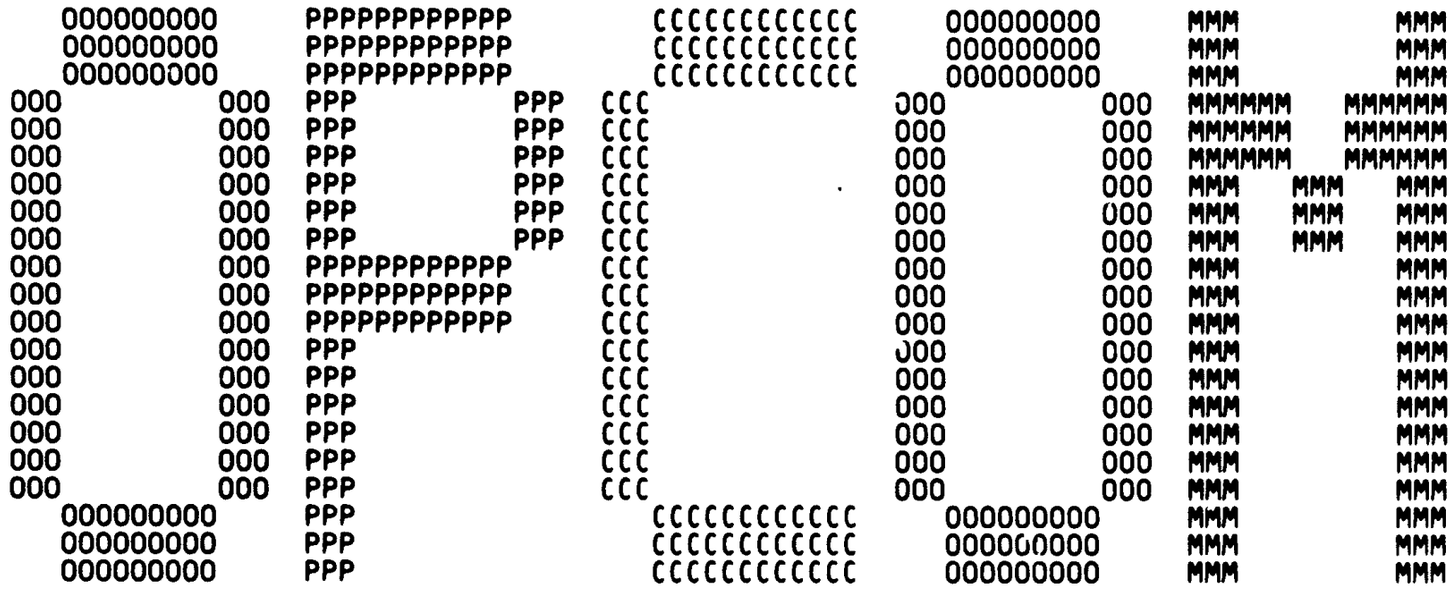

_$2

Sym

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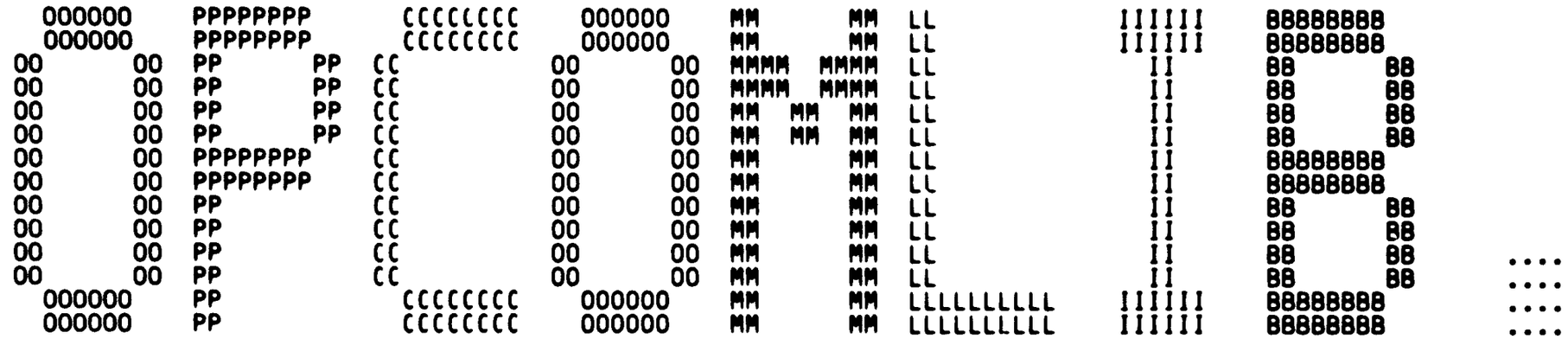
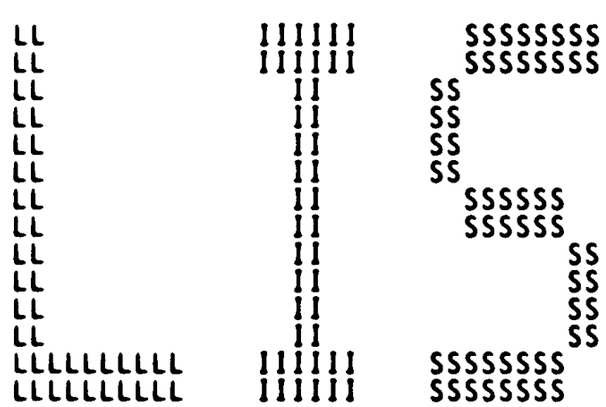
FILEID**OPCOMLIB





```
0001  0     !MODULE OPC$OPCOMLIB    (IDENT = 'V04-000') =   %TITLE 'Facility-wide library module'
0002  0     ! BEGIN
0003  0     !
0004  0     !*****************************************************************************
0005  0     !*                                                                           *
0006  0     !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
0007  0     !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                   *
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0022  0     !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
0023  0     !*                                                                           *
0024  0     !*                                                                           *
0025  0     !*****************************************************************************
0026  0     !
0027  0     !++
0028  0     ! FACILITY:     OPCOM - Operator communication facility
0029  0     !
0030  0     ! ABSTRACT:     BLISS Library for OPCOM facility
0031  0     !
0032  0     ! ENVIRONMENT:  VAX/VMS User mode
0033  0     !
0034  0     ! AUTHOR:       CW Hobbs
0035  0     !
0036  0     ! CREATED:      24-Aug-1983
0037  0     !
0038  0     ! MODIFIED BY:
0039  0     !
0040  0     !       V03-003 CWH3003         CW Hobbs                    12-Aug-1984
0041  0     !               Remove REPLY and SOFTWARE operators from the known list
0042  0     !
0043  0     !       V03-002 CWH3002         CW Hobbs                    16-Sep-1983
0044  0     !               Move non-facility EXTERNAL ROUTINE declarations to this file
0045  0     !
0046  0     !--
0047  0     !
0048  0     !
0049  0     ! Include the data structure definitions from external files
0050  0     !
0051  0     LIBRARY 'SYS$LIBRARY:LIB';
0052  0     REQUIRE 'LIB$:OPCDEFTMP';       ! New message definitions
0293  0     REQUIRE 'LIB$:OPCOMDEF';
0935  0     REQUIRE 'SHRLIB$:CLUMBX';
```

```
;  0998  0     !
;  0999  0     ! Define a compile time variable to be used as a table origin by several of the macros.
;  1000  0     !
;  1001  0     COMPILETIME     counter = 0;
;  1002  0
;  1003  0     !
;  1004  0     ! Define literal values
;  1005  0     !
;  1006  0     LITERAL
;  1007  0             max_dev_nam     = 64,                   ! Maximum length of a dev name
;  1008  0             !
;  1009  0             ! Define volume protection masks that are used to control access to the operator mailbox.
;  1010  0             !
;  1011  0             read_write      = %X'0FF0F',            ! Allow read and write access
;  1012  0             read_nowrite    = %X'0FFFF',            ! Allow read, don't allow write
;  1013  0             !
;  1014  0             ! Other useful literals
;  1015  0             !
;  1016  0             true            = 1,                    ! BOOLEAN value
;  1017  0             false           = 0,                    ! BOOLEAN value
;  1018  0             !
;  1019  0             on              = 1,                    ! Bit value
;  1020  0             off             = 0,                    ! Bit value
;  1021  0             !
;  1022  0             ! Define the masks containing all known operators
;  1023  0             !
;  1024  1             known_attn_mask1 =      (OPC$M_NM_CENTRL OR     OPC$M_NM_PRINT  OR      OPC$M_NM_TAPES  OR
;  1025  1                                      OPC$M_NM_DISKS  OR      OPC$M_NM_DEVICE OR      OPC$M_NM_CARDS  OR
;  1026  1                                      OPC$M_NM_NTWORK OR      OPC$M_NM_CLUSTER OR     OPC$M_NM_SECURITY OR
;  1027  1                                     !OPC$M_NM_REPLY  OR      OPC$M_NM_SOFTWARE OR    OPC$M_NM_FILL_11 OR
;  1028  1                                      OPC$M_NM_OPER1  OR      OPC$M_NM_OPER2  OR      OPC$M_NM_OPER3  OR
;  1029  1                                      OPC$M_NM_OPER4  OR      OPC$M_NM_OPER5  OR      OPC$M_NM_OPER6  OR
;  1030  1                                      OPC$M_NM_OPER7  OR      OPC$M_NM_OPER8  OR      OPC$M_NM_OPER9  OR
;  1031  0                                      OPC$M_NM_OPER10 OR      OPC$M_NM_OPER11 OR      OPC$M_NM_OPER12),
;  1032  0             known_attn_mask2 =      0;
;  1033  0
;  1034  0     !
;  1035  0     ! Define routine linkages
;  1036  0     !
;  1037  0     LINKAGE
;  1038  0             alloc_csd       = JSB (REGISTER=1; REGISTER=2)
;  1039  0                                     : NOPRESERVE (3) NOTUSED (4,5,6,7,8,9,10,11),
;  1040  0             csp_call        = JSB (REGISTER=2)
;  1041  0                                     : NOTUSED (3,4,5,6,7,8,9,10,11),
;  1042  0             dalloc_csd      = JSB (REGISTER=0)
;  1043  0                                     : NOPRESERVE (2,3) NOTUSED (4,5,6,7,8,9,10,11),
;  1044  0             jsb_r0r1        = JSB (REGISTER=0, REGISTER=1)
;  1045  0                                     : PRESERVE (1) NOTUSED (2,3,4,5,6,7,8,9,10,11);
```

```
;    1046  0      !
;    1047  0      ! Declare some common data structure initialization macros
;    1048  0      !
;    1049  0      MACRO
;    1050  0              ! Define shorthand for a single initialized dynamic string desc
;    1051  0              !
;    1052  0              $dyn_str_desc                           ! Static declaration
;  M 1053  0                      =
;  M 1054  0                      BLOCK [dsc$k_d_bln,BYTE]
;  M 1055  0                      PRESET ([dsc$b_class]   = dsc$k_class_d,
;  M 1056  0                              [dsc$b_dtype]   = dsc$k_dtype_t,
;  M 1057  0                              [dsc$w_length]  = 0,
;  M 1058  0                              [dsc$a_pointer] = 0 )
;    1059  0                      %,
;    1060  0
;    1061  0              $dyn_str_desc_init (desci)              ! Run-time initialization
;  M 1062  0                      =
;  M 1063  0                      BEGIN
;  M 1064  0                      BIND
;  M 1065  0                          desc = (desci) : VECTOR [2, LONG],
;  M 1066  0                          tmpl = exch$gq_dyn_str_template : VECTOR [2, LONG];
;  M 1067  0                      desc [0] = .tmpl [0];
;  M 1068  0                      desc [1] = .tmpl [1];
;  M 1069  0                      END
;    1070  0                      %,
;    1071  0
;    1072  0              ! Define macro for a single initialized static string desc.
;    1073  0              !
;    1074  0              $stat_str_desc (L, A)                   ! Static declaration, init to length and address
;  M 1075  0                      =
;  M 1076  0                      BLOCK [dsc$k_s_bln,BYTE]
;  M 1077  0                      PRESET( [dsc$b_class]   = dsc$k_class_s,
;  M 1078  0                              [dsc$b_dtype]   = dsc$k_dtype_t,
;  M 1079  0                              [dsc$w_length]  = (L),
;  M 1080  0                              [dsc$a_pointer] = (A) )
;    1081  0                      %,
;    1082  0
;    1083  0              $string_desc (str)                      ! Static declaration, init to length and address
;  M 1084  0                      =
;  M 1085  0                      BLOCK [dsc$k_s_bln,BYTE]
;  M 1086  0                      PRESET( [dsc$b_class]   = dsc$k_class_s,
;  M 1087  0                              [dsc$b_dtype]   = dsc$k_dtype_t,
;  M 1088  0                              [dsc$w_length]  = (%CHARCOUNT (STR)),
;  M 1089  0                              [dsc$a_pointer] = (UPLIT BYTE (STR)) )
;    1090  0                      %,
;    1091  0
;    1092  0              $stat_str_desc_init (desci, L, A)       ! Run-time initialization
;  M 1093  0                      =
;  M 1094  0                      BEGIN
;  M 1095  0                      BIND
;  M 1096  0                          desc = (desci) : BLOCK [, BYTE];
;  M 1097  0                      desc [dsc$b_class]   = dsc$k_class_s;
;  M 1098  0                      desc [dsc$b_dtype]   = dsc$k_dtype_t;
;  M 1099  0                      desc [dsc$w_length]  = (L);
;  M 1100  0                      desc [dsc$a_pointer] = (A);
;  M 1101  0                      END
;    1102  0                      %,
```

```
;    1103  0
;    1104  0          $str_desc_set (desci, L, A)     ! Copy new length and pointer fields (both static and dynamic)
;  M 1105  0                        =
;  M 1106  0                        BEGIN
;  M 1107  0                        BIND
;  M 1108  0                            desc = (desci) : BLOCK [, BYTE];
;  M 1109  0                        desc [dsc$w_length]  = (L);
;  M 1110  0                        desc [dsc$a_pointer] = (A);
;  M 1111  0                        END
;    1112  0                        %,
;    1113  0
;    1114  0          ! And shorthand for just a descriptor declaration
;    1115  0          !
;    1116  0          $desc_block
;  M 1117  0                        =
;  M 1118  0                        BLOCK [dsc$k_s_bln, BYTE]
;    1119  0                        %,
;    1120  0
;    1121  0          ! Short form for byte vector reference
;    1122  0          !
;    1123  0          $ref_bvector
;  M 1124  0                        =
;  M 1125  0                        REF $bvector
;    1126  0                        %,
;    1127  0
;    1128  0          ! Short form for byte block reference
;    1129  0          !
;    1130  0          $ref_bblock
;  M 1131  0                        =
;  M 1132  0                        REF $bblock
;    1133  0                        %;
;    1134  0
;    1135  0          STRUCTURE
;    1136  0                        $bvector [I; N] =
;    1137  0                                        [N]
;    1138  0                                        ($bvector+I)<0,8,0>;
;    1139  0
;    1140  0          !+
;    1141  0          ! SIGNAL_STOP a condition assuming no return.  LIB$STOP is not
;    1142  0          ! supposed to return, but BLISS doesn't krow this, so we block further
;    1143  0          ! flow here.  This will generate better code for us.
;    1144  0          !-
;    1145  0          MACRO
;    1146  0              $signal_stop []
;  M 1147  0                        =
;  M 1148  0                        BEGIN
;  M 1149  0                        LINKAGE
;  M 1150  0                            LNK = CALL : PRESERVE (0,1,2,3,4,5,6,7,8,9,10,11);
;  M 1151  0                        EXTERNAL ROUTINE
;  M 1152  0                            LIB$STOP : ADDRESSING_MODE (GENERAL) LNK NOVALUE;
;  M 1153  0                        BUILTIN
;  M 1154  0                            R0;
;  M 1155  0
;  M 1156  0                        LIB$STOP (%REMAINING);
;  M 1157  0                        RETURN (.R0);
;  M 1158  0
;  M 1159  0                        END
```

```
;    1160  0                          %;
;    1161  0
;    1162  0      !+
;    1163  0      ! SIGNAL a condition and return.
;    1164  0      !-
;    1165  0      MACRO
;    1166  0          $signal_return (code)
;M   1167  0                          =
;M   1168  0                          BEGIN
;M   1169  0                          LOCAL
;M   1170  0                              temp;
;M   1171  0
;M   1172  0                          temp = (code);          ! Need to avoid multiple calls, etc
;M   1173  0                          SIGNAL (.temp           ! Perform the actual signal of the error
;M   1174  0                                  %IF %LENGTH GTR 1 %THEN ,%REMAINING %FI);
;M   1175  0                          RETURN .temp
;M   1176  0
;M   1177  0                          END
;    1178  0                          %;
;    1179  0
;    1180  0      !+
;    1181  0      ! SIGNAL a condition and continue.
;    1182  0      !-
;    1183  0      MACRO
;    1184  0          $signal (code)
;M   1185  0                          =
;M   1186  0                          SIGNAL ( (code)         ! Perform the actual signal of the error
;M   1187  0                                 %IF %LENGTH GTR 1 %THEN ,%REMAINING %FI)
;    1188  0                          %;
;    1189  0      !+
;    1190  0      ! Check for a logic error.  If the expression is not true, then we have a problem.
;    1191  0      !-
;    1192  0      MACRO
;    1193  0          $logic_check (level, condition, error_code)
;M   1194  0                              =
;M   1195  0
;M   1196  0                              ! See if a compile time check is possible
;M   1197  0                              !
;M   1198  0                              %IF %CTCE ((condition))
;M   1199  0                              %THEN
;M   1200  0
;M   1201  0                                  ! The condition is a compile-time expression.  There is one special case, when the
;M   1202  0                                  ! condition is the string "(false)".  This is used as an unconditional logic abort.
;M   1203  0                                  ! If we have "(false)", then do a naked SIGNAL_STOP
;M   1204  0                                  !
;M   1205  0                                  %IF %IDENTICAL (condition, (false))
;M   1206  0                                  %THEN
;M   1207  0                                      SIGNAL_STOP (exch$_badlogic, 1, (error_code))
;M   1208  0
;M   1209  0                                  ! The condition is a normal test.  If it is true, print a message that the condition
;M   1210  0                                  ! was verified during compilation.  If false, generate a serious error.
;M   1211  0                                  !
;M   1212  0                                  %ELSE
;M   1213  0                                      %IF (condition)
;M   1214  0                                      %THEN
;M   1215  0                                          %PRINT ('assumption ',error_code,' verified during compilation')
;M   1216  0                                      %ELSE
```

```
; M 1217  0                                   %ERROR ('assumption ',error_code,' is not true')
; M 1218  0                               %FI
; M 1219  0                           %FI
; M 1220  0
; M 1221  0                           ! The condition is not a compile-time constant.  If the current variant calls for it,
; M 1222  0                           ! generate run-time code to test the assumption.
; M 1223  0                           !
; M 1224  0                           %ELSE
; M 1225  0                               %IF switch_variant GEQ (level)
; M 1226  0                               %THEN
; M 1227  0                                       BEGIN
; M 1228  0                                       IF NOT (condition)
; M 1229  0                                       THEN
; M 1230  0                                           SIGNAL_STOP (exch$_badlogic, 1, (error_code));
; M 1231  0                                       END
; M 1232  0                               %FI
; M 1233  0                           %FI
    1234  0                           %;
    1235  0
    1236  0      ! Message print routines
    1237  0      !
    1238  0      MACRO
    1239  0          $print_lit (string)
; M 1240  0                           =
; M 1241  0                           lib$put_output (%ASCID string)
    1242  0                           %,
    1243  0
    1244  0          $print_desc (desc)
; M 1245  0                           =
; M 1246  0                           lib$put_output (desc)
    1247  0                           %,
    1248  0
    1249  0          $print_fao (string)
; M 1250  0                           =
; M 1251  0                           BEGIN
; M 1252  0                           EXTERNAL ROUTINE  SHARE_FAO_BUFFER;
; M 1253  0                           lib$put_output (
; M 1254  0                               SHARE_FAO_BUFFER (%ASCID string
; M 1255  0                                   %IF %LENGTH GTR 1 %THEN ,%REMAINING %FI))
; M 1256  0                           END
    1257  0                           %;
    1258  0
    1259  0      ! Macros to manipulate queues
    1260  0      !
    1261  0      MACRO
    1262  0
    1263  0          ! Initialize the header of a queue.  This means make each of the 2 pointers in the header point to the header.
    1264  0          !
    1265  0          $queue_initialize (q_header)
; M 1266  0                           =
; M 1267  0                           BEGIN
; M 1268  0
; M 1269  0                           BIND
; M 1270  0                               _qh_ = (q_header) : VECTOR [2, LONG];
; M 1271  0
; M 1272  0                           _qh_ [0] = _qh_;
; M 1273  0                           _qh_ [1] = _qh_;
```

```
;  M 1274  0
;  M 1275  0                        END
;    1276  0                        %,
;    1277  0
;    1278  0        ! Insert an element at the head of a queue.
;    1279  0        !
;    1280  0        $queue_insert_head (item, q_header)
;  M 1281  0                        =
;  M 1282  0                        BEGIN
;  M 1283  0
;  M 1284  0                        BUILTIN
;  M 1285  0                            INSQUE;
;  M 1286  0                        BIND
;  M 1287  0                            _qh_ = (q_header) : VECTOR [2, LONG];
;  M 1288  0
;  M 1289  0                        INSQUE ((item), _qh_ [0])
;  M 1290  0
;  M 1291  0                        END
;    1292  0                        %,
;    1293  0
;    1294  0        ! Insert an element at the tail of a queue.
;    1295  0        !
;    1296  0        $queue_insert_tail ( tem, q_header)
;  M 1297  0                        =
;  M 1298  0                        BEGIN
;  M 1299  0
;  M 1300  0                        BUILTIN
;  M 1301  0                            INSQUE;
;  M 1302  0                        BIND
;  M 1303  0                            _qh_ = (q_header) : VECTOR [2, LONG];
;  M 1304  0
;  M 1305  0                        INSQUE ((item), ._qh_ [1])
;  M 1306  0
;  M 1307  0                        END
;    1308  0                        %,
;    1309  0        !+
;    1310  0        ! Remove the indicated element from a queue.  The first parameter is the address of the element.  The second
;    1311  0        ! parameter is optional.
;    1312  0        !
;    1313  0        ! If supplied, it is the address of a longword in which to store the element removed from the queue or 0 if
;    1314  0        ! no element was present in the queue.  The value of the expression is TRUE is a element was removed from the
;    1315  0        ! queue and FALSE otherwise.
;    1316  0        !
;    1317  0        ! If the second parameter is not supplied, the value of the expression is the address of the element removed
;    1318  0        ! from the queue or 0 if no element was present in the queue.
;    1319  0        !-
;    1320  0        $queue_remove (q_element, element)
;  M 1321  0                        =
;  M 1322  0                        BEGIN
;  M 1323  0
;  M 1324  0                        BIND
;  M 1325  0                            qhead_ = (q_element) : VECTOR [2, LONG];
;  M 1326  0                        BUILTIN
;  M 1327  0                            REMQUE;
;  M 1328  0
;  M 1329  0                        %IF (%NULL (element))
;  M 1330  0                        %THEN
```

```
;  M 1331  0                        LOCAL
;  M 1332  0                            _T_ : REF VECTOR [2, LONG];
;  M 1333  0                    %ELSE
;  M 1334  0                        BIND
;  M 1335  0                            _T_ = (element) : REF VECTOR [2, LONG];
;  M 1336  0                    %FI
;  M 1337  0
;  M 1338  0                    IF (REMQUE (_qhead_, _T_))
;  M 1339  0                    THEN
;  M 1340  0                        BEGIN
;  M 1341  0
;  M 1342  0                        ! queue was empty
;  M 1343  0                        !
;  M 1344  0                        IF (%NULL (element))
;  M 1345  0                        THEN
;  M 1346  0                            0
;  M 1347  0                        ELSE
;  M 1348  0                            (_T_ = 0; FALSE)
;  M 1349  0                        END
;  M 1350  0                    ELSE
;  M 1351  0                        BEGIN
;  M 1352  0
;  M 1353  0                        IF (%NULL (element))
;  M 1354  0                        THEN
;  M 1355  0                            ._T_
;  M 1356  0                        ELSE
;  M 1357  0                            true
;  M 1358  0                        END
;  M 1359  0                    END
;    1360  0                    %,
;    1361  0            !+
;    1362  0            ! Remove an element from the head of a queue.  The first parameter is the address of the queue header.  The
;    1363  0            ! second parameter is optional.
;    1364  0            !
;    1365  0            ! If supplied, it is the address of a longword in which to store the element removed from the queue or 0 if
;    1366  0            ! no element was present in the queue.  The value of the expression is TRUE is a element was removed from the
;    1367  0            ! queue and FALSE otherwise.
;    1368  0            !
;    1369  0            ! If the second parameter is not supplied, the value of the expression is the address of the element removed
;    1370  0            ! from the queue or 0 if no element was present in the queue.
;    1371  0            !-
;    1372  0            $queue_remove_head (q_header, element)
;  M 1373  0                               =
;  M 1374  0                               BEGIN
;  M 1375  0
;  M 1376  0                               BIND
;  M 1377  0                                   _qh_ = (q_header) : VECTOR [2, LONG];
;  M 1378  0
;  M 1379  0                               %IF (%NULL (element))
;  M 1380  0                               %THEN
;  M 1381  0                                   $queue_remove (._qh_ [0])
;  M 1382  0                               %ELSE
;  M 1383  0                                   $queue_remove (._qh_ [0], element)
;  M 1384  0                               %FI
;  M 1385  0
;  M 1386  0                               END
;    1387  0                               %,
```

```
;    1388  0          !+
;    1389  0          ! Remove an element from the tail of a queue.  The first parameter is the address of the queue header.  The
;    1390  0          ! second parameter is optional.
;    1391  0          !
;    1392  0          ! If supplied, it is the address of a longword in which to store the element removed from the queue or 0 if
;    1393  0          ! no element was present in the queue.  The value of the expression is TRUE is a element was removed from the
;    1394  0          ! queue and FALSE otherwise.
;    1395  0          !
;    1396  0          ! If the second parameter is not supplied, the value of the expression is the address of the element removed
;    1397  0          ! from the queue or 0 if no element was present in the queue.
;    1398  0          !-
;    1399  0          $queue_remove_tail (q_header, element)
;M   1400  0                              =
;M   1401  0                              BEGIN
;M   1402  0
;M   1403  0                              BIND
;M   1404  0                                  _qh_ = (q_header) : VECTOR [2, LONG];
;M   1405  0
;M   1406  0                              %IF (%NULL (element))
;M   1407  0                              %THEN
;M   1408  0                                  $queue_remove (._qh_ [1])
;M   1409  0                              %ELSE
;M   1410  0                                  $queue_remove (._qh_ [1], element)
;M   1411  0                              %FI
;M   1412  0                                                                                                              4F
;M   1413  0                              END
;    1414  0                              %,
;    1415  0
;    1416  0          ! Test a queue for emptiness.  TRUE if the queue is empty, FALSE if the queue is not empty            64
;    1417  0          !
;    1418  0          $queue_empty (q_header)
;M   1419  0                              =
;M   1420  0                              BEGIN
;M   1421  0
;M   1422  0                              BIND
;M   1423  0                                  _qh_ = (q_header) : VECTOR [2, LONG];
;M   1424  0
;M   1425  0                              _qh_ EQLA ._qh_ [0]
;M   1426  0
;M   1427  0                              END
;    1428  0                              %;
```

```
;  1429  0     !
;  1430  0     ! Define macros specific to OPCOM functions
;  1431  0     !
;  1432  0     MACRO
;  1433  0             !
;  1434  0             ! This next macro will allow us to examine any element
;  1435  0             ! of the count vector by just specifying its index.
;  1436  0             !
;  1437  0             OCD_W_ENABLECOUNT (N)    = (N*2)+$BYTEOFFSET(OCD_T_COUNTVECTOR),0,16,1%;
;  1438  0
;  1439  0     MACRO
;  1440  0             !++
;  1441  0             ! SCB_DEF
;  1442  0             !
;  1443  0             ! Functional description:
;  1444  0             !
;  1445  0             !       This macro will build the SCB table and the associated
;  1446  0             !       SCB's.  Each entry in the SCB table is a pointer to
;  1447  0             !       an SCB.  Each SCB describes a particular data structure.
;  1448  0             !       The table has a 1 origin, and is indexed by the data
;  1449  0             !       structure type.
;  1450  0             !
;  1451  0             ! Inputs:
;  1452  0             !
;  1453  0             !       DS_TYPE         : Data structure type.  An alphabetic
;  1454  0             !                         string that is assumed to prefix all
;  1455  0             !                         structure definitions and literals
;  1456  0             !                         pertaining to that structure type.
;  1457  0             !
;  1458  0             !       COUNT           : Count of data structures of this type
;  1459  0             !                         to be preallocated and inserted on
;  1460  0             !                         the its SCB look-aside list.
;  1461  0             !
;  1462  0             ! Implicit Input:
;  1463  0             !
;  1464  0             !       A COMPILETIME symbol, DS_TYPE_CODE, has
;  1465  0             !       been declared and initialized to 1.
;  1466  0             !
;  1467  0             ! Implicit Output:
;  1468  0             !
;  1469  0             !       A GLOBAL LITERAL defining the data
;  1470  0             !       structure type is declared.
;  1471  0             !--
;  1472  0             !
;  1473  0             SCB_DEF
;M 1474  0                     (DS_TYPE,COUNT) =
;M 1475  0                     GLOBAL LITERAL %NAME (DS_TYPE,'_K_TYPE') = COUNTER;
;M 1476  0                     PSECT OWN = $SCB_ENTRY;
;M 1477  0                     OWN
;M 1478  0                             SCB:    $bblock [SCB_K_SIZE]
;M 1479  0                                     PRESET  ([SCB_B_SIZE]           = %NAME (DS_TYPE,'_K_SIZE'),
;M 1480  0                                              [SCB_W_LAL_COUNT]      = COUNT,
;M 1481  0                                              [SCB_L_FLINK]          = SCB + $BYTEOFFSET (SCB_L_FLINK),
;M 1482  0                                              [SCB_L_BLINK]          = SCB + $BYTEOFFSET (SCB_L_FLINK)
;M 1483  0                                             );
;M 1484  0                     PSECT OWN = $SCB_TABLE;
;M 1485  0                     OWN
```

```
;  M 1486  0                    SCB_TBL:LONG INITIAL (SCB);
;  M 1487  0           UNDECLARE SCB, SCB_TBL;
;  M 1488  0           %ASSIGN (COUNTER,COUNTER+1);
;    1489  0           %;
```

```
;    1490  0      !
;    1491  0      ! Run-time library and other routines external to the facility
;    1492  0      !
;    1493  0      EXTERNAL ROUTINE
;    1494  0          cli$get_value       : ADDRESSING_MODE (GENERAL),              ! CLI Entity value fetch
;    1495  0          cli$present         : ADDRESSING_MODE (GENERAL),              ! CLI Entity presence boolean
;    1496  0          exe$alloc_csd       : ALLOC_CSD_ADDRESSING_MODE (GENERAL),    ! Allocate a CSD structure
;    1497  0          exe$chkrdacces      : ADDRESSING_MODE (GENERAL),              ! Check read access to pages
;    1498  0          exe$chkwrtacces     : ADDRESSING_MODE (GENERAL),              ! Check write acess
;    1499  0          exe$csp_call        : CSP_CALL_ADDRESSING_MODE (GENERAL),     ! Communicate with CSP
;    1500  0          exe$dealloc_csd     : DALLOC_CSD_ADDRESSING_MODE (GENERAL),   ! Release CSD structure
;    1501  0          exe$setopr          : ADDRESSING_MODE (GENERAL),              ! Set or clear OPR bit
;    1502  0          lib$free_vm         : ADDRESSING_MODE (GENERAL),              ! Release a block of virtual memory
;    1503  0          lib$get_vm          : ADDRESSING_MODE (GENERAL),              ! Allocate a block of virtual memory
;    1504  0          lib$lookup_key      : ADDRESSING_MODE (GENERAL),              ! Look up keyword in table
;    1505  0          lib$put_output      : ADDRESSING_MODE (GENERAL),              ! Display a line on SYS$OUTPUT
;    1506  0          lib$sig_to_ret      : ADDRESSING_MODE (GENERAL),              ! Convert a signal to a return
;    1507  0          ots$cvt_ti_l        : ADDRESSING_MODE (GENERAL),              ! Convert string (decimal) to integer
;    1508  0          str$copy_dx         : ADDRESSING_MODE (GENERAL),              ! Copy string of any class
;    1509  0          str$free1_dx        : ADDRESSING_MODE (GENERAL)               ! Release dynamic string
;    1510  0          ;
;    1511  0
;    1512  0      !
;    1513  0      ! Symbols from external modules which need explicit declarations
;    1514  0      !
;    1515  0      EXTERNAL LITERAL
;    1516  0          cli$_comma,                                                   ! Parameter ended with a comma
;    1517  0          cli$_concat,                                                  ! Parameter ended with a plus sign
;    1518  0          cli$_ivverb,                                                  ! Invalid verb
;    1519  0          cli$_locneg,                                                  ! An explicit /NOqual for local qual
;    1520  0          cli$_locpres,                                                 ! An explicit /qual for local qual
;    1521  0          cli$_negated,                                                 ! An explicit /NOqual was given
;    1522  0          cli$_nocomd,                                                  ! CLI saw a blank line and burped
;    1523  0          cli$_present,                                                 ! An explicit /qual was given
;    1524  0          cli$_facility;                                                ! CLI facility code
;    1525  0
;    1526  0      !
;    1527  0      ! External declarations for frequently referenced facility routines
;    1528  0      !
;    1529  0      EXTERNAL ROUTINE
;    1530  0          opc$free_vm,                                                  ! Free a chunk of virtual memory
;    1531  0          opc$get_vm;                                                   ! Allocate memory
;    1532  0      !
;    1533  0      ! Miscellaneous externals
;    1534  0      !
;    1535  0      EXTERNAL
;    1536  0          ascid_INVALIDRQCB : block [, BYTE];                           ! In a GLOBAL BIND in OPCOMDATA
;
;
;                                Library Statistics
;
;                                          -------- Symbols --------      Pages       Processing
;         File                             Total    Loaded   Percent      Mapped      Time
;
;    _$255$DUA28:[SYSLIB]LIB.L32;1          18619        32         0      1000          00:01.8
```

```
;                                       COMMAND QUALIFIERS

;       BLISS/LIBRARY=LIB$:/LIST=LIS$: SRC$:OPCOMLIB

; Run Time:         00:13.2
; Elapsed Time:     01:03.5
; Lines/CPU Min:     6971
; Lexemes/CPU-Min: 37161
; Memory Used:  168 pages
; Library Precompilation Complete
```

LOGFILE
LIS

OPCOMDEF
LIS

OPCOMDATA
LIS

OPCOMINI
LIS

OPCOMUTIL
LIS

OPCOMLIB
LIS

OPCDEFTMP
LIS

OPCOMMAIN
LIS

OPCOMOLD
LIS

OPCOMRPLY
LIS

OPCCRASH
LIS

OPERUTIL
LIS

OPCOMROST
LIS