F 5

```
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO     TTTTTTTTTTTTTTT     SSSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO     TTTTTTTTTTTTTTT     SSSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO     TTTTTTTTTTTTTTT     SSSSSSSSSSSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT        SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT        SSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO        TTT           SSSSSSSSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO        TTT           SSSSSSSSS
BBBBBBBBBBBB     OOO         OOO  OOO         OOO        TTT           SSSSSSSSS
BBB         BBB  OOO         OOO  OOO         COO        TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT                    SSS
BBB         BBB  OOO         OOO  OOO         OOO        TTT                    SSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO           TTT        SSSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO           TTT        SSSSSSSSSSSS
BBBBBBBBBBBB        OOOOOOOOO        OOOOOOOOO           TTT        SSSSSSSSSSSS
```

FILEID**STARDDRIV

L 8

```
  SSSSSSSS  TTTTTTTTTT    AAAAAA    RRRRRRRR    DDDDDDDD    DDDDDDDD    RRRRRRRR      IIIIII    VV      VV
  SSSSSSSS  TTTTTTTTTT    AAAAAA    RRRRRRRR    DDDDDDDD    DDDDDDDD    RRRRRRRR      IIIIII    VV      VV
SS              TT      AA      AA  RR      RR  DD      DD  DD      DD  RR      RR      II      VV      VV
SS              TT      AA      AA  RR      RR  DD      DD  DD      DD  RR      RR      II      VV      VV
SS              TT      AA      AA  RR      RR  DD      DD  DD      DD  RR      RR      II      VV      VV
SS              TT      AA      AA  RR      RR  DD      DD  DD      DD  RR      RR      II      VV      VV
  SSSSSS        TT      AA      AA  RRRRRRRR    DD      DD  DD      DD  RRRRRRRR        II      VV      VV
  SSSSSS        TT      AA      AA  RRRRRRRR    DD      DD  DD      DD  RRRRRRRR        II      VV      VV
        SS      TT      AAAAAAAAAA  RR  RR      DD      DD  DD      DD  RR  RR          II      VV      VV
        SS      TT      AAAAAAAAAA  RR  RR      DD      DD  DD      DD  RR  RR          II      VV      VV
        SS      TT      AA      AA  RR    RR    DD      DD  DD      DD  RR    RR        II        VV  VV        ....
        SS      TT      AA      AA  RR    RR    DD      DD  DD      DD  RR    RR        II        VV  VV        ....
SSSSSSSS        TT      AA      AA  RR      RR  DDDDDDDD    DDDDDDDD    RR      RR    IIIIII        VV          ....
SSSSSSSS        TT      AA      AA  RR      RR  DDDDDDDD    DDDDDDDD    RR      RR    IIIIII        VV          ....


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
```

Table of contents

```
0000          .TITLE  STARDDRIV - Driver read routines for STASYSGEN, STACONFIG
0000          .IDENT  'V04-000'
0000
0000    ;
0000    ;****************************************************************************
0000    ;*                                                                          *
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0000    ;*                                                                          *
0000    ;*                                                                          *
0000    ;****************************************************************************
0000    ;
0000
0000    ;++
0000    ; FACILITY:     STANDALONE SYSGEN, STANDALONE CONFIGURE
0000    ;
0000    ; ABSTRACT:     READS DRIVERS INTO MEMORY.
0000    ;
0000    ; ENVIRONMENT:  USER, EXEC, AND KERNEL MODE
0000    ;
0000    ; AUTHOR:  STEVE BECKHARDT,     CREATION DATE:  18-SEP-1979
0000    ;
0000    ; MODIFIED BY:
0000    ;
0000    ;       V03-003 KDM0090         Kathleen D. Morse       10-Nov-1983
0000    ;               Make file header buffer fall on word boundry instead
0000    ;               of a byte boundry, so that STASYSGEN works on MicroVAX I.
0000    ;
0000    ;       V03-002 WMC0001         Wayne Cardoza           09-Aug-1983
0000    ;               Make it handle non-contiguous files.
0000    ;
0000    ;       V03-001 MSH0001         Maryann Hinden          07-Jul-1983
0000    ;               Move to separate module.
0000    ;--
```

```
          0000          .SBTTL  DECLARATIONS
          0000  ;
          0000  ; INCLUDE FILES:
          0000  ;
          0000
          0000  ;
          0000  ; MACROS:
          0000  ;
          0000
          0000  ;
          0000  ; EQUATED SYMBOLS:
          0000  ;
          0000
0000000D  0000  CR = ^XD                                ; ASCII carriage return
0000000A  0000  LF = ^XA                                ; ASCII line feed
          0000
          0000  ;
          0000  ; OWN STORAGE:
          0000  ;
          0000
    00000000            .PSECT  BOO$SYSGEN,WRT,WORD
          0000
00000200  0000  FILHDR: .BLKB   512                     ; Buffer for file header
          0200
00000400  0200  IXFHDR: .BLKB   512                     ; Buffer for index file header
          0400
          0400  RTRVPTR:                                ; Buffer for 128 retrieval pointer
00000600  0400          .BLKB   512
          0600
          0600  RTRVLEN:                                ; Length of retreival pointers
00000604  0600          .BLKL   1
          0604
          0604  RTRVDESC:                               ; Descriptor for retrieval pointer buffer
00000200  0604          .LONG   512
00000400' 0608          .ADDRESS RTRVPTR
          060C
          060C  STATBLK:                                ; Statistics block
00000610  060C          .BLKL   1                       ;  LBN of first block of file
00000614  0610          .BLKL   1                       ;  Size of file in blocks
          0614
          0614  IOSTBLK:                                ; I/O status block
0000061C  0614          .BLKL   2
          061C
          061C  FILNAM_DSC:                             ; File name descriptor
00000000  061C          .LONG   0                       ;  Size (in bytes)
00000625' 0620          .ADDRESS FILNAMBFR              ;  Address of file name
          0624
          0624  FILNAMBFRLF:                            ; Line feed before file name buffer
      0A  0624          .ASCII  <LF>
          0625  FILNAMBFR:                              ; File name buffer
00000635  0625          .BLKB   16
          0635
```

```
                           0635          .SBTTL  IOGEN$READDR;V - Read in Driver
                           0635  ;++
                           0635  ; FUNCTIONAL DESCRIPTION:
                           0635  ;
                           0635  ;       This routine reads the driver into memory by opening it
                           0635  ;       with FIL$OPENFILE and reading it with a QIO.
                           0635  ;
                           0635  ; CALLING SEQUENCE:
                           0635  ;
                           0635  ;       BSBW    IOGEN$READDRIV
                           0635  ;
                           0635  ; INPUT PARAMETERS:
                           0635  ;
                           0635  ;       R0      Address of filename counted string
                           0635  ;       R3      Address of location to store channel number
                           0635  ;       R4      Address of two longword array to return address range
                           0635  ;               created by $EXPREG.
                           0635  ;
                           0635  ; IMPLICIT INPUTS:
                           0635  ;
                           0635  ;       None
                           0635  ;
                           0635  ; OUTPUT PARAMETERS:
                           0635  ;
                           0635  ;       R0      Completion code
                           0635  ;
                           0635  ; IMPLICIT OUTPUTS:
                           0635  ;
                           0635  ;       None
                           0635  ;
                           0635  ; COMPLETION CODES
                           0635  ;
                           0635  ;       Those returned by FIL$OPENFILE, $EXPREG, and $QIO
                           0635  ;
                           0635  ; SIDE EFFECTS:
                           0635  ;
                           0635  ;       R0 - R2 are used as scratch registers
                           0635  ;
                           0635  ;--
                           0635
                           0635  IOGEN$READDRIV::
           51    80    9A  0635          MOVZBL  (R0)+,R1                ; Get length of filename
           09    51    D1  0638          CMPL    R1,#9                   ; Longer than 9 characters?
                 06    15  063B          BLEQ    10$                     ; No
     50   0000'8F      3C  063D          MOVZWL  #SS$_BADFILENAME,R0     ; Yes, error
                       05  0642          RSB
                           0643
  D4 AF    51    04    C1  0643  10$:    ADDL3   #4,R1,FILNAM_DSC        ; Store filename size + 4
                 3C    BB  0648          PUSHR   #^M<R2,R3,R4,R5>        ; Save registers
  D6 AF    60    51    28  064A          MOVC3   R1,(R0),FILNAMBFR       ; Copy filename into local buffer
 63    4558452E  8F    D0  064F          MOVL    #^A/.EXE/,(R3)          ; Append filetype
                 3C    BA  0656          POPR    #^M<R2,R3,R4,R5>        ; Restore registers
                           0658
                           0658          ;
                           0658          ; Open the file
                           0658          ;
                           0658
```

```
               A9 AF   7F  0658            PUSHAQ   RTRVDESC               ; Buffer for retrieval pointers
               A2 AF   9F  065B            PUSHAB   RTRVLEN                ; Get length of retrieval pointer buffer use
       52      AB AF   7E  065E            MOVAQ    STATBLK,R2             ; Get address of statistics block
                  62   7F  0662            PUSHAQ   (R2)                   ; Push address of statistics block
             F998 CF   9F  0664            PUSHAB   FILHDR                 ; Push address of file header buffer
             FB94 CF   9F  0668            PUSHAB   IXFHDR                 ; Push address of index file hdr bfr
               AD AF   7F  066C            PUSHAQ   FILNAM_DSC             ; Push address of filename descriptor
                  63   3F  066F            PUSHAW   (R3)                   ; Push address of loc. to store channel
    00000000'EF   07   FB  0671            CALLS    #7,FIL$OPENFILE        ; Open the file
               0E 50   E9  0678            BLBC     R0,20$                 ; Error
       84 AF   82 AF   D1  067B            CMPL     RTRVLEN,RTRVDESC       ; Did we overflow buffer
                  26   19  0680            BLSS     40$                    ; No
    50    00000000'EF  D0  0682            MOVL     SS$_FILNOTCNTG,R0
                F974'  30  0689  20$:      BSBW     PUTERROR               ; Output error message
         50    8D AF   D0  068C            MOVL     FILNAM_DSC,R0          ; Get length of filename
       90 AF40    0D   90  0690            MOVB     #CR,FI[NAMBFR[R0]      ; Put CR at end of buffer
             8D AF40   94  0695            CLRB     FILNAMBFR+1[R0]        ; Make it ASCIZ
                  7E   7C  0699            CLRQ     -(SP)                  ; No input buffer
               86 AF   9F  069B            PUSHAB   FILNAMBFRLF            ; Push address of filename
    00000000'EF   03   FB  069E            CALLS    #3,BOO$READPROMPT      ; Output driver name
                  50   D4  06A5            CLRL     R0                     ; Status
                  05   05  06A7            RSB
                           06A8
             00E0 8F   BB  06A8  40$:      PUSHR    #^M<R5,R6,R7>
                           06AC            ;
                           06AC            ; Expand the program region to create a place to read driver into
                           06AC            ;
                           06AC
                           06AC            $EXPREG_S      PAGCNT = 4(R2),-; # of pages
                           06AC                           RETADR = (R4)   ; Return address array
               4C 50   E9  06BC            BLBC     R0,90$                          ; Error
                           06BF
                           06BF            ;
                           06BF            ; Read in the driver
                           06BF            ;
                           06BF
 52   FF3B CF   FD 8F  78  06BF            ASHL     #-3,RTRVLEN,R2         ; Number of retrieval pointers
          55   FD36 CF 9E  06C6            MOVAB    RTRVPTR,R5             ; Start of pointers
               56   64 D0  06CB            MOVL     (R4),R6                ; Start of driver buffer
               50   85 7D  06CE  50$:      MOVQ     (R5)+,R0               ; R0 = # of blocks, R1 = LBN.
 57   50   00000200 8F C5  06D1            MULL3    #512,R0,R7             ; Convert blocks to bytes
                           06D9            $QIOW_S CHAN = (R3),-           ; Channel number
                           06D9                    FUNC = #IO$_READLBLK,-  ; Function
                           06D9                    IOSB = IOSTBLK,-        ; I/O status block
                           06D9                    P1 = (R6),-             ; Buffer address
                           06D9                    P2 = R7,-               ; Byte count
                           06D9                    P3 = R1                 ; LBN
               0E 50   E9  06FA            BLBC     R0,90$                 ; Error
          50   FF13 CF 3C  06FD            MOVZWL   IOSTBLK,R0             ; Final status
               06 50   E9  0702            BLBC     R0,90$                 ; Error
               56   57 C0  0705            ADDL     R7,R6                  ; New buffer
               C3   52 F5  0708            SOBGTR   R2,50$
                           070B
             00E0 8F   BA  070B  90$:      POPR     #^M<R5,R6,R7>
                  05       070F            RSB
                           0710
                           0710            .END
```

```
$$T1               = 00000001
BOO$READPROMPT       ********     X    01
CR                 = 0000000D
FIL$OPENFILE         ********     X    01
FILHDR               00000000 R        01
FILNAMBFR            00000625 R        01
FILNAMBFRLF          00000624 R        01
FILNAM_DSC           0000061C R        01
IO$_READLBLK         ********     X    01
IOGEN$READDRIV       00000635 RG       01
IOSTBLK              00000614 R        01
IXFHDR               00000200 R        01
LF                 = 0000000A
PUTERROR             ********     X    01
RTRVDESC             00000604 R        01
RTRVLEN              00000600 R        01
RTRVPTR              00000400 R        01
SS$_BADFILENAME      ********     X    01
SS$_FILNOTCNTG       ********     X    01
STATBLK              0000060C R        01
SYS$EXPREG           ********    GX    01
SYS$QIOW             ********    GX    01

                                                    +-----------------+
                                                    ! Psect synopsis !
                                                    +-----------------+

PSECT name                        Allocation            PSECT No.  Attributes
----------                        ----------            ---------  ----------
.  ABS  .                         00000000  (     0.)   00 (   0.)  NOPIC    USR    CON    ABS    LCL NOSHR NOEXE NORD   NOWRT NOVEC BYTE
BOO$SYSGEN                        00000710  (  1808.)   01 (   1.)  NOPIC    USR    CON    REL    LCL NOSHR   EXE   RD     WRT NOVEC WORD

                                                 +------------------------+
                                                 ! Performance indicators !
                                                 +------------------------+

Phase                        Page faults    CPU Time       Elapsed Time
-----                        -----------    --------       ------------
Initialization                       29    00:00:00.10    00:00:00.71
Command processing                  110    00:00:00.66    00:00:02.71
Pass 1                              134    00:00:01.05    00:00:03.51
Symbol table sort                     0    00:00:00.01    00:00:00.01
Pass 2                               54    00:00:00.44    00:00:01.00
Symbol table output                   3    00:00:00.02    00:00:00.03
Psect synopsis output                 1    00:00:00.01    00:00:00.01
Cross-reference output                0    00:00:00.00    00:00:00.00
Assembler run totals                333    00:00:02.30    00:00:07.98

The working set limit was 1050 pages.
4178 bytes (9 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 22 non-local and 5 local symbols.
217 source lines were read in Pass 1, producing 11 object records in Pass 2.
6 pages of virtual memory were used to define 6 macros.
```

```
                                        +--------------------------+
                                        ! Macro library statistics !
                                        +--------------------------+

Macro library name                       Macros defined
------------------                       --------------
_$255$DUA28:[BOOTS.OBJ]BOOTS.MLB;1                   0
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                       0
_$255$DUA28:[SYSLIB]STARLET.MLB;2                    6
TOTALS (all libraries)                               6

70 GETS were required to define 6 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:STARDDRIV/OBJ=OBJ$:STARDDRIV MSRC$:STARDDRIV/UPDATE=(ENH$:STARDDRIV)+EXECML$/LIB+LIB$:BOOTS.MLB/LIB
```

0040 AH-BT13A-SE
VAX/VMS V4.0

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