


```

1 0001 0 MODULE LIB_DATABASE (           ! Data base for librarian command processor
2 0002 0                               LANGUAGE (BLISS32),
3 0003 0                               IDENT = 'V04-000'
4 0004 0                               ) =
5 0005 1 BEGIN
6 0006 1
7 0007 1
8 0008 1 *****
9 0009 1 *
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27 0027 1 *
28 0028 1 *
29 0029 1 *****
30 0030 1
31 0031 1 ++
32 0032 1
33 0033 1 FACILITY:  Library command processor
34 0034 1
35 0035 1 ABSTRACT:
36 0036 1
37 0037 1 The VAX/VMS librarian is invoked by DCL to process the LIBRARY
38 0038 1 command. It utilizes the librarian procedure set to perform
39 0039 1 the actual modifications to the library.
40 0040 1
41 0041 1 ENVIRONMENT:
42 0042 1
43 0043 1 VAX native, user mode.
44 0044 1
45 0045 1 --
46 0046 1
47 0047 1
48 0048 1 AUTHOR:  Benn Schreiber,           CREATION DATE:  12-June-1979
49 0049 1
50 0050 1 MODIFIED BY:
51 0051 1
52 0052 1 V03-001      GJA0071      Greg Awdziewicz      6-Mar-1984
53 0053 1 Allow text & shareable image libraries' keys to be as
54 0054 1 long as filenames.
55 0055 1
56 0056 1 V02-005      RPG0045      Bob Grosso           7-Aug-1981
57 0057 1 Support for /BEFORE and /SINCE

```

:	58	0058	1	:	lib\$gl_ctlmdk now a quadword
:	59	0059	1	:	
:	60	0060	1	:	V02-004
:	61	0061	1	:	RPG0044
:	62	0062	1	:	Bob Grosso
:	63	0063	1	:	21-Jul-1981
:	64	0064	1	:	Support tparsing of create/compress options.
:	65	0065	1	:	V02-003
:	66	0066	1	:	RPG0036
:	67	0067	1	:	Bob Grosso
:	68	0068	1	:	4-Jun-1981
:	69	0069	1	:	Modify create options for HISTORY.
:	70	0070	1	:	V02-002
:	71	0071	1	:	RPG0035
:	72	0072	1	:	Bob Grosso
:	73	0073	1	:	16-Apr-1981
:				:	Add listhead for update history module names.
:				:	V02-001
:				:	BLS0029
:				:	Benn Schreiber
:				:	23-Dec-1980
:				:	Add shareable image symbol table library

```

: 75 0074 1 LIBRARY 'SYSSLIBRARY:STARLET.L32'; !System data structures
: 76 0075 1 REQUIRE 'PREFIX'; !Macro definitions
: 77 0076 1 REQUIRE 'LIBDEF'; !Librarian structure defs.
: 78 0077 1 REQUIRE 'LBRDEF'; !Library processor defs.
: 79 0261 1
: 80 0262 1
: 81 0550 1
: 82 0551 1
: 83 1142 1
: 84 1143 1 EXTERNAL ROUTINE
: 85 1144 1 lib_delete_obj, !Delete an object module
: 86 1145 1 lib_delete_mac, !Delete a macro module
: 87 1146 1 lib_delete_hlp, !Delete a help module
: 88 1147 1 lib_delete_txt, !Delete a text module
: 89 1148 1 lib_input_obj, !Input an object file
: 90 1149 1 lib_input_mac, !Input a macro file
: 91 1150 1 lib_input_hlp, !Input a help file
: 92 1151 1 lib_input_txt; !Input a text file
: 93 1152 1
: 94 1153 1 ! Global data
: 95 1154 1
: 96 1155 1 GLOBAL
: 97 1156 1 lib$before_date : BLOCK [2], !date from /BEFORE
: 98 1157 1 lib$since_date : BLOCK [2], !date from /SINCE
: 99 1158 1 lib$al_rab : $RAB () !RAB for I/O
: 100 1159 1 lib$gl_modnamix : INITIAL (1), !Index number for module names
: 101 1160 1 lib$gl_objgsdix : INITIAL (2), !Index number for object gsd names
: 102 1161 1 lib$gl_recount, !Count of records inserted
: 103 1162 1 lib$gl_keysize, !Max length of keys in current library
: 104 1163 1 lib$gl_listwid, !Width of listing line from /WIDTH
: 105 1164 1 lib$gl_libctl, !Library control index
: 106 1165 1 lib$gl_ctlmsk : BLOCK [2], !Librarian control mask
: 107 1166 1 lib$gl_tmprfdb : REF BBLOCK, !Temporary FDB pointer
: 108 1167 1 lib$gl_libfdb : REF BBLOCK, !Pointer to library FDB
: 109 1168 1 lib$gl_outfdb : REF BBLOCK, !Pointer to output FDB
: 110 1169 1 lib$gl_inpfdb : REF BBLOCK, !Pointer to current input FDB
: 111 1170 1 lib$gl_inplst : REF BBLOCK, !Pointer to input list FDB's
: 112 1171 1 lib$gl_lisfdb : REF BBLOCK, !Pointer to listing file FDB
: 113 1172 1 lib$gl_modupdl : VECTOR [2], !Listhead for library update history module list
: 114 1173 1 lib$gl_modlisl : VECTOR [2], !Listhead for "list only" module list
: 115 1174 1 lib$gl_modxtrl : VECTOR [2], !Listhead for module extraction list
: 116 1175 1 lib$gl_objsyrl : VECTOR [2], !Listhead for symbols to remove from
: 117 1176 1 ! object library
: 118 1177 1 lib$gl_delmodl : VECTOR [2], !Listhead for module names to delete
: 119 1178 1 lib$gl_cre8flags, !Flags bitvector indicates which options set by create
: 120 1179 1 lib$al_creopts : VECTOR [6, LONG] !Options specifiable with /CREATE
: 121 1180 1 INITIAL (lib$c_defblks, !number of blocks
: 122 1181 1 lib$c_defgbls, !number of global symbols (object libraries)
: 123 1182 1 lib$c_defmods, !number of module names
: 124 1183 1 0, !keysize
: 125 1184 1 lib$c_defluhrec, !number of library update history records
: 126 1185 1 lib$c_defvertyp), !version number of library
: 127 1186 1
: 128 1187 1 ! Table of month names as pointers to ASCII strings
: 129 1188 1
: 130 1189 1 lib$al_months : VECTOR [12, LONG] INITIAL
: 131 1190 1 (CSTRING ('JAN'),
```

```
132 1191 1 CSTRING ('FEB'),
133 1192 1 CSTRING ('MAR'),
134 1193 1 CSTRING ('APR'),
135 1194 1 CSTRING ('MAY'),
136 1195 1 CSTRING ('JUN'),
137 1196 1 CSTRING ('JUL'),
138 1197 1 CSTRING ('AUG'),
139 1198 1 CSTRING ('SEP'),
140 1199 1 CSTRING ('OCT'),
141 1200 1 CSTRING ('NOV'),
142 1201 1 CSTRING ('DEC')),
143 1202 1
144 1203 1 :
145 1204 1 : Default filename extensions for input files of different library types
146 1205 1 : (***** DO NOT CHANGE THE ORDER OF THE FOLLOWING*****)
147 1206 1 :
148 1207 1 lib_obj_defext : BBLOCK [dsc% s_bln * 2] !String descriptor for object library
149 1208 1 INITIAL (STRINGDESC (?'.OLB'),
150 1209 1 STRINGDESC ('.OBJ')),
151 1210 1 lib_mac_defext : BBLOCK [dsc% s_bln * 2] !String descriptor for macro library
152 1211 1 INITIAL (STRINGDESC (?'.MLB'),
153 1212 1 STRINGDESC ('.MAR')),
154 1213 1 lib_hlp_defext : BBLOCK [dsc% s_bln * 2] !String descriptor for help library
155 1214 1 INITIAL (STRINGDESC (?'.HLB'),
156 1215 1 STRINGDESC ('.HLP')),
157 1216 1 lib_txt_defext : BBLOCK [dsc% s_bln * 2] !String descriptor for text library
158 1217 1 INITIAL (STRINGDESC (?'.TLB'),
159 1218 1 STRINGDESC ('.TXT')),
160 1219 1 lib_shr_defext : BBLOCK [dsc% s_bln * 2] !String descriptor for shareable
161 1220 1 INITIAL (STRINGDESC (?'.OLB'),
162 1221 1 STRINGDESC ('.EXE')),
163 1222 1 :
164 1223 1 : Other global data
165 1224 1 lib$al_tynames : VECTOR [lbr% typ_decmx + 2, LONG] !Names of library types
166 1225 1 INITIAL (CSTRING ('ONKNOWN'),
167 1226 1 CSTRING ('OBJECT'),
168 1227 1 CSTRING ('MACRO'),
169 1228 1 CSTRING ('HELP'),
170 1229 1 CSTRING ('TEXT'),
171 1230 1 CSTRING ('SHAREABLE IMAGE SYMBOL TABLE'),
172 1231 1 CSTRING ('USER DEFINED')),
173 1232 1 lib$gl_type, !type of library (from command)
174 1233 1 lib$al_ascbinf : VECTOR [lbr% typ_decmx + 1, LONG] !Binary/ASCII index flags
175 1234 1 INITIAL (0, !0 - not used
176 1235 1 sym% maxlng, !Object libraries
177 1236 1 sym% maxlng, !Macro libraries
178 1237 1 lib% shortsym, !Help text libraries
179 1238 1 lib% filename_length, !TEXT libraries
180 1239 1 lib% filename_length), !Shr img symbol table libraries
181 1240 1 lib$al_hdrlen : VECTOR [lbr% typ_decmx + 1, LONG] !Mod. hdr. extra data length
182 1241 1 INITIAL (0, sym% maxlng + 2, 0, 0, 0, sym% maxlng+2),
183 1242 1 lib$al_idxopt : VECTOR [lbr% typ_decmx + 1, LONG] !Index options
184 1243 1 INITIAL (0, cre% objcasng, cre% mactxtcas, cre% hlpcasing,
185 1244 1 cre% mactxtcas, cre% objcasng), ! Unused, object, macro, hlp, text, shstb
186 1245 1 lib$al_numidx : VECTOR [lbr% typ_decmx + 1, LONG] !Number of indices
187 1246 1 INITIAL (0, 2, 1, 1, 1, 2); !Unused,object,macro,hlp,TEXT,shr stb
188 1247 1 GLOBAL BIND
```

```

189 1248 1 lib$al_inpdspat = PLIT (
190 1249 1 0, ! 0 - not used
191 1250 1 lib_input_obj, ! object
192 1251 1 lib_input_mac, ! macro
193 1252 1 lib_input_hlp, ! help
194 1253 1 lib_input_txt, ! TEXT
195 1254 1 lib_input_obj, ! Shareable image stb
196 1255 1 )
197 1256 1 lib$al_deldspat = PLIT (
198 1257 1 0, ! not used
199 1258 1 lib_delete_obj, ! object
200 1259 1 lib_delete_mac, ! macro
201 1260 1 lib_delete_hlp, ! help
202 1261 1 lib_delete_txt, ! text
203 1262 1 lib_delete_obj, ! Shareable image stb
204 1263 1 )
205 1264 1 lib$gl_allblks = lib$al_creopts [lib$c_opt_blks], ! Number of blocks to allocate for file
206 1265 1 lib$gl_allgbls = lib$al_creopts [lib$c_opt_gbls], ! Number of global symbols to allocate
207 1266 1 lib$gl_allmods = lib$al_creopts [lib$c_opt_mods], ! Number of modules to allocate
208 1267 1 lib$gl_allksz = lib$al_creopts [lib$c_opt_ksz], ! Key size of entries
209 1268 1 lib$gl_allhfs = lib$al_creopts [lib$c_opt_luhs], ! Number of library update history records
210 1269 1 lib$gl_allver = lib$al_creopts [lib$c_opt_ver], ! Version type of library
211 1270 1 lib$gl_objmodix = lib$gl_modnamix, ! object module name index
212 1271 1 lib$gl_macmodix = lib$gl_modnamix, ! macro module name index
213 1272 1 lib$gl_hlpmodix = lib$gl_modnamix, ! help module name index
214 1273 1 lib$gl_txtmodix = lib$gl_modnamix; ! text module name index
215 1274 1
216 1275 1 END ! Of module
217 1276 0 ELUDOM

```

```

.TITLE LIB_DATABASE
.IDENT \V04-000\
.PSECT $SPLITS,NOWRT,NOEXE,2

```

4E	41	03	00000	P.AAA:	.BYTE	3
		4A	00001		.ASCII	\JAN\
		03	00004	P.AAB:	.BYTE	3
42	45	46	00005		.ASCII	\FEB\
		03	00008	P.AAC:	.BYTE	3
52	41	4D	00009		.ASCII	\MAR\
		03	0000C	P.AAD:	.BYTE	3
52	50	41	0000D		.ASCII	\APR\
		03	00010	P.AAE:	.BYTE	3
59	41	4D	00011		.ASCII	\MAY\
		03	00014	P.AAF:	.BYTE	3
4E	55	4A	00015		.ASCII	\JUN\
		03	00018	P.AAG:	.BYTE	3
4C	55	4A	00019		.ASCII	\JUL\
		03	0001C	P.AAH:	.BYTE	3
47	55	41	0001D		.ASCII	\AUG\
		03	00020	P.AAI:	.BYTE	3
50	45	53	00021		.ASCII	\SEP\
		03	00024	P.AAJ:	.BYTE	3
54	43	4F	00025		.ASCII	\OCT\
		03	00028	P.AAK:	.BYTE	3

```

56 4F 4E 00029 .ASCII \NOV\
      03 0002C P.AAL: .BYTE 3
43 45 44 0002D .ASCII \DEC\
42 4C 4F 2E 00030 P.AAM: .ASCII \.OLB\
4A 42 4F 2E 00034 P.AAN: .ASCII \.OBJ\
42 4C 4D 2E 00038 P.AAO: .ASCII \.MLB\
52 41 4D 2E 0003C P.AAP: .ASCII \.MAR\
42 4C 48 2E 00040 P.AAQ: .ASCII \.HLB\
50 4C 48 2E 00044 P.AAR: .ASCII \.HLP\
42 4C 54 2E 00048 P.AAS: .ASCII \.TLB\
54 58 54 2E 0004C P.AAT: .ASCII \.TXT\
42 4C 4F 2E 00050 P.AAU: .ASCII \.OLB\
45 58 45 2E 00054 P.AAV: .ASCII \.EXE\
      07 00058 P.AAW: .BYTE 7
4E 57 4F 4E 4B 4E 55 00059 .ASCII \UNKNOWN\
      06 00060 P.AAX: .BYTE 6
54 43 45 4A 42 4F 00061 .ASCII \OBJECT\
      05 00067 P.AAY: .BYTE 5
      4F 52 43 41 4D 00068 .ASCII \MACRO\
      04 0006D P.AAZ: .BYTE 4
      50 4C 45 48 0006E .ASCII \HEL\
      04 00072 P.ABA: .BYTE 4
      54 58 45 54 00073 .ASCII \TEXT\
      1C 00077 P.ABB: .BYTE 28
45 47 41 4D 49 20 45 4C 42 41 45 52 41 48 53 00078 .ASCII \SHAREABLE IMAGE SYMBOL TABLE\
      45 4C 42 41 54 20 4C 4F 42 4D 59 53 20 00087
      0C 00094 P.ABC: .BYTE 12
      44 45 4E 49 46 45 44 20 52 45 53 55 00095 .ASCII \USER DEFINED\
      000A1 .BLKB 3
      00000006 000A4 .LONG 6
      00000000 000A8 P.ABD: .LONG 0
00000000G 00000000G 00000000G 00000000G 00000000G 000AC .ADDRESS LIB_INPUT_OBJ, LIB_INPUT_MAC, -
      LIB_INPUT_RLP, LIB_INPUT_TXT, -
      LIB_INPUT_OBJ
      00000006 000C0 .LONG 6
      00000000 000C4 P.ABE: .LONG 0
00000000G 00000000G 00000000G 00000000G 00000000G 000C8 .ADDRESS LIB_DELETE_OBJ, LIB_DELETE_MAC, -
      LIB_DELETE_RLP, LIB_DELETE_TXT, -
      LIB_DELETE_OBJ
      .PSECT $GLOBAL$,NOEXE,2
0000 LIB$BEFORE_DATE::
      .BLKB 8
00008 LIB$SINCE_DATE::
      .BLKB 8
01 00010 LIB$AL_RAB::
      .BYTE 1
      44 00011 .BYTE 68
      0000 00012 .WORD 0
00000000 00014 .LONG 0
00000000 00018 .LONG 0
00000000 0001C .LONG 0
      0000# 00020 .WORD 0[3]
      0000 00026 .WORD 0
00000000 00028 .LONG 0
      0000 0002C .WORD 0

```

: R


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00000000' 00000000' 00000000' 00000000' 00000000' 00000000' 000E8      P.AAF, P.AAG, P.AAH, P.AAI, P.AAJ, P.AAK, - ;
                                                    P.AAL ;
00000004 00100 LIB_OBJ_DEFE XT:: ;
                .LONG 4 ;
00000000' 00104                .ADDRESS P.AAM ;
00000004 00108                .LONG 4 ;
00000000' 0010C                .ADDRESS P.AAN ;
00000004 00110 LIB_MAC_DEFE XT:: ;
                .LONG 4 ;
00000000' 00114                .ADDRESS P.AAO ;
00000004 00118                .LONG 4 ;
00000000' 0011C                .ADDRESS P.AAP ;
00000004 00120 LIB_HLP_DEFE XT:: ;
                .LONG 4 ;
00000000' 00124                .ADDRESS P.AAQ ;
00000004 00128                .LONG 4 ;
00000000' 0012C                .ADDRESS P.AAR ;
00000004 00130 LIB_TXT_DEFE XT:: ;
                .LONG 4 ;
00000000' 00134                .ADDRESS P.AAS ;
00000004 00138                .LONG 4 ;
00000000' 0013C                .ADDRESS P.AAT ;
00000004 00140 LIB_SHR_DEFE XT:: ;
                .LONG 4 ;
00000000' 00144                .ADDRESS P.AAU ;
00000004 00148                .LONG 4 ;
00000000' 0014C                .ADDRESS P.AAV ;
00000000' 00150 LIB$AL_TYPNAMES:: ;
                .ADDRESS P.AAW, P.AAX, P.AAY, P.AAZ, P.ABA, - ;
                P.ABB, P.ABC ;
00000000' 00168 LIB$GL_TYPE:: ;
0016C                .BLKB 4 ;
00000027 00000027 0000000F 0000001F 0000001F 00000000 00170 LIB$AL_ASCBINF:: ;
                .LONG 0, 31, 31, 15, 39, 39 ;
00000021 00000000 00000000 00000000 00000021 00000000 00188 LIB$AL_HDRLEN:: ;
                .LONG 0, 33, 0, 0, 0, 33 ;
00000003 00000000 00000006 00000000 00000003 00000000 001A0 LIB$AL_IDXOPT:: ;
                .LONG 0, 3, 0, 6, 0, 3 ;
00000002 00000001 00000001 00000001 00000002 00000000 001B8 LIB$AL_NUMIDX:: ;
                .LONG 0, 2, 1, 1, 1, 2 ;

```

```

LIB$AL_INPDSPAT== P.ABD
LIB$AL_DELDSPAT== P.ABE
LIB$GL_ALLBLKS== LIB$AL_CREOPTS
LIB$GL_ALLGBLS== LIB$AL_CREOPTS+4
LIB$GL_ALLMODS== LIB$AL_CREOPTS+8
LIB$GL_ALLKSZ== LIB$AL_CREOPTS+12
LIB$GL_ALLHIS== LIB$AL_CREOPTS+16
LIB$GL_ALLVER== LIB$AL_CREOPTS+20
LIB$GL_OBJMODIX== LIB$GL_MODNAMIX
LIB$GL_MACMODIX== LIB$GL_MODNAMIX
LIB$GL_HLPMODIX== LIB$GL_MODNAMIX
LIB$GL_TXTMODIX== LIB$GL_MODNAMIX
.EXTRN LIB_DELETE_OBJ, LIB_DELETE_MAC
.EXTRN LIB_DELETE_HLP, LIB_DELETE_TXT
.EXTRN LIB_INPUT_OBJ, LIB_INPUT_MAC
.EXTRN LIB_INPUT_HLP, LIB_INPUT_TXT

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PSECT SUMMARY

Name	Bytes	Attributes
\$GLOBALS	464	NOVEC, WRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)
\$SPLITS	220	NOVEC, NOWRT, RD, NOEXE, NOSHR, LCL, REL, CON, NOPIC, ALIGN(2)

Library Statistics

File	Symbols		Pages Mapped	Processing Time
	Total	Loaded Percent		
_\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	35 0	581	00:01.0

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LISS:DATABASE/OBJ=OBJ\$:DATABASE MSRCS:DATABASE/UPDATE=(ENHS:DATABASE)

: Size: 0 code + 684 data bytes
: Run Time: 00:16.4
: Elapsed Time: 00:34.7
: Lines/CPU Min: 4668
: Lexemes/CPU-Min: 54629
: Memory Used: 149 pages
: Compilation Complete

