K 7

```
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
RRR         RRR  UUU         UUU  NNNNNN      NNN  000         000  FFF              FFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
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      NNNNNN  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  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
```

```
_$2

Sym
---
NDX
NDX
NUM
NUM
OPE
OUT
PAC
PAC
PAC
PAC
PAC
PAC
PAC
PAD
PAG
PAG
PAG
PAG
PAG
PAG
PAG
PER
PUT
RCO
RIN

RLI
RNO
RNO
RTY
SAV
STR
STR
STR
STR
STR
STR

STR
STR
STR
STR
STK
STR
STR
STR
STR
STR
STR
STR
STR
STR
```

G 10

```
**FILE**ID**LSTOPS
```

```
LL            SSSSSSSS  TTTTTTTTTT    000000    PPPPPPPP      SSSSSSSS
LL            SSSSSSSS  TTTTTTTTTT    000000    PPPPPPPP      SSSSSSSS
LL          SS              TT      00      00  PP      PP  SS
LL          SS              TT      00      00  PP      PP  SS
LL          SS              TT      00      00  PP      PP  SS
LL          SS              TT      00      00  PP      PP  SS
LL            SSSSSS        TT      00      00  PPPPPPPP      SSSSSS
LL            SSSSSS        TT      00      00  PPPPPPPP      SSSSSS
LL                  SS      TT      00      00  PP                  SS
LL                  SS      TT      00      00  PP                  SS
LL                  SS      TT      00      00  PP                  SS      ....
LL                  SS      TT      00      00  PP                  SS      ....
LLLLLLLLLL  SSSSSSSS        TT        000000    PP          SSSSSSSS        ....
LLLLLLLLLL  SSSSSSSS        TT        000000    PP          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
```

```
  0001  0 %TITLE 'O/P text to left of document'
  0002  0 MODULE lstops ( IDENT = 'V04-000'
P 0003  0                 %BLISS32[, ADDRESSING_MODE (EXTERNAL    = LONG_RELATIVE,
  0004  0                                             NONEXTERNAL = LONG_RELATIVE)]
  0005  0                 ) =
  0006  1 BEGIN
  0007  1
  0008  1 !****************************************************************************
  0009  1 !*                                                                          *
  0010  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                 *
  0011  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                  *
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  0026  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
  0027  1 !*                                                                          *
  0028  1 !*                                                                          *
  0029  1 !****************************************************************************
  0030  1
  0031  1 !++
  0032  1 ! FACILITY:     DSR (Digital Standard RUNOFF) / DSRPLUS
  0033  1 !
  0034  1 ! ABSTRACT:     Prefixes a line with optional listing information.
  0035  1 !
  0036  1 ! ENVIRONMENT:  Transportable
  0037  1 !
  0038  1 ! AUTHOR:       R.W.Friday       CREATION DATE: December, 1978
  0039  1 !
  0040  1
```

```
1 %SBTTL 'Revision History'
1 !
1 ! MODIFIED BY:
1 !
1 !       010     REM00010        Ray Marshall    31-May-1984
1 !               Find tuning -- made output lines numbers start at 1 instead
1 !                 of starting at 0.
1 !
1 !       009     REM00009        Ray Marshall    16-May-1984
1 !               Added support for outputting the output line number.
1 !
1 !       008     RER00008        Ron Randall     07-Mar-1983
1 !               Global edit of all modules. Updated module names, idents,
1 !               copyright dates. Changed require files to BLISS library.
1 !
1 !--
1
```

```
;     60          0058   1 %SBTTL 'Module Level Declarations'
;     61          0059   1
;     62          0060   1 !
;     63          0061   1 ! TABLE OF CONTENTS:
;     64          0062   1 !
;     65          0063   1 FORWARD ROUTINE
;     66          0064   1     lstops : NOVALUE,
;     67          0065   1     iseque : NOVALUE,
;     68          0066   1     oseque : NOVALUE;
;     69          0067   1
;     70          0068   1 !
;     71          0069   1 ! INCLUDE FILES:
;     72          0070   1 !
;     73          0071   1 LIBRARY 'NXPORT:XPORT';                          ! XPORT Library
;     74          0072   1 REQUIRE 'REQ:RNODEF';                            ! RUNOFF variant definitions
;     75          0203   1
;     76        U 0204   1 %IF DSRPLUS %THEN
;     77        U 0205   1 LIBRARY 'REQ:DPLLIB';                            ! DSRPLUS BLISS Library
;     78          0206   1 %ELSE
;     79          0207   1 LIBRARY 'REQ:DSRLIB';                            ! DSR BLISS Library
;     80          0208   1 %FI
;     81          0209   1
;     82          0210   1 !
;     83          0211   1 ! EXTERNAL REFERENCES:
;     84          0212   1 !
;     85          0213   1 EXTERNAL
;     86          0214   1     FRA : FIXED_STRING,
;     87          0215   1     GCA : GCA_DEFINITION,
;     88          0216   1     PHAN : PHAN_DEFINITION,
;     89          0217   1     TSF : TSF_DEFINITION;
;     90          0218   1
;     91          0219   1 EXTERNAL ROUTINE
;     92          0220   1     CONVBB;
;     93          0221   1
;    95    0222  1 %SBTTL 'LSTOPS -- main control routine'
;    96    0223  1 GLOBAL ROUTINE lstops (option_list, blank_line) : NOVALUE =
;    97    0224  1
;    98    0225  1 !++
;    99    0226  1 ! FUNCTIONAL DESCRIPTION:
;   100    0227  1 !
;   101    0228  1 !      This routine is used to format the columns that preceed the normal
;   102    0229  1 !      document.  These columns typically contain change bars, the draft flag,
;   103    0230  1 !      sequence numbers, and/or the entire document is shifted to the right.
;   104    0231  1 !
;   105    0232  1 !      These columns have to be set up for each and every line that RUNOFF
;   106    0233  1 !      writes.  In some cases, however, what is wanted is not the actual
;   107    0234  1 !      options, but simply sufficient spaces to skip over them; that can
;   108    0235  1 !      occur, for example, when LOUT has to overprint the line to do
;   109    0236  1 !      underlining, etc.  LSTOPS generates the requested information, or
;   110    0237  1 !      spaces, as applicable.
;   111    0238  1 !
;   112    0239  1 !      NOTE: This entire routine can be replaced by a simple ''RETURN''
;   113    0240  1 !            if the listing options are not wanted ever.
;   114    0241  1 !
;   115    0242  1 ! FORMAL PARAMETERS:
;   116    0243  1 !
;   117    0244  1 !      OPTION_LIST indicates which listing options are to be processed.
;   118    0245  1 !      BLANK_LINE is TRUE if the line is a blank one, FALSE otherwise.
;   119    0246  1 !
;   120    0247  1 ! IMPLICIT INPUTS:
;   121    0248  1 !
;   122    0249  1 !      FRA is implicitly set up to point to where the options are to be
;   123    0250  1 !      generated.
;   124    0251  1 !      TSF describes the record for which the options are to be generated.
;   125    0252  1 !
;   126    0253  1 ! IMPLICIT OUTPUTS:
;   127    0254  1 !
;   128    0255  1 !      The listing options are written into FRA, thereby lengthening
;   129    0256  1 !      that fixed string.
;   130    0257  1 !
;   131    0258  1 ! ROUTINE VALUE:
;   132    0259  1 ! COMPLETION CODES:      None
;   133    0260  1 !
;   134    0261  1 ! SIDE EFFECTS:          None
;   135    0262  1 !--
;   136    0263  1
;   137    0264  2    BEGIN
;   138    0265  2    LOCAL
;   139    0266  2       BARS;
;   140    0267  2
;   141    0268  2    IF  .BLANK_LINE
;   142    0269  2    THEN
;   143    0270  2
;   144    0271  2       !This is a quick test to avoid lots of processing for empty lines.
;   145    0272  2       IF  .OPTION_LIST EQL LSTOPS_NONE
;   146    0273  2       THEN
;   147    0274  2          !Put nothing on blank lines.
;   148    0275  2          RETURN;
;   149    0276  2
;   150    0277  2    !Decide which change bar information to use: that which applies to blank lines,
;   151    0278  2    !or that which applies to text on lines.
;   152        0279  2       IF   .BLANK_LINE
;   153        0280  2       THEN
;   154        0281  2           !Use the change bar information that applies to white space.
;   155        0282  2           BARS = .TSF_BARS
;   156        0283  2       ELSE
;   157        0284  2           !Use the change bar information that applies to text.
;   158        0285  2           BARS = .TSF_H_BARS;
;   159        0286  2
;   160        0287  2       IF   NOT .BLANK_LINE                !(Avoid shifting blank lines to the right because of /RIGHT)
;   161        0288  3           OR (.BARS AND .OPTION_LIST<BAR__>)       !
;   162        0289  3           OR (.GCA_DEBUG_CND AND .OPTION_LIST<CND__> AND (.TSF_DRAFT_FLAG NEQ %C' '))      !
;   163        0290  3           OR (.GCA_CMD_ISQ AND .OPTION_LIST<ISQ__>)
;   164        0291  3           OR (.GCA_CMD_OSQ AND .OPTION_LIST<OSQ__>)
;   165        0292  2       THEN
;   166        0293  2       !Change bars or sequence number or draft flag requested.
;   167        0294  3           BEGIN
;   168        0295  3
;   169        0296  3           IF   .GCA_CMD_RIT                  !(This won't get done for blank lines to which nothing else applies)
;   170        0297  3           THEN
;   171        0298  3           !Shift output to the right, as requested.
;   172        0299  3
;   173        0300  3               INCR I FROM 1 TO .PHAN_RIGHT DO
;   174        0301  3                   FS_WCHAR (FRA, %C' ');
;   175        0302  3
;   176        0303  3           IF .gca_cmd_isq THEN                         ! User said:  /SEQUENCE.
;   177        0304  3               iseque (.option_list<isq__>);
;   178        0305  3
;   179        0306  3           IF .gca_cmd_osq THEN                         ! User said:
;   180        0307  3               oseque (.option_list<osq__>);        ! /DEC_INTERNAL=OUTPUT_LINE_NUMBER
;   181        0308  3
;   182        0309  3           IF   .GCA_DEBUG_CND
;   183        0310  3           THEN
;   184        0311  3           !Output the draft flag.
;   185        0312  4               BEGIN
;   186        0313  4               FS_WCHAR (FRA, %C' ');!Single space before draft flag.
;   187        0314  4
;   188        0315  4               IF   .OPTION_LIST<CND__>
;   189        0316  4               THEN
;   190        0317  4                   !User wants to see the draft flag, output it.
;   191        0318  5                   FS_WCHAR (FRA, .TSF_DRAFT_FLAG)
;   192        0319  4               ELSE
;   193        0320  4                   !User does not want to see the draft flag, output a space.
;   194        0321  4                   FS_WCHAR (FRA, %C' ');
;   195        0322  4
;   196        0323  4               FS_WCHAR (FRA, %C' ');!Single space after draft flag.
;   197        0324  3               END;
;   198        0325  3
;   199        0326  3           !Process change bar field.
;   200        0327  4           IF   (.BARS                        !Change bars wanted?
;   201        0328  4               AND .OPTION_LIST<BAR__>)
;   202        0329  3               OR
;   203        0330  4               (.GCA_EVER_BARS               !Change bars ever seen?
;   204        0331  4                AND NOT .BLANK_LINE)         !In this case output something.
;   205        0332  3           THEN
;   206        0333  4               BEGIN
;   207        0334  4
;   208        0335  4               !Output the change bar.
;  209          0336  5              IF  NOT (.OPTION_LIST<BAR__> AND .BARS)
;  210          0337  4              THEN
;  211          0338  4                  !Don't want change bar at all.
;  212          0339  5                  FS_WC'AR (FRA, %C' ')
;  213          0340  4              ELSE
;  214          0341  4                  FS_WCHAR (FRA, .TSF_BAR_CHAR);
;  215          0342  4
;  216          0343  4              FS_WCHAR (FRA, %C' ');       !Two spaces after the change bar field.
;  217          0344  4              FS_WCHAR (FRA, %C' ');
;  218          0345  3              END;
;  219          0346  3
;  220          0347  2          END;
;  221          0348  2
;  222          0349  1      END;                                        !End of LSTOPS


                                                                         .TITLE  LSTOPS O/P text to left of document
                                                                         .IDENT  \V04-000\

                                                                         .EXTRN  FRA, GCA, PHAN, TSF
                                                                         .EXTRN  CONVBB

                                                                         .PSECT  $CODE$,NOWRT,2

                                               003C 00000                .ENTRY  LSTOPS, Save R2,R3,R4,R5                 ; 0223
                         55 00000000G  EF   9E 00002                     MOVAB   TSF, R5                                  ;
                         54 00000000G  EF   9E 00009                     MOVAB   GCA+76, R4                               ;
                         53 00000000G  EF   9E 00010                     MOVAB   FRA+4, R3                                ;
                         06         08 AC   E9 00017                     BLBC    BLANK_LINE, 1$                           ; 0268
                                    04 AC   D5 0001B                     TSTL    OPTION_LIST                              ; 0272
                                       01   12 0001E                     BNEQ    1$                                       ;
                                            04 00020                     RET                                              ;
                         50            65   D0 00021  1$:                MOVL    TSF, R0                                  ; 0282
                         08         08 AC   E9 00024                     BLBC    BLANK_LINE, 2$                           ;
     52        7C  A0    01            00   EF 00028                     EXTZV   #0, #1, 124(R0), BARS                    ;
                         07            11      0002E                     BRB     3$                                       ;
     52      0080  C0    01            00   EF 00030  2$:                EXTZV   #0, #1, 128(R0), BARS                    ; 0285
                         2B         08 AC   E9 00037  3$:                BLBC    BLANK_LINE, 8$                           ; 0287
                         04            52   E9 0003B                     BLBC    BARS, 4$                                 ; 0288
                         24         04 AC   E8 0003E                     BLBS    OPTION_LIST, 8$                          ;
               0B    28  A4            02   E1 00042  4$:                BBC     #2, GCA+116, 5$                          ; 0289
               06    04  AC            01   E1 00047                     BBC     #1, OPTION_LIST, 5$                      ;
               20        30         A0 D1      0004C                     CMPL    48(R0), #32                              ;
                                    14 12      00050                     BNEQ    8$                                       ;
               05        64            02   E1 00052  5$:                BBC     #2, GCA+76, 6$                           ; 0290
               0B    04  AC            02   E0 00056                     BBS     #2, OPTION_LIST, 8$                      ;
               01        64            04   E0 0005B  6$:                BBS     #4, GCA+76, 7$                           ; 0291
                                            04 0005F                     RET                                              ;
               01    04  AC            04   E0 00060  7$:                BBS     #4, OPTION_LIST, 8$                      ;
                                            04 00065                     RET                                              ;
               15        64            03   E1 00066  8$:                BBC     #3, GCA+76, 11$                          ; 0296
                                       50   D4 0006A                     CLRL    I                                        ; 0300
                                       09   11 0006C                     BRB     10$                                      ;
                     00  B3            20   90 0006E  9$:                MOVB    #32, @FRA+4                              ; 0301
                                       63   D6 00072                     INCL    FRA+4                                    ;
                                    08 A3   D6 00074                     INCL    FRA+12                                   ;
               EF        50 00000000G  EF   F3 00077  10$:               AOBLEQ  PHAN+20, I, 9$                           ; 0300
```

```
                                 0D             64              02 E1 0007F 11$:  BBC     #2, GCA+76, 12$               ; 0303
                7E        04     AC             01              02 EF 00083       EXTZV   #2, #1, OPTION_LIST, -(SP)    ; 0304
                                    00000000V   EF              01 FB 00089       CALLS   #1, ISEQUE
                                 0D             64              04 E1 00090 12$:  BBC     #4, GCA+76, 13$               ; 0306
                7E        04     AC             01              04 EF 00094       EXTZV   #4, #1, OPTION_LIST, -(SP)    ; 0307
                                    00000000V   EF              01 FB 0009A       CALLS   #1, OSEQUE
                                 2A        28   A4              02 E1 000A1 13$:  BBC     #2, GCA+116, 16$              ; 0309
                                           00   B3              20 90 000A6       MOVB    #32, @FRA+4                   ; 0313
                                                                63 D6 000AA       INCL    FRA+4
                                                         08     A3 D6 000AC       INCL    FRA+12
                                 0A        04   AC              01 E1 000AF       BBC     #1, OPTION_LIST, 14$          ; 0315
                                                50              65 D0 000B4       MOVL    TSF, R0                       ; 0318
                                           00   B3       30     A0 90 000B7       MOVB    48(R0), @FRA+4
                                                                04 11 000BC       BRB     15$
                                           00   B3              20 90 000BE 14$:  MOVB    #32, @FRA+4                   ; 0321
                                                                63 D6 000C2 15$:  INCL    FRA+4
                                                         08     A3 D6 000C4       INCL    FRA+12                        ; 0318
                                           00   B3              20 90 000C7       MOVB    #32, @FRA+4                   ; 0323
                                                                63 D6 000CB       INCL    FRA+4
                                                         08     A3 D6 000CD       INCL    FRA+12
                                                04              52 E9 000D0 16$:  BLBC    BARS, 17$                     ; 0327
                                                0C       04     AC E8 000D3       BLBS    OPTION_LIST, 18$              ; 0328
                                                30       D4     A4 E9 000D7 17$:  BLBC    GCA+32, 22$                   ; 0330
                                                2C       08     AC E8 000DB       BLBS    BLANK_LINE, 22$               ; 0331
                                                03       04     AC E9 000DF       BLBC    OPTION_LIST, 19$              ; 0336
                                                06              52 E8 000E3 18$:  BLBS    BARS, 20$
                                           00   B3              20 90 000E6 19$:  MOVB    #32, @FRA+4                   ; 0339
                                                                08 11 000EA       BRB     21$
                                                50              65 D0 000EC 20$:  MOVL    TSF, R0                       ; 0341
                                           00   B3       1C     A0 90 000EF       MOVB    28(R0), @FRA+4
                                                                63 D6 000F4 21$:  INCL    FRA+4
                                                         08     A3 D6 000F6       INCL    FRA+12                        ; 0339
                                           00   B3              20 90 000F9       MOVB    #32, @FRA+4                   ; 0343
                                                                63 D6 000FD       INCL    FRA+4
                                                         08     A3 D6 000FF       INCL    FRA+12
                                           00   B3              20 90 00102       MOVB    #32, @FRA+4                   ; 0344
                                                                63 D6 00106       INCL    FRA+4
                                                         08     A3 D6 00108       INCL    FRA+12
                                                                   04 0010B 22$:  RET                                   ; 0349

; Routine Size:  268 bytes,    Routine Base:  $CODE$ + 0000


;  223          0350  1
```

```
1 %SBTTL 'ISEQUE -- O/P seq. number or spaces'
1 ROUTINE iseque (sequence) : NOVALUE =
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       ISEQUE either generates the input sequence number on the record, or
1 !       else fills the spot with spaces.
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       If SEQUENCE is TRUE, the sequence number is provided; if FALSE,
1 !       the spot is space filled.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       It is assumed that FRA is set up to point to the area where
1 !       the sequence number is to go.
1 !
1 ! IMPLICIT OUTPUTS:     None
1 !
1 ! ROUTINE VALUE:
1 ! COMPLETION CODES:     None
1 !
1 ! SIDE EFFECTS:         None
1 !--
1
2     BEGIN
2
2     IF  NOT .SEQUENCE
2     THEN
2     !Caller doesn't want sequence numbers though.
2     !Fill sequence number field with spaces.
2
2         INCR I FROM 1 TO 11 DO
3             FS_WCHAR (FRA, %C' ')
3
2     ELSE
2     !Caller does want the sequence numbers.
3         BEGIN
3         LOCAL
3             FILL,
3             KHARS : VECTOR [10],
3             KHAR_COUNT;
3
3         CONVBB (.TSF_ISEQN, KHARS, KHAR_COUNT, 10);     !Convert input sequence number to character.
3
3         !For honest-to-goodness
3         IF  .TSF_SEQN_FLAG                      !SOS style sequence numbers
3         THEN                                    !zero-fill on the left.
3             FILL = %C'0'
3         ELSE                                    !Otherwise,
3             FILL = %C' ';                       !space-fill the record counter.
3
3         INCR I FROM 1 TO (5 - .KHAR_COUNT) DO   !Put in fill characters (spaces or '0's)
3             FS_WCHAR (FRA, .FILL);
3
```

```
:   282    0408  3          DECR I FROM .KHAR_COUNT TO 1 DO           !Output record/sequence number.
:   283    0409  3              FS_WCHAR (FRA, .KHARS [.I - 1]);
:   284    0410  3
:   285    0411  3          FS_WCHAR (FRA, %C'/');                    !Slash separating line and page numbers.
:   286    0412  3          CONVBB (.TSF_IPAGEN, KHARS, KHAR_COUNT, 10);    !Convert page number.
:   287    0413  3
:   288    0414  3          INCR I FROM 1 TO (3 - .KHAR_COUNT) DO     !Pad page counter.
:   289    0415  3              FS_WCHAR (FRA, %C' ');
:   290    0416  3
:   291    0417  3          DECR I FROM .KHAR_COUNT TO 1 DO           !Output page number.
:   292    0418  3              FS_WCHAR (FRA, .KHARS [.I - 1]);
:   293    0419  3
:   294    0420  3          FS_WCHAR (FRA, %C' ');                    !Two spaces before whatever follows.
:   295    0421  3          FS_WCHAR (FRA, %C' ');
:   296    0422  2          END;
:   297    0423  2
:   298    0424  1      END;                                          !End of ISEQUE
```

```
                           007C 00000 ISEQUE: .WORD    Save R2,R3,R4,R5,R6           : 0352
         56 00000000G   EF   9E 00002         MOVAB    CONVBB, R6                    :
         55 00000000G   EF   9E 00009         MOVAB    TSF, R5                       :
         54 00000000G   EF   9E 00010         MOVAB    FRA+4, R4                     :
         5E             2C   C2 00017         SUBL2    #44, SP                       :
         11    04       AC   E8 0001A         BLBS     SEQUENCE, 2$                  : 0380
         50             01   D0 0001E         MOVL     #1, I                         : 0385
      00 B4             20   90 00021 1$:     MOVB     #32, @FRA+4                   : 0386
                        64   D6 00025         INCL     FRA+4                         :
               08       A4   D6 00027         INCL     FRA+12                        :
F3       50             0B   F3 0002A         AOBLEQ   #11, I, 1$                    : 0385
                             04 0002E         RET                                    :
                        0A   DD 0002F 2$:     PUSHL    #10                           : 0396
               04       AE   9F 00031         PUSHAB   KHAR_COUNT                    :
               0C       AE   9F 00034         PUSHAB   KHARS                         :
         50             65   D0 00037         MOVL     TSF, R0                       :
               48       A0   DD 0003A         PUSHL    72(R0)                        :
         66             04   FB 0003D         CALLS    #4, CONVBB                    :
         51             65   D0 00040         MOVL     TSF, R1                       : 0399
         05    10       A1   E9 00043         BLBC     16(R1), 3$                    :
         53             30   D0 00047         MOVL     #48, FILL                     : 0401
                        03   11 0004A         BRB      4$                            :
         53             20   D0 0004C 3$:     MOVL     #32, FILL                     : 0403
50       05             6E   C3 0004F 4$:     SUBL3    KHAR_COUNT, #5, R0            : 0405
                        52   D4 00053         CLRL     I                             : 0406
                        09   11 00055         BRB      6$                            :
      00 B4             53   90 00057 5$:     MOVB     FILL, @FRA+4                  :
                        64   D6 0005B         INCL     FRA+4                         :
               08       A4   D6 0005D         INCL     FRA+12                        :
F3       52             50   F3 00060 6$:     AOBLEQ   R0, I, 5$                     : 0405
50       6E             01   C1 00064         ADDL3    #1, KHAR_COUNT, I             : 0408
                        0A   11 00068         BRB      8$                            :
      00 B4           6E40   F6 0006A 7$:     CVTLB    KHARS-4[I], @FRA+4            : 0409
                        64   D6 0006F         INCL     FRA+4                         :
               08       A4   D6 00071         INCL     FRA+12                        :
                F3             50 F5 00074 8$:      SOBGTR   I, 7$                                  ; 0408
          00    B4             2F 90 00077          MOVB     #47, @FRA+4                            ; 0411
                               64 D6 0007B          INCL     FRA+4                                  ;
                          08   A4 D6 0007D          INCL     FRA+12                                 ;
                               0A DD 00080          PUSHL    #10                                    ; 0412
                          04   AE 9F 00082          PUSHAB   KHAR_COUNT                             ;
                          0C   AE 9F 00085          PUSHAB   KHARS                                  ;
                          4C   A1 DD 00088          PUSHL    76(R1)                                 ;
                66             04 FB 0008B          CALLS    #4, CONVBB                             ;
50              03             6E C3 0008E          SUBL3    KHAR_COUNT, #3, R0                     ; 0414
                               51 D4 00092          CLRL     I                                      ;
                               09 11 00094          BRB      10$                                    ;
          00    B4             20 90 00096 9$:      MOVB     #32, @FRA+4                            ; 0415
                               64 D6 0009A          INCL     FRA+4                                  ;
                          08   A4 D6 0009C          INCL     FRA+12                                 ;
F3              51             50 F3 0009F 10$:     AOBLEQ   R0, I, 9$                              ; 0414
50              6E             01 C1 000A3          ADDL3    #1, KHAR_COUNT, I                      ; 0417
                               0A 11 000A7          BRB      12$                                    ;
          00    B4           6E40 F6 000A9 11$:     CVTLB    KHARS-4[I], @FRA+4                     ; 0418
                               64 D6 000AE          INCL     FRA+4                                  ;
                          08   A4 D6 000B0          INCL     FRA+12                                 ;
                F3             50 F5 000B3 12$:     SOBGTR   I, 11$                                 ; 0417
          00    B4             20 90 000B6          MOVB     #32, @FRA+4                            ; 0420
                               64 D6 000BA          INCL     FRA+4                                  ;
                          08   A4 D6 000BC          INCL     FRA+12                                 ;
          00    B4             20 90 000BF          MOVB     #32, @FRA+4                            ; 0421
                               64 D6 000C3          INCL     FRA+4                                  ;
                          08   A4 D6 000C5          INCL     FRA+12                                 ;
                                  04 000C8          RET                                             ; 0424

; Routine Size:  201 bytes,    Routine Base:  $CODE$ + 010C
;   300          0425  1 %SBTTL 'OSEQUE -- O/P O/P line number or spaces'
;   301          0426  1 ROUTINE oseque (sequence) : NOVALUE =
;   302          0427  1
;   303          0428  1 !++
;   304          0429  1 ! FUNCTIONAL DESCRIPTION:
;   305          0430  1 !
;   306          0431  1 !       OSEQUE either generates the output line number on the record, or
;   307          0432  1 !       else fills the spot with spaces.
;   308          0433  1 !
;   309          0434  1 ! FORMAL PARAMETERS:
;   310          0435  1 !
;   311          0436  1 !       If SEQUENCE is TRUE, the sequence number is provided; if FALSE,
;   312          0437  1 !       the spot is space filled.
;   313          0438  1 !
;   314          0439  1 ! IMPLICIT INPUTS:
;   315          0440  1 !
;   316          0441  1 !       It is assumed that FRA is set up to point to the area where
;   317          0442  1 !       the sequence number is to go.
;   318          0443  1 !
;   319          0444  1 ! IMPLICIT OUTPUTS:     None
;   320          0445  1 !
;   321          0446  1 ! ROUTINE VALUE:
;   322          0447  1 ! COMPLETION CODES:     None
;   323          0448  1 !
;   324          0449  1 ! SIDE EFFECTS:         None
;   325          0450  1 !--
;   326          0451  1
;   327          0452  2     BEGIN
;   328          0453  2
;   329          0454  2     IF  NOT .sequence THEN
;   330          0455  2
;   331          0456  2     !Caller doesn't want line numbers, so fill line number field with spaces.
;   332          0457  2
;   333          0458  2         IF .diag2_14 THEN
;   334          0459  3             INCR i FROM 1 TO 10 DO FS_WCHAR (fra, %C' ')
;   335          0460  2         ELSE
;   336          0461  3             INCR i FROM 1 TO 5 DO FS_WCHAR (fra, %C' ')
;   337          0462  3
;   338          0463  2     ELSE            !Caller does want the sequence numbers.
;   339          0464  3         BEGIN
;   340          0465  3         LOCAL
;   341          0466  3             fill,
;   342          0467  3             khars : VECTOR [10],
;   343          0468  3             khar_count;
;   344          0469  3
;   345          0470  3         ! For honest-to-goodness SOS style sequence numbers:
;   346          0471  3
;   347          0472  3         IF  .TSF_SEQN_FLAG
;   348          0473  3         THEN                                ! zero-fill on the left.
;   349          0474  3             FILL = %C'0'
;   350          0475  3         ELSE                                ! Otherwise,
;   351          0476  3             FILL = %C' ';                   ! space-fill the record counter.
;   352          0477  3
;   353          0478  3         IF .diag2_14 THEN
;   354          0479  4             BEGIN
;   355          0480  5             CONVBB ( (.gca_page_cnt + 1)    ! Convert "real" page number.
;   356          0481  4                     ,khars
;   357          0482  4                          ,khar_count
;   358          0483  4                          ,10 );
;   359          0484  4
;   360          0485  4                   INCR i FROM 1 TO (4 - .khar_count) DO        !Pad page counter.
;   361          0486  4                       FS_WCHAR (fra, %C' ');
;   362          0487  4
;   363          0488  4                   DECR i FROM .khar_count TO 1 DO      !Output page number.
;   364          0489  4                       FS_WCHAR (fra, .khars [.i - 1]);
;   365          0490  4
;   366          0491  5                   FS_WCHAR (fra, %C'.')                        ! Dot separating line and page numbers.
;   367          0492  3                   END;
;   368          0493  3
;   369          0494  3               CONVBB ( .phan_lines_tp+1    ! Convert line number to character string
;   370          0495  3                       ,khars
;   371          0496  3                       ,khar_count
;   372          0497  3                       ,10 );
;   373          0498  3
;   374          0499  3               INCR i FROM 1 TO (3 - .khar_count) DO   !Put in fill characters (spaces or '0's)
;   375          0500  3                   FS_WCHAR (fra, .fill);
;   376          0501  3
;   377          0502  3               DECR i FROM .khar_count TO 1 DO         !Output line number.
;   378          0503  3                   FS_WCHAR (fra, .khars [.i - 1]);
;   379          0504  3
;   380          0505  3               FS_WCHAR (fra, %C' ');                  !Two spaces before whatever follows.
;   381          0506  3               FS_WCHAR (fra, %C' ');
;   382          0507  2               END;
;   383          0508  2
;   384          0509  1           END;                                        !End of OSEQUE



                                          003C 00000 OSEQUE: .WORD   Save R2,R3,R4,R5                                ; 0426
                              55 00000000G  EF   9E 00002           MOVAB   CONVBB, R5                                      ;
                              54 00000000G  EF   9E 00009           MOVAB   GCA+216, R4                                     ;
                              53 00000000G  EF   9E 00010           MOVAB   FRA+4, R3                                       ;
                              5E            2C   C2 00017           SUBL2   #44, SP                                         ;
                              27        04  AC   E8 0001A           BLBS    SEQUENCE, 4$                                    ; 0454
                   11      01 A4            06   E1 0001E           BBC     #6, GCA+217, 2$                                 ; 0458
                              50            01   D0 00023           MOVL    #1, I                                           ; 0459
                           00 B3            20   90 00026 1$:       MOVB    #32, @FRA+4                                     ;
                                            63   D6 0002A           INCL    FRA+4                                           ;
                                        08  A3   D6 0002C           INCL    FRA+12                                          ;
                   F3         50            0A   F3 0002F           AOBLEQ  #10, I, 1$                                      ;
                                                 04 00033           RET                                                     ;
                              50            01   D0 00034 2$:       MOVL    #1, I                                           ; 0461
                           00 B3            20   90 00037 3$:       MOVB    #32, @FRA+4                                     ;
                                            63   D6 0003B           INCL    FRA+4                                           ;
                                        08  A3   D6 0003D           INCL    FRA+12                                          ;
                   F3         50            05   F3 00040           AOBLEQ  #5, I, 3$                                       ;
                                                 04 00044           RET                                                     ; 0458
                              50 00000000G  EF   D0 00045 4$:       MOVL    TSF, R0                                         ; 0472
                              05        10  A0   E9 0004C           BLBC    16(R0), 5$                                      ;
                              52            30   D0 00050           MOVL    #48, FILL                                       ; 0474
                              03            11   00053              BRB     6$                                              ;
                              52            20   D0 00055 5$:       MOVL    #32, FILL                                       ; 0476
```

```
        41        01    A4                06 E1 00058 6$:   BBC     #6, GCA+217, 11$                    ; 0478
                                          0A DD 0005D       PUSHL   #10                                 ; 0480
                                  04      AE 9F 0005F       PUSHAB  KHAR_COUNT                          ;
                                  0C      AE 9F 00062       PUSHAB  KHARS                               ;
        7E        80    A4                01 C1 00065       ADDL3   #1, GCA+88, -(SP)                   ;
                        65                04 FB 0006A       CALLS   #4, CONVBB                          ;
        50              04                6E C3 0006D       SUBL3   KHAR_COUNT, #4, R0                  ; 0485
                                          51 D4 00071       CLRL    I                                   ;
                                          09 11 00073       BRB     8$                                  ;
                  00    B3                20 90 00075 7$:   MOVB    #32, @FRA+4                         ; 0486
                                          63 D6 00079       INCL    FRA+4                               ;
                                  08      A3 D6 0007B       INCL    FRA+12                              ;
        F3              51                50 F3 0007E 8$:   AOBLEQ  R0, I, 7$                           ; 0485
        50              6E                01 C1 00082       ADDL3   #1, KHAR_COUNT, I                   ; 0488
                                          0A 11 00086       BRB     10$                                 ;
                  00    B3              6E40 F6 00088 9$:   CVTLB   KHARS-4[I], @FRA+4                  ; 0489
                                          63 D6 0008D       INCL    FRA+4                               ;
                                  08      A3 D6 0008F       INCL    FRA+12                              ;
                        F3                50 F5 00092 10$:  SOBGTR  I, 9$                               ; 0488
                  00    B3                2E 90 00095       MOVB    #46, @FRA+4                         ; 0491
                                          63 D6 00099       INCL    FRA+4                               ;
                                  08      A3 D6 0009B       INCL    FRA+12                              ;
                                          0A DD 0009E 11$:  PUSHL   #10                                 ; 0494
                                  04      AE 9F 000A0       PUSHAB  KHAR_COUNT                          ;
                                  0C      AE 9F 000A3       PUSHAB  KHARS                               ;
        7E 00000000G    EF                01 C1 000A6       ADDL3   #1, PHAN+12, -(SP)                  ;
                        65                04 FB 000AE       CALLS   #4, CONVBB                          ;
        50              03                6E C3 000B1       SUBL3   KHAR_COUNT, #3, R0                  ; 0499
                                          51 D4 000B5       CLRL    I                                   ; 0500
                                          09 11 000B7       BRB     13$                                 ;
                  00    B3                52 90 000B9 12$:  MOVB    FILL, @FRA+4                        ;
                                          63 D6 000BD       INCL    FRA+4                               ;
                                  08      A3 D6 000BF       INCL    FRA+12                              ;
        F3              51                50 F3 000C2 13$:  AOBLEQ  R0, I, 12$                          ; 0499
        50              6E                01 C1 000C6       ADDL3   #1, KHAR_COUNT, I                   ; 0502
                                          0A 11 000CA       BRB     15$                                 ;
                  00    B3              6E40 F6 000CC 14$:  CVTLB   KHARS-4[I], @FRA+4                  ; 0503
                                          63 D6 000D1       INCL    FRA+4                               ;
                                  08      A3 D6 000D3       INCL    FRA+12                              ;
                        F3                50 F5 000D6 15$:  SOBGTR  I, 14$                              ; 0502
                  00    B3                20 90 000D9       MOVB    #32, @FRA+4                         ; 0505
                                          63 D6 000DD       INCL    FRA+4                               ;
                                  08      A3 D6 000DF       INCL    FRA+12                              ;
                  00    B3                20 90 000E2       MOVB    #32, @FRA+4                         ; 0506
                                          63 D6 000E6       INCL    FRA+4                               ;
                                  08      A3 D6 000E8       INCL    FRA+12                              ;
                                             04 000EB       RET                                         ; 0509

; Routine Size:  236 bytes,    Routine Base:  $CODE$ + 01D5


;   385          0510  1 END                                           !End of module
;   386          0511  0 ELUDOM
;                                   PSECT SUMMARY
;
;       Name                       Bytes                        Attributes
;
;   $CODE$                              705  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]XPORT.L32;1                590         0         0         252          00:00.2
;   _$255$DUA28:[RUNOFF.SRC]DSRLIB.L32;1          1248        36         2          86          00:00.3




;                                    COMMAND QUALIFIERS

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

; Size:          705 code + 0 data bytes
; Run Time:         00:14.8
; Elapsed Time:     00:31.3
; Lines/CPU Min:      2070
; Lexemes/CPU-Min: 23983
; Memory Used:  111 pages
; Compilation Complete
```

0343 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
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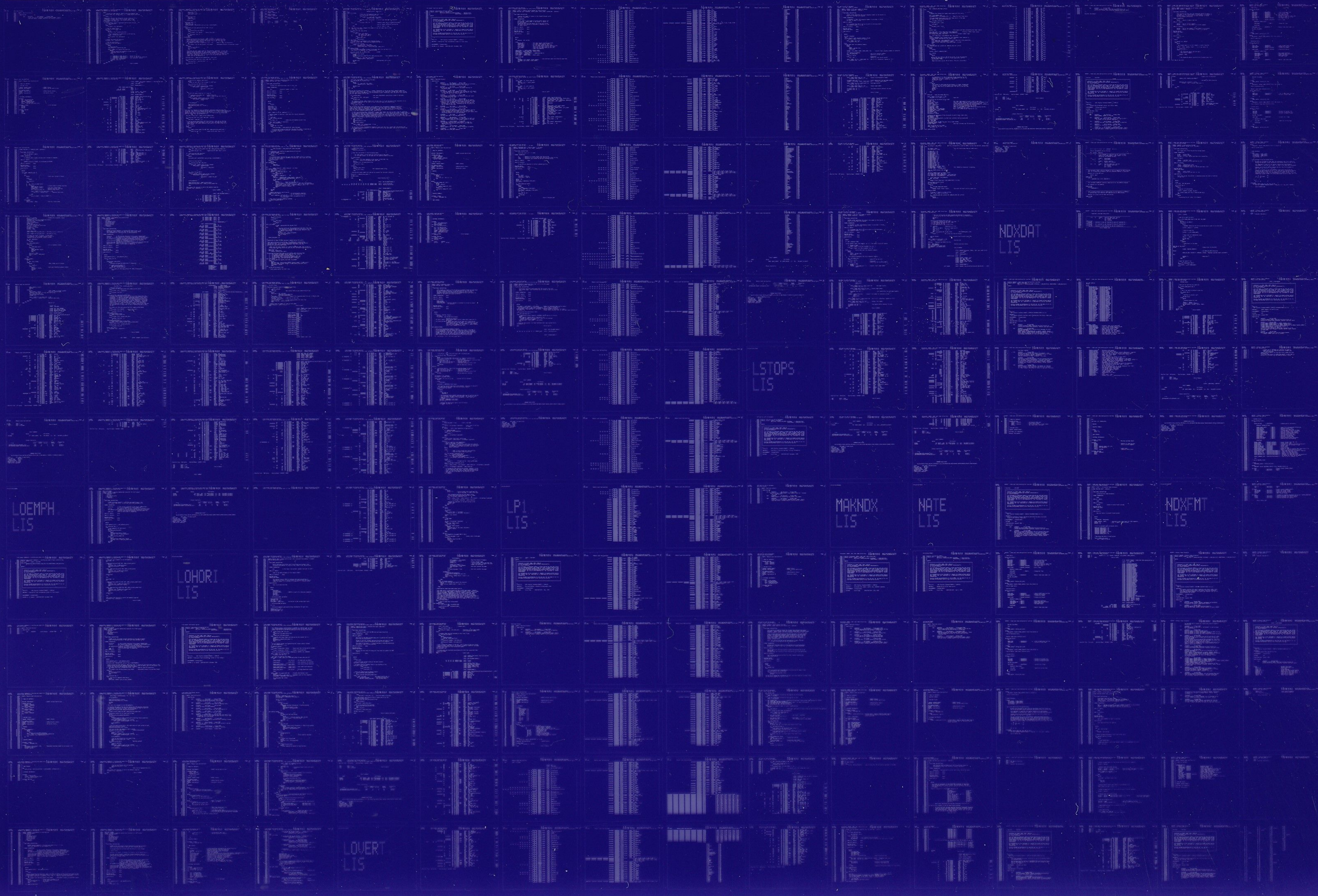
NDXDAT
LIS

LSTOPS
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LOEMPH
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LP1
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MAKNDX
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NATE
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NDXFMT
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LOHORI
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LOVERT
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