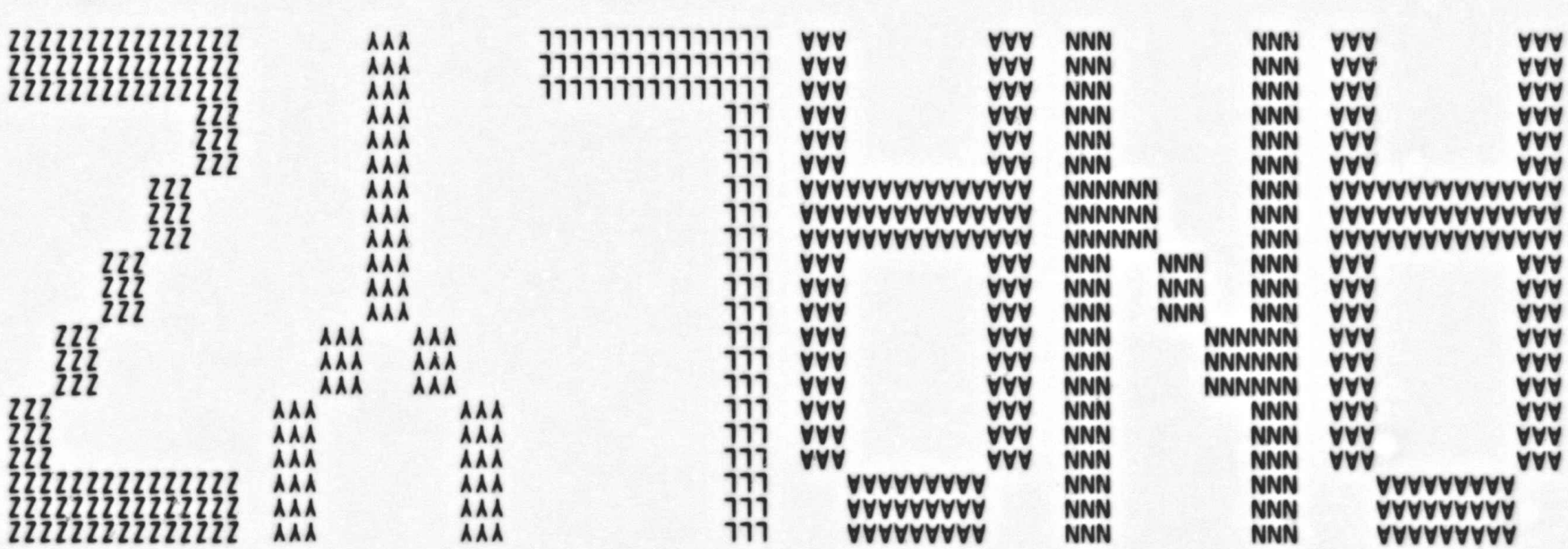

J 4

```
   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
```

```
EEEEEEEEEE  XX      XX  EEEEEEEEEE  FFFFFFFFFF    IIIIII    XX      XX  UU      UU  PPPPPPPP
EEEEEEEEEE  XX      XX  EEEEEEEEEE  FFFFFFFFFF    IIIIII    XX      XX  UU      UU  PPPPPPPP
EE          XX      XX  EE          FF              II      XX      XX  UU      UU  PP      PP
EE          XX      XX  EE          FF              II      XX      XX  UU      UU  PP      PP
EE            XX  XX    EE          FF              II        XX  XX    UU      UU  PP      PP
EE            XX  XX    EE          FF              II        XX  XX    UU      UU  PP      PP
EEEEEEEE        XX      EEEEEEEE    FFFFFFFF        II          XX      UU      UU  PPPPPPPP
EEEEEEEE        XX      EEEEEEEE    FFFFFFFF        II          XX      UU      UU  PPPPPPPP
EE            XX  XX    EE          FF              II        XX  XX    UU      UU  PP
EE            XX  XX    EE          FF              II        XX  XX    UU      UU  PP
EE          XX      XX  EE          FF              II      XX      XX  UU      UU  PP
EE          XX      XX  EE          FF              II      XX      XX  UU      UU  PP
EEEEEEEEEE  XX      XX  EEEEEEEEEE  FF          IIIIII    XX      XX  UUUUUUUUUU  PP
EEEEEEEEEE  XX      XX  EEEEEEEEEE  FF          IIIIII    XX      XX  UUUUUUUUUU  PP

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 'EXEFIXUP - Analyze Fixup Info'
;    2          0002  0       module exefixup (
;    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.                    *
;   10          0010  1 !*  ALL RIGHTS RESERVED.                                                      *
;   11          0011  1 !*                                                                           *
;   12          0012  1 !*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED   *
;   13          0013  1 !*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE  *
;   14          0014  1 !*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER   *
;   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   *
;   17          0017  1 !*  TRANSFERRED.                                                              *
;   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, Analyze Image Fixup Info
;   32          0032  1 !
;   33          0033  1 ! Abstract:     This module is responsible for analyzing the fixup info
;   34          0034  1 !               section of an image.  This section contains info necessary
;   35          0035  1 !               for the linking and activation of shareable images.
;   36          0036  1 !
;   37          0037  1 !
;   38          0038  1 ! Environment:
;   39          0039  1 !
;   40          0040  1 ! Author: Paul C. Anagnostopoulos, Creation Date: 20 April 1981
;   41          0041  1 !
;   42          0042  1 ! Modified By:
;   43          0043  1 !
;   44          0044  1 !       V03-003 MCN0167         Maria del C. Nasr       02-May-1984
;   45          0045  1 !               Get the length of the fixup section cells only once,
;   46          0046  1 !               for the first one, and use this value for all the cells.
;   47          0047  1 !
;   48          0048  1 !       V03-002 MCN0158         Maria del C. Nasr       22-Mar-1984
;   49          0049  1 !               Use SHL$C_MAXNAMLNG for size of shareable image name
;   50          0050  1 !               to pass as a parameter to ANL$CHECK_SYMBOL.  Eliminate
;   51          0051  1 !               declaration of local loop counter I.  Determine the
;   52          0052  1 !               length to add for the fixup section, to support new
;   53          0053  1 !               length.
;   54          0054  1 !
;   55          0055  1 !       V03-001 PCA1011         Paul C. Anagnostopoulos  1-Apr-1983
;   56          0056  1 !               Change the message prefix to ANLOBJ$_ to ensure that
;   57          0057  1 !               message symbols are unique across all ANALYZEs.  This
```

```
;   58          0058  1 !
;   59          0059  1 !--                is necessitated by the new merged message files.
```

```
;    61          0060  1 %sbttl 'Module Declarations'
;    62          0061  1 !
;    63          0062  1 ! Libraries and Requires:
;    64          0063  1 !
;    65          0064  1
;    66          0065  1 library 'lib';
;    67          0066  1 require 'objexereq';
;    68          0502  1
;    69          0503  1 !
;    70          0504  1 ! Table of Contents:
;    71          0505  1 !
;    72          0506  1
;    73          0507  1 forward routine
;    74          0508  1         anl$image_fixup_info;
;    75          0509  1
;    76          0510  1 !
;    77          0511  1 ! External References:
;    78          0512  1 !
;    79          0513  1
;    80          0514  1 external routine
;    81          0515  1         anl$check_flags,
;    82          0516  1         anl$check_symbol,
;    83          0517  1         anl$format_error,
;    84          0518  1         anl$format_flags,
;    85          0519  1         anl$format_line,
;    86          0520  1         anl$format_protection,
;    87          0521  1         anl$interact,
;    88          0522  1         anl$map_fixup_section,
;    89          0523  1         anl$report_page,
;    90          0524  1         anl$report_line;
;    91          0525  1
;    92          0526  1 external
;    93          0527  1         anl$gb_interactive: byte;
;    94          0528  1
;    95          0529  1 !
;    96          0530  1 ! Own Variables:
;    97          0531  1 !
```

```
;    99          0532  1 %sbttl 'ANL$IMAGE_FIXUP_INFO - Analyze Fixup Info'
;   100          0533  1 !++
;   101          0534  1 ! Functional Description:
;   102          0535  1 !       This routine is responsible for the analysis of the fixup info
;   103          0536  1 !       section of a shareable image.
;   104          0537  1 !
;   105          0538  1 ! Formal Parameters:
;   106          0539  1 !       image_base              Starting address of the complete image.
;   107          0540  1 !       fixup_size              Number of blocks of fixup info.
;   108          0541  1 !       fixup_vbn               VBN of fixup info.
;   109          0542  1 !
;   110          0543  1 ! Implicit Inputs:
;   111          0544  1 !       global data
;   112          0545  1 !
;   113          0546  1 ! Implicit Outputs:
;   114          0547  1 !       global data
;   115          0548  1 !
;   116          0549  1 ! Returned Value:
;   117          0550  1 !       If interactive session:  true if we are to continue, false otherwise.
;   118          0551  1 !
;   119          0552  1 ! Side Effects:
;   120          0553  1 !
;   121          0554  1 !--
;   122          0555  1
;   123          0556  1
;   124          0557  2 global routine anl$image_fixup_info(image_base,fixup_size,fixup_vbn) = begin
;   125          0558  2
;   126          0559  2 own
;   127          0560  2         flags_def: vector[2,long] initial(
;   128          0561  2                                 0,
;   129          0562  2                                 uplit byte (%ascic 'IAF$V_SHR'));
;   130          0563  2
;   131          0564  2 local
;   132          0565  2         fp: ref block[,byte],
;   133          0566  2         end_ptr: ref block[,byte],
;   134          0567  2         sp: ref block[,byte],
;   135          0568  2         count: long,
;   136          0569  2         long_array: vector[4,long];
;   137          0570  2
;   138          0571  2
;   139          0572  2 ! We begin with a nice heading on a new page.
;   140          0573  2
;   141          0574  2 anl$report_page();
;   142          0575  2 anl$format_line(0,0,anlobj$_exefixup);
;   143          0576  2 anl$report_line(-1);
;   144          0577  2 anl$report_line(-1);
;   145          0578  2
;   146          0579  2 ! If the fixup size and VBN are zero, then there was no fixup section.
;   147          0580  2 ! Tell the user and quit.
;   148          0581  2
;   149          0582  3 if .fixup_size eqlu 0 then (
;   150          0583  3         anl$format_line(0,1,anlobj$_exefixupnone);
;   151          0584  3         return true;
;   152          0585  2 );
;   153          0586  2
;   154          0587  2 ! Map the fixup section into memory.  If the routine returns zero, then
;   155          0588  2 ! we couldn't, so tell the user.
```

```
;  156          0589  2
;  157          0590  2 fp = anl$map_fixup_section(.fixup_size,.fixup_vbn);
;  158          0591  3 if .fp eqla 0 then (
;  159          0592  3         anl$format_error(anlobj$_exebadfixupvbn,.fixup_vbn,.fixup_size);
;  160          0593  3         return;
;  161          0594  2 );
;  162          0595  2
;  163          0596  2 ! Set up a pointer to the end of the section so we can test for it.
;  164          0597  2
;  165          0598  2 end_ptr = .fp + .fixup_size*512;
;  166          0599  2
;  167          0600  2 ! Now we will format the fixed part of the fixup info.  The only items
;  168          0601  2 ! we need to bother with are the flags, shareable image count,
;  169          0602  2 ! and extra allowed count.
;  170          0603  2
;  171          0604  2 anl$format_line(3,1,anlobj$_exefixfixed);
;  172          0605  2 anl$report_line(-1);
;  173          0606  2 anl$format_flags(2,anlobj$_exefixflags,.fp[iaf$w_flags],flags_def);
;  174          0607  2 anl$check_flags(.fp[iaf$w_flags],flags_def);
;  175          0608  2 anl$format_line(0,2,anlobj$_exefixcount,.fp[iaf$l_shrimgcnt]);
;  176          0609  2 anl$format_line(0,2,anlobj$_exefixextra,.fp[iaf$l_shlextra]);
;  177          0610  2
;  178          0611  2 ! If this is an interactive session, then let's see what the user wants to do.
;  179          0612  2
;  180          0613  2 if .anl$gb_interactive then
;  181          0614  2         if not anl$interact() then
;  182          0615  2                 return false;
```

```
;   184         0616  2 ! Now we are going to print the shareable image list.  This involves
;   185         0617  2 ! only the name of the image.  And the first list entry has no name,
;   186         0618  2 ! because it refers to this image.
;   187         0619  2
;   188         0620  2 anl$report_line(-1);
;   189         0621  2 anl$format_line(3,1,anlobj$_exefixlist);
;   190         0622  2 anl$report_line(-1);
;   191         0623  2
;   192         0624  2 sp = .fp + .fp[iaf$l_shlstoff];
;   193         0625  2
;   194         0626  3 begin
;   195         0627  3
;   196         0628  3 local
;   197         0629  3         cell_size;
;   198         0630  3
;   199         0631  3 If .sp[shl$b_shl_size] neq 0
;   200         0632  3 then
;   201         0633  3         cell_size = .sp[shl$b_shl_size]
;   202         0634  3 else
;   203         0635  3         cell_size = shl$c_old_shl_size;
;   204         0636  3
;   205         0637  4 incru i from 0 to .fp[iaf$l_shrimgcnt]-1 do (
;   206         0638  4         local
;   207         0639  4                 name_dsc: descriptor;
;   208         0640  4
;   209         0641  4         if .i eqlu 0 then
;   210         0642  4                 anl$format_line(0,2,anlobj$_exefixname0,.i)
;   211         0643  5         else (
;   212         0644  5                 anl$format_line(0,2,anlobj$_exefixname,.i,sp[shl$t_imgnam]);
;   213         0645  5                 build_descriptor(name_dsc,.sp[shl$b_namlng],sp[shl$t_imgnam]+1);
;   214         0646  5                 anl$check_symbol(name_dsc, shl$c_maxnamlng);
;   215         0647  4         );
;   216         0648  4         sp = .sp + .cell_size;
;   217         0649  3 );
;   218         0650  2 end;
;   219         0651  2
;   220         0652  2 ! If this is an interactive session, then let's see what the user wants to do.
;   221         0653  2
;   222         0654  2 if .anl$gb_interactive then
;   223         0655  2         if not anl$interact() then
;   224         0656  2                 return false;
```

```
;   226         0657  2 ! Now we will analyze the external address data (G^ fixups).  For each
;   227         0658  2 ! shareable image with such fixups, we have a fixup count, the image
;   228         0659  2 ! number, and a list of references.
;   229         0660  2
;   230         0661  2
;   231         0662  3 if .fp[iaf$l_g_fixoff] nequ 0 then (
;   232         0663  3
;   233         0664  3         anl$report_line(-1);
;   234         0665  3         anl$format_line(3,1,anlobj$_exefixg);
;   235         0666  3         sp = .fp + .fp[iaf$l_g_fixoff];
;   236         0667  3
;   237         0668  3         ! Loop until we get to the end of the data.
;   238         0669  3
;   239         0670  4         while .sp[0,0,32,0] nequ 0 do (
;   240         0671  4
;   241         0672  4                 ! If we have run off the end of the section, then the
;   242         0673  4                 ! end of data marker is missing.
;   243         0674  4
;   244         0675  5                 if .sp geqa .end_ptr then (
;   245         0676  5                         anl$format_error(anlobj$_exebadfixupend);
;   246         0677  5         exitloop;
;   247         0678  4                 );
;   248         0679  4
;   249         0680  4                 ! Format a line with the count and image number.
;   250         0681  4
;   251         0682  4                 count = .sp[0,0,32,0];
;   252         0683  4                 sp = .sp + 4;
;   253         0684  4                 anl$report_line(-1);
;   254         0685  4                 anl$format_line(2,2,anlobj$_exefixgimage,.count,.sp[0,0,32,0]);
;   255         0686  4                 sp = .sp + 4;
;   256         0687  4
;   257         0688  4                 ! Loop through the references and format them 4 to a line.
;   258         0689  4
;   259         0690  5                 incru i from 0 to .count-1 do (
;   260         0691  5                         long_array[.i mod 4] = .sp[0,0,32,0];
;   261         0692  5                         sp = .sp + 4;
;   262         0693  5
;   263         0694  5                         if .i mod 4 eqlu 3 or .i eqlu .count-1 then
;   264         0695  5                                 anl$format_line(0,3,anlobj$_exefixgline,.i mod 4 + 1,
;   265         0696  5                                                 .long_array[0],.long_array[1],.long_array[2],.long_array[3])
;   266         0697  4                 );
;   267         0698  3         );
;   268         0699  3
;   269         0700  3         ! If this is an interactive session, then let's see what the user
;   270         0701  3         ! wants to do.
;   271         0702  3
;   272         0703  3         if .anl$gb_interactive then
;   273         0704  3                 if not anl$interact() then
;   274         0705  3                         return false;
;   275         0706  2 );
```

```
;   277         0707  2 ! Now we will analyze the internal address data (.ADDRESS fixups).  For each
;   278         0708  2 ! shareable image with such fixups, we have a fixup count, the image
;   279         0709  2 ! number, and a list of offsets.
;   280         0710  2
;   281         0711  3 if .fp[iaf$l_dotadroff] nequ 0 then (
;   282         0712  3
;   283         0713  3         ! Put out a heading line including the base address of the image,
;   284         0714  3         ! since the address are relative to it.
;   285         0715  3
;   286         0716  3         anl$report_line(-1);
;   287         0717  3         anl$format_line(3,1,anlobj$_exefixa,.image_base);
;   288         0718  3         sp = .fp + .fp[iaf$l_dotadroff];
;   289         0719  3
;   290         0720  3         ! Loop until we get to the end of the data.
;   291         0721  3
;   292         0722  4         while .sp[0,0,32,0] nequ 0 do (
;   293         0723  4
;   294         0724  4                 ! If we have run off the end of the section, then the
;   295         0725  4                 ! end of data marker is missing.
;   296         0726  4
;   297         0727  5                 if .sp gequa .end_ptr then (
;   298         0728  5                         anl$format_error(anlobj$_exebadfixupend);
;   299         0729  5         exitloop;
;   300         0730  4                 );
;   301         0731  4
;   302         0732  4                 ! Format a line with the count and image number.
;   303         0733  4
;   304         0734  4                 count = .sp[0,0,32,0];
;   305         0735  4                 sp = .sp + 4;
;   306         0736  4                 anl$report_line(-1);
;   307         0737  4                 anl$format_line(2,2,anlobj$_exefixaimage,.count,.sp[0,0,32,0]);
;   308         0738  4                 sp = .sp + 4;
;   309         0739  4
;   310         0740  4                 ! Loop through the references and format them 4 to a line.
;   311         0741  4
;   312         0742  5                 incru i from 0 to .count-1 do (
;   313         0743  5                         long_array[.i mod 4] = .sp[0,0,32,0];
;   314         0744  5                         sp = .sp + 4;
;   315         0745  5
;   316         0746  5                         if .i mod 4 eqlu 3 or .i eqlu .count-1 then
;   317         0747  5                                 anl$format_line(0,3,anlobj$_exefixaline,.i mod 4 + 1,
;   318         0748  5                                                 .long_array[0],.long_array[1],.long_array[2],.long_array[3])
;   319         0749  4                 );
;   320         0750  3         );
;   321         0751  3
;   322         0752  3         ! If this is an interactive session, then let's see what the user
;   323         0753  3         ! wants to do.
;   324         0754  3
;   325         0755  3         if .anl$gb_interactive then
;   326         0756  3                 if not anl$interact() then
;   327         0757  3                         return false;
;   328         0758  2 );
```

```
;   330          0759  2 ! Now we will analyze the section protection change data.  This consists
;   331          0760  2 ! of a count of changes, followed by the changes.  Each change specifies
;   332          0761  2 ! the address and extent of the section, along with its new protection.
;   333          0762  2
;   334          0763  3 if .fp[iaf$l_chgprtoff] nequ 0 then (
;   335          0764  3
;   336          0765  3         ! Put out a heading line including the base address of the image,
;   337          0766  3         ! since the address are relative to it.
;   338          0767  3
;   339          0768  3         anl$report_line(-1);
;   340          0769  3         anl$format_line(3,1,anlobj$_exefixp,.image_base);
;   341          0770  3         sp = .fp + .fp[iaf$l_chgprtoff];
;   342          0771  3         count = .sp[0,0,32,0];
;   343          0772  3         sp = .sp + 4;
;   344          0773  3
;   345          0774  3         ! Now we will loop through the change entries.
;   346          0775  3
;   347          0776  4         incru i from 1 to .count do (
;   348          0777  4
;   349          0778  4                 ! If we have run off the end of the section, then the
;   350          0779  4                 ! count is screwed up.
;   351          0780  4
;   352          0781  5                 if .sp geqa .end_ptr then (
;   353          0782  5                         anl$format_error(anlobj$_exebadfixupend);
;   354          0783  5         exitloop;
;   355          0784  4                 );
;   356          0785  4
;   357          0786  4                 ! Format the information about this change.
;   358          0787  4
;   359          0788  4                 anl$report_line(-1);
;   360          0789  4                 anl$format_line(2,2,anlobj$_exefixpsect,.sp[icp$l_baseva],.sp[icp$w_npages]);
;   361          0790  4                 anl$format_protection(2,.sp[icp$w_newprt]);
;   362          0791  4
;   363          0792  4                 ! Advance to the next change entry.
;   364          0793  4
;   365          0794  4                 sp = .sp + 8;
;   366          0795  3         );
;   367          0796  3
;   368          0797  3         ! If this is an interactive session, then let's see what the user
;   369          0798  3         ! wants to do.
;   370          0799  3
;   371          0800  3         if .anl$gb_interactive then
;   372          0801  3                 if not anl$interact() then
;   373          0802  3                         return false;
;   374          0803  2 );
```

```
;  376          0804  2 ! We are all done.  Free up the memory mapping the fixup section.
;  377          0805  2
;  378          0806  2 anl$map_fixup_section();
;  379          0807  2
;  380          0808  2 return true;
;  381          0809  2
;  382          0810  1 end;
; INFO#212                L1:0592
; Null expression appears in value-required context


                                                        .TITLE  EXEFIXUP EXEFIXUP - Analyze Fixup Info
                                                        .IDENT  \V04-000\

                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

                52  48  53  5F  56  24  46  41  49  09  00000 P.AAA:  .ASCII  <9>\IAF$V_SHR\                          ;

                                                        .PSECT  $OWN$,NOEXE,2

                                            00000000    00000 FLAGS_DEF:
                                                        .LONG   0                                                   ;
                                            00000000'   00004       .ADDRESS P.AAA                                  ;

                                                        .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$_EXEHDRTEXTVBN
.EXTRN  ANLOBJ$_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$CHECK_FLAGS
                                                        .EXTRN  ANL$CHECK_SYMBOL
                                                        .EXTRN  ANL$FORMAT_ERROR
                                                        .EXTRN  ANL$FORMAT_FLAGS
                                                        .EXTRN  ANL$FORMAT_LINE
                                                        .EXTRN  ANL$FORMAT_PROTECTION
                                                        .EXTRN  ANL$INTERACT, ANL$MAP_FIXUP_SECTION
                                                        .EXTRN  ANL$REPORT_PAGE
                                                        .EXTRN  ANL$REPORT_LINE
                                                        .EXTRN  ANL$GB_INTERACTIVE

                                                        .PSECT  $CODE$,NOWRT,2

                                        0FFC 00000      .ENTRY  ANL$IMAGE_FIXUP_INFO, Save R2,R3,R4,R5,R6,- ; 0557
                                                                R7,R8,R9,R10,R11
                                5B      0000G   CF  9E 00002    MOVAB   ANL$GB_INTERACTIVE, R11                 ;
                                5A  00000000G   8F  D0 00007    MOVL    #ANLOBJ$_EXEBADFIXUPEND, R10            ;
                                59      0000G   CF  9E 0000E    MOVAB   ANL$REPORT_LINE, R9                     ;
                                58      0000G   CF  9E 00013    MOVAB   ANL$FORMAT_LINE, R8                     ;
                                5E              18  C2 00018    SUBL2   #24, SP                                 ;
                          0000G CF              00  FB 0001B    CALLS   #0, ANL$REPORT_PAGE                     ; 0574
                                    00000000G   8F  DD 00020    PUSHL   #ANLOBJ$_EXEFIXUP                       ; 0575
                                                7E  7C 00026    CLRQ    -(SP)                                   ;
                                68              03  FB 00028    CALLS   #3, ANL$FORMAT_LINE                     ;
                                7E              01  CE 0002B    MNEGL   #1, -(SP)                               ; 0576
                                69              01  FB 0002E    CALLS   #1, ANL$REPORT_LINE                     ;
                                7E              01  CE 00031    MNEGL   #1, -(SP)                               ; 0577
                                69              01  FB 00034    CALLS   #1, ANL$REPORT_LINE                     ;
                                52          08  AC  D0 00037    MOVL    FIXUP_SIZE, R2                          ; 0582
                                                10  12 0003B    BNEQ    1$                                      ;
                                    00000000G   8F  DD 0003D    PUSHL   #ANLOBJ$_EXEFIXUPNONE                   ; 0583
                                                01  DD 00043    PUSHL   #1                                      ;
                                                7E  D4 00045    CLRL    -(SP)                                   ;
                                68              03  FB 00047    CALLS   #3, ANL$FORMAT_LINE                     ;
                                            02CB 31  00004A     BRW     35$                                     ; 0584
                                        0C  AC  DD 0004D 1$:    PUSHL   FIXUP_VBN                               ; 0590
                                52              DD 00050        PUSHL   R2                                      ;
                          0000G CF              02  FB 00052    CALLS   #2, ANL$MAP_FIXUP_SECTION               ;
                                53              50  D0 00057    MOVL    R0, FP                                  ;
                                                13  12 0005A    BNEQ    3$                                      ; 0591
                                52              DD 0005C        PUSHL   R2                                      ; 0592
                                        0C  AC  DD 0005E        PUSHL   FIXUP_VBN                               ;
                                    00000000G   8F  DD 00061    PUSHL   #ANLOBJ$_EXEBADFIXUPVBN                 ;
                          0000G CF              03  FB 00067    CALLS   #3, ANL$FORMAT_ERROR                    ;
                                            02AD 31  0006C 2$:  BRW     36$                                     ; 0591
52                  52                  09  78 0006F 3$:    ASHL    #9, R2, R2                              ; 0598
57                  52                  53  C1 00073        ADDL3   FP, R2, END_PTR                         ;
                                    00000000G   8F  DD 00077    PUSHL   #ANLOBJ$_EXEFIXFIXED                    ; 0604
                                                01  DD 0007D    PUSHL   #1                                      ;
                                                03  DD 0007F    PUSHL   #3                                      ;
                                68              03  FB 00081    CALLS   #3, ANL$FORMAT_LINE                     ;
```

```
                         7E              01  CE 00084          MNEGL   #1, -(SP)                                  ; 0605
                         69              01  FB 00087          CALLS   #1, ANL$REPORT_LINE                         ;
                               0000'     CF  9F 0008A          PUSHAB  FLAGS_DEF                                   ; 0606
                         7E       0A     A3  3C 0008E          MOVZWL  10(FP), -(SP)                               ;
                            00000000G    8F  DD 00092          PUSHL   #ANLOBJ$_EXEFIXFLAGS                        ;
                                         02  DD 00098          PUSHL   #2                                          ;
                   0000G CF              04  FB 0009A          CALLS   #4, ANL$FORMAT_FLAGS                        ;
                               0000'     CF  9F 0009F          PUSHAB  FLAGS_DEF                                   ; 0607
                         7E       0A     A3  3C 000A3          MOVZWL  10(FP), -(SP)                               ;
                   0000G CF              02  FB 000A7          CALLS   #2, ANL$CHECK_FLAGS                         ;
                               1C        A3  DD 000AC          PUSHL   28(FP)                                      ; 0608
                            00000000G    8F  DD 000AF          PUSHL   #ANLOBJ$_EXEFIXCOUNT                        ;
                                         02  DD 000B5          PUSHL   #2                                          ;
                                         7E  D4 000B7          CLRL    -(SP)                                       ;
                         68              04  FB 000B9          CALLS   #4, ANL$FORMAT_LINE                         ;
                               20        A3  DD 000BC          PUSHL   32(FP)                                      ; 0609
                            00000000G    8F  DD 000BF          PUSHL   #ANLOBJ$_EXEFIXEXTRA                        ;
                                         02  DD 000C5          PUSHL   #2                                          ;
                                         7E  D4 000C7          CLRL    -(SP)                                       ;
                         68              04  FB 000C9          CALLS   #4, ANL$FORMAT_LINE                         ;
                         08              6B  E9 000CC          BLBC    ANL$GB_INTERACTIVE, 4$                      ; 0613
                   0000G CF              00  FB 000CF          CALLS   #0, AN[$INTERACT                            ; 0614
                         95              50  E9 000D4          BLBC    R0, 2$                                      ;
                         7E              01  CE 000D7 4$:      MNEGL   #1, -(SP)                                   ; 0620
                         69              01  FB 000DA          CALLS   #1, ANL$REPORT_LINE                         ;
                            00000000G    8F  DD 000DD          PUSHL   #ANLOBJ$_EXEFIXLIST                         ; 0621
                                         01  DD 000E3          PUSHL   #1                                          ;
                                         03  DD 000E5          PUSHL   #3                                          ;
                         68              03  FB 000E7          CALLS   #3, ANL$FORMAT_LINE                         ;
                         7E              01  CE 000EA          MNEGL   #1, -(SP)                                   ; 0622
                         69              01  FB 000ED          CALLS   #1, ANL$REPORT_LINE                         ;
                54       53       18     A3  C1 000F0          ADDL3   24(FP), FP, SP                              ; 0624
                                10        A4  95 000F5          TSTB    16(SP)                                      ; 0631
                                         06  13 000F8          BEQL    5$                                          ;
                         55      10      A4  9A 000FA          MOVZBL  16(SP), CELL_SIZE                           ; 0633
                                         03  11 000FE          BRB     6$                                          ;
                         55              38  D0 00100 5$:      MOVL    #56, CELL_SIZE                              ; 0635
                56       1C     A3              01  C3 00103 6$:      SUBL3   #1, 28(FP), R6                      ; 0637
                                         52  D4 00108          CLRL    I                                           ; 0648
                                         3F  11 0010A          BRB     10$                                         ;
                                         52  D5 0010C 7$:      TSTL    I                                           ; 0641
                                         11  12 0010E          BNEQ    8$                                          ;
                                         52  DD 00110          PUSHL   I                                           ; 0642
                            00000000G    8F  DD 00112          PUSHL   #ANLOBJ$_EXEFIXNAME0                        ;
                                         02  DD 00118          PUSHL   #2                                          ;
                                         7E  D4 0011A          CLRL    -(SP)                                       ;
                         68              04  FB 0011C          CALLS   #4, ANL$FORMAT_LINE                         ;
                                         25  11 0011F          BRB     9$                                          ;
                                18       A4  9F 00121 8$:      PUSHAB  24(SP)                                      ; 0644
                                         52  DD 00124          PUSHL   I                                           ;
                            00000000G    8F  DD 00126          PUSHL   #ANLOBJ$_EXEFIXNAME                         ;
                                         02  DD 0012C          PUSHL   #2                                          ;
                                         7E  D4 0012E          CLRL    -(SP)                                       ;
                         68              05  FB 00130          CALLS   #5, ANL$FORMAT_LINE                         ;
                         6E       18     A4  9A 00133          MOVZBL  24(SP), NAME_DSC                            ; 0645
                   04    AE       19     A4  9E 00137          MOVAB   25(R4), NAME_DSC+4                          ;
                                         27  DD 0013C          PUSHL   #39                                         ; 0646
```

```
                                    04   AE  9F 0013E             PUSHAB  NAME_DSC                                                ;
                          0000G     CF       02  FB 00141             CALLS   #2, ANL$CHECK_SYMBOL                               ;
                                    54       55  C0 00146 9$:         ADDL2   CELL_SIZE, SP                                      ; 0648
                                             52  D6 00149             INCL    I                                                  ; 0637
                                    56       52  D1 0014B 10$:        CMPL    I, R6                                              ;
                                             BC  1B 0014E             BLEQU   7$                                                 ;
                                    0B       6B  E9 00150             BLBC    ANL$GB_INTERACTIVE, 11$                            ; 0654
                          0000G     CF       00  FB 00153             CALLS   #0, ANL$INTERACT                                   ; 0655
                                    03       50  E8 00158             BLBS    R0, 11$                                            ;
                                         01BE 31  00 0015B             BRW     36$                                                ;
                                    0C   A3  D5 0015E 11$:            TSTL    12(FP)                                             ; 0662
                                         03  12 00161                 BNEQ    12$                                                ;
                                         009B 31 00163                 BRW     20$                                                ;
                                    7E       01  CE 00166 12$:        MNEGL   #1, -(SP)                                          ; 0664
                                    69       01  FB 00169             CALLS   #1, ANL$REPORT_LINE                                ;
                                00000000G    8F  DD 0016C             PUSHL   #ANLOBJ$_EXEFIXG                                   ; 0665
                                             01  DD 00172             PUSHL   #1                                                 ;
                                             03  DD 00174             PUSHL   #3                                                 ;
                                    68       03  FB 00176             CALLS   #3, ANL$FORMAT_LINE                                ;
                          54        53   0C  A3  C1 00179             ADDL3   12(FP), FP, SP                                     ; 0666
                                             64  D5 0017E 13$:        TSTL    (SP)                                               ; 0670
                                             71  13 00180             BEQL    19$                                                ;
                                    57       54  D1 00182             CMPL    SP, END_PTR                                        ; 0675
                                             09  1F 00185             BLSSU   14$                                                ;
                                             5A  DD 00187             PUSHL   R10                                                ; 0676
                          0000G     CF       01  FB 00189             CALLS   #1, ANL$FORMAT_ERROR                               ;
                                             63  11 0018E             BRB     19$                                                ; 0675
                                    52       84  D0 00190 14$:        MOVL    (SP)+, COUNT                                       ; 0682
                                    7E       01  CE 00193             MNEGL   #1, -(SP)                                          ; 0684
                                    69       01  FB 00196             CALLS   #1, ANL$REPORT_LINE                                ;
                                             64  DD 00199             PUSHL   (SP)                                               ; 0685
                                             52  DD 0019B             PUSHL   COUNT                                              ;
                                00000000G    8F  DD 0019D             PUSHL   #ANLOBJ$_EXEFIXGIMAGE                              ;
                                             02  DD 001A3             PUSHL   #2                                                 ;
                                             02  DD 001A5             PUSHL   #2                                                 ;
                                    68       05  FB 001A7             CALLS   #5, ANL$FORMAT_LINE                                ;
                                    54       04  C0 001AA             ADDL2   #4, SP                                             ; 0686
                                    56   FF  A2  9E 001AD             MOVAB   -1(R2), R6                                         ; 0690
                                             55  D4 001B1             CLRL    I                                                  ;
                                             37  11 001B3             BRB     18$                                                ;
                    7E      00       55       01  7A 001B5 15$:        EMUL    #1, I, #0, -(SP)                                   ; 0691
                    50      50       8E       04  7B 001BA             EDIV    #4, (SP)+, R0, R0                                  ;
                                08 AE40         84  D0 001BF             MOVL    (SP)+, LONG_ARRAY[R0]                              ;
                                    03       50  D1 001C4             CMPL    R0, #3                                             ; 0694
                                             05  13 001C7             BEQL    16$                                                ;
                                    56       55  D1 001C9             CMPL    I, R6                                              ;
                                             1C  12 001CC             BNEQ    17$                                                ;
                                    14   AE  DD 001CE 16$:            PUSHL   LONG_ARRAY+12                                      ; 0696
                                    14   AE  DD 001D1                 PUSHL   LONG_ARRAY+8                                       ;
                                    14   AE  DD 001D4                 PUSHL   LONG_ARRAY+4                                       ;
                                    14   AE  DD 001D7                 PUSHL   LONG_ARRAY                                         ;
                                    01   A0  9F 001DA                 PUSHAB  1(R0)                                              ; 0695
                                00000000G    8F  DD 001DD             PUSHL   #ANLOBJ$_EXEFIXGLINE                               ;
                                             03  DD 001E3             PUSHL   #3                                                 ;
                                             7E  D4 001E5             CLRL    -(SP)                                              ;
                                    68       08  FB 001E7             CALLS   #8, ANL$FORMAT_LINE                                ;
                                             55  D6 001EA 17$:         INCL    I                                                  ; 0690
```

```
                                56                55   D1 001EC 18$:    CMPL    I, R6                                   ;
                                                  C4   1B 001EF         BLEQU   15$                                     ;
                                                  8B   11 001F1         BRB     13$                                     ; 0670
                                0B                6B   E9 001F3 19$:    BLBC    ANL$GB_INTERACTIVE, 20$                 ; 0703
                          0000G CF                00   FB 001F6         CALLS   #0, ANL$INTERACT                        ; 0704
                                03                50   E8 001FB         BLBS    R0, 20$                                 ;
                                                011B   31 001FE         BRW     36$                                     ;
                                            10    A3   D5 00201 20$:    TSTL    16(FP)                                  ; 0711
                                                  03   12 00204         BNEQ    21$                                     ;
                                                009B   31 00206         BRW     29$                                     ;
                                7E                01   CE 00209 21$:    MNEGL   #1, -(SP)                               ; 0716
                                69                01   FB 0020C         CALLS   #1, ANL$REPORT_LINE                     ;
                                            04    AC   DD 0020F         PUSHL   IMAGE_BASE                              ; 0717
                                    00000000G     8F   DD 00212         PUSHL   #ANLOBJ$_EXEFIXA                        ;
                                                  01   DD 00218         PUSHL   #1                                      ;
                                                  03   DD 0021A         PUSHL   #3                                      ;
                                68                04   FB 0021C         CALLS   #4, ANL$FORMAT_LINE                     ;
                          54    53          10    A3   C1 0021F         ADDL3   16(FP), FP, SP                          ; 0718
                                                  64   D5 00224 22$:    TSTL    (SP)                                    ; 0722
                                                  71   13 00226         BEQL    28$                                     ;
                                57                54   D1 00228         CMPL    SP, END_PTR                             ; 0727
                                                  09   1F 0022B         BLSSU   23$                                     ;
                                                  5A   DD 0022D         PUSHL   R10                                     ; 0728
                          0000G CF                01   FB 0022F         CALLS   #1, ANL$FORMAT_ERROR                    ;
                                                  63   11 00234         BRB     28$                                     ; 0727
                                52                84   D0 00236 23$:    MOVL    (SP)+, COUNT                            ; 0734
                                7E                01   CE 00239         MNEGL   #1, -(SP)                               ; 0736
                                69                01   FB 0023C         CALLS   #1, ANL$REPORT_LINE                     ;
                                                  64   DD 0023F         PUSHL   (SP)                                    ; 0737
                                                  52   DD 00241         PUSHL   COUNT                                   ;
                                    00000000G     8F   DD 00243         PUSHL   #ANLOBJ$_EXEFIXAIMAGE                   ;
                                                  02   DD 00249         PUSHL   #2                                      ;
                                                  02   DD 0024B         PUSHL   #2                                      ;
                                68                05   FB 0024D         CALLS   #5, ANL$FORMAT_LINE                     ;
                                54                04   C0 00250         ADDL2   #4, SP                                  ; 0738
                                56          FF    A2   9E 00253         MOVAB   -1(R2), R6                              ; 0742
                                                  55   D4 00257         CLRL    I                                       ;
                                                  37   11 00259         BRB     27$                                     ;
                7E        00        55                01   7A 0025B 24$:    EMUL    #1, I, #0, -(SP)                        ; 0743
                50        50        8E                04   7B 00260         EDIV    #4, (SP)+, R0, R0                       ;
                              08 AE40                 84   D0 00265         MOVL    (SP)+, LONG_ARRAY[R0]                   ;
                                03                    50   D1 0026A         CMPL    R0, #3                                  ; 0746
                                                      05   13 0026D         BEQL    25$                                     ;
                                56                    55   D1 0026F         CMPL    I, R6                                   ;
                                                      1C   12 00272         BNEQ    26$                                     ;
                                                14    AE   DD 00274 25$:    PUSHL   LONG_ARRAY+12                           ; 0748
                                                14    AE   DD 00277         PUSHL   LONG_ARRAY+8                            ;
                                                14    AE   DD 0027A         PUSHL   LONG_ARRAY+4                            ;
                                                14    AE   DD 0027D         PUSHL   LONG_ARRAY                              ;
                                                01    A0   9F 00280         PUSHAB  1(R0)                                   ; 0747
                                    00000000G     8F   DD 00283         PUSHL   #ANLOBJ$_EXEFIXALINE                    ;
                                                  03   DD 00289         PUSHL   #3                                      ;
                                                  7E   D4 0028B         CLRL    -(SP)                                   ;
                                68                08   FB 0028D         CALLS   #8, ANL$FORMAT_LINE                     ;
                                                  55   D6 00290 26$:    INCL    I                                       ; 0742
                                56                55   D1 00292 27$:    CMPL    I, R6                                   ;
                                                  C4   1B 00295         BLEQU   24$                                     ;
```

```
                                 8B  11 00297              BRB     22$                                                     ; 0722
                           08    6B  E9 00299 28$:        BLBC    ANL$GB_INTERACTIVE, 29$                                 ; 0755
                     0000G CF    00  FB 0029C             CALLS   #0, ANL$INTERACT                                        ; 0756
                           78    50  E9 002A1             BLBC    R0, 36$                                                 ;
                              14 A3  D5 002A4 29$:        TSTL    20(FP)                                                  ; 0763
                                 6A  13 002A7             BEQL    34$                                                     ;
                           7E    01  CE 002A9             MNEGL   #1, -(SP)                                               ; 0768
                           69    01  FB 002AC             CALLS   #1, ANL$REPORT_LINE                                     ;
                              04 AC  DD 002AF             PUSHL   IMAGE_BASE                                              ; 0769
                    00000000G 8F  DD 002B2               PUSHL   #ANLOBJ$_EXEFIXP                                        ;
                                 01  DD 002B8             PUSHL   #1                                                      ;
                                 03  DD 002BA             PUSHL   #3                                                      ;
                           68    04  FB 002BC             CALLS   #4, ANL$FORMAT_LINE                                     ;
                        54 53    14 A3  C1 002BF          ADDL3   20(FP), FP, SP                                          ; 0770
                           52    84  D0 002C4             MOVL    (SP)+, COUNT                                            ; 0771
                           55    01  D0 002C7             MOVL    #1, I                                                   ; 0781
                                 37  11 002CA             BRB     32$                                                     ;
                           57    54  D1 002CC 30$:        CMPL    SP, END_PTR                                             ;
                                 09  1F 002CF             BLSSU   31$                                                     ;
                                 5A  DD 002D1             PUSHL   R10                                                     ; 0782
                     0000G CF    01  FB 002D3             CALLS   #1, ANL$FORMAT_ERROR                                    ;
                                 2E  11 002D8             BRB     33$                                                     ; 0781
                           7E    01  CE 002DA 31$:        MNEGL   #1, -(SP)                                               ; 0788
                           69    01  FB 002DD             CALLS   #1, ANL$REPORT_LINE                                     ;
                           7E       04 A4  3C 002E0       MOVZWL  4(SP), -(SP)                                            ; 0789
                                 64  DD 002E4             PUSHL   (SP)                                                    ;
                    00000000G 8F  DD 002E6               PUSHL   #ANLOBJ$_EXEFIXPSECT                                    ;
                                 02  DD 002EC             PUSHL   #2                                                      ;
                                 02  DD 002EE             PUSHL   #2                                                      ;
                           68    05  FB 002F0             CALLS   #5, ANL$FORMAT_LINE                                     ;
                           7E       06 A4  3C 002F3       MOVZWL  6(SP), -(SP)                                            ; 0790
                                 02  DD 002F7             PUSHL   #2                                                      ;
                     0000G CF    02  FB 002F9             CALLS   #2, ANL$FORMAT_PROTECTION                               ;
                           54    08  C0 002FE             ADDL2   #8, SP                                                  ; 0794
                                 55  D6 00301             INCL    I                                                       ; 0776
                           52    55  D1 00303 32$:        CMPL    I, COUNT                                                ;
                                 C4  1B 00306             BLEQU   30$                                                     ;
                           08    6B  E9 00308 33$:        BLBC    ANL$GB_INTERACTIVE, 34$                                 ; 0800
                     0000G CF    00  FB 0030B             CALLS   #0, ANL$INTERACT                                        ; 0801
                           09    50  E9 00310             BLBC    R0, 36$                                                 ;
                     0000G CF    00  FB 00313 34$:        CALLS   #0, ANL$MAP_FIXUP_SECTION                               ; 0806
                           50    01  D0 00318 35$:        MOVL    #1, R0                                                  ; 0808
                                     04 0031B             RET                                                             ;
                                 50  D4 0031C 36$:        CLRL    R0                                                      ; 0810
                                     04 0031E             RET                                                             ;

; Routine Size:  799 bytes,    Routine Base:  $CODE$ + 0000

;  383          0811  1
;  384          0812  0 end eludom
```

```
;                                       PSECT SUMMARY
;
;
;       Name                    Bytes                           Attributes
;
;  $PLIT$                         10  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $OWN$                           8  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  $CODE$                        799  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)



;                                   Library Statistics
;
;                                        -------- Symbols --------      Pages       Processing
;       File                             Total    Loaded   Percent      Mapped      Time
;
;  _$255$DUA28:[SYSLIB]LIB.L32;1          18619        25         0        1000        00:01.7



; Information:  1
; Warnings:     0
; Errors:       0



;                                       COMMAND QUALIFIERS

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

; Size:          799 code + 18 data bytes
; Run Time:          00:17.0
; Elapsed Time:      01:03.9
; Lines/CPU Min:      2872
; Lexemes/CPU-Min: 13669
; Memory Used:  290 pages
; Compilation Complete
```

SETSHOAL
CLS

OBJEXEREQ
REQ

EXEFIXUP
CLS

ANALYZRMS
MAP

SHOWACL
CLS

EXESTUFF
CLS

ANALYZ

EXEINPUT
CLS

ANALYZOBJ
MAP

EXEDRIVE
CLS

RMSREQ
REQ