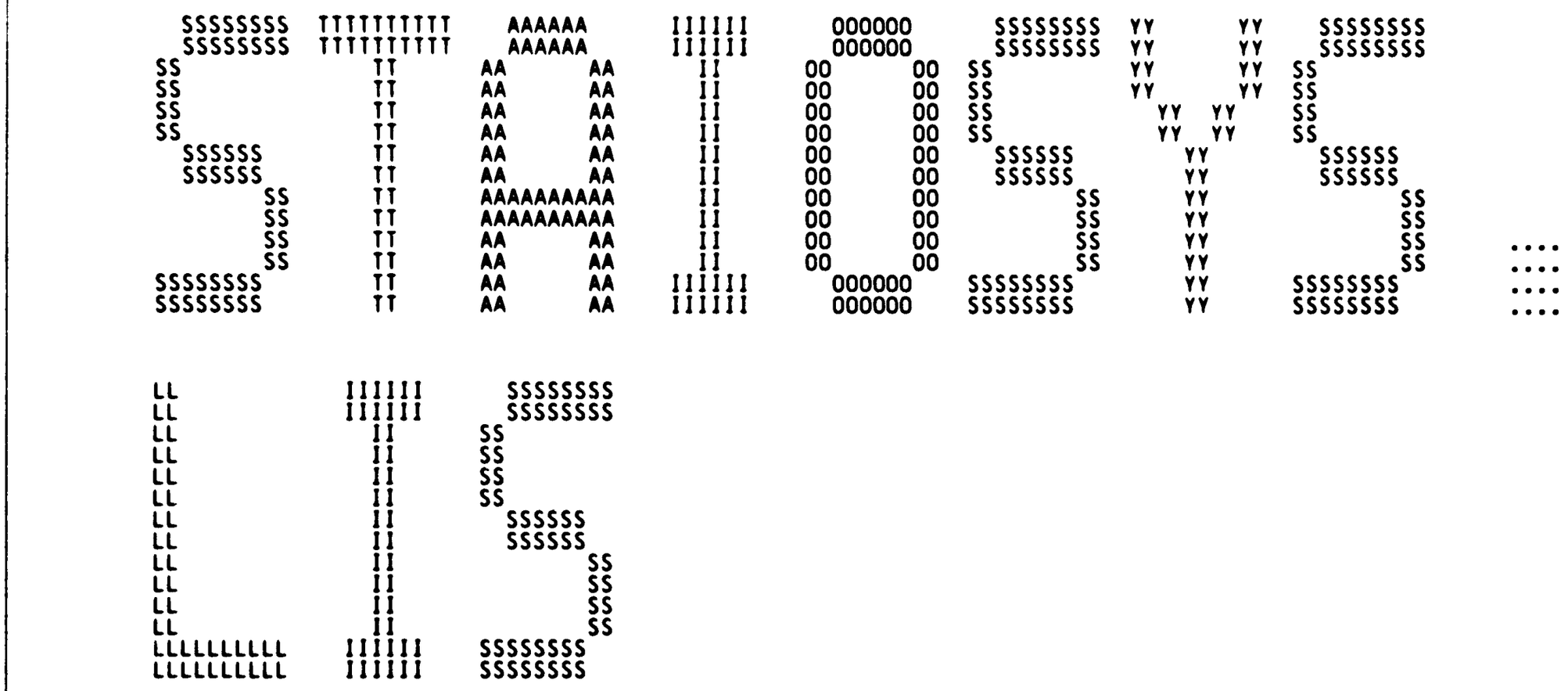
```
BBBBBBBBBBBB        AAAAAAAAA        CCCCCCCCCCC  KKK         KKK  UUU          UUU  PPPPPPPPPPPP
BBBBBBBBBBBB        AAAAAAAAA        CCCCCCCCCCC  KKK         KKK  UUU          UUU  PPPPPPPPPPPP
BBBBBBBBBBBB        AAAAAAAAA        CCCCCCCCCCC  KKK         KKK  UUU          UUU  PPPPPPPPPPPP
BBB         BBB  AAA         AAA  CCC            KKK         KKK  UUU          UUU  PPP         PPP
BBB         BBB  AAA         AAA  CCC            KKK         KKK  UUU          UUU  PPP         PPP
BBB         BBB  AAA         AAA  CCC            KKK         KKK  UUU          UUU  PPP         PPP
BBB         BBB  AAA         AAA  CCC            KKK       KKK    UUU          UUU  PPP         PPP
BBB         BBB  AAA         AAA  CCC            KKK       KKK    UUU          UUU  PPP         PPP
BBB         BBB  AAA         AAA  CCC            KKK       KKK    UUU          UUU  PPP         PPP
BBBBBBBBBBBB     AAA         AAA  CCC            KKKKKKKKK        UUU          UUU  PPPPPPPPPPPP
BBBBBBBBBBBB     AAA         AAA  CCC            KKKKKKKKK        UUU          UUU  PPPPPPPPPPPP
BBBBBBBBBBBB     AAA         AAA  CCC            KKKKKKKKK        UUU          UUU  PPPPPPPPPPPP
BBB         BBB  AAAAAAAAAAAAAAA  CCC            KKK       KKK    UUU          UUU  PPP
BBB         BBB  AAAAAAAAAAAAAAA  CCC            KKK       KKK    UUU          UUU  PPP
BBB         BBB  AAAAAAAAAAAAAAA  CCC            KKK       KKK    UUU          UUU  PPP
BBB         BBB  AAA         AAA  CCC            KKK          KKK  UUU          UUU  PPP
BBB         BBB  AAA         AAA  CCC            KKK          KKK  UUU          UUU  PPP
BBB         BBB  AAA         AAA  CCC            KKK          KKK  UUU          UUU  PPP
BBBBBBBBBBBB     AAA         AAA     CCCCCCCCCCC  KKK          KKK  UUUUUUUUUUUUUUUU  PPP
BBBBBBBBBBBB     AAA         AAA     CCCCCCCCCCC  KKK          KKK  UUUUUUUUUUUUUUUU  PPP
```


SSSSSSSS TTTTTTTTTT AAAAAA IIIIII OOOOOO SSSSSSSS YY YY SSSSSSSS
SSSSSSSS TTTTTTTTTT AAAAAA IIIIII OOOOOO SSSSSSSS YY YY SSSSSSSS
SS TT AA AA II OO OO SS YY YY SS
SS TT AA AA II OO OO SS YY YY SS
SS TT AA AA II OO OO SS YY YY SS
SS TT AA AA II OO OO SS YY YY SS
SSSSSS TT AA AA II OO OO SSSSSS YY SSSSSS
SSSSSS TT AA AA II OO OO SSSSSS YY SSSSSS
SS TT AAAAAAAAAA II OO OO SS YY SS
SS TT AAAAAAAAAA II OO OO SS YY SS
SS TT AA AA II OO OO SS YY SS ....
SS TT AA AA II OO OO SS YY SS ....
SSSSSSSS TT AA AA IIIIII OOOOOO SSSSSSSS YY SSSSSSSS ....
SSSSSSSS TT AA AA IIIIII OOOOOO SSSSSSSS YY SSSSSSSS ....
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 STAIOSYS (%TITLE 'Standalone I/O system'
;     2          0002  0                   IDENT = 'V04-000'
;     3          0003  0                   ) =
;     4          0004  1 BEGIN
;     5          0005  1
;     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.           *
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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 *
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;    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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;    23          0023  1 !*                                                                    *
;    24          0024  1 !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS *
;    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 !++
;    32          0032  1 ! FACILITY:
;    33          0033  1 !       Backup/Restore
;    34          0034  1 !
;    35          0035  1 ! ABSTRACT:
;    36          0036  1 !       This module contains the replacements for I/O routines in the
;    37          0037  1 !       stand-alone environment.
;    38          0038  1 !
;    39          0039  1 ! ENVIRONMENT:
;    40          0040  1 !       VAX/VMS user mode.
;    41          0041  1 !--
;    42          0042  1 !
;    43          0043  1 ! AUTHOR: M. Jack, CREATION DATE: 27-Dec-1980
;    44          0044  1 !
;    45          0045  1 ! MODIFIED BY:
;    46          0046  1 !
;    47          0047  1 !       V03-001 ACG0313         Andrew C. Goldstein,    12-Feb-1983  17:22
;    48          0048  1 !               Add routine subtitles
;    49          0049  1 !
;    50          0050  1 !**
```

```
;    52          0051  1 REQUIRE 'SRC$:COMMON';
;    53          1157  1 LIBRARY 'SYS$LIBRARY:LIB';
;    54          1158  1
;    55          1159  1
;    56          1160  1 FORWARD ROUTINE
;    57          1161  1         ASSIGN_CHANNEL,                 ! Execute $ASSIGN service
;    58          1162  1         LIB$GET_COMMAND,                ! LIB$GET_COMMAND
;    59          1163  1         LIB$PUT_OUTPUT,                 ! LIB$PUT_OUTPUT
;    60          1164  1         SYS$QIO,                        ! QIO service
;    61          1165  1         SYS$QIOW,                       ! QIOW service
;    62          1166  1         SYS$CLOSE,                      ! CLOSE service
;    63          1167  1         SYS$CREATE,                     ! CREATE service
;    64          1168  1         SYS$OPEN,                       ! OPEN service
;    65          1169  1         SYS$CONNECT,                    ! CONNECT service
;    66          1170  1         SYS$PUT,                        ! PUT service
;    67          1171  1         DUMMY;                          ! Dummy service
;    68          1172  1
;    69          1173  1
;    70          1174  1 EXTERNAL ROUTINE
;    71          1175  1         STA_QIO:                        ! Standalone ACP QIO processor
;    72          1176  1
;    73          1177  1
;    74          1178  1 OWN
;    75          1179  1         STA_TT_CHAN;                    ! Channel assigned to SYS$INPUT/OUTPUT
```

```
;    77          1180  1 %SBTTL 'ASSIGN_CHANNEL - assign channel to device'
;    78          1181  1 ROUTINE ASSIGN_CHANNEL(DEVICE,CHANNEL)=
;    79          1182  1
;    80          1183  1 !++
;    81          1184  1 !
;    82          1185  1 ! FUNCTIONAL DESCRIPTION:
;    83          1186  1 !       This routine executes the $ASSIGN service.
;    84          1187  1 !
;    85          1188  1 ! INPUT PARAMETERS:
;    86          1189  1 !       DEVICE          - Descriptor for device name
;    87          1190  1 !       CHANNEL         - Pointer to where channel number will be stored
;    88          1191  1 !
;    89          1192  1 ! IMPLICIT INPUTS:
;    90          1193  1 !       NONE
;    91          1194  1 !
;    92          1195  1 ! OUTPUT PARAMETERS:
;    93          1196  1 !       NONE
;    94          1197  1 !
;    95          1198  1 ! IMPLICIT OUTPUTS:
;    96          1199  1 !       NONE
;    97          1200  1 !
;    98          1201  1 ! ROUTINE VALUE:
;    99          1202  1 !       Completion status.
;   100          1203  1 !
;   101          1204  1 ! SIDE EFFECTS:
;   102          1205  1 !       NONE
;   103          1206  1 !
;   104          1207  1 !--
;   105          1208  1
;   106          1209  2 BEGIN
;   107          1210  2 MAP
;   108          1211  2         DEVICE:         REF BBLOCK;     ! Pointer to descriptor for device
;   109          1212  2 LOCAL
;   110          1213  2         IN_DESC:        VECTOR[2],      ! Descriptor for input device name
;   111          1214  2         OUT_DESC:       VECTOR[2],      ! Descriptor for BUFFER
;   112          1215  2         BUFFER:         VECTOR[64,BYTE],! Buffer for result of $TRNLOG
;   113          1216  2         P,                              ! Temporary pointer
;   114          1217  2         STATUS;                         ! Status variable
;   115          1218  2
;   116          1219  2
;   117          1220  2 ! Strip elements following colon from string if required.
;   118          1221  2 !
;   119          1222  2 IN_DESC[0] = .DEVICE[DSC$W_LENGTH];
;   120          1223  2 IF (P = CH$FIND_CH(.DEVICE[DSC$W_LENGTH], .DEVICE[DSC$A_POINTER], %C':')) NEQ 0
;   121          1224  2     THEN IN_DESC[0] = .P - .DEVICE[DSC$A_POINTER];
;   122          1225  2 IN_DESC[1] = .DEVICE[DSC$A_POINTER];
;   123          1226  2
;   124          1227  2
;   125          1228  2 ! Execute $TRNLOG service to handle process-permanent file.
;   126          1229  2 !
;   127          1230  2 OUT_DESC[0] = 64;
;   128          1231  2 OUT_DESC[1] = BUFFER;
;   129          1232  2 BUFFER[0] = 0;
;   130          1233  2 $TRNLOG(LOGNAM=IN_DESC, RSLLEN=OUT_DESC, RSLBUF=OUT_DESC);
;   131          1234  2
;   132          1235  2
;   133          1236  2 ! Handle process-permanent file.
```

```
;  134          1237  2 !
;  135          1238  2 IF .BUFFER[0] EQL %O'033'
;  136          1239  2 THEN
;  137          1240  3     BEGIN
;  138          1241  3     IN_DESC[0] = .OUT_DESC[0] - 4;
;  139          1242  3     IN_DESC[1] = .OUT_DESC[1] + 4;
;  140          1243  2     END;
;  141          1244  2
;  142          1245  2
;  143          1246  2 ! Execute $ASSIGN service, returning its result as value.
;  144          1247  2 !
;  145          1248  3 $ASSIGN(DEVNAM=IN_DESC, CHAN=.CHANNEL)
;  146          1249  1 END;


                                                                .TITLE  STAIOSYS Standalone I/O system
                                                                .IDENT  \V04-000\

                                                                .PSECT  DATA,NOEXE,2

                                                        00000 STA_TT_CHAN:
                                                                .BLKB   4

                                                                .EXTRN  STA_QIO, SYS$TRNLOG
                                                                .EXTRN  SYS$ASSIGN

                                                                .PSECT  CODE,NOWRT,2

                                                        0004 00000 ASSIGN_CHANNEL:
                                                                .WORD   Save R2                                 ;  1181
                                                5E      B0  AE  9E 00002        MOVAB   -80(SP), SP             ;
                                                52      04  AC  D0 00006        MOVL    DEVICE, R2              ;  1222
                                            48  AE          62  3C 0000A        MOVZWL  (R2), IN_DESC           ;
                                    04  B2      62          3A  3A 0000E        LOCC    #58, (R2), @4(R2)       ;  1223
                                                            02  12 00013        BNEQ    1$                      ;
                                                            51  D4 00015        CLRL    R1                      ;
                                                            51  D5 00017 1$:     TSTL    P                       ;
                                                            06  13 00019        BEQL    2$                      ;
                                    48  AE          51      04  A2  C3 0001B    SUBL3   4(R2), P, IN_DESC       ;  1224
                                                4C  AE      04  A2  D0 00021 2$:  MOVL    4(R2), IN_DESC+4        ;  1225
                                                40  AE      40  8F  9A 00026    MOVZBL  #64, OUT_DESC           ;  1230
                                                44  AE          6E  9E 0002B    MOVAB   BUFFER, OUT_DESC+4      ;  1231
                                                                6E  94 0002F    CLRB    BUFFER                  ;  1232
                                                                7E  7C 00031    CLRQ    -(SP)                   ;  1233
                                                                7E  D4 00033    CLRL    -(SP)                   ;
                                                            4C  AE  9F 00035    PUSHAB  OUT_DESC                ;
                                                            50  AE  9F 00038    PUSHAB  OUT_DESC                ;
                                                            5C  AE  9F 0003B    PUSHAB  IN_DESC                 ;
                                            00000000G   00          06  FB 0003E    CALLS   #6, SYS$TRNLOG          ;
                                                        1B          6E  91 00045    CMPB    BUFFER, #27             ;  1238
                                                                    0C  12 00048    BNEQ    3$                      ;
                                    48  AE      40  AE              04  C3 0004A    SUBL3   #4, OUT_DESC, IN_DESC   ;  1241
                                    4C  AE      44  AE              04  C1 00050    ADDL3   #4, OUT_DESC+4, IN_DESC+4 ;  1242
                                                                7E  7C 00056 3$:     CLRQ    -(SP)                   ;  1248
                                                            08  AC  DD 00058        PUSHL   CHANNEL                 ;
                                                            54  AE  9F 0005B        PUSHAB  IN_DESC                 ;
                                            00000000G   00          04  FB 0005E    CALLS   #4, SYS$ASSIGN          ;
```

```
                                04 00065        RET                                     ; 1249

; Routine Size:  102 bytes,    Routine Base:  CODE + 0000
```

```
;  148          1250  1 %SBTTL 'LIB$GET_COMMAND - get input from termina '
;  149          1251  1 GLOBAL ROUTINE LIB$GET_COMMAND(GET_STR,PROMPT_STR,OUT_LEN)=
;  150          1252  1
;  151          1253  1 !++
;  152          1254  1 !
;  153          1255  1 ! FUNCTIONAL DESCRIPTION:
;  154          1256  1 !       This routine is a replacement for LIB$GET_COMMAND in the
;  155          1257  1 !       stand-alone environment.  Note that it need only handle static
;  156          1258  1 !       output strings.
;  157          1259  1 !
;  158          1260  1 ! INPUT PARAMETERS:
;  159          1261  1 !       GET_STR         - Pointer to static descriptor to receive the string.
;  160          1262  1 !       PROMPT_STR      - Pointer to descriptor for prompt string.
;  161          1263  1 !       OUT_LEN         - (Optional) Pointer to word to receive length.
;  162          1264  1 !
;  163          1265  1 ! IMPLICIT INPUTS:
;  164          1266  1 !       NONE
;  165          1267  1 !
;  166          1268  1 ! OUTPUT PARAMETERS:
;  167          1269  1 !       NONE
;  168          1270  1 !
;  169          1271  1 ! IMPLICIT OUTPUTS:
;  170          1272  1 !       NONE
;  171          1273  1 !
;  172          1274  1 ! ROUTINE VALUE:
;  173          1275  1 !       Completion status.
;  174          1276  1 !
;  175          1277  1 ! SIDE EFFECTS:
;  176          1278  1 !       NONE
;  177          1279  1 !
;  178          1280  1 !--
;  179          1281  1
;  180          1282  2 BEGIN
;  181          1283  2 MAP
;  182          1284  2         GET_STR:        REF BBLOCK,             ! Pointer to static descriptor
;  183          1285  2         PROMPT_STR:     REF BBLOCK;             ! Pointer to descriptor
;  184          1286  2 LOCAL
;  185          1287  2         STATUS,                                 ! Status variable
;  186          1288  2         IOSB:           VECTOR[4,WORD],         ! I/O status block
;  187          1289  2         BUFFER:         VECTOR[132,BYTE];       ! Input buffer
;  188          1290  2 BUILTIN
;  189          1291  2         ACTUALCOUNT;
;  190          1292  2
;  191          1293  2
;  192          1294  2 ! Assign the channel if required.
;  193          1295  2 !
;  194          1296  2 IF .STA_TT_CHAN EQL 0
;  195          1297  2 THEN
;  196          1298  3     BEGIN
;  197          1299  3     STATUS = ASSIGN_CHANNEL($DESCRIPTOR('SYS$INPUT'), STA_TT_CHAN);
;  198          1300  3     IF NOT .STATUS THEN RETURN .STATUS;
;  199          1301  2     END;
;  200          1302  2
;  201          1303  2
;  202          1304  2 ! Execute the QIO.
;  203          1305  2 !
;  204        P 1306  2 STATUS = $QIOW(
```

```
;  205          P 1307  2      FUNC=IO$_READPROMPT,
;  206          P 1308  2      CHAN=.STA_TT_CHAN,
;  207          P 1309  2      IOSB=IOSB,
;  208          P 1310  2      P1=BUFFER,
;  209          P 1311  2      P2=132,
;  210          P 1312  2      P5=.PROMPT_STR[DSC$A_POINTER],
;  211            1313  2      P6=.PROMPT_STR[DSC$W_LENGTH]);
;  212            1314  2  IF .STATUS THEN STATUS = .IOSB[0];
;  213            1315  2  IF NOT .STATUS THEN RETURN .STATUS;
;  214            1316  2
;  215            1317  2
;  216            1318  2  ! Return the length if requested.
;  217            1319  2  !
;  218            1320  2  IF ACTUALCOUNT() GEQU 3
;  219            1321  2  THEN
;  220            1322  2      (.OUT_LEN)<0,16> = MINU(.IOSB[1], .GET_STR[DSC$W_LENGTH]);
;  221            1323  2
;  222            1324  2
;  223            1325  2  ! Copy the string to the output buffer and return.
;  224            1326  2  !
;  225            1327  2  CH$COPY(.IOSB[1], BUFFER, %C' ', .GET_STR[DSC$W_LENGTH], .GET_STR[DSC$A_POINTER]);
;  226            1328  2  SS$_NORMAL
;  227            1329  1  END;


                    54  55  50  4E  49  24  53  59  53  00066 P.AAB:  .ASCII  \SYS$INPUT\                                ;
                                                        0006F         .BLKB   1
                                                00000009 00070 P.AAA:  .LONG   9                                          ;
                                                00000000' 00074        .ADDRESS P.AAB                                     ;

                                                                       .EXTRN  SYS$QIOW

                                                    007C 00000         .ENTRY  LIB$GET_COMMAND, Save R2,R3,R4,R5,R6       ; 1251
                        56 00000000'    EF   9E 00002         MOVAB   STA_TT_CHAN, R6                                    ;
                        5E      FF74    CE   9E 00009         MOVAB   -140(SP), SP                                       ;
                                        66   D5 0000E         TSTL    STA_TT_CHAN                                        ; 1296
                                        0D   12 00010         BNEQ    1$                                                 ;
                                        56   DD 00012         PUSHL   R6                                                 ; 1299
                                    E1  AF   9F 00014         PUSHAB  P.AAA                                              ;
                            FF6C    CF       FB 00017         CALLS   #2, ASSIGN_CHANNEL                                 ;
                                    55       E9 0001C         BLBC    STATUS, 4$                                         ; 1300
                                    51   08  AC   D0 0001F 1$:  MOVL    PROMPT_STR, R1                                     ; 1313
                                    7E       3C 00023         MOVZWL  (R1), -(SP)                                        ;
                                        04   A1   DD 00026         PUSHL   4(R1)                                          ;
                                             7E   7C 00029         CLRQ    -(SP)                                          ;
                                        7E   84   8F   9A 0002B         MOVZBL  #132, -(SP)                                ;
                                             14   AE   9F 0002F         PUSHAB  BUFFER                                     ;
                                             7E   7C 00032         CLRQ    -(SP)                                          ;
                                             F8   AD   9F 00034         PUSHAB  IOSB                                       ;
                                                  37   DD 00037         PUSHL   #55                                        ;
                                                  66   DD 00039         PUSHL   STA_TT_CHAN                                ;
                                                  7E   D4 0003B         CLRL    -(SP)                                      ;
                        00000000G   00            0C   FB 0003D         CALLS   #12, SYS$QIOW                              ;
                                    2D            50   E9 00044         BLBC    STATUS, 4$                                 ; 1314
                                    50       F8   AD   3C 00047         MOVZWL  IOSB, STATUS                               ;
                                    26            50   E9 0004B         BLBC    STATUS, 4$                                 ; 1315
```

```
                                03              6C  91 0004E           CMPB    (AP), #3                                        ; 1320
                                                12  1F 00051           BLSSU   3$                                              ;
                                50      FA      AD  3C 00053           MOVZWL  IOSB+2, R0                                      ; 1322
                                50      04      BC  B1 00057           CMPW    @GET_STR, R0                                    ;
                                                04  1E 0005B           BGEQU   2$                                              ;
                                50      04      BC  3C 0005D           MOVZWL  @GET_STR, R0                                    ;
                        0C      BC              50  B0 00061 2$:       MOVW    R0, @OUT_LEN                                    ;
                                50      04      AC  D0 00065 3$:       MOVL    GET_STR, R0                                     ; 1327
        60              20      6E      FA      AD  2C 00069           MOVC5   IOSB+2, BUFFER, #32, (R0), @4(R0)               ;
                                        04      B0      0006F                                                                   ;
                                50              01  D0 00071           MOVL    #1, R0                                          ; 1329
                                                    04 00074 4$:       RET                                                     ;
```

; Routine Size: 117 bytes,   Routine Base: CODE + 0078

```
;  229          1330  1 %SBTTL 'LIB$PUT_OUTPUT - write to SYS$OUTPUT'
;  230          1331  1 GLOBAL ROUTINE LIB$PUT_OUTPUT(PUT_STR)=
;  231          1332  1
;  232          1333  1 !++
;  233          1334  1 !
;  234          1335  1 ! FUNCTIONAL DESCRIPTION:
;  235          1336  1 !       This routine is a replacement for LIB$PUT_OUTPUT in the
;  236          1337  1 !       stand-alone environment.
;  237          1338  1 !
;  238          1339  1 ! INPUT PARAMETERS:
;  239          1340  1 !       PUT_STR         - Pointer to descriptor for string.
;  240          1341  1 !
;  241          1342  1 ! IMPLICIT INPUTS:
;  242          1343  1 !       NONE
;  243          1344  1 !
;  244          1345  1 ! OUTPUT PARAMETERS:
;  245          1346  1 !       NONE
;  246          1347  1 !
;  247          1348  1 ! IMPLICIT OUTPUTS:
;  248          1349  1 !       NONE
;  249          1350  1 !
;  250          1351  1 ! ROUTINE VALUE:
;  251          1352  1 !       Completion status.
;  252          1353  1 !
;  253          1354  1 ! SIDE EFFECTS:
;  254          1355  1 !       NONE
;  255          1356  1 !
;  256          1357  1 !--
;  257          1358  1
;  258          1359  2 BEGIN
;  259          1360  2 MAP
;  260          1361  2         PUT_STR:        REF BBLOCK;     ! Pointer to descriptor
;  261          1362  2 LOCAL
;  262          1363  2         STATUS,                         ! Status variable
;  263          1364  2         IOSB:           VECTOR[4,WORD]; ! I/O status block
;  264          1365  2
;  265          1366  2
;  266          1367  2 ! Assign the channel if required.
;  267          1368  2 !
;  268          1369  2 IF .STA_TT_CHAN EQL 0
;  269          1370  2 THEN
;  270          1371  3     BEGIN
;  271          1372  3     STATUS = ASSIGN_CHANNEL($DESCRIPTOR('SYS$INPUT'), STA_TT_CHAN);
;  272          1373  3     IF NOT .STATUS THEN RETURN .STATUS;
;  273          1374  2     END;
;  274          1375  2
;  275          1376  2
;  276          1377  2 ! Execute the QIO.
;  277          1378  2 !
;  278        P 1379  2 STATUS = $QIOW(
;  279        P 1380  2     FUNC=IO$_WRITELBLK,
;  280        P 1381  2     CHAN=.STA_TT_CHAN,
;  281        P 1382  2     IOSB=IOSB,
;  282        P 1383  2     P1=.PUT_STR[DSC$A_POINTER],
;  283        P 1384  2     P2=.PUT_STR[DSC$W_LENGTH],
;  284          1385  2     P4=%C' ');
;  285          1386  2 IF .STATUS THEN STATUS = .IOSB[0];
```

```
;  286          1387  2 .STATUS
;  287          1388  1 END;


                                54 55 50 4E 49 24 53 59 53  000ED P.AAD:  .ASCII  \SYS$INPUT\                    ;
                                                            000F6        .BLKB   2                                  ;
                                                 00000009   000F8 P.AAC:  .LONG   9                                  ;
                                                 00000000'  000FC        .ADDRESS P.AAD                             ;


                                                    0004 00000          .ENTRY  LIB$PUT_OUTPUT, Save R2            ; 1331
                                    52 00000000'  EF  9E 00002          MOVAB   STA_TT_CHAN, R2                    ;
                                    5E            08  C2 00009          SUBL2   #8, SP                             ;
                                                  62  D5 0000C          TSTL    STA_TT_CHAN                        ; 1369
                                                  0D  12 0000E          BNEQ    1$                                 ;
                                                  52  DD 00010          PUSHL   R2                                 ; 1372
                                                E3    AF 9F 00012       PUSHAB  P.AAC                              ;
                                FEE6  CF          02  FB 00015          CALLS   #2, ASSIGN_CHANNEL                 ;
                                      28          50  E9 0001A          BLBC    STATUS, 2$                         ; 1373
                                                  7E  7C 0001D 1$:      CLRQ    -(SP)                              ; 1385
                                                  20  DD 0001F          PUSHL   #32                                ;
                                                  7E  D4 00021          CLRL    -(SP)                              ;
                                    51        04    AC D0 00023       MOVL    PUT_STR, R1                        ;
                                    7E              61 3C 00027       MOVZWL  (R1), -(SP)                        ;
                                              04    A1 DD 0002A       PUSHL   4(R1)                              ;
                                                    7E 7C 0002D       CLRQ    -(SP)                              ;
                                              20    AE 9F 0002F       PUSHAB  IOSB                               ;
                                                    20 DD 00032       PUSHL   #32                                ;
                                                    62 DD 00034       PUSHL   STA_TT_CHAN                        ;
                                                    7E D4 00036       CLRL    -(SP)                              ;
                                00000000G   00      0C FB 00038       CALLS   #12, SYS$QIOW                      ;
                                            03      50 E9 0003F       BLBC    STATUS, 2$                         ; 1386
                                            50      6E 3C 00042       MOVZWL  IOSB, STATUS                       ;
                                                    04 00045 2$:      RET                                        ; 1388

; Routine Size:  70 bytes,    Routine Base:  CODE + 0100
```

```
;  289          1389  1 %SBTTL 'SYS$QIO - intercept QIO service call'
;  290          1390  1 GLOBAL ROUTINE SYS$QIO(EFN,CHAN,FUNC,IOSB,ASTADR,ASTPRM,P1,P2,P3,P4,P5,P6)=
;  291          1391  1
;  292          1392  1 !++
;  293          1393  1 !
;  294          1394  1 ! FUNCTIONAL DESCRIPTION:
;  295          1395  1 !       This routine is a replacement for the QIO service in the
;  296          1396  1 !       stand-alone environment.
;  297          1397  1 !
;  298          1398  1 ! INPUT PARAMETERS:
;  299          1399  1 !       As for SYS$QIO.
;  300          1400  1 !
;  301          1401  1 ! IMPLICIT INPUTS:
;  302          1402  1 !       NONE
;  303          1403  1 !
;  304          1404  1 ! OUTPUT PARAMETERS:
;  305          1405  1 !       NONE
;  306          1406  1 !
;  307          1407  1 ! IMPLICIT OUTPUTS:
;  308          1408  1 !       NONE
;  309          1409  1 !
;  310          1410  1 ! ROUTINE VALUE:
;  311          1411  1 !       Completion status.
;  312          1412  1 !
;  313          1413  1 ! SIDE EFFECTS:
;  314          1414  1 !       NONE
;  315          1415  1 !
;  316          1416  1 !--
;  317          1417  1
;  318          1418  2 BEGIN
;  319          1419  2 MAP
;  320          1420  2         FUNC:           BBLOCK;         ! I/O function code
;  321          1421  2 BIND ROUTINE
;  322          1422  2         QIO_VECTOR=     %X'800001C8';   ! Vector location for SYS$QIO
;  323          1423  2 BUILTIN
;  324          1424  2         CALLG,
;  325          1425  2         AP;
;  326          1426  2
;  327          1427  2
;  328          1428  2 IF
;  329          1429  2     .FUNC[IO$V_FCODE] LEQU IO$_LOGICAL OR
;  330          1430  2     .FUNC[IO$V_FCODE] EQL IO$_READPROMPT
;  331          1431  2 THEN
;  332          1432  3     BEGIN
;  333          1433  3     !
;  334          1434  3     ! Pass physical and logical I/O functions, and READPROMPT function,
;  335          1435  3     ! directly to the driver.
;  336          1436  3     !
;  337          1437  3     CALLG(.AP, QIO_VECTOR)
;  338          1438  3     END
;  339          1439  2 ELSE
;  340          1440  3     BEGIN
;  341          1441  3     !
;  342          1442  3     ! Read/write virtual and ACP I/O functions come here.
;  343          1443  3     !
;  344          1444  3     CALLG(.AP, STA_QIO)
;  345          1445  3     END
```

```
;  346          1446  1 END;


                                                    QIO_VECTOR=         -2147483192

                                                0000 00000          .ENTRY  SYS$QIO, Save nothing                   ; 1390
        2F      0C  AC              06          00  ED 00002          CMPZV   #0, #6, FUNC, #47                       ; 1429
                                                08  1B 00008          BLEQU   1$                                      ;
        37      0C  AC              06          00  ED 0000A          CMPZV   #0, #6, FUNC, #55                       ; 1430
                                                08  12 00010          BNEQ    2$                                      ;
                        800001C8    9F          6C  FA 00012  1$:      CALLG   (AP), @#^X800001C8                      ; 1437
                                                    04 00019          RET                                             ; 1432
                        00000000G   00          6C  FA 0001A  2$:      CALLG   (AP), STA_QIO                           ; 1444
                                                    04 00021          RET                                             ; 1446

; Routine Size:  34 bytes,    Routine Base:  CODE + 0146
```

```
;  348          1447  1 %SBTTL 'SYS$QIOW - intercept QIOW service call'
;  349          1448  1 GLOBAL ROUTINE SYS$QIOW(EFN,CHAN,FUNC,IOSB,ASTADR,ASTPRM,P1,P2,P3,P4,P5,P6)=
;  350          1449  1
;  351          1450  1 !++
;  352          1451  1 !
;  353          1452  1 ! FUNCTIONAL DESCRIPTION:
;  354          1453  1 !       This routine is a replacement for the QIOW service in the
;  355          1454  1 !       stand-alone environment.
;  356          1455  1 !
;  357          1456  1 ! INPUT PARAMETERS:
;  358          1457  1 !       As for SYS$QIOW.
;  359          1458  1 !
;  360          1459  1 ! IMPLICIT INPUTS:
;  361          1460  1 !       NONE
;  362          1461  1 !
;  363          1462  1 ! OUTPUT PARAMETERS:
;  364          1463  1 !       NONE
;  365          1464  1 !
;  366          1465  1 ! IMPLICIT OUTPUTS:
;  367          1466  1 !       NONE
;  368          1467  1 !
;  369          1468  1 ! ROUTINE VALUE:
;  370          1469  1 !       Completion status.
;  371          1470  1 !
;  372          1471  1 ! SIDE EFFECTS:
;  373          1472  1 !       NONE
;  374          1473  1 !
;  375          1474  1 !--
;  376          1475  1
;  377          1476  2 BEGIN
;  378          1477  2 EXTERNAL ROUTINE
;  379          1478  2         SYS$WAITFR:     ADDRESSING_MODE(GENERAL);       ! Wait for event flag
;  380          1479  2 REGISTER
;  381          1480  2         R0=0;
;  382          1481  2 BUILTIN
;  383          1482  2         CALLG,
;  384          1483  2         AP;
;  385          1484  2
;  386          1485  2
;  387          1486  2 R0 = CALLG(.AP, SYS$QIO);       ! Execute $QIO part
;  388          1487  2 IF NOT .R0 THEN RETURN .R0;     ! If failed, return status
;  389          1488  2 CALLG(.AP, SYS$WAITFR)          ! Execute $WAITFR part
;  390          1489  1 END;


                                                        .EXTRN  SYS$WAITFR

                                          0000 00000    .ENTRY  SYS$QIOW, Save nothing                  ; 1448
                              D8  AF      6C  FA 00002  CALLG   (AP), SYS$QIO                           ; 1486
                                  07      50  E9 00006  BLBC    R0, 1$                                  ; 1487
                          00000000G   00  6C  FA 00009  CALLG   (AP), SYS$WAITFR                        ; 1488
                                          04 00010 1$:  RET                                             ; 1489

; Routine Size:  17 bytes,    Routine Base:  CODE + 0168
```

```
;   392          1490  1 %SBTTL 'SYS$CLOSE - RMS $CLOSE routine'
;   393          1491  1 GLOBAL ROUTINE SYS$CLOSE(FAB)=
;   394          1492  1
;   395          1493  1 !++
;   396          1494  1 !
;   397          1495  1 ! FUNCTIONAL DESCRIPTION:
;   398          1496  1 !       This routine is a replacement for the CLOSE service in the
;   399          1497  1 !       stand-alone environment.
;   400          1498  1 !
;   401          1499  1 ! INPUT PARAMETERS:
;   402          1500  1 !       FAB             - Pointer to the FAB.
;   403          1501  1 !
;   404          1502  1 ! IMPLICIT INPUTS:
;   405          1503  1 !       NONE
;   406          1504  1 !
;   407          1505  1 ! OUTPUT PARAMETERS:
;   408          1506  1 !       NONE
;   409          1507  1 !
;   410          1508  1 ! IMPLICIT OUTPUTS:
;   411          1509  1 !       NONE
;   412          1510  1 !
;   413          1511  1 ! ROUTINE VALUE:
;   414          1512  1 !       Completion status.
;   415          1513  1 !
;   416          1514  1 ! SIDE EFFECTS:
;   417          1515  1 !       NONE
;   418          1516  1 !
;   419          1517  1 !--
;   420          1518  1
;   421          1519  2 BEGIN
;   422          1520  2 MAP
;   423          1521  2         FAB:            REF BBLOCK;     ! Pointer to FAB
;   424          1522  2
;   425          1523  2
;   426          1524  2 ! This service deassigns the channel that was assigned by $CREATE or $OPEN.
;   427          1525  2 !
;   428          1526  2 $DASSGN(CHAN=.FAB[FAB$L_CTX]);
;   429          1527  2 FAB[FAB$W_IFI] = 0;
;   430          1528  2 FAB[FAB$L_CTX] = 0;
;   431          1529  2 FAB[FAB$L_STS] = RMS$_NORMAL;
;   432          1530  2 FAB[FAB$L_STV] = 0;
;   433          1531  2 RMS$_NORMAL
;   434          1532  1 END;


                                                        .EXTRN  SYS$DASSGN

                                                0004 00000      .ENTRY  SYS$CLOSE, Save R2                              ; 1491
                        52      04      AC      D0 00002        MOVL    FAB, R2                                         ; 1526
                                18      A2      DD 00006        PUSHL   24(R2)                                          ;
              00000000G 00              01      FB 00009        CALLS   #1, SYS$DASSGN                                  ;
                                02      A2      B4 00010        CLRW    2(R2)                                           ; 1527
                                18      A2      D4 00013        CLRL    24(R2)                                          ; 1528
                    08  A2 00010001      8F      D0 00016        MOVL    #65537, 8(R2)                                   ; 1529
                                0C      A2      D4 0001E        CLRL    12(R2)                                          ; 1530
                        50 00010001      8F      D0 00021        MOVL    #65537, R0                                      ; 1532
```

```
                                04 00028        RET                                             ;

; Routine Size:  41 bytes,    Routine Base:  CODE + 0179
```

```
;  436          1533  1 %SBTTL 'SYS$CREATE - RMS $CREATE routine'
;  437          1534  1 GLOBAL ROUTINE SYS$CREATE(FAB)=
;  438          1535  1
;  439          1536  1 !++
;  440          1537  1 !
;  441          1538  1 ! FUNCTIONAL DESCRIPTION:
;  442          1539  1 !       This routine is a replacement for the CREATE service in the
;  443          1540  1 !       stand-alone environment.  It is limited to operation on terminals,
;  444          1541  1 !       line printers, and magnetic tape.
;  445          1542  1 !
;  446          1543  1 ! INPUT PARAMETERS:
;  447          1544  1 !       FAB             - Pointer to the FAB.
;  448          1545  1 !
;  449          1546  1 ! IMPLICIT INPUTS:
;  450          1547  1 !       NONE
;  451          1548  1 !
;  452          1549  1 ! OUTPUT PARAMETERS:
;  453          1550  1 !       NONE
;  454          1551  1 !
;  455          1552  1 ! IMPLICIT OUTPUTS:
;  456          1553  1 !       NONE
;  457          1554  1 !
;  458          1555  1 ! ROUTINE VALUE:
;  459          1556  1 !       Completion status.
;  460          1557  1 !
;  461          1558  1 ! SIDE EFFECTS:
;  462          1559  1 !       NONE
;  463          1560  1 !
;  464          1561  1 !--
;  465          1562  1
;  466          1563  2 BEGIN
;  467          1564  2 MAP
;  468          1565  2         FAB:            REF BBLOCK;     ! Pointer to FAB
;  469          1566  2 LOCAL
;  470          1567  2         NAM:            REF BBLOCK,     ! Pointer to NAM block
;  471          1568  2         DESC:           VECTOR[2],      ! Descriptor for expanded string
;  472          1569  2         STATUS;                         ! Status variable
;  473          1570  2
;  474          1571  2
;  475          1572  2 ! Parse the file specification if necessary.
;  476          1573  2 !
;  477          1574  2 IF NOT $PARSE(FAB=.FAB) THEN RETURN .FAB[FAB$L_STS];
;  478          1575  2
;  479          1576  2
;  480          1577  2 ! Check the device type.
;  481          1578  2 !
;  482          1579  2 IF
;  483          1580  2     NOT .BBLOCK[FAB[FAB$L_DEV], DEV$V_CCL] AND
;  484          1581  2     NOT .BBLOCK[FAB[FAB$L_DEV], DEV$V_SQD] AND
;  485          1582  2     .FAB[FAB$L_DEV] NEQ 0 ! Process-permanent file hack
;  486          1583  2 THEN
;  487          1584  3     BEGIN
;  488          1585  3     FAB[FAB$L_STS] = RMS$_DEV;
;  489          1586  3     FAB[FAB$L_STV] = 0;
;  490          1587  3     RETURN RMS$_DEV
;  491          1588  2     END;
;  492          1589  2
```

```
;  493          1590  2
;  494          1591  2 ! Create the resultant string.
;  495          1592  2 !
;  496          1593  2 NAM = .FAB[FAB$L_NAM];
;  497          1594  2 NAM[NAM$B_RSL] = .NAM[NAM$B_ESL];
;  498          1595  2 CH$MOVE(.NAM[NAM$B_ESL], .NAM[NAM$L_ESA], .NAM[NAM$L_RSA]);
;  499          1596  2
;  500          1597  2
;  501          1598  2 ! Assign the channel.
;  502          1599  2 !
;  503          1600  2 DESC[0] = .NAM[NAM$B_ESL];
;  504          1601  2 DESC[1] = .NAM[NAM$L_ESA];
;  505          1602  2 STATUS = ASSIGN_CHANNEL(DESC, FAB[FAB$L_CTX]);
;  506          1603  2 IF NOT .STATUS
;  507          1604  2 THEN
;  508          1605  3     BEGIN
;  509          1606  3     FAB[FAB$L_STS] = .STATUS;
;  510          1607  3     FAB[FAB$L_STV] = 0;
;  511          1608  3     RETURN .STATUS;
;  512          1609  2     END;
;  513          1610  2
;  514          1611  2
;  515          1612  2 ! Indicate success.
;  516          1613  2 !
;  517          1614  2 FAB[FAB$L_STS] = RMS$_NORMAL;
;  518          1615  2 FAB[FAB$L_STV] = .FAB[FAB$L_CTX];
;  519          1616  2 RMS$_NORMAL
;  520          1617  1 END;

                                                                .EXTRN  SYS$PARSE

                                                00FC 00000      .ENTRY  SYS$CREATE, Save R2,R3,R4,R5,R6,R7      ;  1534
                                          5E    08   C2 00002      SUBL2   #8, SP                                  ;
                                          57    04   AC D0 00005      MOVL    FAB, R7                             ;  1574
                                                     57 DD 00009      PUSHL   R7                                  ;
                                    00000000G     00   01 FB 0000B      CALLS   #1, SYS$PARSE                       ;
                                                  05   50 E8 00012      BLBS    R0, 1$                              ;
                                                  50   08   A7 D0 00015      MOVL    8(R7), R0                   ;
                                                            04 00019      RET                                     ;
                                       1D   40    A7         01 E0 0001A 1$:  BBS     #1, 64(R7), 2$              ;  1580
                                       18   40    A7         05 E0 0001F      BBS     #5, 64(R7), 2$              ;  1581
                                                       40    A7 D5 00024      TSTL    64(R7)                      ;  1582
                                                             13 13 00027      BEQL    2$                          ;
                                                 08    A7 00184C4   8F D0 00029      MOVL    #99524, 8(R7)       ;  1585
                                                         0C    A7 D4 00031      CLRL    12(R7)                      ;  1586
                                                  50 00184C4   8F D0 00034      MOVL    #99524, R0              ;  1587
                                                            04 0003B      RET                                     ;
                                                  56    28   A7 D0 0003C 2$:  MOVL    40(R7), NAM             ;  1593
                                                 03   A6    0B   A6 90 00040      MOVB    11(NAM), 3(NAM)         ;  1594
                                                  50    0B   A6 9A 00045      MOVZBL  11(NAM), R0             ;  1595
                                    04   B6    0C   B6         50 28 00049      MOVC3   R0, @12(NAM), @4(NAM)   ;
                                                  6E    0B   A6 9A 0004F      MOVZBL  11(NAM), DESC           ;  1600
                                                 04   AE    0C   A6 D0 00053      MOVL    12(NAM), DESC+4         ;  1601
                                                         18   A7 9F 00058      PUSHAB  24(R7)                  ;  1602
                                                         04   AE 9F 0005B      PUSHAB  DESC                    ;
```

```
                        FDFB    CF                  02  FB 0005E           CALLS   #2, ASSIGN_CHANNEL                      ;
                                08                  50  E8 00063           BLBS    STATUS, 3$                             ; 1603
                          08    A7                  50  D0 00066           MOVL    STATUS, 8(R7)                          ; 1606
                                            0C      A7  D4 0006A           CLRL    12(R7)                                 ; 1607
                                                        04 0006D           RET                                            ; 1608
                          08    A7 00010001         8F  D0 0006E 3$:       MOVL    #65537, 8(R7)                          ; 1614
                          0C    A7          18      A7  D0 00076           MOVL    24(R7), 12(R7)                         ; 1615
                                50 00C10001         8F  D0 0007B           MOVL    #65537, R0                             ; 1617
                                                        04 00082           RET                                            ;

; Routine Size:  131 bytes,    Routine Base:  CODE + 01A2
```

```
;   522          1618  1 %SBTTL 'SYS$OPEN - RMS $OPEN routine'
;   523          1619  1 GLOBAL ROUTINE SYS$OPEN(FAB)=
;   524          1620  1
;   525          1621  1 !++
;   526          1622  1 !
;   527          1623  1 ! FUNCTIONAL DESCRIPTION:
;   528          1624  1 !       This routine is a replacement for the OPEN service in the
;   529          1625  1 !       stand-alone environment.  It is limited to operation on terminals,
;   530          1626  1 !       line printers, and magnetic tape.
;   531          1627  1 !
;   532          1628  1 ! INPUT PARAMETERS:
;   533          1629  1 !       FAB             - Pointer to the FAB.
;   534          1630  1 !
;   535          1631  1 ! IMPLICIT INPUTS:
;   536          1632  1 !       NONE
;   537          1633  1 !
;   538          1634  1 ! OUTPUT PARAMETERS:
;   539          1635  1 !       NONE
;   540          1636  1 !
;   541          1637  1 ! IMPLICIT OUTPUTS:
;   542          1638  1 !       NONE
;   543          1639  1 !
;   544          1640  1 ! ROUTINE VALUE:
;   545          1641  1 !       Completion status.
;   546          1642  1 !
;   547          1643  1 ! SIDE EFFECTS:
;   548          1644  1 !       NONE
;   549          1645  1 !
;   550          1646  1 !--
;   551          1647  1
;   552          1648  2 BEGIN
;   553          1649  2 MAP
;   554          1650  2         FAB:            REF BBLOCK;     ! Pointer to FAB
;   555          1651  2 LOCAL
;   556          1652  2         NAM:            REF BBLOCK,     ! Pointer to NAM block
;   557          1653  2         DESC:           VECTOR[2],      ! Descriptor for expanded string
;   558          1654  2         STATUS;                         ! Status variable
;   559          1655  2
;   560          1656  2
;   561          1657  2 ! Parse the file specification if necessary.
;   562          1658  2 !
;   563          1659  2 IF NOT $PARSE(FAB=.FAB) THEN RETURN .FAB[FAB$L_STS];
;   564          1660  2
;   565          1661  2
;   566          1662  2 ! Check the device type.
;   567          1663  2 !
;   568          1664  2 IF
;   569          1665  2     NOT .BBLOCK[FAB[FAB$L_DEV], DEV$V_CCL] AND
;   570          1666  2     NOT .BBLOCK[FAB[FAB$L_DEV], DEV$V_SQD] AND
;   571          1667  2     .FAB[FAB$L_DEV] NEQ 0 ! Process-permanent file hack
;   572          1668  2 THEN
;   573          1669  3     BEGIN
;   574          1670  3     FAB[FAB$L_STS] = RMS$_DEV;
;   575          1671  3     FAB[FAB$L_STV] = 0;
;   576          1672  3     RETURN RMS$_DEV
;   577          1673  2     END;
;   578          1674  2
```

```
;  579          1675  2
;  580          1676  2 ! Create the resultant string.
;  581          1677  2 !
;  582          1678  2 NAM = .FAB[FAB$L_NAM];
;  583          1679  2 NAM[NAM$B_RSL] = .NAM[NAM$B_ESL];
;  584          1680  2 CH$MOVE(.NAM[NAM$B_ESL], .NAM[NAM$L_ESA], .NAM[NAM$L_RSA]);
;  585          1681  2
;  586          1682  2
;  587          1683  2 ! Assign the channel.
;  588          1684  2 !
;  589          1685  2 DESC[0] = .NAM[NAM$B_ESL];
;  590          1686  2 DESC[1] = .NAM[NAM$L_ESA];
;  591          1687  2 STATUS = ASSIGN_CHANNEL(DESC, FAB[FAB$L_CTX]);
;  592          1688  2 IF NOT .STATUS
;  593          1689  2 THEN
;  594          1690  3     BEGIN
;  595          1691  3     FAB[FAB$L_STS] = .STATUS;
;  596          1692  3     FAB[FAB$L_STV] = 0;
;  597          1693  3     RETURN .STATUS;
;  598          1694  2     END;
;  599          1695  2
;  600          1696  2
;  601          1697  2 ! Indicate success.
;  602          1698  2 !
;  603          1699  2 FAB[FAB$L_STS] = RMS$_NORMAL;
;  604          1700  2 FAB[FAB$L_STV] = .FAB[FAB$L_CTX];
;  605          1701  2 RMS$_NORMAL
;  606          1702  1 END;

                                    00FC 00000          .ENTRY  SYS$OPEN, Save R2,R3,R4,R5,R6,R7        ;  1619
                                5E      08  C2 00002    SUBL2   #8, SP                                  ;
                                57  04  AC  D0 00005    MOVL    FAB, R7                                 ;  1659
                                    57  DD 00009        PUSHL   R7                                      ;
                00000000G       00      01  FB 0000B    CALLS   #1, SYS$PARSE                           ;
                                05      50  E8 00012    BLBS    R0, 1$                                  ;
                                50  08  A7  D0 00015    MOVL    8(R7), R0                               ;
                                        04  00019        RET                                             ;
            1D      40  A7          01  E0 0001A 1$:    BBS     #1, 64(R7), 2$                          ;  1665
            18      40  A7          05  E0 0001F        BBS     #5, 64(R7), 2$                          ;  1666
                        40  A7      D5  00 00024        TSTL    64(R7)                                  ;  1667
                                    13  13 00027        BEQL    2$                                      ;
                    08  A7 000184C4  8F  D0 00029       MOVL    #99524, 8(R7)                           ;  1670
                            0C  A7  D4  00031           CLRL    12(R7)                                  ;  1671
                        50 000184C4  8F  D0 00034       MOVL    #99524, R0                              ;  1672
                                        04  0003B       RET                                             ;
                        56      28  A7  D0 0003C 2$:    MOVL    40(R7), NAM                             ;  1678
                    03  A6      0B  A6  90 00040        MOVB    11(NAM), 3(NAM)                         ;  1679
                        50      0B  A6  9A 00045        MOVZBL  11(NAM), R0                             ;  1680
    04  B6          0C  B6          50  28 00049        MOVC3   R0, @12(NAM), @4(NAM)                   ;
                        6E      0B  A6  9A 0004F        MOVZBL  11(NAM), DESC                           ;  1685
                    04  AE      0C  A6  D0 00053        MOVL    12(NAM), DESC+4                         ;  1686
                                18  A7  9F 00058        PUSHAB  24(R7)                                  ;  1687
                                04  AE  9F 0005B        PUSHAB  DESC                                    ;
```

```
                FD78   CF             02   FB 0005E          CALLS   #2, ASSIGN_CHANNEL                    ;
                       08             50   E8 00063          BLBS    STATUS, 3$                           ; 1688
                  08   A7             50   D0 00066          MOVL    STATUS, 8(R7)                        ; 1691
                                  0C   A7   D4 0006A          CLRL    12(R7)                               ; 1692
                                       04   0006D            RET                                          ; 1693
                  08   A7 00010001   8F   D0 0006E 3$:       MOVL    #65537, 8(R7)                        ; 1699
                  0C   A7         18   A7   D0 00076          MOVL    24(R7), 12(R7)                       ; 1700
                       50 00010001   8F   D0 0007B          MOVL    #65537, R0                           ; 1702
                                       04   00082            RET                                          ;

; Routine Size:  131 bytes,    Routine Base:  CODE + 0225
```

```
;  608          1703  1 %SBTTL 'SYS$CONNECT - RMS $CONNECT routine'
;  609          1704  1 GLOBAL ROUTINE SYS$CONNECT(RAB)=
;  610          1705  1
;  611          1706  1 !++
;  612          1707  1 !
;  613          1708  1 ! FUNCTIONAL DESCRIPTION:
;  614          1709  1 !       This routine is a replacement for the CONNECT service in the
;  615          1710  1 !       stand-alone environment.
;  616          1711  1 !
;  617          1712  1 ! INPUT PARAMETERS:
;  618          1713  1 !       RAB             - Pointer to the RAB.
;  619          1714  1 !
;  620          1715  1 ! IMPLICIT INPUTS:
;  621          1716  1 !       NONE
;  622          1717  1 !
;  623          1718  1 ! OUTPUT PARAMETERS:
;  624          1719  1 !       NONE
;  625          1720  1 !
;  626          1721  1 ! IMPLICIT OUTPUTS:
;  627          1722  1 !       NONE
;  628          1723  1 !
;  629          1724  1 ! ROUTINE VALUE:
;  630          1725  1 !       Completion status.
;  631          1726  1 !
;  632          1727  1 ! SIDE EFFECTS:
;  633          1728  1 !       NONE
;  634          1729  1 !
;  635          1730  1 !--
;  636          1731  1
;  637          1732  2 BEGIN
;  638          1733  2 MAP
;  639          1734  2         RAB:            REF BBLOCK;     ! Pointer to RAB
;  640          1735  2
;  641          1736  2
;  642          1737  2 ! This service is a no-operation.
;  643          1738  2 !
;  644          1739  2 RAB[RAB$L_STS] = RMS$_NORMAL;
;  645          1740  2 RAB[RAB$L_STV] = 0;
;  646          1741  2 RMS$_NORMAL
;  647          1742  1 END;


                                                0000 00000      .ENTRY  SYS$CONNECT, Save nothing                       ; 1704
                                     50      04 AC   D0 00002   MOVL    RAB, R0                                         ; 1739
                                08   A0 00010001 8F   D0 00006   MOVL    #65537, 8(R0)                                   ;
                                           0C   A0   D4 0000E   CLRL    12(R0)                                          ; 1740
                                     50 00010001 8F   D0 00011   MOVL    #65537, R0                                      ; 1742
                                                04 00018        RET                                                     ;

; Routine Size:  25 bytes,    Routine Base:  CODE + 02A8
```

```
;  649          1743  1 %SBTTL 'SYS$PUT - RMS $PUT routine'
;  650          1744  1 GLOBAL ROUTINE SYS$PUT(RAB)=
;  651          1745  1
;  652          1746  1 !++
;  653          1747  1 !
;  654          1748  1 ! FUNCTIONAL DESCRIPTION:
;  655          1749  1 !       This routine is a replacement for the PUT service in the
;  656          1750  1 !       stand-alone environment.  This service is provided to allow
;  657          1751  1 !       /LIST to operate.  It is restricted to terminals and line printers.
;  658          1752  1 !
;  659          1753  1 ! INPUT PARAMETERS:
;  660          1754  1 !       RAB             - Pointer to the RAB.
;  661          1755  1 !
;  662          1756  1 ! IMPLICIT INPUTS:
;  663          1757  1 !       NONE
;  664          1758  1 !
;  665          1759  1 ! OUTPUT PARAMETERS:
;  666          1760  1 !       NONE
;  667          1761  1 !
;  668          1762  1 ! IMPLICIT OUTPUTS:
;  669          1763  1 !       NONE
;  670          1764  1 !
;  671          1765  1 ! ROUTINE VALUE:
;  672          1766  1 !       Completion status.
;  673          1767  1 !
;  674          1768  1 ! SIDE EFFECTS:
;  675          1769  1 !       NONE
;  676          1770  1 !
;  677          1771  1 !--
;  678          1772  1
;  679          1773  2 BEGIN
;  680          1774  2 MAP
;  681          1775  2         RAB:            REF BBLOCK;     ! Pointer to RAB
;  682          1776  2 LOCAL
;  683          1777  2         FAB:            REF BBLOCK,     ! Pointer to FAB
;  684          1778  2         STATUS,                         ! Status variable
;  685          1779  2         IOSB:           VECTOR[4,WORD]; ! I/O status block
;  686          1780  2
;  687          1781  2
;  688          1782  2 ! Point to FAB.
;  689          1783  2 !
;  690          1784  2 FAB = .RAB[RAB$L_FAB];
;  691          1785  2
;  692          1786  2
;  693          1787  2 ! Make sure a channel has been assigned.
;  694          1788  2 !
;  695          1789  2 IF .FAB[FAB$L_CTX] EQL 0
;  696          1790  2 THEN
;  697          1791  3     BEGIN
;  698          1792  3     RAB[RAB$L_STS] = RMS$_DEV;
;  699          1793  3     RAB[RAB$L_STV] = 0;
;  700          1794  3     RETURN RMS$_DEV
;  701          1795  2     END;
;  702          1796  2
;  703          1797  2
;  704          1798  2 ! Execute the I/O.
;  705          1799  2 !
```

```
;  706        P 1800  2 STATUS = $QIOW(
;  707        P 1801  2     FUNC=IO$_WRITELBLK,
;  708        P 1802  2     CHAN=.FAB[FAB$L_CTX],
;  709        P 1803  2     IOSB=IOSB,
;  710        P 1804  2     P1=.RAB[RAB$L_RBF],
;  711        P 1805  2     P2=.RAB[RAB$W_RSZ],
;  712          1806  2     P4=%C' ');
;  713          1807  2 IF .STATUS THEN STATUS = .IOSB[0];
;  714          1808  2 RAB[RAB$L_STS] = .STATUS;
;  715          1809  2 RAB[RAB$L_STV] = 0;
;  716          1810  2 .STATUS
;  717          1811  1 END;


                                    0004 00000         .ENTRY  SYS$PUT, Save R2                                ; 1744
                                5E      08  C2 00002   SUBL2   #8, SP                                          ;
                                52      04  AC  D0 00005   MOVL    RAB, R2                                     ; 1784
                                50      3C  A2  D0 00009   MOVL    60(R2), FAB                                 ;
                                        18  A0  D5 0000D   TSTL    24(FAB)                                     ; 1789
                                            13  12 00010   BNEQ    1$                                          ;
                            08  A2 000184C4  8F  D0 00012   MOVL    #99524, 8(R2)                               ; 1792
                                        0C  A2  D4 0001A   CLRL    12(R2)                                      ; 1793
                                50 000184C4  8F  D0 0001D   MOVL    #99524, R0                                  ; 1794
                                            04  00024   RET                                                    ;
                                            7E  7C 00025 1$:    CLRQ    -(SP)                                  ; 1806
                                            20  DD 00027   PUSHL   #32                                         ;
                                            7E  D4 00029   CLRL    -(SP)                                       ;
                                    7E      22  A2  3C 0002B   MOVZWL  34(R2), -(SP)                           ;
                                            28  A2  DD 0002F   PUSHL   40(R2)                                  ;
                                            7E  7C 00032   CLRQ    -(SP)                                       ;
                                            20  AE  9F 00034   PUSHAB  IOSB                                     ;
                                            20  DD 00037   PUSHL   #32                                        ;
                                            18  A0  DD 00039   PUSHL   24(FAB)                                 ;
                                            7E  D4 0003C   CLRL    -(SP)                                       ;
                        00000000G   00              0C  FB 0003E   CALLS   #12, SYS$QIOW                       ;
                                    03              50  E9 00045   BLBC    STATUS, 2$                          ; 1807
                                    50              6E  3C 00048   MOVZWL  IOSB, STATUS                        ;
                                08  A2              50  D0 0004B 2$:    MOVL    STATUS, 8(R2)                  ; 1808
                                            0C  A2  D4 0004F   CLRL    12(R2)                                  ; 1809
                                            04  00052   RET                                                    ; 1811

; Routine Size:  83 bytes,    Routine Base:  CODE + 02C1
```

```
;  719          1812  1 %SBTTL 'DUMMY - various dummy RMS routines'
;  720          1813  1 ROUTINE DUMMY(RAB)=
;  721          1814  1
;  722          1815  1 !++
;  723          1816  1 !
;  724          1817  1 ! FUNCTIONAL DESCRIPTION:
;  725          1818  1 !       This routine serves as a stub for services that are referenced but are
;  726          1819  1 !       never called in the stand-alone environment, namely SYS$FIND, SYS$GET,
;  727          1820  1 !       and SYS$REWIND.  These services are used to handle save set files in
;  728          1821  1 !       the on-line version.
;  729          1822  1 !
;  730          1823  1 ! INPUT PARAMETERS:
;  731          1824  1 !       RAB             - Pointer to the RAB.
;  732          1825  1 !
;  733          1826  1 ! IMPLICIT INPUTS:
;  734          1827  1 !       NONE
;  735          1828  1 !
;  736          1829  1 ! OUTPUT PARAMETERS:
;  737          1830  1 !       NONE
;  738          1831  1 !
;  739          1832  1 ! IMPLICIT OUTPUTS:
;  740          1833  1 !       NONE
;  741          1834  1 !
;  742          1835  1 ! ROUTINE VALUE:
;  743          1836  1 !       Completion status (RMS$_IOP, invalid operation).
;  744          1837  1 !
;  745          1838  1 ! SIDE EFFECTS:
;  746          1839  1 !       NONE
;  747          1840  1 !
;  748          1841  1 !--
;  749          1842  1
;  750          1843  2 BEGIN
;  751          1844  2 MAP
;  752          1845  2         RAB:            REF BBLOCK;     ! Pointer to RAB
;  753          1846  2
;  754          1847  2
;  755          1848  2 RAB[RAB$L_STS] = RMS$_IOP;
;  756          1849  2 RAB[RAB$L_STV] = 0;
;  757          1850  2 RMS$_IOP
;  758          1851  1 END;


                                        0000 00000 DUMMY:   .WORD   Save nothing                    ; 1813
                              50    04  AC   D0 00002         MOVL    RAB, R0                       ; 1848
                           08 A0 00018574 8F   D0 00006         MOVL    #99700, 8(R0)                 ;
                                 0C  A0   D4 0000E            CLRL    12(R0)                        ; 1849
                              50 00018574 8F   D0 00011         MOVL    #99700, R0                    ; 1851
                                          04 00018            RET                                   ;

; Routine Size:  25 bytes,    Routine Base:  CODE + 0314
```

```
;  760          1852  1 GLOBAL BIND ROUTINE
;  761          1853  1          SYS$FIND        = DUMMY,
;  762          1854  1          SYS$GET         = DUMMY,
;  763          1855  1          SYS$REWIND      = DUMMY;
;  764          1856  1
;  765          1857  1
;  766          1858  1 END
;  767          1859  0 ELUDOM
```

```
SYS$FIND-=          DUMMY
SYS$GET==           DUMMY
SYS$REWIND==        DUMMY
```

```
;                              PSECT SUMMARY
;
;      Name                    Bytes                          Attributes
;
;  DATA                           4  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;  CODE                         813  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
```

```
;                          Library Statistics
;
;                                 -------- Symbols --------      Pages       Processing
;      File                       Total    Loaded   Percent      Mapped      Time
;
;  _$255$DUA28:[SYSLIB]LIB.L32;1  18619       36         0        1000        00:02.2
```

```
;                                    COMMAND QUALIFIERS

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

; Size:         776 code + 41 data bytes
; Run Time:        00:23.3
; Elapsed Time:    01:11.8
; Lines/CPU Min:    4789
; Lexemes/CPU-Min: 33866
; Memory Used:  185 pages
; Compilation Complete
```

TAPEUTIL
LIS

STAINVOL
LIS

UTILITY
LIS

STATOSYS
LIS

STAPARSE
LIS