


```

000000  PPPPPPP  CCCCCCCC  000000  MM      MM  DDDDDDDD  AAAAAA  TTTTTTTTTT  AAAAAA
000000  PPPPPPP  CCCCCCCC  000000  MM      MM  DDDDDDDD  AAAAAA  TTTTTTTTTT  AAAAAA
00      00  PP      PP  CC      CC  00      00  MMMM  MMMM  DD      DD  AA      AA  TT      TT  AA      AA
00      00  PP      PP  CC      CC  00      00  MMMM  MMMM  DD      DD  AA      AA  TT      TT  AA      AA
00      00  PP      PP  CC      CC  00      00  MM  MM  MM  DD      DD  AA      AA  TT      TT  AA      AA
00      00  PP      PP  CC      CC  00      00  MM  MM  MM  DD      DD  AA      AA  TT      TT  AA      AA
00      00  PPPPPPP  CC      CC  00      00  MM  MM  MM  DD      DD  AA      AA  TT      TT  AA      AA
00      00  PPPPPPP  CC      CC  00      00  MM  MM  MM  DD      DD  AA      AA  TT      TT  AA      AA
00      00  PP      CC      CC  00      00  MM  MM  MM  DD      DD  AAAAAAAAAA  TT      TT  AAAAAAAAAA
00      00  PP      CC      CC  00      00  MM  MM  MM  DD      DD  AAAAAAAAAA  TT      TT  AAAAAAAAAA
00      00  PP      CC      CC  00      00  MM  MM  MM  DD      DD  AA      AA  TT      TT  AA      AA
00      00  PP      CC      CC  00      00  MM  MM  MM  DD      DD  AA      AA  TT      TT  AA      AA
000000  PP      CCCCCCCC  000000  MM  MM  DDDDDDDD  AA      AA  TT      TT  AA      AA
000000  PP      CCCCCCCC  000000  MM  MM  DDDDDDDD  AA      AA  TT      TT  AA      AA

```

```

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 MODULE OPC$OPCOMDATA(
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 |*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY |*|
10 0010 1 |*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS. |*|
11 0011 1 |*  ALL RIGHTS RESERVED. |*|
12 0012 1 |*|
13 0013 1 |*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED |*|
14 0014 1 |*  ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE |*|
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16 0016 1 |*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY |*|
17 0017 1 |*  OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY |*|
18 0018 1 |*  TRANSFERRED. |*|
19 0019 1 |*|
20 0020 1 |*  THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE |*|
21 0021 1 |*  AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT |*|
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25 0025 1 |*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL. |*|
26 0026 1 |*|
27 0027 1 |*|
28 0028 1 |*****|
29 0029 1
30 0030 1 ++
31 0031 1 Facility:
32 0032 1
33 0033 1     OPCOM
34 0034 1
35 0035 1 Abstract:
36 0036 1
37 0037 1     This module contains the definitions of the data structures used
38 0038 1     by OPCOM. All global variables and constants are defined here.
39 0039 1
40 0040 1 Environment:
41 0041 1
42 0042 1     VAX/VMS operating system
43 0043 1
44 0044 1 Author:
45 0045 1
46 0046 1     Steven T. Jeffreys
47 0047 1
48 0048 1 Creation date:
49 0049 1
50 0050 1     December 16, 1980
51 0051 1
52 0052 1 Revision history:
53 0053 1
54 0054 1     V03-004 CWH3169          CW Hobbs          5-May-1984
55 0055 1     Second pass for cluster-wide OPCOM:
56 0056 1     - Add BYPASS_PRIV mask
57 0057 1     - Change timer delta from 15 seconds to 5 minutes
    
```

```

58      0058 1  - Add SYI_SWPOUTPGCNT and LOGTIME_COUNTER, reorder data
59      0059 1
60      0060 1  V03-003 CWH3003      CW Hobbs      16-Sep-1983
61      0061 1      Add an audit trail
62      0062 1
63      0063 1  V03-002 CWH3001      CW Hobbs      30-Jul-1983
64      0064 1      Various and sundry things to make OPCOM distributed
65      0065 1      across the cluster.
66      0066 1
67      0067 1  V03-001 STJ3030      Steven T. Jeffreys,      05-Oct-1982
68      0068 1      - Added list head for implicitly canceled requests.
69      0069 1      - Defined FLUSH_PENDING global status flag.
70      0070 1
71      0071 1  V02-004 STJ0220      Steven T. Jeffreys,      17-Feb-1982
72      0072 1      - Added list head for implicitly disabled operators.
73      0073 1
74      0074 1  V02-003 STJ0158      Steven T. Jeffreys,      8-Feb-1982
75      0075 1      - Increased time stamp wait time to 5 minutes.
76      0076 1
77      0077 1  V02-002 STJ0081      Steven T. Jeffreys,      2-Aug-1981
78      0078 1      Changed default logfile name to SYS$MANAGER:OPERATOR.LOG.
79      0079 1
80      0080 1  --
81      0081 1
82      0082 1  LIBRARY 'SYS$LIBRARY:LIB.L32';
83      0083 1  LIBRARY 'LIB$:OPCOMLIB';
84      0084 1
85      0085 1
86      0086 1  NOTE: Global storage is arranged to improve page faulting behaviour. The
87      0087 1  following order is attempted:
88      0088 1      - data used only during initialization
89      0089 1      - infrequently used data
90      0090 1      - frequently used data
91      0091 1
92      0092 1  GLOBAL
93      0093 1
94      0094 1  OPRENABLE message used by OPCOM_INIT to enable
95      0095 1  the default operator terminal, OPA0. The message
96      0096 1  is not broadcasted.
97      0097 1
98      0098 1  MSG1      : $bblock [OPCSK COMHDRSIZ+31]      : OPA0 ENABLE request
99      0099 1      INITIAL (WORD (MSG$_OPRST),      : Message type code
100     0100 1      WORD (0),      : No reply mailbox
101     0101 1      LONG (-1),      : Privilege mask
102     0102 1      LONG (-1),      : Privilege mask
103     0103 1      LONG (X'010004'),      : Sender OIC = [1,4]
104     0104 1      LONG (%ASCII'SYST'),      : Username = 'SYSTEM'
105     0105 1      LONG (%ASCII'EM '),      :
106     0106 1      LONG (%ASCII' '),      :
107     0107 1      LONG (%ASCII'SYST'),      : Account = 'SYSTEM'
108     0108 1      LONG (%ASCII'EM '),      :
109     0109 1      BYTE (4),      : Base priority
110     0110 1      BYTE (0),      : Unused
111     0111 1
112     0112 1      BYTE (OPCS X OPRENABLE),      : Set request code
113     0113 1      BYTE (OPCSR_SYSTEM),      : Set scope to SYSTEM
114     0114 1      LONG (OPCSM_NOBRD),      : Do not broadcast this message

```

```

115 0115 1 LONG (OPCSM_PERMOPER), ! Make OPA0 a permanent operator
116 0116 1 LONG (KNOWN_ATTEN_MASK1), ! Receive all requests
117 0117 1 LONG (KNOWN_ATTEN_MASK2),
118 0118 1 LONG (1), ! Set request ID
119 0119 1 LONG (0), ! UIC
120 0120 1 BYTE (4), ! Character count
121 0121 1 LONG (%ASCII'OPA0'), ! Operator device name
122 0122 1 )
123 0123 1 OPA0_ENABLE_MSG : $bblock [DSC$K S BLN] ! Descriptor for OPA0 enable request
124 0124 1 INITIAL (LONG (OPCSK_COMHDRSIZ+31), LONG (MSG1)),
125 0125 1
126 0126 1
127 0127 1 LOGFILE_INIT message used by OPCOM_INIT to
128 0128 1 initialize the system operator log file.
129 0129 1
130 0130 1 MSG2 : $bblock [OPCSK_COMHDRSIZ+31] ! LOGFILE INIT request
131 0131 1 INITIAL (WORD (MSG$_OPRST), ! Message type code
132 0132 1 WORD (0), ! No reply mailbox
133 0133 1 LONG (-1), ! Privilege mask
134 0134 1 LONG (-1), ! Privilege mask
135 0135 1 LONG (%X'010004'), ! Sender UIC = [1,4]
136 0136 1 LONG (%ASCII'SYST'), ! Username = 'SYSTEM'
137 0137 1 LONG (%ASCII'EM '),
138 0138 1 LONG (%ASCII' '),
139 0139 1 LONG (%ASCII'SYST'), ! Account = 'SYSTEM'
140 0140 1 LONG (%ASCII'EM '),
141 0141 1 BYTE (4), ! Base priority
142 0142 1 BYTE (0), ! Unused
143 0143 1
144 0144 1 BYTE (OPCS X LOGFILE), ! Set request code
145 0145 1 BYTE (OPCSR_SYSTEM), ! Set scope to SYSTEM
146 0146 1 LONG (0),
147 0147 1 LONG (OPCSM_INITLOG), ! Initialize the logfile
148 0148 1 LONG (OPCSM_NM_CENTRL), ! Notify CENTRAL operators
149 0149 1 LONG (0), ! Unused
150 0150 1 LONG (2), ! Request ID
151 0151 1 LONG (0), ! UIC
152 0152 1 BYTE (4), ! Character count
153 0153 1 LONG (%ASCII'OPA0'), ! Operator device name
154 0154 1 )
155 0155 1 LOGFILE_MSG : $bblock [DSC$K S BLN] ! Descriptor for LOGFILE INIT request
156 0156 1 INITIAL (LONG (OPCSK_COMHDRSIZ+31), LONG (MSG2)),
157 0157 1
158 0158 1
159 0159 1
160 0160 1
161 0161 1
162 0162 1 Define RMS control structures for the logfile.
163 0163 1
164 0164 1 LOGFILE_RES : VECTOR [NAM$C_MAXRSS, BYTE], ! Result name string
165 0165 1 LOGFILE_NAM : $NAM (
166 0166 1 RSA=LOGFILE_RES, ! Result buffer address
167 0167 1 RSS=NAM$C_MAXRSS ! Result buffer length
168 0168 1 )
169 0169 1 LOGFILE_FAB : $FAB (
170 0170 1 FAC=(PUT), ! WRITE access only
171 0171 1 RAT=CR, ! Record Attributes

```

```

172 P 0172 1
173 P 0173 1
174 P 0174 1
175 P 0175 1
176 P 0176 1
177 P 0177 1
178 P 0178 1
179 P 0179 1
180 P 0180 1
181 P 0181 1
182 P 0182 1
183 P 0183 1
184 P 0184 1
185 P 0185 1
186 P 0186 1
187 P 0187 1
188 P 0188 1
189 P 0189 1
190 P 0190 1
191 P 0191 1
192 P 0192 1
193 P 0193 1
194 P 0194 1
195 P 0195 1
196 P 0196 1
197 P 0197 1
198 P 0198 1
199 P 0199 1
200 P 0200 1
201 P 0201 1
202 P 0202 1
203 P 0203 1
204 P 0204 1
205 P 0205 1
206 P 0206 1
207 P 0207 1
208 P 0208 1
209 P 0209 1
210 P 0210 1
211 P 0211 1
212 P 0212 1
213 P 0213 1
214 P 0214 1
215 P 0215 1
216 P 0216 1
217 P 0217 1
218 P 0218 1
219 P 0219 1
220 P 0220 1
221 P 0221 1
222 P 0222 1
223 P 0223 1
224 P 0224 1
225 P 0225 1
226 P 0226 1
227 P 0227 1
228 P 0228 1

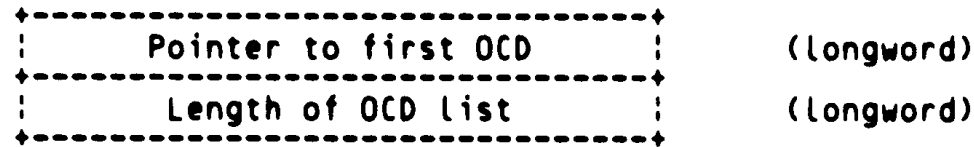
```

```

ORG=SEQ,           ! Sequential file
RFM=VAR,           ! Variable length records
NAM=LOGFILE_NAM,  ! Name block
FNM='SYS$MANAGER:OPERATOR.LOG'
),
LOGFILE_RAB       : $RAB (
    FAB=LOGFILE_FAB
),

```

The following data structure is vector of list headers for each class of operator. The format of the list head is:



There is one such entry for each class of operator, SYSTEM, GROUP, and USER, as well as a spare entry at the end of the vector. The list pointed to by the list header is a doubly linked list of OCD data structures.

```

OCD_VECTOR       : VECTOR [8, LONG],

```

Various and sundry useful variables.

```

DISABLED_OPER_Q : VECTOR [2]           ! List head
                  INITIAL (DISABLED_OPER_Q, DISABLED_OPER_Q),
CANCELED_RQST_Q : VECTOR [2]         ! List head
                  INITIAL (CANCELED_RQST_Q, CANCELED_RQST_Q),
UNKNOWN_MESSAGE_COUNT : LONG,        ! Count of unknown message types received
REQUEST_NUMBER   : LONG,             ! Current request number
NEXT_SEQUENCE    : LONG,             ! Sequence returned by CLUSUTIL_NEXT_SEQUENCE
OPER_MBX_CHAN    : WORD,             ! Channel to MBA2
OPER_IDENT_NUM   : WORD,             ! Current oper ident
OPER_MBX_NAME    : $string_desc ('MBA2:'), ! String descriptor
DEVICE_FAO       : $string_desc ('TAC!UW'), ! Device FAO control string
MBX_FAO          : $string_desc ('MB!UW'), ! FAO control string
LOGFILE_OPEN     : LONG,             ! Boolean
BYPASS_PRIV      : $bblock [8]       ! Mask to enable or clear BYPASS priv
PRESET ([PRV$V_BYPASS] = 1),
LCL_NODENAME     : $desc_block;      ! Local nodename (DECnet or VAXcluster)

```

Define segments for cluster data, most have no meaning unless GBLSTS_K_IN_VAXcluster is true.

```

GLOBAL
SEQ_WIDTH_DEF    : _LONG INITIAL (2+8), ! Eight bits for index, two for sequence
SEQ_WIDTH        : LONG,               ! Width of seed
SEQ_SEED         : LONG,               ! 12 bit seed to make unique sequence numbers
LCL_CSID         : LONG,               ! CSID for the local node
LCL_NOD          : $ref_bblock,        ! Pointer to NOD block for local node
NOD_HEAD        : VECTOR [2, LONG]     ! Queue header for all node blocks

```

```

229 0229 1 INITIAL (NOD_HEAD, NOD_HEAD);
230 0230 1
231 0231 1 GLOBAL BIND
232 0232 1 WAIT_DELTA = UPLIT (5 * 60 * -1000000, -1);! Wait time for timer AST (5 minutes)
233 0233 1
234 0234 1 GLOBAL
235 0235 1 SYI_SWPOUTPGCNT : LONG, ! Swap out page count
236 0236 1 LOGTIME_COUNTER : LONG INITIAL (100), ! Used to stamp logfile every so many timestamps,
237 0237 1 ! initial to large # so first time it stamps.
238 0238 1
239 0239 1 ! Define the global status bitvector. It is used to maintain status info global to all of OPCOM.
240 0240 1
241 0241 1 GLOBAL_STATUS : BITVECTOR [32];
242 0242 1
243 0243 1
244 0244 1 ! Define SCB table. Each entry describes a type of data structure.
245 0245 1 ! The information kept on each data structure type includes the size
246 0246 1 ! (in bytes) of the data structure, the sequence number of the data
247 0247 1 ! structure, the count of preallocated data structures kept on a
248 0248 1 ! look-aside list (LAL), and the LAL header. The SCB table is indexed
249 0249 1 ! by the data structure type. The type is defined by the SCB_DEF
250 0250 1 ! macro, which makes the SCB_DEF invocations order independent.
251 0251 1 ! The SCB table has a 1 origin.
252 0252 1
253 0253 1
254 0254 1 %ASSIGN (COUNTER,1); ! Set table origin
255 0255 1 PSECT GLOBAL = $$SCB_TABLE;
256 0256 1 PSECT OWN = $$SCB_TABLE;
257 0257 1 GLOBAL
258 0258 1 SCB_TABLE : VECTOR [0]; ! Start of SCB table
259 0259 1
260 0260 1 ! Define table entries. Input parameters are the structure type
261 0261 1 ! and the number of structures to preallocate for the look-aside list.
262 0262 1
263 0263 1 SCB_DEF (RQCB,32);
264 0264 1 SCB_DEF (MCB,32);
265 0265 1 SCB_DEF (OCD,4);
266 0266 1 SCB_DEF (NOD,16);
267 0267 1
268 0268 1
269 0269 1 ! Define the minimum and maximum data structure types.
270 0270 1 ! Note that this must come after the last SCB_DEF macro
271 0271 1 ! call, as the macro defines the literals referenced.
272 0272 1
273 0273 1 GLOBAL LITERAL
274 0274 1
275 0275 1 MIN_DS_TYPE = MIN (RQCB_K_TYPE,
276 0276 1 MCB_K_TYPE,
277 0277 1 OCD_K_TYPE,
278 0278 1 NOD_K_TYPE
279 0279 1 ),
280 0280 1
281 0281 1 MAX_DS_TYPE = MAX (RQCB_K_TYPE,
282 0282 1 MCB_K_TYPE,
283 0283 1 OCD_K_TYPE,
284 0284 1 NOD_K_TYPE
285 0285 1 ),

```

```

286 0286 1 | Define the minimum and maximum SCOPE values.
287 0287 1 |
288 0288 1 |
289 0289 1 |     MIN_SCOPE      = MIN  (OPCSK_SYSTEM,
290 0290 1 |                       OPCS_K_GROUP,
291 0291 1 |                       OPCS_K_USER,
292 0292 1 |                       OPCS_K_UNSPÉC
293 0293 1 |                       ),
294 0294 1 |
295 0295 1 |     MAX_SCOPE      = MAX  (OPCSK_SYSTEM,
296 0296 1 |                       OPCS_K_GROUP,
297 0297 1 |                       OPCS_K_USER,
298 0298 1 |                       OPCS_K_UNSPÉC
299 0299 1 |                       );
300 0300 1 |
301 0301 1 | GLOBAL BIND
302 0302 1 |     ascid_INVALIDRQCB = %ASCID 'Invalid RQCB in cluster message' : block [, BYTE];
303 0303 1 |
304 0304 1 | END
305 0305 0 | ELUDOM

```

```

.TITLE OPCSOPCOMDATA
.IDENT \V04-000\
.PSECT $SCB_ENTRY,NOEXE,2

```

```

0020 0094 0000 SCB: .WORD 148, 32
00000000' 00000000' 00004 .BYTE 0[4]
00000000' 00000000' 00008 .ADDRESS SCB+8, SCB+8
0020 003C 00010 SCB: .WORD 60, 32
00000000' 00000000' 00014 .BYTE 0[4]
00000000' 00000000' 00018 .ADDRESS SCB+8, SCB+8
0004 0008 00020 SCB: .WORD 216, 4
00000000' 00000000' 00024 .BYTE 0[4]
00000000' 00000000' 00028 .ADDRESS SCB+8, SCB+8
0010 0056 00030 SCB: .WORD 86, 16
00000000' 00000000' 00034 .BYTE 0[4]
00000000' 00000000' 00038 .ADDRESS SCB+8, SCB+8

```

```

.PSECT $SCB_TABLE,NOEXE,2

```

```

0000 SCB_TABLE::
.BLKB 0
00000000' 0000 SCB_TBL: .ADDRESS SCB
00000000' 00004 SCB_TBL: .ADDRESS SCB
00000000' 00008 SCB_TBL: .ADDRESS SCB
00000000' 0000C SCB_TBL: .ADDRESS SCB

```

```

.PSECT $SPLITS,NOWRT,NOEXE,2

```

```

45 50 4F 3A 52 45 47 41 4E 41 4D 24 53 59 53 00000 P.AAA: .ASCII \SYSSMANAGER:OPERATOR.LOG\
47 4F 4C 2E 52 4F 54 41 52 0000F
3A 32 41 42 4D 5F 00018 P.AAB: .ASCII \MBA2:\
57 55 21 43 41 21 0001E P.AAC: .ASCII \TAC!UW\
57 55 21 42 4D 00024 P.AAD: .ASCII \MB!UW\
00029 .BLKB 3

```



```
00000045 00095 .BLKB 3
00000000' 00098 LOGFILE_MSG:: .LONG 69
00000000' 0009C .ADDRESS MSG2
000A0 LOGFILE_RES:: .BLKB 255
02 0019F .BLKB 1
001A0 LOGFILE_NAM:: .BYTE 2
60 001A1 .BYTE 96
FF 001A2 .BYTE -1
00 001A3 .BYTE 0
00000000' 001A4 .ADDRESS LOGFILE_RES
00 001A8 .BYTE 0
00 001A9 .BYTE 0
00 001AA .BYTE 0
00 001AB .BYTE 0
00000000 001AC .LONG 0
00000000 001B0 .LONG 0
0000# 001B4 .WORD 0[8]
0000# 001C4 .WORD 0[3]
0000# 001CA .WORD 0[3]
00000000 001D0 .LONG 0
00000000 001D4 .LONG 0
00 001D8 .BYTE 0
00 001D9 .BYTE 0
00 001DA .BYTE 0
00 001DB .BYTE 0
00 001DC .BYTE 0
00 001DD .BYTE 0
00# 001DE .BYTE 0[2]
00000000 001E0 .LONG 0
00000000 001E4 .LONG 0
00000000 001E8 .LONG 0
00000000 001EC .LONG 0
00000000 001F0 .LONG 0
00000000 001F4 .LONG 0
00000000# 001F8 .LONG 0[2]
03 00200 LOGFILE_FAB:: .BYTE 3
50 00201 .BYTE 80
0000 00202 .WORD 0
00000000 00204 .LONG 0
00000000 00208 .LONG 0
00000000 0020C .LONG 0
00000000 00210 .LONG 0
0000 00214 .WORD 0
01 00216 .BYTE 1
00 00217 .BYTE 0
00000000 00218 .LONG 0
00 0021C .BYTE 0
00 0021D .BYTE 0
02 0021E .BYTE 2
02 0021F .BYTE 2
00000000 00220 .LONG 0
00000000 00224 .LONG 0
00000000' 00228 .ADDRESS LOGFILE_NAM
```

.....

```
00000000' 0022C .ADDRESS P.AAA
00000000 00230 .LONG 0
    18 00234 .BYTE 24
    00 00235 .BYTE 0
    0000 00236 .WORD 0
00000000 00238 .LONG 0
    0000 0023C .WORD 0
    00 0023E .BYTE 0
    00 0023F .BYTE 0
00000000 00240 .LONG 0
00000000 00244 .LONG 0
    0000 00248 .WORD 0
    00 0024A .BYTE 0
    00 0024B .BYTE 0
00000000 0024C .LONG 0
    01 00250 LOGFILE_RAB::
    .BYTE 1
    44 00251 .BYTE 68
    0000 00252 .WORD 0
00000000 00254 .LONG 0
00000000 00258 .LONG 0
00000000 0025C .LONG 0
    0000# 00260 .WORD 0[3]
    0000 00266 .WORD 0
00000000 00268 .LONG 0
    0000 0026C .WORD 0
    00 0026E .BYTE 0
    00 0026F .BYTE 0
    0000 00270 .WORD 0
    0000 00272 .WORD 0
00000000 00274 .LONG 0
00000000 00278 .LONG 0
00000000 0027C .LONG 0
00000000 00280 .LONG 0
    00 00284 .BYTE 0
    00 00285 .BYTE 0
    00 00286 .BYTE 0
    00 00287 .BYTE 0
00000000 00288 .LONG 0
00000000' 0028C .ADDRESS LOGFILE_FAB
00000000 00290 .LONG 0
    00294 OCD_VECTOR::
    .BLKB 32
00000000' 00000000' 002B4 DISABLED_OPER_Q::
    .ADDRESS DISABLED_OPER_Q, DISABLED_OPER_Q
00000000' 00000000' 002BC CANCELED_RQST_Q::
    .ADDRESS CANCELED_RQST_Q, CANCELED_RQST_Q
    002C4 UNKNOWN_MESSAGE_COUNT::
    .BLKB 4
    002C8 REQUEST_NUMBER::
    .BLKB 4
    002CC NEXT_SEQUENCE::
    .BLKB 4
    002D0 OPER_MBX_CHAN::
    .BLKB 2
    002D2 OPER_IDENT_NUM::
    .BLKB 2
```

```

0006 002D4 OPER_MBX_NAME::
      .WORD 6
01 0E 002D6 .BYTE 14, 1
00000000' 002D8 .ADDRESS P.AAB
0006 002DC DEVICE_FAO::
      .WORD 6
01 0E 002DE .BYTE 14, 1
00000000' 002E0 .ADDRESS P.AAC
0005 002E4 MBX_FAO::
      .WORD 5
01 0E 002E6 .BYTE 14, 1
00000000' 002E8 .ADDRESS P.AAD
002EC LOGFILE_OPEN::
      .BLKB 4
00# 002F0 BYPASS_PRIV::
      .BYTE 0[3]
20 002F3 .BYTE 32
002F4 .BLKB 4
002F8 LCL_NODENAME::
      .BLKB 8
0000000A 00300 SEQ_WIDTH_DEF::
      .CONG 10
00304 SEQ_WIDTH::
      .BLKB 4
00308 SEQ_SEED::
      .BLKB 4
0030C LCL_CSID::
      .BLKB 4
00310 LCL_NOD::
      .BLKB 4
00000000' 00000000' 00314 NOD_HEAD::
      .ADDRESS NOD_HEAD, NOD_HEAD
0031C SYI_SWPOUTPGCNT::
      .BLKB 4
00000064 00320 LOGTIME_COUNTER::
      .LONG 100
00324 GLOBAL_STATUS::
      .BLKB 4

```

```

WAIT_DELTA== P.AAE
RQCB_K_TYPE== 1
MCB_R_TYPE== 2
OCD_K_TYPE== 3
NOD_K_TYPE== 4
MIN_DS_TYPE== 1
MAX_DS_TYPE== 4
MIN_SCOPE== 1
MAX_SCOPE== 4
ASCID_INVALIDRQCB== P.AAF

```

PSECT SUMMARY

```

Name Bytes Attributes
$GLOBALS 808 NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

```

```
: $PLITS          92 NOVEC,NOWRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
: $SCB_TABLE      16 NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
: $SCB_ENTRY      64 NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)
: . ABS           0  NOVEC,NOWRT,NORD ,NOEXE,NOSHR, LCL, ABS, CON,NOPIC,ALIGN(0)
```

Library Statistics

File	----- Total	Symbols Loaded	----- Percent	Pages Mapped	Processing Time
_\$255\$DUA28:[SYSLIB]LIB.L32;1	18619	39	0	1000	00:01.9
_\$255\$DUA28:[OPCOM.OBJ]OPCOMLIB.L32;1	633	27	4	43	00:00.8

COMMAND QUALIFIERS

```
: BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:OPCOMDATA/OBJ=OBJ$:OPCOMDATA MSRC$:OPCOMDATA/UPDATE=(ENH$:OPCOMDATA)
: Size:          0 code + 980 data bytes
: Run Time:      00:10.2
: Elapsed Time:  00:40.6
: Lines/CPU Min: 1794
: Lexemes/CPU-Min: 30264
: Memory Used:   91 pages
: Compilation Complete
```

The image displays a grid of 120 small terminal window screenshots, arranged in 10 rows and 12 columns. Each window shows a different VAX/VMS utility or system message. The windows are arranged in a grid, with each window displaying a different utility or system message. The titles of the windows are: LOGFILE LIS, OPCOMDEF LIS, OPCOMDATA LIS, OPCOMINI LIS, OPCOMLIB LIS, OPCOMMAIN LIS, OPCOMOLD LIS, OPCOMPLY LIS, OPCOMRST LIS, OPCCRASH LIS, and OPERUTIL LIS. The content within the windows includes various system logs, error messages, and utility outputs, all rendered in a monospaced font typical of early computer terminals.