; 0691
                                      05 0000' CF E9 0001B      BLBC    PATCH_TEXT_FLAG, 1$                     ;
                                0000G CF      00 FB 00020      CALLS   #0, ANL$IMAGE_PATCH_TEXT                ; 0692
                                      1F      50 E9 00025 1$:   BLBC    CONTINUE, 3$                            ; 0696
                                      05 0000' CF E9 00028      BLBC    GST_FLAG, 2$                            ;
                                0000G CF      00 FB 0002D      CALLS   #0, ANL$IMAGE_GST                       ; 0697
                                      12      50 E9 00032 2$:   BLBC    CONTINUE, 3$                            ; 0701
                                      0D 0000' CF E9 00035      BLBC    FIXUP_SECTION_FLAG, 3$                  ;
                                              6E DD 0003A       PUSHL   FIXUP_VBN                               ; 0702
                                           08 AE  DD 0003C      PUSHL   FIXUP_SIZE                              ;
                                           10 AE  DD 0003F      PUSHL   IMAGE_BASE                              ;
                                0000G CF      03 FB 00042      CALLS   #3, ANL$IMAGE_FIXUP_INFO                ;
                                      7E      01 CE 00047 3$:   MNEGL   #1, -(SP)                               ; 0706
                                      62      01 FB 0004A       CALLS   #1, ANL$REPORT_LINE                     ;
                                      7E      01 CE 0004D       MNEGL   #1, -(SP)                               ; 0707
                                      62      01 FB 00050       CALLS   #1, ANL$REPORT_LINE                     ;
                                      7E      01 CE 00053       MNEGL   #1, -(SP)                               ; 0708
                                      62      01 FB 00056       CALLS   #1, ANL$REPORT_LINE                     ;
                                0000G CF      00 FB 00059       CALLS   #0, ANL$ERROR_COUNT                     ; 0709
```

```
                     0C   AE       50   8F   9A 0005E        MOVZBL  #80, COMMAND_LINE                                ; 0715
                     10   AE       14   AE   9E 00063        MOVAB   COMMAND_LINE+8, COMMAND_LINE+4                   ;
                                   0C   AE   9F 00068        PUSHAB  COMMAND_LINE                                     ; 0717
                                 0000'  CF   9F 0006B        PUSHAB  P.AAV                                            ;
                00000000G  00           02   FB 0006F        CALLS   #2, CLI$GET_VALUE                                ;
                                   0C   AE   9F 00076        PUSHAB  COMMAND_LINE                                     ; 0718
                           00000000G    8F   DD 00079        PUSHL   #ANLOBJ$_ANYTHING                                ;
                                        7E   7C 0007F        CLRQ    -(SP)                                            ;
                      0000G  CF         04   FB 00081        CALLS   #4, ANL$FORMAT_LINE                              ;
                                        04   00086        RET                                                      ; 0723

; Routine Size:  135 bytes,    Routine Base:  $CODE$ + 00D3

;  293          0724  1
;  294          0725  0 end eludom



;                                   PSECT SUMMARY
;
;       Name                    Bytes                           Attributes
;
;  $OWN$                         267  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $PLIT$                        204  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $CODE$                        346  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]STARLET.L32;1   9776        11         0       581         00:01.0



;                                   COMMAND QUALIFIERS

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

; Size:         346 code + 471 data bytes
; Run Time:       00:10.2
; Elapsed Time:   00:36.2
; Lines/CPU Min:   4260
; Lexemes/CPU-Min: 14362
; Memory Used:  135 pages
; Compilation Complete
```

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SETSHOAL
CLS

OBJEXEREQ
REQ

EXEFIXUP
CLS

ANALYZRMS
MAP

SHOWACL
CLS

EXESTUFF
CLS

ANALYZ

EXEINPUT
CLS

ANALYZOBJ
MAP

EXEDRIVE
CLS

RMSREQ
REQ