


```

000000 000000 JJ DDDDDDDD RRRRRRRR IIIIII VV VV EEEEEEEEE
000000 000000 JJ DDDDDDDD RRRRRRRR IIIIII VV VV EEEEEEEEE
00 00 00 00 JJ DD DD RR RR II VV VV EE
00 00 00 00 JJ DD DD RR RR II VV VV EE
00 00 00 00 JJ DD DD RR RR II VV VV EE
00 00 00 00 JJ DD DD RRRRRR II VV VV EEEEEEE
00 00 00 00 JJ DD DD RRRRRR II VV VV EEEEEEE
00 00 00 00 JJ DD DD RR RR II VV VV EE
00 00 00 00 JJ DD DD RR RR II VV VV EE
00 00 00 00 JJ DD DD RR RR II VV VV EE
000000 000000 JJJJJJ DDDDDDDD RR RR IIIIII VV VV EEEEEEEEE
000000 000000 JJJJJJ DDDDDDDD RR RR IIIIII VV VV EEEEEEEEE

```

```

LL IIIIII SSSSSSS
LL IIIIII SSSSSSS
LL II SS
LL II SS
LL II SS
LL II SSSSS
LL II SSSSS
LL II SS
LL II SS
LL II SS
LLLLLLLLL IIIIII SSSSSSS
LLLLLLLLL IIIIII SSSSSSS

```

```

1 0001 0 %title 'OBJDRIVE - Drive Analysis of Object Files'
2 0002 0      module objdrive (
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
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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, Object File Analyzer
32 0032 1
33 0033 1 Abstract:      This module is the main control for the analysis of object
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: 6 January 1981
40 0040 1
41 0041 1 Modified By:
42 0042 1
43 0043 1      V03-002 DGB0069      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$object: novalue,
66 0500 1     anl$object_positionals: novalue,
67 0501 1     anl$object2: novalue,
68 0502 1     anl$object_record_line: novalue,
69 0503 1     anl$object_statistics: novalue;
70 0504 1
71 0505 1 :
72 0506 1 : External References:
73 0507 1 :
74 0508 1
75 0509 1 external routine
76 0510 1     anl$error_count,
77 0511 1     anl$format_error,
78 0512 1     anl$format_hex,
79 0513 1     anl$format_line,
80 0514 1     anl$get_object_record,
81 0515 1     anl$interact,
82 0516 1     anl$object_eom,
83 0517 1     anl$object_gsd,
84 0518 1     anl$object_hdr,
85 0519 1     anl$object_lnk,
86 0520 1     anl$object_record_size,
87 0521 1     anl$object_tir,
88 0522 1     anl$open_next_object_file,
89 0523 1     anl$prepare_report_file,
90 0524 1     anl$report_line,
91 0525 1     anl$report_page,
92 0526 1     cli$get_value: addressing_mode(general),
93 0527 1     cli$present: addressing_mode(general);
94 0528 1
95 0529 1 :
96 0530 1 : Global Variables:
97 0531 1 :
98 0532 1 : The following variable tells people whether this is an interactive session.
99 0533 1
100 0534 1 global
101 0535 1     anl$gb_interactive: byte;
102 0536 1
103 0537 1 :
104 0538 1 : Own Variables:
105 0539 1 :
106 0540 1 : The following variables contain various positional qualifier values.
107 0541 1
108 0542 1 own
```

```
: 109      0543 1      type_flag: bitvector[256].
: 110      0544 1      range: vector[2,long];
: 111      0545 1
: 112      0546 1 ! The following flag tells us whether we are currently "within" a module.
: 113      0547 1
: 114      0548 1 own
: 115      0549 1      within_module: byte initial(false);
: 116      0550 1
: 117      0551 1 ! The following two vectors keep track of the count of each object record
: 118      0552 1 ! type and the total bytes for each type.
: 119      0553 1
: 120      0554 1 own
: 121      0555 1      record_count: vector[obj$c_maxrectyp+1,long]
: 122      0556 1      initial(rep obj$c_maxrectyp+1 of (0)),
: 123      0557 1      byte_total: vector[obj$c_maxrectyp+1,long]
: 124      0558 1      initial(rep obj$c_maxrectyp+1 of (0));
```

```
: 126 0559 1 %sbttl 'ANL$OBJECT - Control Analysis of Object Files'
: 127 0560 1 !++
: 128 0561 1 ! Functional Description:
: 129 0562 1 !   This routine is responsible for controlling the analysis of object
: 130 0563 1 !   files.
: 131 0564 1 !
: 132 0565 1 ! Formal Parameters:
: 133 0566 1 !   none
: 134 0567 1 !
: 135 0568 1 ! Implicit Inputs:
: 136 0569 1 !   global data
: 137 0570 1 !
: 138 0571 1 ! Implicit Outputs:
: 139 0572 1 !   global data
: 140 0573 1 !
: 141 0574 1 ! Returned Value:
: 142 0575 1 !   none
: 143 0576 1 !
: 144 0577 1 ! Side Effects:
: 145 0578 1 !
: 146 0579 1 !--
: 147 0580 1
: 148 0581 1
: 149 0582 2 global routine anl$object: novalue = begin
: 150 0583 2
: 151 0584 2 own
: 152 0585 2     own_described_buffer(report_file_spec,nam$c_maxrss);
: 153 0586 2
: 154 0587 2 local
: 155 0588 2     status: long,
: 156 0589 2     type_flag: bitvector[256],
: 157 0590 2     range: vector[2,long];
: 158 0591 2
: 159 0592 2
: 160 0593 2 ! Get the global qualifiers that can be specified for ANALYZE/OBJECT.
: 161 0594 2 ! The first one is the /INTERACTIVE qualifier.
: 162 0595 2
: 163 0596 2 anl$gb_interactive = cli$present(describe('INTERACTIVE'));
: 164 0597 2
: 165 0598 2 ! If the user wants us to generate output, determine the name of the
: 166 0599 2 ! report file. Note that if this is an interactive session, we always
: 167 0600 2 ! use SYS$OUTPUT.
: 168 0601 2
: 169 0602 2 if cli$present(describe('OUTPUT')) then
: 170 0603 2     if .anl$gb_interactive then
: 171 0604 2         ch$copy(10,uplit byte ('SYS$OUTPUT'),
: 172 0605 2             ' ',..report_file_spec[len],..report_file_spec[ptr])
: 173 0606 2     else
: 174 0607 2         cli$get_value(describe('OUTPUT'),report_file_spec);
: 175 0608 2
: 176 0609 2 ! We go into a loop, once through for each object file or library member.
: 177 0610 2
: 178 0611 2 loop (
: 179 0612 2     local
: 180 0613 2         local_described_buffer(resultant_file_spec,nam$c_maxrss);
: 181 0614 2
: 182 0615 2     status = anl$open_next_object_file(resultant_file_spec);
```

```

: 183 0616 3
: 184 0617 3 exitif (not .status);
: 185 0618 3
: 186 0619 3 ! Prepare the file to receive the object analysis report.
: 187 0620 3
: 188 0621 3 anl$prepare_report_file(report_file_spec,resultant_file_spec,anlobj$_objheading);
: 189 0622 3
: 190 0623 3 ! Analyze the object file.
: 191 0624 3
: 192 0625 3 anl$object2();
: 193 0626 3 );
: 194 0627 3
: 195 0628 3 return;
: 196 0629 3
: 197 0630 3 end;

```

```

:
: .TITLE OBJDRIVE OBJDRIVE - Drive Analysis of Object Fi
: .IDENT \V04-000\ les
: .PSECT $SPLITS$,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 \SYSS$OUTPUT\
: 54 55 50 54 55 4F 0002E P.AAG: .ASCII \OUTPUT\
: 00000006 00034 P.AAF: .LONG 6
: 00000000* 00038 .ADDRESS P.AAG
: .PSECT $OWNS$,NOEXE,2
: 00000 TYPE_FLAG:
: .BLKB 32
: 00020 RANGE: .BLKB 8
: 00 00028 WITHIN_MODULE:
: .BYTE 0
: 00029 .BLKB 3
: 00000000# 0002C RECORD_COUNT:
: .LONG 0[8]
: 00000000# 0004C BYTE_TOTAL:
: .LONG 0[8]
: 000000FF 0006C REPORT_FILE_SPEC:
: .LONG 255
: 00000000* 00070 .ADDRESS REPORT_FILE_SPEC+8
: 00074 .BLKB 255
: .PSECT $GLOBAL$,NOEXE,2
: 00000 ANL$GB_INTERACTIVE::
: .BLKB 1

```

.EXTRN ANLOBS\$ _OK, ANLOBS\$ _ANYTHING
.EXTRN ANLOBS\$ _DATATYPE
.EXTRN ANLOBS\$ _ERRORCOUNT
.EXTRN ANLOBS\$ _ERRORNONE
.EXTRN ANLOBS\$ _ERRORS, ANLOBS\$ _EXEFIXA
.EXTRN ANLOBS\$ _EXEFIXAIMAGE
.EXTRN ANLOBS\$ _EXEFIXALINE
.EXTRN ANLOBS\$ _EXEFIXCOUNT
.EXTRN ANLOBS\$ _EXEFIXEXTRA
.EXTRN ANLOBS\$ _EXEFIXFIXED
.EXTRN ANLOBS\$ _EXEFIXFLAGS
.EXTRN ANLOBS\$ _EXEFIXG
.EXTRN ANLOBS\$ _EXEFIXGIMAGE
.EXTRN ANLOBS\$ _EXEFIXGLINE
.EXTRN ANLOBS\$ _EXEFIXLIST
.EXTRN ANLOBS\$ _EXEFIXNAME
.EXTRN ANLOBS\$ _EXEFIXNAME0
.EXTRN ANLOBS\$ _EXEFIXP
.EXTRN ANLOBS\$ _EXEFIXPSECT
.EXTRN ANLOBS\$ _EXEFIXUP
.EXTRN ANLOBS\$ _EXEFIXUPNONE
.EXTRN ANLOBS\$ _EXEGST, ANLOBS\$ _EXEHDR
.EXTRN ANLOBS\$ _EXEHDRACTIVE
.EXTRN ANLOBS\$ _EXEHDRBLKCOUNT
.EXTRN ANLOBS\$ _EXEHDRCHANCOUNT
.EXTRN ANLOBS\$ _EXEHDRCHANDEF
.EXTRN ANLOBS\$ _EXEHDRDECECO
.EXTRN ANLOBS\$ _EXEHDRDMT
.EXTRN ANLOBS\$ _EXEHDRDST
.EXTRN ANLOBS\$ _EXEHDRFILEID
.EXTRN ANLOBS\$ _EXEHDRFIXED
.EXTRN ANLOBS\$ _EXEHDRFLAGS
.EXTRN ANLOBS\$ _EXEHDRGBLIDENT
.EXTRN ANLOBS\$ _EXEHDRGST
.EXTRN ANLOBS\$ _EXEHDRIDENT
.EXTRN ANLOBS\$ _EXEHDRIMAGEID
.EXTRN ANLOBS\$ _EXEHDRISD
.EXTRN ANLOBS\$ _EXEHDRISDBASE
.EXTRN ANLOBS\$ _EXEHDRISDCOUNT
.EXTRN ANLOBS\$ _EXEHDRISDFLAGS
.EXTRN ANLOBS\$ _EXEHDRISDGBLNAM
.EXTRN ANLOBS\$ _EXEHDRISDNUM
.EXTRN ANLOBS\$ _EXEHDRISDPFCDEF
.EXTRN ANLOBS\$ _EXEHDRISDPFCsiz
.EXTRN ANLOBS\$ _EXEHDRISDTYPE
.EXTRN ANLOBS\$ _EXEHDRISDVBN
.EXTRN ANLOBS\$ _EXEHDRLINKID
.EXTRN ANLOBS\$ _EXEHDRMATCH
.EXTRN ANLOBS\$ _EXEHDRNAME
.EXTRN ANLOBS\$ _EXEHDRNOPATCH
.EXTRN ANLOBS\$ _EXEHDRPAGECOUNT
.EXTRN ANLOBS\$ _EXEHDRPAGEDEF
.EXTRN ANLOBS\$ _EXEHDRPATCH
.EXTRN ANLOBS\$ _EXEHDRPATCHDATE
.EXTRN ANLOBS\$ _EXEHDRPRIV
.EXTRN ANLOBS\$ _EXEHDRROPATCH

.EXTRN ANLOBS\$_EXEHDRRWPATCH
.EXTRN ANLOBS\$_EXEHDRSYMDBG
.EXTRN ANLOBS\$_EXEHDRSYSVER
.EXTRN ANLOBS\$_EXEHDRTEXTVBN
.EXTRN ANLOBS\$_EXEHDRTIME
.EXTRN ANLOBS\$_EXEHDRTYPEEXE
.EXTRN ANLOBS\$_EXEHDRTYPELIM
.EXTRN ANLOBS\$_EXEHDRUSERECO
.EXTRN ANLOBS\$_EXEHDRXFER1
.EXTRN ANLOBS\$_EXEHDRXFER2
.EXTRN ANLOBS\$_EXEHDRXFER3
.EXTRN ANLOBS\$_EXEHEADING
.EXTRN ANLOBS\$_EXEPATCH
.EXTRN ANLOBS\$_FLAG, ANLOBS\$_HEXDATA
.EXTRN ANLOBS\$_HEXHEADING1
.EXTRN ANLOBS\$_HEXHEADING2
.EXTRN ANLOBS\$_INDMSGSEC
.EXTRN ANLOBS\$_INTERACT
.EXTRN ANLOBS\$_MASK, ANLOBS\$_OBJCPREC
.EXTRN ANLOBS\$_OBJDBGREC
.EXTRN ANLOBS\$_OBJENV, ANLOBS\$_OBJEOMFLAGS
.EXTRN ANLOBS\$_OBJEOMREC
.EXTRN ANLOBS\$_OBJEOMSEVABT
.EXTRN ANLOBS\$_OBJEOMSEVERR
.EXTRN ANLOBS\$_OBJEOMSEVIGN
.EXTRN ANLOBS\$_OBJEOMSEVRES
.EXTRN ANLOBS\$_OBJEOMSEVSUC
.EXTRN ANLOBS\$_OBJEOMSEVWRN
.EXTRN ANLOBS\$_OBJEOMWREC
.EXTRN ANLOBS\$_OBJFADPASSMECH
.EXTRN ANLOBS\$_OBJGSDENV
.EXTRN ANLOBS\$_OBJGSDENVFLAGS
.EXTRN ANLOBS\$_OBJGSDENVPAR
.EXTRN ANLOBS\$_OBJGSDPEM
.EXTRN ANLOBS\$_OBJGSDPEMW
.EXTRN ANLOBS\$_OBJGSDIDC
.EXTRN ANLOBS\$_OBJGSDIDCENT
.EXTRN ANLOBS\$_OBJGSDIDCFLAGS
.EXTRN ANLOBS\$_OBJGSDIDCMATCH
.EXTRN ANLOBS\$_OBJGSDIDCOBJ
.EXTRN ANLOBS\$_OBJGSDIDCVALA
.EXTRN ANLOBS\$_OBJGSDIDCVALB
.EXTRN ANLOBS\$_OBJGSDLPEM
.EXTRN ANLOBS\$_OBJGSDLPRO
.EXTRN ANLOBS\$_OBJGSDLSY
.EXTRN ANLOBS\$_OBJGSDPRO
.EXTRN ANLOBS\$_OBJGSDPROW
.EXTRN ANLOBS\$_OBJGSDPSC
.EXTRN ANLOBS\$_OBJGSDPSCALIGN
.EXTRN ANLOBS\$_OBJGSDPSCALLOC
.EXTRN ANLOBS\$_OBJGSDPSCBASE
.EXTRN ANLOBS\$_OBJGSDPSCFLAGS
.EXTRN ANLOBS\$_OBJGSDREC
.EXTRN ANLOBS\$_OBJGSDSPSC
.EXTRN ANLOBS\$_OBJGSDSYM
.EXTRN ANLOBS\$_OBJGSDSYMW
.EXTRN ANLOBS\$_OBJGTXREC

.EXTRN ANLOBS\$_OBJHDRIGNREC
.EXTRN ANLOBS\$_OBJHEADING
.EXTRN ANLOBS\$_OBJLITINDEX
.EXTRN ANLOBS\$_OBJLNKREC
.EXTRN ANLOBS\$_OBJLNMREC
.EXTRN ANLOBS\$_OBJMHDCREATE
.EXTRN ANLOBS\$_OBJMHDNAME
.EXTRN ANLOBS\$_OBJMHDPATCH
.EXTRN ANLOBS\$_OBJMHDREC
.EXTRN ANLOBS\$_OBJMHDRECSIZ
.EXTRN ANLOBS\$_OBJMHDSTRLVL
.EXTRN ANLOBS\$_OBJMHDVERSION
.EXTRN ANLOBS\$_OBJMTCORRECT
.EXTRN ANLOBS\$_OBJMTCINPUT
.EXTRN ANLOBS\$_OBJMTCNAME
.EXTRN ANLOBS\$_OBJMTCREC
.EXTRN ANLOBS\$_OBJMTCSEQNUM
.EXTRN ANLOBS\$_OBJMTCUIC
.EXTRN ANLOBS\$_OBJMTCVERSION
.EXTRN ANLOBS\$_OBJMTCWHEN
.EXTRN ANLOBS\$_OBJPROARGCOUNT
.EXTRN ANLOBS\$_OBJPROARGNUM
.EXTRN ANLOBS\$_OBJPSECT
.EXTRN ANLOBS\$_OBJSRCREC
.EXTRN ANLOBS\$_OBJSTATHEADING1
.EXTRN ANLOBS\$_OBJSTATHEADING2
.EXTRN ANLOBS\$_OBJSTATLINE
.EXTRN ANLOBS\$_OBJSTATTOTAL
.EXTRN ANLOBS\$_OBJSYMBOL
.EXTRN ANLOBS\$_OBJSYMFLAGS
.EXTRN ANLOBS\$_OBJTIRARGINDEX
.EXTRN ANLOBS\$_OBJTIRCMD
.EXTRN ANLOBS\$_OBJTIRCMDSTK
.EXTRN ANLOBS\$_OBJTBTRC
.EXTRN ANLOBS\$_OBJTIRREC
.EXTRN ANLOBS\$_OBJTIRSTOIM
.EXTRN ANLOBS\$_OBJTIRFIELD
.EXTRN ANLOBS\$_OBJTTLREC
.EXTRN ANLOBS\$_OBJVALUE
.EXTRN ANLOBS\$_OBJUVALUE
.EXTRN ANLOBS\$_PROTECTION
.EXTRN ANLOBS\$_SEVERITY
.EXTRN ANLOBS\$_TEXT, ANLOBS\$_TEXTHDR
.EXTRN ANLOBS\$_NOSUCHMOD
.EXTRN ANLOBS\$_BADDATE
.EXTRN ANLOBS\$_BADHDRBLKCOUNT
.EXTRN ANLOBS\$_BADSEVERITY
.EXTRN ANLOBS\$_BADSYM1ST
.EXTRN ANLOBS\$_BADSYMCHAR
.EXTRN ANLOBS\$_BADSYMLEN
.EXTRN ANLOBS\$_EXEBADF IXUPEND
.EXTRN ANLOBS\$_EXEBADF IXUPISD
.EXTRN ANLOBS\$_EXEBADF IXUPVBN
.EXTRN ANLOBS\$_EXEBADISDS1
.EXTRN ANLOBS\$_EXEBADISDTYPE
.EXTRN ANLOBS\$_EXEBADMATCH
.EXTRN ANLOBS\$_EXEBADPATCHLEN

```

.EXTRN ANLOBS$ _EXEBADOBJ
.EXTRN ANLOBS$ _EXEBADTYPE
.EXTRN ANLOBS$ _EXEBADXFERO
.EXTRN ANLOBS$ _EXEHDRISDLONG
.EXTRN ANLOBS$ _EXEHDRLONG
.EXTRN ANLOBS$ _EXEISDLENDZRO
.EXTRN ANLOBS$ _EXEISDLENGBL
.EXTRN ANLOBS$ _EXEISDLENPRIV
.EXTRN ANLOBS$ _EXENOTNATIVE
.EXTRN ANLOBS$ _EXTRABYTES
.EXTRN ANLOBS$ _FIELDFIT
.EXTRN ANLOBS$ _FLAGERROR
.EXTRN ANLOBS$ _NOTOK, ANLOBS$ _OBJBADIDCMATCH
.EXTRN ANLOBS$ _OBJBADNUM
.EXTRN ANLOBS$ _OBJBADPOP
.EXTRN ANLOBS$ _OBJBADPUSH
.EXTRN ANLOBS$ _OBJBADTYPE
.EXTRN ANLOBS$ _OBJBADVIELD
.EXTRN ANLOBS$ _OBJEOMBADSEV
.EXTRN ANLOBS$ _OBJEOMMISSING
.EXTRN ANLOBS$ _OBJFADBADAVC
.EXTRN ANLOBS$ _OBJFADBADRBC
.EXTRN ANLOBS$ _OBJGSDBADALIGN
.EXTRN ANLOBS$ _OBJGSDBADSUBTYP
.EXTRN ANLOBS$ _OBJHDRRES
.EXTRN ANLOBS$ _OBJMHDBADRECSIZ
.EXTRN ANLOBS$ _OBJMHDBADSTRLVL
.EXTRN ANLOBS$ _OBJMHDMISSING
.EXTRN ANLOBS$ _OBJNONTIRCMD
.EXTRN ANLOBS$ _OBJNOPSC
.EXTRN ANLOBS$ _OBJNULLREC
.EXTRN ANLOBS$ _OBJPOSPACE
.EXTRN ANLOBS$ _OBJPROMINMAX
.EXTRN ANLOBS$ _OBJPSCABSLEN
.EXTRN ANLOBS$ _OBJRECTOOBIG
.EXTRN ANLOBS$ _OBJTIRRES
.EXTRN ANLOBS$ _OBJUNDEFENV
.EXTRN ANLOBS$ _OBJUNDEFLIT
.EXTRN ANLOBS$ _OBJUNDEFPSC
.EXTRN ANALYZE$ FACILITY
.EXTRN ANL$ERROR COUNT
.EXTRN ANL$FORMAT ERROR
.EXTRN ANL$FORMAT_HEX, ANL$FORMAT_LINE
.EXTRN ANL$GET OBJECT RECORD
.EXTRN ANL$INTERACT, ANL$OBJECT EOM
.EXTRN ANL$OBJECT_GSD, ANL$OBJECT_HDR
.EXTRN ANL$OBJECT_LNK, ANL$OBJECT_RECORD SIZE
.EXTRN ANL$OBJECT_TIR, ANL$OPEN_NEXT_OBJECT_FILE
.EXTRN ANL$PREPARE REPORT_FILE
.EXTRN ANL$REPORT_CINE
.EXTRN ANL$REPORT_PAGE
.EXTRN CLIS$GET_VALUE, CLIS$PRESENT

.PSECT $CODE$,NOWRT,2

.ENTRY ANL$OBJECT, Save R2,R3,R4,R5,R6,R7
MOVAB REPORT_FILE_SPEC, R7

```

```

57      0000*  CF  00FC 00000
          9E 00002

```

```

: 0582
:

```

		56	00000000G	00	9E	00007	MOVAB	CLISPRESNT, R6		
		5E	FED0	CE	9E	0000E	MOVAB	-304(SP), SP		
			0000*	CF	9F	00013	PUSHAB	P.AAA	0596	
		66		01	FB	00017	CALLS	#1, CLISPRESNT		
		0000*		50	90	0001A	MOVAB	R0, ANL\$GB_INTERACTIVE		
				CF	9F	0001F	PUSHAB	P.AAC	0602	
		66		01	FB	00023	CALLS	#1, CLISPRESNT		
		1D		50	E9	00026	BLBC	R0, 2\$		
		0B		CF	E9	00029	BLBC	ANL\$GB_INTERACTIVE, 1\$	0603	
67	20	0000*		0A	2C	0002E	MOVCS	#10, P.AAE, #32, REPORT_FILE_SPEC, -	0605	
				04	B7	00035		@REPORT_FILE_SPEC+4		
				0D	11	00037	BRB	2\$	0604	
				57	DD	00039	1\$:	PUSHL	R7	0607
			0000*	CF	9F	0003B		PUSHAB	P.AAF	
		00000000G	00	02	FB	0003F	CALLS	#2, CLISGET VALUE		
			6E	FF	8F	9A	2\$:	MOVZBL	#255, RESULTANT_FILE_SPEC	0613
		04	AE	08	AE	9E	MOVAB	RESULTANT_FILE_SPEC+8, -		
								RESULTANT_FILE_SPEC+4		
				5E	DD	0004F	PUSHL	SP	0615	
		0000G	CF	01	FB	00051	CALLS	#1, ANL\$OPEN_NEXT_OBJECT_FILE		
			52	50	DD	00056	MOVL	R0, STATUS		
			17	52	E9	00059	BLBC	STATUS, 3\$	0617	
				8F	DD	0005C	PUSHL	#ANL\$OBJ\$ OBJHEADING	0621	
			00000000G	AE	9F	00062	PUSHAB	RESULTANT_FILE_SPEC		
				04						
				57	DD	00065	PUSHL	R7		
		0000G	CF	03	FB	00067	CALLS	#3, ANL\$PREPARE_REPORT_FILE		
		0000V	CF	00	FB	0006C	CALLS	#0, ANL\$OBJECT2	0625	
				D3	11	00071	BRB	2\$	0607	
				04	00073	3\$:	RET		0630	

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

```
199 0631 1 %sbttl 'ANL$OBJECT_POSITIONALS - Process Positional Qualifiers'
200 0632 1 : **
201 0633 1 : Functional Description:
202 0634 1 : This routine is called by the OBJINPUT module whenever it scans
203 0635 1 : off the next file spec from the command line. We need to process
204 0636 1 : positional qualifiers.
205 0637 1 :
206 0638 1 : Formal Parameters:
207 0639 1 : none
208 0640 1 :
209 0641 1 : Implicit Inputs:
210 0642 1 : global data
211 0643 1 :
212 0644 1 : Implicit Outputs:
213 0645 1 : global data
214 0646 1 :
215 0647 1 : Returned Value:
216 0648 1 : none
217 0649 1 :
218 0650 1 : Side Effects:
219 0651 1 :
220 0652 1 : --
221 0653 1 :
222 0654 1 :
223 0655 2 global routine anl$object_positionals: novalue = begin
224 0656 2
225 0657 2 local
226 0658 2     all_types: byte;
227 0659 2
228 0660 2
229 0661 2 ! First we process the qualifiers that specify which record types are to be
230 0662 2 ! analyzed. If none are specified, we analyze all records. If any are
231 0663 2 ! specified, we analyze only those specified. NOTE that we always analyze
232 0664 2 ! module headers and end-of-module records, as well as any invalid records.
233 0665 2
234 0666 2 all_types = not cli$present(describe('DBG')) and
235 0667 2     not cli$present(describe('EOM')) and
236 0668 2     not cli$present(describe('GSD')) and
237 0669 2     not cli$present(describe('LNK')) and
238 0670 2     not cli$present(describe('MHD')) and
239 0671 2     not cli$present(describe('TBT')) and
240 0672 2     not cli$present(describe('TIR'));
241 0673 2
242 0674 2 ch$fill(%x'ff', %allocation(type_flag), type_flag);
243 0675 2 type_flag[obj]$c_dbg] = .all_types or cli$present(describe('DBG'));
244 0676 2 type_flag[obj]$c_gsd] = .all_types or cli$present(describe('GSD'));
245 0677 2 type_flag[obj]$c_lnk] = .all_types or cli$present(describe('LNK'));
246 0678 2 type_flag[obj]$c_tbt] = .all_types or cli$present(describe('TBT'));
247 0679 2 type_flag[obj]$c_tir] = .all_types or cli$present(describe('TIR'));
248 0680 2
249 0681 2 ! There used to be other positional qualifiers, but not any more.
250 0682 2
251 0683 2 return;
252 0684 2
253 0685 1 end;
```

```

.PSECT SPLITS,NOWRT,NOEXE,2
47 42 44 0003C P.AAI: .ASCII \DBG\
0003F .BLKB 1
00000003 00040 P.AAH: .LONG 3
00000000* 00044 .ADDRESS P.AAI
4D 4F 45 00048 P.AAK: .ASCII \EOM\
0004B .BLKB 1
00000003 0004C P.AAJ: .LONG 3
00000000* 00050 .ADDRESS P.AAK
44 53 47 00054 P.AAM: .ASCII \GSD\
00057 .BLKB 1
00000003 00058 P.AAL: .LONG 3
00000000* 0005C .ADDRESS P.AAM
4B 4E 4C 00060 P.AAO: .ASCII \LNK\
00063 .BLKB 1
00000003 00064 P.AAN: .LONG 3
00000000* 00068 .ADDRESS P.AAO
44 48 4D 0006C P.AAQ: .ASCII \MHD\
0006F .BLKB 1
00000003 00070 P.AAP: .LONG 3
00000000* 00074 .ADDRESS P.AAQ
54 42 54 00078 P.AAS: .ASCII \TBT\
0007B .BLKB 1
00000003 0007C P.AAR: .LONG 3
00000000* 00080 .ADDRESS P.AAS
52 49 54 00084 P.AAU: .ASCII \TIR\
00087 .BLKB 1
00000003 00088 P.AAT: .LONG 3
00000000* 0008C .ADDRESS P.AAU
47 42 44 00090 P.AAW: .ASCII \DBG\
00093 .BLKB 1
00000003 00094 P.AAV: .LONG 3
00000000* 00098 .ADDRESS P.AAW
44 53 47 0009C P.AAY: .ASCII \GSD\
0009F .BLKB 1
00000003 000A0 P.AAX: .LONG 3
00000000* 000A4 .ADDRESS P.AAY
4B 4E 4C 000A8 P.ABA: .ASCII \LNK\
000AB .BLKB 1
00000003 000AC P.AAZ: .LONG 3
00000000* 000B0 .ADDRESS P.ABA
54 42 54 000B4 P.ABC: .ASCII \TBT\
000B7 .BLKB 1
00000003 000B8 P.ABB: .LONG 3
00000000* 000BC .ADDRESS P.ABC
52 49 54 000C0 P.ABE: .ASCII \TIR\
000C3 .BLKB 1
00000003 000C4 P.ABD: .LONG 3
00000000* 000C8 .ADDRESS P.ABE

```

.PSECT \$CODE\$,NOWRT,2

03FC 00000

.ENTRY ANL\$OBJECT_POSITIONALS, Save R2,R3,R4,R5,- ; 0655

			59	0000*	CF	9E	00002	MOVAB	R6, R7, R8, R9		
			58	0000*	CF	9E	00007	MOVAB	TYPE_FLAG, R9		
			57	00000000G	00	9E	0000C	MOVAB	P.AAR, R8		
					58	DD	00013	MOVAB	CLISPRESNT, R7		
			67		01	FB	00015	PUSHL	R8	0666	
			53		50	DO	00018	CALLS	#1, CLISPRESNT		
				0C	AB	9F	0001B	MOVL	R0, R3		
			67		01	FB	0001E	PUSHAB	P.AAJ	0667	
			52		50	DO	00021	CALLS	#1, CLISPRESNT		
			52		53	CB	00024	MOVL	R0, R2		
				18	AB	9F	00027	BISL2	R3, R2		
			67		01	FB	0002A	PUSHAB	P.AAL	0668	
			53		50	DO	0002D	CALLS	#1, CLISPRESNT		
			53		52	CB	00030	MOVL	R0, R3		
				24	AB	9F	00033	BISL2	R2, R3		
			67		01	FB	00036	PUSHAB	P.AAN	0669	
			52		50	DO	00039	CALLS	#1, CLISPRESNT		
			52		53	CB	0003C	MOVL	R0, R2		
				30	AB	9F	0003F	BISL2	R3, R2		
			67		01	FB	00042	PUSHAB	P.AAP	0670	
			53		50	DO	00045	CALLS	#1, CLISPRESNT		
			53		52	CB	00048	MOVL	R0, R3		
				3C	AB	9F	0004B	BISL2	R2, R3		
			67		01	FB	0004E	PUSHAB	P.AAR	0671	
			52		50	DO	00051	CALLS	#1, CLISPRESNT		
			52		53	CB	00054	MOVL	R0, R2		
				48	AB	9F	00057	BISL2	R3, R2		
			67		01	FB	0005A	PUSHAB	P.AAT	0672	
			50		52	CB	0005D	CALLS	#1, CLISPRESNT		
			56		50	92	00060	BISL2	R2, R0		
20	FF	8F	6E		00	2C	00063	MCOMB	R0, ALL TYPES	0671	
					69		00069	MOVCS	#0, (SPT, #255, #32, TYPE_FLAG)	0674	
					54	AB	9F	0006A	PUSHAB	P.AAV	0675
			67		01	FB	0006D	CALLS	#1, CLISPRESNT		
			50	52	56	89	00070	BISB3	ALL_TYPES, R0, R2		
69		01	04		52	F0	00074	INSV	R2, #4, #1, TYPE_FLAG		
				60	AB	9F	00079	PUSHAB	P.AAX	0676	
			67		01	FB	0007C	CALLS	#1, CLISPRESNT		
			50	52	56	89	0007F	BISB3	ALL_TYPES, R0, R2		
69		01	01		52	F0	00083	INSV	R2, #1, #1, TYPE_FLAG		
				6C	AB	9F	00088	PUSHAB	P.AAZ	0677	
			67		01	FB	0008B	CALLS	#1, CLISPRESNT		
			50	52	56	89	0008E	BISB3	ALL_TYPES, R0, R2		
69		01	06		52	F0	00092	INSV	R2, #6, #1, TYPE_FLAG		
				78	AB	9F	00097	PUSHAB	P.ABB	0678	
			67		01	FB	0009A	CALLS	#1, CLISPRESNT		
			50	52	56	89	0009D	BISB3	ALL_TYPES, R0, R2		
69		01	05		52	F0	000A1	INSV	R2, #5, #1, TYPE_FLAG		
				0084	CB	9F	000A6	PUSHAB	P.ABD	0679	
			67		01	FB	000AA	CALLS	#1, CLISPRESNT		
			50	52	56	89	000AD	BISB3	ALL_TYPES, R0, R2		
69		01	02		52	F0	000B1	INSV	R2, #2, #1, TYPE_FLAG		
					04	000B6		RET		0685	

; Routine Size: 183 bytes, Routine Base: \$CODE\$ + 0074

OBJDRIVE
V04-000

OBJDRIVE - Drive Analysis of Object Files

15-Sep-1984 23:38:00

ANL\$OBJECT_POSITIONALS - Process Positional Qua

14-Sep-1984 11:52:46

VAX-11 Bliss-32 V4.0-742
[ANALYZ.SRC]OBJDRIVE.B32;1

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```

255 0686 1 %sbttl 'ANL$OBJECT2 - Generate Object Analysis Report'
256 0687 1 **
257 0688 1 Functional Description:
258 0689 1 This routine is responsible for generating the analysis report
259 0690 1 for a single object file. The object file is ready to read, and the
260 0691 1 report file is ready to write.
261 0692 1
262 0693 1 Formal Parameters:
263 0694 1 none
264 0695 1
265 0696 1 Implicit Inputs:
266 0697 1 global data
267 0698 1
268 0699 1 Implicit Outputs:
269 0700 1 global data
270 0701 1
271 0702 1 Returned Value:
272 0703 1 none
273 0704 1
274 0705 1 Side Effects:
275 0706 1
276 0707 1 --
277 0708 1
278 0709 1
279 0710 2 global routine anl$object2: novalue = begin
280 0711 2
281 0712 2 local
282 0713 2 status: long,
283 0714 2 record_number: long,
284 0715 2 record_dsc: descriptor,
285 0716 2 scanp: ref block[,byte],
286 0717 2 type: byte;
287 0718 2
288 0719 2
289 0720 2 ! This is the main record analysis loop. We go through once for each record
290 0721 2 ! in the object file.
291 0722 2
292 0723 2 incru record_number from 1 do (
293 0724 2
294 0725 2 ! Get the next object record. If we reach end-of-file, we're done
295 0726 2 ! with this loop.
296 0727 2
297 0728 2 status = anl$get_object_record(record_dsc);
298 0729 2
299 0730 2 exitif (not .status);
300 0731 2
301 0732 2 ! See if there is a type code in the record. If not, that's an error.
302 0733 2
303 0734 3 scanp = .record_dsc[ptr];
304 0735 4 if .record_dsc[ten] gtru 0 then (
305 0736 4
306 0737 4 ! Now we know we have a record type, so we can see if the
307 0738 4 ! user wants to analyze it. If so, select on the type code.
308 0739 4 ! If not, just ignore it.
309 0740 4
310 0741 5 if .type_flag[.scanp[obj]$b_rectyp]] then (
311 0742 5

```

```
312 0743 5 selectoneu .scanp[obj$b_rectyp] of set
313 0744 5 [obj$c_hdr]: anl$object_hdr(.record_number,record_dsc);
314 0745 5
315 0746 5 [obj$c_gsd]: anl$object_gsd(.record_number,record_dsc);
316 0747 5
317 0748 5 [obj$c_tir,
318 0749 5 obj$c_dbg,
319 0750 5 obj$c_tbf]: anl$object_tir(.record_number,record_dsc);
320 0751 5
321 0752 5 [obj$c_eom,
322 0753 5 obj$c_eomw]: anl$object_eom(.record_number,record_dsc);
323 0754 5
324 0755 5 [obj$c_lnk]: anl$object_lnk(.record_number,record_dsc);
325 0756 5
326 0757 6 [otherwise]: (anl$format_error(anlobj$_objbadtype,.record_number,.scanp[obj$b_rec
327 0758 5 anl$format_hex(1,record_dsc));)
328 0759 5 tes;
329 0760 5
330 0761 5 ! Make sure that this record isn't longer than the
331 0762 5 ! maximum specified in the module header.
332 0763 5
333 0764 5 anl$object_record_size(.record_dsc[len]);
334 0765 5
335 0766 5 ! Skip a couple of lines to make it look nice.
336 0767 5
337 0768 5 anl$report_line(-1);
338 0769 5 anl$report_line(-1);
339 0770 5
340 0771 5 ! If this is an interactive session, let's find out if
341 0772 5 ! the user wants to continue or quit.
342 0773 5
343 0774 5 if .anl$gb_interactive then
344 0775 5 exitif (not anl$interact());
345 0776 5
346 0777 4 );
347 0778 4
348 0779 4 ) else (
349 0780 4
350 0781 4 ! There was no record type. Tell the user.
351 0782 4
352 0783 4 anl$format_error(anlobj$_objnullrec,.record_number);
353 0784 4 anl$report_line(-1);
354 0785 4 anl$report_line(-1);
355 0786 3 );
356 0787 3
357 0788 2 );
```

```

: 359 0789 2 ! We have read all the records of the object file. If we are still within
: 360 0790 2 ! a module, then an end-of-module record is missing. We have to force one
: 361 0791 2 ! so that various error checks can be made.
: 362 0792
: 363 0793 if .within_module then (
: 364 0794     anl$format_error(anlobj$_objeommissing);
: 365 0795     anl$object_eom();
: 366 0796     within_module = false;
: 367 0797 );
: 368 0798
: 369 0799 ! Now we can print the summary statistics on a new page.
: 370 0800
: 371 0801 anl$report_page();
: 372 0802 anl$object_statistics();
: 373 0803
: 374 0804 ! Tell the user how many errors were uncovered.
: 375 0805
: 376 0806 anl$error_count();
: 377 0807
: 378 0808 ! Finally, print the command line that was used to generate the report.
: 379 0809
: 380 0810 begin
: 381 0811 local
: 382 0812     local_described_buffer(command_line,80);
: 383 0813
: 384 0814 cli$get_value(describe('$LINE'),command_line);
: 385 0815 anl$format_line(0,0,anlobj$_anything,command_line);
: 386 0816 end;
: 387 0817
: 388 0818 return;
: 389 0819
: 390 0820 1 end;

```

```

.PSECT $PLITS$,NOWRT,NOEXE,2
45 4E 49 4C 24 000CC P.ABG: .ASCII \ $LINE\
000D1 .BLKB 3
00000005 000D4 P.ABF: .LONG 5
00000000' 000D8 .ADDRESS P.ABG

.PSECT $CODE$,NOWRT,2
007C 00000 .ENTRY ANL$OBJECT2, Save R2,R3,R4,R5,R6 : 0710
56 0000G CF 9E 00002 MOVAB ANL$FORMAT_ERROR, R6
55 0000G CF 9E 00007 MOVAB ANL$REPORT_LINE, R5
5E A0 AE 9E 0000C MOVAB -96(SP), SP
53 01 D0 00010 MOVL #1, RECORD_NUMBER : 0723
58 AE 9F 00013 1$: PUSHAB RECORD_DSC : 0728
0000G CF 01 FB 00016 CALLS #1, ANL$GET_OBJECT_RECORD
54 50 D0 0001B MOVL R0, STATUS
03 54 E8 0001E BLBS STATUS, 2$ : 0730
0001 31 00021 BRW 15$
52 5C AE D0 00024 2$: MOVL RECORD_DSC+4, SCANP : 0734

```


			1C	11	000D7	BRB	15\$		
			53	DD	000D9	PUSHL	RECORD_NUMBER	13\$:	0783
		00000000G	8F	DD	000DB	PUSHL	#ANLOBS OBJNULLREC		
66			02	FB	000E1	CALLS	#2, ANL\$FORMAT_ERROR		
7E			01	CE	000E4	MNEGL	#1, -(SP)		0784
65			01	FB	000E7	CALLS	#1, ANL\$REPORT_LINE		
7E			01	CE	000EA	MNEGL	#1, -(SP)		0785
65			01	FB	000ED	CALLS	#1, ANL\$REPORT_LINE		
			53	D6	000F0	INCL	RECORD_NUMBER	14\$:	0723
			FF	1E	31	BRW	1\$		
12		0000*	CF	E9	000F5	BLBC	WITHIN_MODULE, 16\$	15\$:	0793
		00000000G	8F	DD	000FA	PUSHL	#ANLOBS OBJEOMMISSING		0794
66			01	FB	00100	CALLS	#1, ANL\$FORMAT_ERROR		
0000G	CF		00	FB	00103	CALLS	#0, ANL\$OBJECT_EOM		0795
		0000*	CF	94	00108	CLRB	WITHIN_MODULE		0796
0000G	CF		00	FB	0010C	CALLS	#0, ANL\$REPORT_PAGE	16\$:	0801
0000V	CF		00	FB	00111	CALLS	#0, ANL\$OBJECT_STATISTICS		0802
0000G	CF		00	FB	00116	CALLS	#0, ANL\$ERROR_COUNT		0806
	6E	50	8F	9A	0011B	MOVZBL	#80, COMMAND_LINE		0812
04	AE	08	AE	9E	0011F	MOVAB	COMMAND_LINE+8, COMMAND_LINE+4		
			5E	DD	00124	PUSHL	SP		0814
		0000*	CF	9F	00126	PUSHAB	P,ABF		
00000000G	00		02	FB	0012A	CALLS	#2, CLISGET_VALUE		
			5E	DD	00131	PUSHL	SP		0815
		00000000G	8F	DD	00133	PUSHL	#ANLOBS_ANYTHING		
			7E	7C	00139	CLRQ	-(SP)		
0000G	CF		04	FB	0013B	CALLS	#4, ANL\$FORMAT_LINE		
			04	00	00140	RET			0820

; Routine Size: 321 bytes, Routine Base: \$CODE\$ + 012B

```
392 0821 1 %sbttl 'ANL$OBJECT_RECORD_LINE - Print Record Lines'
393 0822 1 **
394 0823 1 Functional Description:
395 0824 1 This routine is responsible for printing the major record line
396 0825 1 for each object record to be analyzed. Because of this, the
397 0826 1 routine gets a good summary of the object file. Thus it is also
398 0827 1 responsible for some simple checking of the order of records and
399 0828 1 some overall statistics.
400 0829 1
401 0830 1 Formal Parameters:
402 0831 1 record_msg The message code for the major record line.
403 0832 1 record_number The number of this record.
404 0833 1 the_record Address of descriptor of the record.
405 0834 1
406 0835 1 Implicit Inputs:
407 0836 1 global data
408 0837 1
409 0838 1 Implicit Outputs:
410 0839 1 global data
411 0840 1
412 0841 1 Returned Value:
413 0842 1 none
414 0843 1
415 0844 1 Side Effects:
416 0845 1
417 0846 1 --
418 0847 1
419 0848 1
420 0849 2 global routine anl$object_record_line(record_msg,record_number,the_record): novalue = begin
421 0850 2
422 0851 2 bind
423 0852 2 record_dsc = .the_record: descriptor;
424 0853 2
425 0854 2 local
426 0855 2 scanp: ref block[,byte],
427 0856 2 module_header: byte;
428 0857 2
429 0858 2
430 0859 2 ! The record is guaranteed to be at least one byte long. Therefore we can
431 0860 2 ! always print the record line.
432 0861 2
433 0862 2 anl$format_line(4,0,.record_msg,.record_number,.record_dsc[len]);
434 0863 2
435 0864 2 ! Now we want to check a little bit of the overall structure of the module
436 0865 2 ! Split up depending upon whether we are within a module or not.
437 0866 2
438 0867 2 scanp = .record_dsc[ptr];
439 0868 2 module_header = false;
440 0869 2 if .scanp[obj$b_rectyp] eqlu obj$c_hdr then
441 0870 2 if .record_dsc[len] gequ 2 then
442 0871 2 if .scanp[obj$b_subtyp] eqlu obj$c_hdr_mhd then
443 0872 2 module_header = true;
444 0873 2
445 0874 2 if not .within_module then (
446 0875 2
447 0876 2 ! We are not within a module, so this had better be a module header.
448 0877 2 ! If not tell the user.
```

```

: 449 0878 3
: 450 0879     if not .module_header then
: 451 0880     anl$format_error(anlobj$_objmhdmissing);
: 452 0881     within_module = true;
: 453 0882
: 454 0883 ) else (
: 455 0884
: 456 0885     ! We are within a module, so this had better not be a module header.
: 457 0886     ! If it is, tell the user.  If it is an end of module record, then
: 458 0887     ! we are done with the module.
: 459 0888
: 460 0889     if .module_header then
: 461 0890     anl$format_error(anlobj$_objeommissing)
: 462 0891     else
: 463 0892     within_module = not (.scanp[obj$b_rectyp] eqlu obj$c_eom or
: 464 0893     .scanp[obj$b_rectyp] eqlu obj$c_eomw);
: 465 0894 );
: 466 0895
: 467 0896 ! Now we can collect some statistics.  For each record type, we will count
: 468 0897 ! the number of such records and add up the number of bytes.
: 469 0898
: 470 0899 increment (record_count[.scanp[obj$b_rectyp]]);
: 471 0900 byte_total[.scanp[obj$b_rectyp]] = .byte_total[.scanp[obj$b_rectyp]] + .record_dsc[len];
: 472 0901
: 473 0902 return;
: 474 0903
: 475 0904 1 end;

```

			001C 00000	.ENTRY	ANL\$OBJECT_RECORD_LINE, Save R2,R3,R4	: 0849
	54	0000*	CF 9E 00002	MOVAB	WITHIN_MODULE, R4	: 0852
	53	0C	AC D0 00007	MOVL	THE_RECORD, R3	: 0862
	7E		63 3C 0000B	MOVZWL	(R3), -(SP)	
	7E	04	AC 7D 0000E	MOVQ	RECORD_MSG, -(SP)	
	7E		04 7D 00012	MOVQ	#4, -(SP)	
0000G	CF		05 FB 00015	CALLS	#5, ANL\$FORMAT_LINE	
	50	04	A3 D0 0001A	MOVL	4(R3), SCANP	: 0867
			51 94 0001E	CLRB	MODULE_HEADER	: 0868
	52		60 9A 00020	MOVZBL	(SCANP), R2	: 0869
			0D 12 00023	BNEQ	1\$	
	02		63 B1 00025	CMPW	(R3), #2	: 0870
			08 1F 00028	BLSSU	1\$	
		01	A0 95 0002A	TSTB	1(SCANP)	: 0871
			03 12 0002D	BNEQ	1\$	
	51		01 90 0002F	MOVB	#1, MODULE_HEADER	: 0872
	13		64 E8 00032 1\$:	BLBS	WITHIN_MODULE, 3\$: 0874
	0B		51 E8 00035	BLBS	MODULE_HEADER, 2\$: 0879
		00000000G	8F DD 00038	PUSHL	#ANLOBJ\$ OBJMHDMISSING	: 0880
0000G	CF		01 FB 0003E	CALLS	#1, ANL\$FORMAT_ERROR	
	64		01 90 00043 2\$:	MOVB	#1, WITHIN_MODULE	: 0881
			28 11 00046	BRB	7\$: 0874
	0D		51 E9 00048 3\$:	BLBC	MODULE_HEADER, 4\$: 0889
		00000000G	8F DD 0004B	PUSHL	#ANLOBJ\$ OBJEOMMISSING	: 0890
0000G	CF		01 FB 00051	CALLS	#1, ANL\$FORMAT_ERROR	

OBJDRIVE
V04-000

OBJDRIVE - Drive Analysis of Object Files
ANLSOBJECT_RECORD_LINE - Print Record Lines

G 5
15-Sep-1984 23:38:00
14-Sep-1984 11:52:46

VAX-11 Bliss-32 V4.0-742
[ANALYZ.SRC]OBJDRIVE.B32;1

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	18	11	00056		BRB	7\$		
	51	D4	00058	4\$:	CLRL	R1		0892
03	52	91	0005A		CMPB	R2, #3		
	02	12	0005D		BNEQ	5\$		
	51	D6	0005F		INCL	R1		
	50	D4	00061	5\$:	CLRL	R0		0893
07	52	91	00063		CMPB	R2, #7		
	02	12	00066		BNEQ	6\$		
	50	D6	00068		INCL	R0		
50	51	C8	0006A	6\$:	BISL2	R1, R0		
64	50	92	0006D		MCOMB	R0, WITHIN MODULE		0892
	04 A442	D6	00070	7\$:	INCL	RECORD_COUNTER[R2]		0899
50	63	3C	00074		MOVZWL	(R3), R0		0900
24 A442	50	C0	00077		ADDL2	R0, BYTE_TOTAL[R2]		
	04	0007C			RET			0904

; Routine Size: 125 bytes, Routine Base: \$CODE\$ + 026C

```
477 0905 1 %sbttl 'ANL$OBJECT_STATISTICS - Print Summary Statistics'
478 0906 1 **
479 0907 1 Functional Description:
480 0908 1 This routine is called to print the summary statistics with
481 0909 1 record counts and byte totals.
482 0910 1
483 0911 1 Formal Parameters:
484 0912 1 none
485 0913 1
486 0914 1 Implicit Inputs:
487 0915 1 global data
488 0916 1
489 0917 1 Implicit Outputs:
490 0918 1 global data
491 0919 1
492 0920 1 Returned Value:
493 0921 1 none
494 0922 1
495 0923 1 Side Effects:
496 0924 1
497 0925 1 --
498 0926 1
499 0927 1
500 0928 2 global routine anl$object_statistics: novalue = begin
501 0929 2
502 0930 2 own
503 0931 2 type_msg: vector[obj$c_maxrectyp+1,long] initial(
504 0932 2     uplit byte(%ascic 'HDR'),
505 0933 2     uplit byte(%ascic 'GSD'),
506 0934 2     uplit byte(%ascic 'TIR'),
507 0935 2     uplit byte(%ascic 'EOM'),
508 0936 2     uplit byte(%ascic 'DBG'),
509 0937 2     uplit byte(%ascic 'TBT'),
510 0938 2     uplit byte(%ascic 'LNK'),
511 0939 2     uplit byte(%ascic 'EOMW'));
512 0940 2
513 0941 2 local
514 0942 2     i: long,
515 0943 2     total_record_count: long,
516 0944 2     total_byte_total: long;
517 0945 2
518 0946 2
519 0947 2 ! First we print some heading lines.
520 0948 2
521 0949 2 anl$format_line(0,0,anlobj$_objstatheading1);
522 0950 2 anl$report_line(0);
523 0951 2 anl$format_line(0,0,anlobj$_objstatheading2);
524 0952 2 anl$report_line(0);
525 0953 2
526 0954 2 ! Now we loop through the statistics vectors and print a line for each one.
527 0955 2 ! We also total the record count and byte total.
528 0956 2
529 0957 2 total_record_count = total_byte_total = 0;
530 0958 2 incru i from 0 to obj$c_maxrectyp do (
531 0959 2     anl$format_line(0,0,anlobj$_objstatline,.type_msg[i],.record_count[i],.byte_total[i]);
532 0960 2     total_record_count = .total_record_count + .record_count[i];
533 0961 2     total_byte_total = .total_byte_total + .byte_total[i];
```

```

: 534 0962 2 );
: 535 0963
: 536 0964 ! Now we can print the totals.
: 537 0965
: 538 0966 anl$report_line(0);
: 539 0967 anl$format_line(0,0,anlobj$_objstattotal,.total_record_count,.total_byte_total);
: 540 0968 anl$report_line(0);
: 541 0969 anl$report_line(0);
: 542 0970
: 543 0971 ! Finally, clear the statistics vectors for the next module.
: 544 0972
: 545 0973 ch$fill(%x'00', %allocation(record_count),record_count);
: 546 0974 ch$fill(%x'00', %allocation(byte_total), byte_total);
: 547 0975
: 548 0976 return;
: 549 0977
: 550 0978 1 end;

```

.PSECT \$SPLITS,NOWRT,NOEXE,2											
52	44	48	03	000DC	P.ABH:	.ASCII	<3>\HDR\				
44	53	47	03	000E0	P.ABI:	.ASCII	<3>\GSD\				
52	49	54	03	000E4	P.ABJ:	.ASCII	<3>\TIR\				
4D	4F	45	03	000E8	P.ABK:	.ASCII	<3>\EOM\				
47	42	44	03	000EC	P.ABL:	.ASCII	<3>\DBG\				
54	42	54	03	000F0	P.ABM:	.ASCII	<3>\TBT\				
4B	4E	4C	03	000F4	P.ABN:	.ASCII	<3>\LNK\				
57	4D	4F	04	000F8	P.ABO:	.ASCII	<4>\EOMW\				

```

00000000* 00000000* 00000000* 00000000* 00000000* 00000000* 00173
00000000* 00000000* 00174 TYPE_MSG:
00000000* 00000000* 0018C

```

.PSECT \$OWNS,NOEXE,2

.BLK 1

.ADDRESS P.ABH, P.ABI, P.ABJ, P.ABK, P.ABL, -
P.ABM, P.ABN, P.ABO

.PSECT \$CODE\$,NOWRT,2

.ENTRY ANL\$OBJECT_STATISTICS, Save R2,R3,R4,R5,R6,-; 0928											
58	0000G	CF	9E	00002	MOVAB	ANL\$FORMAT_LINE, R8					
57	0000G	CF	9E	00007	MOVAB	ANL\$REPORT_LINE, R7					
56	0000*	CF	9E	0000C	MOVAB	BYTE TOTAL, R6					
	00000000G	8F	DD	00011	PUSHL	#ANL\$OBJ\$_OBJSTATHEADING1					0949
		7E	7C	00017	CLRQ	-(SP)					
68		03	FB	00019	CALLS	#3, ANL\$FORMAT_LINE					
		7E	D4	0001C	CLRL	-(SP)					0950
67		01	FB	0001E	CALLS	#1, ANL\$REPORT_LINE					
	00000000G	8F	DD	00021	PUSHL	#ANL\$OBJ\$_OBJSTATHEADING2					0951
		7E	7C	00027	CLRQ	-(SP)					
68		03	FB	00029	CALLS	#3, ANL\$FORMAT_LINE					
		7E	D4	00C2C	CLRL	-(SP)					0952
67		01	FB	0002E	CALLS	#1, ANL\$REPORT_LINE					

			53	7C	00031	CLRQ	TOTAL_BYTE_TOTAL	0957
			52	D4	00033	CLRL	I	0958
			6642	DD	00035	PUSHL	BYTE_TOTAL[I]	0959
		EO	A642	DD	00038	PUSHL	RECORD_COUNT[I]	
		0128	C642	DD	0003C	PUSHL	TYPE_MSG[I]	
		00000000G	8F	DD	00041	PUSHL	#ANL\$OBJ\$OBJSTATLINE	
			7E	7C	00047	CLRQ	-(SP)	
68			06	FB	00049	CALLS	#6, ANL\$FORMAT_LINE	
54		EO	A642	CO	0004C	ADDL2	RECORD_COUNT[I], TOTAL_RECORD_COUNT	0960
53			6642	CO	00051	ADDL2	BYTE_TOTAL[I], TOTAL_BYTE_TOTAL	0961
			52	D6	00055	INCL	I	0958
07			52	D1	00057	CMP	I, #7	
			D9	1B	0005A	BLEQU	I, #	
			7E	D4	0005C	CLRL	-(SP)	0966
67			01	FB	0005E	CALLS	#1, ANL\$REPORT_LINE	
			53	DD	00061	PUSHL	TOTAL_BYTE_TOTAL	0967
			54	DD	00063	PUSHL	TOTAL_RECORD_COUNT	
		00000000G	8F	DD	00065	PUSHL	#ANL\$OBJ\$OBJSTATTOTAL	
			7E	7C	0006B	CLRQ	-(SP)	
68			05	FB	0006D	CALLS	#5, ANL\$FORMAT_LINE	
			7E	D4	00070	CLRL	-(SP)	0968
67			01	FB	00072	CALLS	#1, ANL\$REPORT_LINE	
			7E	D4	00075	CLRL	-(SP)	0969
67			01	FB	00077	CALLS	#1, ANL\$REPORT_LINE	
20	00	6E	00	2C	0007A	MOVCS	#0, (SP), #0, #32, RECORD_COUNT	0973
			EO	A6	0007F			
20	00	6E	00	2C	00081	MOVCS	#0, (SP), #0, #32, BYTE_TOTAL	0974
			66		00086			
			04	00087		RET		0978

; Routine Size: 136 bytes, Routine Base: \$CODE\$ + 02E9

; 551 0979 1
; 552 0980 0 end eludom

PSECT SUMMARY

Name	Bytes	Attributes
\$GLOBALS	1	NOVEC, WRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$OWNS	404	NOVEC, WRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$SPLITS	253	NOVEC, NOWRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$CODE\$	881	NOVEC, NOWRT, RD, EXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

Library Statistics

file	----- Symbols -----		Pages Mapped	Processing Time
	Total	Loaded Percent		

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