```
RRRRRRRRRRRR      UUU          UUU  NNN        NNN    000000000    FFFFFFFFFFFFFF   FFFFFFFFFFFFFF
RRRRRRRRRRRR      UUU          UUU  NNN        NNN    000000000    FFFFFFFFFFFFFF   FFFFFFFFFFFFFF
RRRRRRRRRRRR      UUU          UUU  NNN        NNN    000000000    FFFFFFFFFFFFFF   FFFFFFFFFFFFFF
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    NNNNNN    000      000  FFF              FFF
RRR   RRR         UUU          UUU  NNN    NNNNNN    000      000  FFF              FFF
RRR    RRR        UUU          UUU  NNN     NNNN     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  NNN      NNN     000      000  FFF              FFF
RRR       RRR     UUUUUUUUUUUUUUUU  NNN      NNN      000000000    FFF              FFF
RRR        RRR    UUUUUUUUUUUUUUUU  NNN      NNN      000000000    FFF              FFF
RRR        RRR    UUUUUUUUUUUUUUUU  NNN      NNN      000000000    FFF              FFF
```

```
CCCCCCCC  EEEEEEEEEE  NN      NN  TTTTTTTTTT  XX      XX  TTTTTTTTTT
CCCCCCCC  EEEEEEEEEE  NN      NN  TTTTTTTTTT  XX      XX  TTTTTTTTTT
CC        EE          NN      NN      TT        XX    XX      TT
CC        EE          NN      NN      TT        XX    XX      TT
CC        EE          NNNN    NN      TT          XX XX       TT
CC        EE          NNNN    NN      TT          XX XX       TT
CC        EEEEEEEE     NN  NN  NN      TT            XX        TT
CC        EEEEEEEE     NN  NN  NN      TT            XX        TT
CC        EE          NN    NNNN      TT          XX XX       TT
CC        EE          NN    NNNN      TT          XX XX       TT
CC        EE          NN      NN      TT        XX    XX      TT
CC        EE          NN      NN      TT        XX    XX      TT
CCCCCCCC  EEEEEEEEEE  NN      NN      TT        XX    XX      TT
CCCCCCCC  EEEEEEEEEE  NN      NN      TT        XX    XX      TT
```

```
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 CENTXT (                                                    !
    2    0002   0                        IDENT = 'V04-000'!
    3  P 0003   0  %BLISS32[
    4  P 0004   0            ADDRESSING_MODE(EXTERNAL=LONG_RELATIVE,NONEXTERNAL=LONG_RELATIVE)
    5    0005   0            ]
    6    0006   0                  ) =
    7    0007   1  BEGIN
    8    0008   1
    9    0009   1  !********************************************************************
   10    0010   1  !*                                                                  *
   11    0011   1  !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                         *
   12    0012   1  !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.          *
   13    0013   1  !*  ALL RIGHTS RESERVED.                                            *
   14    0014   1  !*                                                                  *
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   16    0016   1  !*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE  *
   17    0017   1  !*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER  *
   18    0018   1  !*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY  *
   19    0019   1  !*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY  *
   20    0020   1  !*  TRANSFERRED.                                                    *
   21    0021   1  !*                                                                  *
   22    0022   1  !*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE  *
   23    0023   1  !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT  *
   24    0024   1  !*  CORPORATION.                                                    *
   25    0025   1  !*                                                                  *
   26    0026   1  !*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS  *
   27    0027   1  !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.         *
   28    0028   1  !*                                                                  *
   29    0029   1  !*                                                                  *
   30    0030   1  !********************************************************************
   31    0031   1  !
   32    0032   1  !++
   33    0033   1  ! FACILITY:        DSR (Digital Standard RUNOFF) / DSRPLUS
   34    0034   1  !
   35    0035   1  ! ABSTRACT: Centers and outputs a single line of text.
   36    0036   1  !
   37    0037   1  !
   38    0038   1  ! ENVIRONMENT: Transportable
   39    0039   1  !
   40    0040   1  ! AUTHOR: R.W.Friday     CREATION DATE: December, 1978
   41    0041   1  !
```

CENTXT
V04-000

Revision History

C 14
15-Sep-1984 23:55:58   VAX-11 Bliss-32 V4.0-742
14-Sep-1984 13:05:39   [RUNOFF.SRC]CENTXT.BLI;1

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    (2)

```
:   43    0042  1 %SBTTL 'Revision History'
:   44    0043  1 !
:   45    0044  1 ! MODIFIED BY:
:   46    0045  1 !
:   47    0046  1 !      002      KFA00002      Ken Alden      07-Mar-1983
:   48    0047  1 !         Global edit of all modules. Updated module names, idents,
:   49    0048  1 !         copyright dates. Changed require files to BLISS library.
:   50    0049  1 !
:   51    0050  1 !--
```

```
   53        0051  1 %SBTTL 'Module Level Declarations'
   54        0052  1
   55        0053  1 !
   56        0054  1 ! TABLE OF CONTENTS:
   57        0055  1 !
   58        0056  1 !
   59        0057  1 ! INCLUDE FILES:
   60        0058  1 !
   61        0059  1
   62        0060  1 LIBRARY 'NXPORT:XPORT';           ! XPORT Library
   63        0061  1 REQUIRE 'REQ:RNODEF';             ! RUNOFF variant definitions
   64        0192  1
   65   U    0193  1 %IF DSRPLUS %THEN
   66   U    0194  1 LIBRARY 'REQ:DPLLIB';             ! DSRPLUS BLISS Library
   67        0195  1 %ELSE
   68        0196  1 LIBRARY 'REQ:DSRLIB';             ! DSR BLISS Library
   69        0197  1 %FI
   70        0198  1
   71        0199  1 !
   72        0200  1 ! MACROS:
   73        0201  1 !
   74        0202  1 !
   75        0203  1 ! EQUATED SYMBOLS:
   76        0204  1 !
   77        0205  1
   78        0206  1 EXTERNAL LITERAL
   79        0207  1     RINTES : UNSIGNED (8);
   80        0208  1
   81        0209  1 !
   82        0210  1 ! OWN STORAGE:
   83        0211  1 !
   84        0212  1 !
   85        0213  1 ! EXTERNAL REFERENCES:
   86        0214  1 !
   87        0215  1
   88        0216  1 EXTERNAL
   89        0217  1     IRA,
   90        0218  1     KHAR,
   91        0219  1     SCA : SCA_DEFINITION,
   92        0220  1     TSF : TSF_DEFINITION;
   93        0221  1
   94        0222  1 EXTERNAL ROUTINE
   95        0223  1     ENDCHR,
   96        0224  1     OUTNJ,
   97        0225  1     RSKIPS;
   98        0226  1
```

```
100    0227   1   GLOBAL ROUTINE CENTXT (TEXT_PTR, TEXT_LENGTH) =
101    0228   1
102    0229   1   !++
103    0230   1   ! FUNCTIONAL DESCRIPTION:
104    0231   1   !
105    0232   1   !       Beginning with the current position on the current record,
106    0233   1   !       CENTXT skips tabs and spaces until it encounters something
107    0234   1   !       else.  If that "something else" is the end-of-record
108    0235   1   !       indicator (';' or RINTES), it outputs the text supplied.
109    0236   1   !       If the "something else" is not the end-of-record indicator,
110    0237   1   !       no text is output.
111    0238   1   !
112    0239   1   ! FORMAL PARAMETERS:
113    0240   1   !
114    0241   1   !       TEXT_PTR is a CH$PTR to the text to be centered and output.
115    0242   1   !       TEXT_LENGTH is the length of the text.
116    0243   1   !
117    0244   1   ! IMPLICIT INPUTS:        None
118    0245   1   !
119    0246   1   ! IMPLICIT OUTPUTS:       None
120    0247   1   !
121    0248   1   ! ROUTINE VALUE:
122    0249   1   ! COMPLETION CODES:
123    0250   1   !
124    0251   1   !       Returns TRUE if the text was centered and output (i.e.,
125    0252   1   !       end-of-record was found), otherwise FALSE.
126    0253   1   !
127    0254   1   ! SIDE EFFECTS: None
128    0255   1   !
129    0256   1   !--
130    0257   1
131    0258   2       BEGIN
132    0259   2       LOCAL
133    0260   2           PTR;
134    0261   2
135    0262   2       !Determine if text was given on the current record.
136    0263   2       RSKIPS (IRA);                                  !Skip spaces and tabs.
137    0264   2
138    0265   2       IF   .KHAR EQL RINTES                          !
139    0266   2           OR .KHAR EQL %C';'
140    0267   2       THEN
141    0268   2       !No text on the record. Output the specified text, centered.
142    0269   3           BEGIN
143    0270   3           PTR = .TEXT_PTR;
144    0271   3
145    0272   3           INCR I FROM 1 TO .TEXT_LENGTH DO
146    0273   3               ENDCHR (CH$RCHAR_A (PTR));
147    0274   3
148    0275   3           !Normally, the text will fit between the margins, since
149    0276   3           !this is not "user" text.  However, just to be certain,
150    0277   3           !if it can't be centered, leave it far to the left.
151    0278   3           TSF_ADJUST = MAX ((.SCA_RM - .SCA_LM - .TEXT_LENGTH)/2, 0);
152    0279   3           !Output the line containing the centered text.
153    0280   3           OUTNJ ();
154    0281   3           RETURN TRUE;
155    0282   3           END
156    0283   2       ELSE
```

```
;   157        0284  2           RETURN FALSE
;   158        0285  2
;   159        0286  1     END;                                        !End of CENTXT

                                                       .TITLE   CENTXT
                                                       .IDENT   \V04-000\

                                                       .EXTRN   RINTES, IRA, KHAR
                                                       .EXTRN   SCA, TSF, ENDCHR
                                                       .EXTRN   OUTNJ, RSKIPS

                                                       .PSECT   $CODE$,NOWRT,2

                              001C  00000              .ENTRY   CENTXT, Save R2,R3,R4
                    54 00000000G EF 9E 00002           MOVAB    KHAR, R4
                       00000000G EF 9F 00009           PUSHAB   IRA
           00000000G EF       01 FB 0000F              CALLS    #1, RSKIPS
           00000000G 8F       64 D1 00016              CMPL     KHAR, #RINTES
                             05 13 0001D               BEQL     1$
                    3B       64 D1 0001F               CMPL     KHAR, #59
                             44 12 00022               BNEQ     5$
                 53       04 AC D0 00024  1$:          MOVL     TEXT_PTR, PTR
                          52 D4 00028                  CLRL     I
                          0A 11 0002A                  BRB      3$
                 7E       83 9A 0002C  2$:             MOVZBL   (PTR)+, -(SP)
           00000000G EF   01 FB 0002F                  CALLS    #1, ENDCHR
        F1         52    08 AC F3 00036  3$:           AOBLEQ   TEXT_LENGTH, I, 2$
                 51 00000000G EF D0 0003B              MOVL     TSF, R1
        50 00000000G FF 00000000G FF C3 00042          SUBL3    @SCA+116, @SCA+120, R0
                       50    08 AC C2 0004E             SUBL2    TEXT_LENGTH, R0
                          02 C6 00052                  DIVL2    #2, R0
                          02 18 00055                  BGEQ     4$
                       50 D4 00057                     CLRL     R0
              28 A1   50 D0 00059  4$:                 MOVL     R0, 40(R1)
           00000000G EF 00 FB 0005D                    CALLS    #0, OUTNJ
                    50 01 D0 00064                     MOVL     #1, R0
                       04 00067                        RET
                    50 D4 00068  5$:                   CLRL     R0
                       04 0006A                        RET

; Routine Size:  107 bytes,    Routine Base:  $CODE$ + 0000

;   160        0287  1                                                 !End of module
;   161        0288  1 END
;   162        0289  0 ELUDOM


                          PSECT SUMMARY

        Name                      Bytes                    Attributes
```

CENTXT
VO4-000   Module Level Declarations   G 14
15-Sep-1984 23:55:58   VAX-11 Bliss-32 V4.0-742   Page   6
14-Sep-1984 13:05:39   [RUNOFF.SRC]CENTXT.BLI;1   (4)

; $CODE$ 107   NOVEC,NOWRT,   RD ,   EXE,NOSHR,   LCL,   REL,   CON,NOPIC,ALIGN(2)

:
:
:   Library Statistics
:
:
:   -------- Symbols --------

File	Total	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	9	0	86	00:00.3

:   COMMAND QUALIFIERS

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

: Size: 107 code + 0 data bytes
: Run Time: 00:03.3
: Elapsed Time: 00:08.7
: Lines/CPU Min: 5222
: Lexemes/CPU-Min: 8566
: Memory Used: 33 pages
: Compilation Complete

BARS
LIS

SETCAS
REQ

VR
REQ

ALINE
LIS

CARAGE
LIS

SAVSTK
REQ

AREC
LIS

TOCRTY
REQ

XTNTAB
REQ

CAPTION
LIS

CLH
LIS

SCA
REQ

BOTPAG
LIS

TPROB
REQ

CNTVMSREQ
R32

TSF
REQ

NDXVMSREQ
R32

SAVE
REQ

CENTXT
LIS