```
RRRRRRRRRRRR     UUU         UUU  NNN         NNN    000000000    FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN         NNN    000000000    FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN         NNN    000000000    FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRR      RRR     UUU         UUU  NNN         NNN    000     000   FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN    000     000   FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN    000     000   FFF              FFF
RRR      RRR     UUU         UUU  NNNNNN      NNN    000     000   FFF              FFF
RRR      RRR     UUU         UUU  NNNNNN      NNN    000     000   FFF              FFF
RRRRRRRRRRRR     UUU         UUU  NNN NNN     NNN    000     000   FFFFFFFFFFF      FFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN NNN     NNN    000     000   FFFFFFFFFFF      FFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN  NNN    NNN    000     000   FFFFFFFFFFF      FFFFFFFFFFF
RRR   RRR        UUU         UUU  NNN   NNNNN 000    000     000   FFF              FFF
RRR    RRR       UUU         UUU  NNN    NNNNNN000   000     000   FFF              FFF
RRR     RRR      UUU         UUU  NNN     NNN 00C    000     000   FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN    000     000   FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN    000     000   FFF              FFF
RRR      RRR     UUUUUUUUUUUUUUU  NNN         NNN    000000000     FFF              FFF
RRR      RRR     UUUUUUUUUUUUUUU  NNN         NNN    000000000     FFF              FFF
RRR      RRR     UUUUUUUUUUUUUUU  NNN         NNN    000000000     FFF              FFF
```

```
DDDDDDD      SSSSSSSS  PPPPPPPP   PPPPPPPP      AAAAAA      GGGGGGGG
DDDDDDD      SSSSSSSS  PPPPPPPP   PPPPPPPP      AAAAAA      GGGGGGGG
DD     DD  SS         PP      PP  PP      PP  AA      AA  GG
DD     DD  SS         PP      PP  PP      PP  AA      AA  GG
DD     DD  SS         PP      PP  PP      PP  AA      AA  GG
DD     DD  SS         PP      PP  PP      PP  AA      AA  GG
DD     DD    SSSSS    PPPPPPPP   PPPPPPPP   AA      AA  GG
DD     DD    SSSSS    PPPPPPPP   PPPPPPPP   AA      AA  GG
DD     DD        SS   PP         PP         AAAAAAAAAA  GG    GGGGGG
DD     DD        SS   PP         PP         AAAAAAAAAA  GG    GGGGG
DD     DD        SS   PP         PP         AA      AA  GG        GG    ....
DD     DD        SS   PP         PP         AA      AA  GG        GG    ....
DDDDDDD  SSSSSSSS     PP         PP         AA      AA  GGGGGG          ....
DDDDDDD  SSSSSSSS     PP         PP         AA      AA  GGGGGG          ....


LL              IIIIII      SSSSSSSS
LL              IIIIII      SSSSSSSS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II      SS
LL                II        SSSSS
LL                II        SSSSS
LL                II            SS
LL                II            SS
LL                II            SS
LL                II            SS
LLLLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLLLL  IIIIII  SSSSSSSS
```

```
     0001   0 %TITLE 'Processes the .DISPLAY NUMBER, & .DISPLAY SUBPAGE'
     0002   0 MODULE DSPPAG ( IDENT = 'V04-000'
  P  0003   0 %BLISS32[,
  P  0004   0           ADDRESSING_MODE(EXTERNAL=LONG_RELATIVE,NONEXTERNAL=LONG_RELATIVE)
     0005   0           ]
     0006   0              ) =
     0007   1 BEGIN
     0008   1
     0009   1 !
     0010   1 !*******************************************************************************
     0011   1 !*                                                                             *
     0012   1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                     *
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     0028   1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                     *
     0029   1 !*                                                                             *
     0030   1 !*                                                                             *
     0031   1 !*******************************************************************************
     0032   1 !
     0033   1 !++
     0034   1 ! FACILITY:      DSR (Digital Standard RUNOFF) / DSRPLUS
     0035   1 !
     0036   1 ! ABSTRACT: Processes the .DISPLAY APPENDIX, .DISPLAY CHAPTER, .DISPLAY NUMBER, and .DISPLAY SUBPAGE command
     0037   1 !
     0038   1 !
     0039   1 ! ENVIRONMENT: Transportable
     0040   1 !
     0041   1 ! AUTHOR: R.W.Friday     CREATION DATE: May, 1979
     0042   1 !
```

```
   44        0043  1  %SBTTL 'Revision History'
   45        0044  1  |
   46        0045  1  |  MODIFIED BY:
   47        0046  1  |
   48        0047  1  |      004      REM00004      Ray Marshall      27-April-1983
   49        0048  1  |               To decommit this routine's handling of the .DISPLAY APPENDIX and
   50        0049  1  |                .DISPLAY CHAPTER directives.  They will hence forth be handled
   51        0050  1  |                by code DSPENT.BLI.
   52        0051  1  |
   53        0052  1  |      003      KFA00003      Ken Alden         07-Mar-1983
   54        0053  1  |               Global edit of all modules. Updated module names, idents,
   55        0054  1  |               copyright dates. Changed require files to BLISS library.
   56        0055  1  |
   57        0056  1  |--
```

```
 59        0057  1 %SBTTL 'Module Level Declarations'
 60        0058  1 !
 61        0059  1 ! TABLE OF CONTENTS:
 62        0060  1 !
 63        0061  1
 64        0062  1 !
 65        0063  1 ! INCLUDE FILES:
 66        0064  1 !
 67        0065  1
 68        0066  1 LIBRARY 'NXPORT:XPORT';                       ! XPORT Library
 69        0067  1 REQUIRE 'REQ:RNODEF';                         ! RUNOFF variant definitions
 70        0198  1
 71    U   0199  1 %IF DSRPLUS %THEN
 72    U   0200  1 LIBRARY 'REQ:DPLLIB';                         ! DSRPLUS BLISS Library
 73        0201  1 %ELSE
 74        0202  1 LIBRARY 'REQ:DSRLIB';                         ! DSR BLISS Library
 75        0203  1 %FI
 76        0204  1
 77        0205  1 !
 78        0206  1 ! MACROS:
 79        0207  1 !
 80        0208  1 !Although the SET_DISPLAY macro has four parameters, it always
 81        0209  1 !appears as if it's being called with just one.  That's because
 82        0210  1 !all the display names (e.g., SCT_PAGE_D) are really macros
 83        0211  1 !defining fields, and they expand into a "comma list" containing
 84        0212  1 !four items.
 85        0213  1 MACRO
 86    M   0214  1     SET_DISPLAY (a,b,c,d) =
 87    M   0215  1         BEGIN
 88    M   0216  1         !The display characteristics take effect on the next
 89    M   0217  1         !page, at the very latest.  So that is always safe to set.
 90    M   0218  1         NPAGEN [a,b,c,d] = .DISPLAY_CODE;
 91    M   0219  1         !At the top of the first page this takes effect immediately, since nothing
 92    M   0220  1         !has been output yet at all.  However, at the top of any other pages you
 93    M   0221  1         !have to be careful.  If the user has given a .LAYOUT command that
 94    M   0222  1         !causes the page number to be centered at the bottom, the page number
 95    M   0223  1         !has not yet been output even if .PHAN_TOP_PAGE is set.  In that case
 96    M   0224  1         !you need to let NEWPAG finish the page and then it's ok to use the
 97    M   0225  1         !display characteristics on the next page.  On the other hand,
 98    M   0226  1         !if you're in the middle of the page it's ok to set the display
 99    M   0227  1         !characteristics immediately because the page number hasn't gone
100    M   0228  1         !out yet, unless you're doing the standard layout.
101    M   0229  1         !Perhaps another way of describing what's going on here is simply to
102    M   0230  1         !say that you can't let the display characteristics of the page number
103    M   0231  1         !get out of synch with what's appeared or not appeared so far.
104    M   0232  1         !Note that there is a very close coordination with the workings of
105    M   0233  1         !NEWPAG implied here.
106    M   0234  1         IF                                                !
107    M   0235  1             .PHAN_TOP_FIRST
108    M   0236  1             OR
109    M   0237  1             (   (NOT .PHAN_TOP_PAGE)
110    M   0238  1                 AND (.HCT_LAYOUT NEQ LAYOUT_STANDARD)   )
111    M   0239  1         THEN
112    M   0240  1             PAGEN [a,b,c,d] = .DISPLAY_CODE
113    M   0241  1         END
114        0242  1                                         %;
115        0243  1
```

;

```
 116    0244    1  !
 117    0245    1  !  EQUATED SYMBOLS:
 118    0246    1  !
 119    0247    1
 120    0248    1  !
 121    0249    1  !  OWN STORAGE:
 122    0250    1  !
 123    0251    1
 124    0252    1  !
 125    0253    1  !  EXTERNAL REFERENCES:
 126    0254    1  !
 127    0255    1  EXTERNAL
 128    0256    1      HCT : HCT_DEFINITION,
 129    0257    1      IRA : FIXED_STRING,
 130    0258    1      PHAN : PHAN_DEFINITION,
 131    0259    1      PAGEN : PAGE_DEFINITION,
 132    0260    1      NPAGEN : PAGE_DEFINITION;
 133    0261    1
 134    0262    1  EXTERNAL ROUTINE
 135    0263    1      GETDD,
 136    0264    1      RSKIPS;
```

N 13

DSPPAG   Processes the .DISPLAY NUMBER, & .DISPLAY SUBPA 16-Sep-1984 00:22:09   VAX-11 Bliss-32 V4.0-742   Page   5
V04-000   Module Level Declarations   14-Sep-1984 13:06:03   [RUNOFF.SRC]DSPPAG.BLI;1   (4)

```
138    0265  1  GLOBAL ROUTINE DSPPAG (HANDLER) : NOVALUE =      !
139    0266  1
140    0267  1  !++
141    0268  1  ! FUNCTIONAL DESCRIPTION:
142    0269  1  !
143    0270  1  !     See the ABSTRACT for a general description.
144    0271  1  !
145    0272  1  ! FORMAL PARAMETERS:
146    0273  1  !
147    0274  1  !     HANDLER indicates which command is to be processed.
148    0275  1  !
149    0276  1  ! IMPLICIT INPUTS:
150    0277  1  !
151    0278  1  !     Very close coordination with the workings of NEWPAG is implied.
152    0279  1  !
153    0280  1  ! IMPLICIT OUTPUTS:      None
154    0281  1  !
155    0282  1  ! ROUTINE VALUE:
156    0283  1  ! COMPLETION CODES:      None
157    0284  1  !
158    0285  1  ! SIDE EFFECTS: None
159    0286  1  !
160    0287  1  !--
161    0288  1
162    0289  2      BEGIN
163    0290  2      LOCAL
164    0291  2          GETDD_RESULT,
165    0292  2          DISPLAY_CODE;
166    0293  2
167    0294  2      !Skip spaces and tabs before the display descriptor.
168    0295  2      RSKIPS (IRA);
169    0296  2
170    0297  2      !And now actually try to get the discriptor.
171    0298  2      GETDD_RESULT = GETDD (DISPLAY_CODE);
172    0299  2
173    0300  2      !Ignore an invalid descriptor
174    0301  2      IF .GETDD_RESULT EQL -1
175    0302  2      THEN
176    0303  2          RETURN;
177    0304  2
178    0305  2      !Distinguish between missing display code and one that
179    0306  2      !is given.
180    0307  2      IF .GETDD_RESULT EQL 0
181    0308  2      THEN
182    0309  2          !No display code supplied
183    0310  3          BEGIN
184    0311  3          !Supply the standard display as the default
185    0312  4          DISPLAY_CODE = (SELECTONE .HANDLER OF
186    0313  4                          SET
187    0314  4                          [H_DISPLAY_NUMBE] : TCONVRT_DEC_NOZ;
188    0315  4                          [H_DISPLAY_SUBPA] : TCONVRT_LET_UPP;
189    0316  3                          TES );
190    0317  2          END;
191    0318  2
192    0319  2      SELECTONE .HANDLER OF
193    0320  2          SET
194    0321  2
```

```
;  195          0322  2            [H_DISPLAY_NUMBE] : SET_DISPLAY (SCT_PAGE_D);
;  196          0323  2            [H_DISPLAY_SUBPA] : SET_DISPLAY (SCT_SUBPG_D);
;  197          0324  2            TES;
;  198          0325  2
;  199          0326  1       END;                        !End of DSPPAG
```

```
                                                             .TITLE  DSPPAG Processes the .DISPLAY NUMBER, & .DISPLA
;                                                                     Y SUBPA
                                                             .IDENT  \V04-000\

                                                             .EXTRN  HCT, IRA, PHAN, PAGEN
                                                             .EXTRN  NPAGEN, GETDD, RSKIPS

                                                             .PSECT  $CODE$,NOWRT,2

                                     000C 00000              .ENTRY  DSPPAG, Save R2,R3                          ; 0265
                    53 00000000G  EF   9E 00002              MOVAB   HCT+28, R3
                    52 00000000G  EF   9E 00009              MOVAB   PHAN+24, R2
                    5E            04   C2 00010              SUBL2   #4, SP
                       00000000G  EF   9F 00013              PUSHAB  IRA                                         ; 0295
         00000000G EF             01   FB 00019              CALLS   #1, RSKIPS
                                  5E   DD 00020              PUSHL   SP                                          ; 0298
         00000000G EF             01   FB 00022              CALLS   #1, GETDD
         FFFFFFFF  8F             50   D1 00029              CMPL    GETDD_RESULT, #-1                           ; 0301
                                  6A   13 00030              BEQL    8$
                                  50   D5 00032              TSTL    GETDD_RESULT                                ; 0307
                                  1D   12 00034              BNEQ    4$
                    50        04  AC   D0 00036              MOVL    HANDLER, R0                                 ; 0312
                    26            50   D1 0003A              CMPL    R0, #38                                     ; 0314
                                  04   12 0003D              BNEQ    1$
                                  50   D4 0003F              CLRL    R0
                                  0D   11 00041              BRB     3$
                    28            50   D1 00043 1$:          CMPL    R0, #40                                     ; 0315
                                  05   13 00046              BEQL    2$
                    50            01   CE 00048              MNEGL   #1, R0
                                  03   11 0004B              BRB     3$
                    50            02   D0 0004D 2$:          MOVL    #2, R0
                    6E            50   D0 00050 3$:          MOVL    R0, DISPLAY_CODE                            ; 0312
                    50        04  AC   D0 00053 4$:          MOVL    HANDLER, R0                                 ; 0319
                    26            50   D1 00057              CMPL    R0, #38                                     ; 0322
                                  1E   12 0005A              BNEQ    6$
00000000G EF            04        04   6E   F0 0005C         INSV    DISPLAY_CODE, #4, #4, NPAGEN
                                  08   62   E8 00065         BLBS    PHAN+24, 5$
                    30        E8  A2   E8 00068              BLBS    PHAN, 8$
                                  63   D5 0006C              TSTL    HCT+28
                                  2C   13 0006E              BEQL    8$
00000000G EF            04        04   6E   F0 00070 5$:     INSV    DISPLAY_CODE, #4, #4, PAGEN
                                  04   00079              RET
                    28            50   D1 0007A 6$:          CMPL    R0, #40                                     ; 0323
                                  1D   12 0007D              BNEQ    8$
00000000G EF            04        00   6E   F0 0007F         INSV    DISPLAY_CODE, #0, #4, NPAGEN+12
                                  08   62   E8 00088         BLBS    PHAN+24, 7$
                    0D        E8  A2   E8 0008B              BLBS    PHAN, 8$
                                  63   D5 0008F              TSTL    HCT+28
                                  09   13 00091              BEQL    8$
00000C00G EF            04        00   6E   F0 00093 7$:     INSV    DISPLAY_CODE, #0, #4, PAGEN+12
```

C 14

04 0009C 8$:   RET   ; 0326

; Routine Size: 157 bytes,   Routine Base: $CODE$ + 0000

```
; 200          0327 1 END                        !End of module
; 201          0328 0 ELUDOM
```

PSECT SUMMARY

Name	Bytes	Attributes
$CODE$	157	NOVEC,NOWRT, RD , EXE,NOSHR, LCL, REL, CON,NOPIC,ALIGN(2)

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
_255DUA28:[SYSLIB]XPORT.L32;1	590	0	0	252	00:00.1
_255DUA28:[RUNOFF.SRC]DSRLIB.L32;1	1248	16	1	86	00:00.3

COMMAND QUALIFIERS

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

```
; Size:             157 code + 0 data bytes
; Run Time:         00:04.0
; Elapsed Time:     00:12.7
; Lines/CPU Min:    4969
; Lexemes/CPU-Min: 14000
; Memory Used: 47 pages
; Compilation Complete
```

DSPHL
LIS

CONVLB
LIS

DOFLG
LIS

DSPENT
LIS

DSRLIB
LIS

DOCASE
LIS

DOCM
LIS

DOOPTS
LIS

DSPPAG
LIS

DLE
LIS