```
MMM        MMM    AAAAAAAAA        IIIIIIIII    LLL
MMM        MMM    AAAAAAAAA        IIIIIIIII    LLL
MMM        MMM    AAAAAAAAA        IIIIIIIII    LLL
MMMMMM  MMMMMM  AAA         AAA       III         LLL
MMMMMM  MMMMMM  AAA         AAA       III         LLL
MMMMMM  MMMMMM  AAA         AAA       III         LLL
MMM  MMM  MMM  AAA         AAA       III         LLL
MMM  MMM  MMM  AAA         AAA       III         LLL
MMM  MMM  MMM  AAA         AAA       III         LLL
MMM        MMM  AAA         AAA       III         LLL
MMM        MMM  AAA         AAA       IIi         LLL
MMM        MMM  AAA         AAA       III         LLL
MMM        MMM  AAAAAAAAAAAAAAA    III         LLL
MMM        MMM  AAAAAAAAAAAAAAA    III         LLL
MMM        MMM  AAAAAAAAAAAAAAA    III         LLL
MMM        MMM  AAA         AAA       III         LLL
MMM        MMM  AAA         AAA       III         LLL
MMM        MMM  AAA         AAA       III         LLL
MMM        MMM  AAA         AAA    IIIIIIIII    LLLLLLLLLLLLLLL
MMM        MMM  AAA         AAA    IIIIIIIII    LLLLLLLLLLLLLLL
MMM        MMM  AAA         AAA    IIIIIIIII    LLLLLLLLLLLLLLL
```

```
DDDDDDDD    IIIIII   RRRRRRRR  EEEEEEEEEE  CCCCCCC  TTTTTTTTTT   000000   RRRRRRRR  YY      YY
DDDDDDDD    IIIIII   RRRRRRRR  EEEEEEEEEE  CCCCCCC  TTTTTTTTTT   000000   RRRRRRRR  YY      YY
DD    DD      II     RR    RR  EE         CC           TT      00    00   RR    RR  YY      YY
DD    DD      II     RR    RR  EE         CC           TT      00    00   RR    RR  YY      YY
DD    DD      II     RR    RR  EE         CC           TT      00    00   RR    RR   YY    YY
DD    DD      II     RR    RR  EE         CC           TT      00    00   RR         YY   YY
DD    DD      II     RRRRRRRR  EEEEEEE    CC           TT      00    00   RRRRRRRR    YY  YY
DD    DD      II     RRRRRRRR  EEEEEEE    CC           TT      00    00   RRRRRRRR     YYY
DD    DD      II     RR  RR    EE         CC           TT      00    00   RR  RR       YY
DD    DD      II     RR  RR    EE         CC           TT      00    00   RR  RR       YY
DD    DD      II     RR   RR   EE         CC           TT      00    00   RR   RR      YY
DD    DD      II     RR   RR   EE         CC           TT      00    00   RR   RR      YY
DDDDDDDD    IIIIII   RR    RR  EEEEEEEEEE  CCCCCCC     TT       000000   RR    RR      YY
DDDDDDDD    IIIIII   RR    RR  EEEEEEEEEE  CCCCCCC     TT       000000   RR    RR      YY


LL          IIIIII     SSSSSSSS
LL          IIIIII     SSSSSSSS
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 MAIL$DIRECTORY( %TITLE 'DISPLAY SUMMARY OF EACH MESSAGE'
   2    0002  0                IDENT = 'V04-000' ) =
   3    0003  1 BEGIN
   4    0004  1
   5    0005  1 !
   6    0006  1 !****************************************************************
   7    0007  1 !*                                                              *
   8    0008  1 !*   COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                    *
   9    0009  1 !*   DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.     *
  10    0010  1 !*   ALL RIGHTS RESERVED.                                       *
  11    0011  1 !*                                                              *
  12    0012  1 !*   THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED  *
  13    0013  1 !*   ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE  *
  14    0014  1 !*   INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER  *
  15    0015  1 !*   COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY  *
  16    0016  1 !*   OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY  *
  17    0017  1 !*   TRANSFERRED.                                               *
  18    0018  1 !*                                                              *
  19    0019  1 !*   THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE  *
  20    0020  1 !*   AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT  *
  21    0021  1 !*   CORPORATION.                                               *
  22    0022  1 !*                                                              *
  23    0023  1 !*   DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS  *
  24    0024  1 !*   SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.    *
  25    0025  1 !*                                                              *
  26    0026  1 !*                                                              *
  27    0027  1 !****************************************************************
  28    0028  1 !
  29    0029  1
  30    0030  1 !++
  31    0031  1 ! FACILITY:     VAX/VMS MAIL UTILITY
  32    0032  1 !
  33    0033  1 ! ABSTRACT:     DISPLAY A SUMMARY OF EACH MESSAGE IN THE CURRENT FILE.
  34    0034  1 !
  35    0035  1 ! ENVIRONMENT:  NATIVE/USER MODE
  36    0036  1 !
  37    0037  1 ! AUTHOR: LEN KAWELL, CREATION DATE: 20-JUN-1979
  38    0038  1 !
  39    0039  1 ! MODIFIED BY:
  40    0040  1 !
  41    0041  1 !       V03-006 ROP0011         Robert Posniak  20-JUN-1984
  42    0042  1 !               Correct extraction of sender node/username
  43    0043  1 !               while listing directory.
  44    0044  1 !
  45    0045  1 !       V03-005 BLS0255         Benn Schreiber  28-Dec-1983
  46    0046  1 !               Use new global flags. Issue message in dir/folder if
  47    0047  1 !               no folders found.
  48    0048  1 !
  49    0049  1 !       V03-004 BLS0225         Benn Schreiber  17-Jun-1983
  50    0050  1 !               Use common erase page routine
  51    0051  1 !
  52    0052  1 !       V03-003 BLS0222         Benn Schreiber  17-May-1983
  53    0053  1 !               If message is deleted, clear flags descriptor
  54    0054  1 !
  55    0055  1 !       V03-002 BLS0211         Benn Schreiber  13-Mar-1983
  56    0056  1 !               Add support for ISAM mail files, and DIR/FOLDER
  57    0057  1 !
```

```
:   58        0058  1 :        V03-001 BLS0177       Benn Schreiber  20-Jun-1982
:   59        0059  1 :        Use MAIL$G_OUTCHAR rather than INPCHAR.  Use MAIL$Q_MSG_FNM
:   60        0060  1 :        to get message file filename, rather than user specified
:   61        0061  1 :        name, which could be a logical.
:   62        0062  1 :--
```

```
  64        0063  1 !
  65        0064  1 ! TABLE OF CONTENTS:
  66        0065  1 !
  67        0066  1
  68        0067  1 !
  69        0068  1 ! INCLUDE FILES:
  70        0069  1 !
  71        0070  1        LIBRARY 'SYS$LIBRARY:STARLET';
  72        0071  1        REQUIRE 'SRC$:MAILREQ';
  73        0217  1        LIBRARY 'LIB$:MAILDEF';
  74        0218  1 !
  75        0219  1 ! MACROS:
  76        0220  1 !
  77        0221  1 !
  78        0222  1 ! EQUATED SYMBOLS:
  79        0223  1 !
  80        0224  1
  81        0225  1 !
  82        0226  1 ! OWN STORAGE:
  83        0227  1 !
  84        0228  1 OWN
  85        0229  1        SENDER: DYN_DESC_DECL,              ! Sender descriptor
  86        0230  1        SUBJ:   DYN_DESC_DECL,              ! Subject descriptor
  87        0231  1        DATE:   DYN_DESC_DECL,              ! Date descriptor
  88        0232  1        FLAGS_DESC: DYN_DESC_DECL;          ! Message flags
  89        0233  1 !
  90        0234  1 ! EXTERNAL REFERENCES:
  91        0235  1 !
  92        0236  1
  93        0237  1 EXTERNAL ROUTINE
  94        0238  1        MAIL$CMD_ERASE,                     ! Erase the screen
  95        0239  1        MAIL$INFO_FOLDER,                   ! Get info about next folder
  96        0240  1        MAIL$FIND_I_MSG,                    ! Find next ISAM message
  97        0241  1        MAIL$FIND_MSG,                      ! Find next message
  98        0242  1        MAIL$GETMSG,                        ! Get message text
  99        0243  1        MAIL$INFO_I_MSG,                    ! Get current ISAM msg info
 100        0244  1        MAIL$INFO_MSG,                      ! Get current message info
 101        0245  1        MAIL$PUT_OUTPUT,                    ! Put to SYS$OUTPUT
 102        0246  1        STR$FREE1_DX;                       ! Deallocate dynamic string
 103        0247  1 EXTERNAL
 104        0248  1        MAIL$GL_FLAGS : $BBLOCK,            ! Control flags
 105        0249  1        MAIL$L_CURMSG : REF $BBLOCK,        ! Current message descriptor
 106        0250  1        MAIL$Q_CURFOLDER : $BBLOCK,         ! Descriptor of isam folder
 107        0251  1        MAIL$Q_INPTRAN : $BBLOCK,           ! Translation of SYS$INPUT
 108        0252  1        MAIL$L_OUTLINES,                    ! Number of lines per page
 109        0253  1        MAIL$Q_RD_DESC : $BBLOCK,           ! Descriptor of filename
 110        0254  1        MAIL$Q_MSG_FILE: BLOCK[,BYTE],      ! Current message file name
 111        0255  1        MAIL$Q_MSG_FNM:  BLOCK[,BYTE],      ! Current message file filename
 112        0256  1        MAIL$L_MSG_NUM:  LONG;              ! Current message number
```

```
114    0257  1 ROUTINE ISAM_DIRECTORY (LINESPP,FULL_FLAG) : NOVALUE =
115    0258  1 !++
116    0259  1 ! FUNCTIONAL DESCRIPTION:
117    0260  1 !
118    0261  1 !        List a directory of an ISAM mail file
119    0262  1 !
120    0263  1 !--
121    0264  2 BEGIN
122    0265  2
123    0266  2 LOCAL
124    0267  2     NUMLINES;
125    0268  2
126    0269  2 NUMLINES = .LINESPP;
127    0270  2
128    0271  3 DO BEGIN
129    0272  3     IF .MAIL$L_CURMSG NEQ 0
130    0273  4     THEN BEGIN
131    0274  5         IF NOT (IF .FULL_FLAG
132    0275  5                 THEN MAIL$INFO_I_MSG(0,SUBJ,DATE,FLAGS_DESC,0,SENDER)
133    0276  5                 ELSE MAIL$INFO_I_MSG(0,SUBJ,DATE,0,0,SENDER))
134    0277  4             THEN RETURN;
135    0278  4         IF .FLAGS_DESC[DSC$W_LENGTH] NEQ 0
136    0279  4             AND .NUMLINES LEQU 1
137    0280  4             THEN (MAIL$PUT_OUTPUT(MAIL$GETMSG(MAIL$_MOREMSG),0); RETURN);
138    0281  4             !
139    0282  4             ! Display summary information
140    0283  4             !
141    0284  4             MAIL$PUT_OUTPUT($DESCRIPTOR('!5UL !20AS !12AS !AF'),
142    0285  4                             .MAIL$L_MSG_NUM,SENDER,
143    0286  4                             DATE,
144    0287  4                             MINU(.SUBJ[DSC$W_LENGTH],40),.SUBJ[DSC$A_POINTER]);
145    0288  4         END
146    0289  4         ELSE BEGIN
147    0290  4             MAIL$PUT_OUTPUT(MAIL$GETMSG(MAIL$_DIRDEL10),.MAIL$L_MSG_NUM);
148    0291  4             STR$FREE1_DX(FLAGS_DESC);
149    0292  3             END;
150    0293  3     IF .FULL_FLAG
151    0294  3         AND .FLAGS_DESC[DSC$W_LENGTH] NEQ 0
152    0295  3         THEN MAIL$PUT_OUTPUT(FLAGS_DESC);
153    0296  3     IF .MAIL$GL_FLAGS[MAIF_V_CTRLCFL]
154    0297  3         THEN RETURN;
155    0298  3     IF NOT MAIL$FIND_I_MSG(0,0,1)
156    0299  3         THEN RETURN;
157    0300  3
158    0301  3         !
159    0302  3         ! If output is to a scope, count lines per page
160    0303  3         !
161    0304  3     IF .MAIL$GL_FLAGS[MAIF_V_SCOPE]
162    0305  4     THEN BEGIN
163    0306  4         NUMLINES = .NUMLINES - 1;
164    0307  4         IF .FULL_FLAG
165    0308  4             AND .FLAGS_DESC[DSC$W_LENGTH] NEQ 0
166    0309  4         THEN NUMLINES = .NUMLINES - 1;
167    0310  4         END
168    0311  3     END
169    0312  2 UNTIL .NUMLINES LEQ 0;
170    0313  2
```

```
  :  171              0314  2 MAIL$PUT_OUTPUT(MAIL$GETMSG(MAIL$_MOREMSG),0);
  :  172              0315  2 RETURN
  :  173              0316  1 END;
```

```
                                                        .TITLE   MAIL$DIRECTORY DISPLAY SUMMARY OF EACH MESSAGE
                                                        .IDENT   \V04-000\

                                                        .PSECT   $CODE$,NOWRT,2

41 32 31 21 20 53 41 30 32 21 20 4C 55 35 21 00000 P.AAB:  .ASCII   \!5UL !20AS !12AS !AF\       :
                              46 41 21 20 53 0000F                                                :
                                    00000014 00014 P.AAA:  .LONG    20                            :
                                    00000000' 00018         .ADDRESS P.AAB                        :

                                                        .PSECT   $OWN$,NOEXE,2

                              00# 00000 SENDER:  .BYTE   0[2]                                     :
                        02 0E 00002         .BYTE   14, 2                                         :
                              00004         .BLKB   4
                              00# 00008 SUBJ:   .BYTE   0[2]                                      :
                        02 0E 0000A         .BYTE   14, 2                                         :
                              0000C         .BLKB   4
                              00# 00010 DATE:   .BYTE   0[2]                                      :
                        02 0E 00012         .BYTE   14, 2                                         :
                              00014         .BLKB   4
                              00# 00018 FLAGS_DESC:                                               :
                              .BYTE   0[2]                                                        :
                        02 0E 0001A         .BYTE   14, 2                                         :
                              0001C         .BLKB   4

                                                        .EXTRN   MAIL$CMD_ERASE, MAIL$INFO_FOLDER
                                                        .EXTRN   MAIL$FIND_I_MSG
                                                        .EXTRN   MAIL$FIND_MSG, MAIL$GETMSG
                                                        .EXTRN   MAIL$INFO_I_MSG
                                                        .EXTRN   MAIL$INFO_MSG, MAIL$PUT_OUTPUT
                                                        .EXTRN   STR$FREE1_DX, MAIL$GL_FLAGS
                                                        .EXTRN   MAIL$L_CURMSG, MAIL$Q_CURFOLDER
                                                        .EXTRN   MAIL$Q_INPTRAN, MAIL$C_OUTLINES
                                                        .EXTRN   MAIL$Q_RD_DESC, MAIL$Q_MSG_FILE
                                                        .EXTRN   MAIL$Q_MSG_FNM, MAIL$L_MSG_NUM

                                                        .PSECT   $CODE$,NOWRT,2

                              00FC 00000 ISAM_DIRECTORY:
                                                        .WORD    Save R2,R3,R4,R5,R6,R7                    : 0257
         57 00000000G 00 9E 00002         MOVAB    MAIL$GETMSG, R7                                         :
         56 00000000G 00 9E 00009         MOVAB    MAIL$L_MSG_NUM, R6                                      :
         55 00000000G 00 9E 00010         MOVAB    MAIL$INFO_I_MSG, R5                                     :
         54 00000000G 00 9E 00017         MOVAB    MAIL$PUT_OUTPUT, R4                                     :
         53 00000000' 00 9E 0001E         MOVAB    FLAGS_DESC, R3                                          :
         52       04 AC D0 00025         MOVL     LINESPP, NUMLINES                                       : 0269
            00000000G 00 D5 00029 1$:     TSTL     MAIL$L_CURMSG                                          : 0272
                  56 13 0002F         BEQL     6$
            16       08 AC E9 00031         BLBC     FULL_FLAG, 2$                                         : 0274
                  E8 A3 9F 00035         PUSHAB   SENDER                                                 : 0275
                  7E D4 00038         CLRL     -(SP)
```

MAIL$DIRECTORY   DISPLAY SUMMARY OF EACH MESSAGE
V04-000

I 11
16-Sep-1984 00:50:27     VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:42:16     [MAIL.SRC]DIRECTORY.B32;1

Page  6
     (3)

M
V(

```
                        53 DD 0003A        PUSHL    R3
                  F8 A3 9F 0003C           PUSHAB   DATE
                  F0 A3 9F 0003F           PUSHAB   SUBJ
                        7E D4 00042        CLRL     -(SP)
               65       06 FB 00044        CALLS    #6, MAIL$INFO_I_MSG        0276
               14       50 E8 00047        BLBS     R0, 3$
                        04 0004A           RET
                  E8 A3 9F 0004B 2$:       PUSHAB   SENDER                    0276
                        7E 7C 0004E        CLRQ     -(SP)
                  F8 A3 9F 00050           PUSHAB   DATE
                  F0 A3 9F 00053           PUSHAB   SUBJ
                        7E D4 00056        CLRL     -(SP)
               65       06 FB 00058        CALLS    #6, MAIL$INFO_I_MSG
               61       50 E9 0005B        BLBC     R0, 9$
                        63 B5 0005E 3$:    TSTW     FLAGS_DESC                0278
                        05 13 00060        BEQL     4$
               01       52 D1 00062        CMPL     NUMLINES, #1              0279
                        76 1B 00065        BLEQU    11$
                  F4 A3 DD 00067 4$:       PUSHL    SUBJ+4                    0287
               7E    F0 A3 3C 0006A        MOVZWL   SUBJ, -(SP)
               28       6E B1 0006E        CMPW     (SP), #40
                        03 1B 00071        BLEQU    5$
               6E       28 D0 00073        MOVL     #40, (SP)
                  F8 A3 9F 00076 5$:       PUSHAB   DATE                      0284
                  E8 A3 9F 00079           PUSHAB   SENDER
                        66 DD 0007C        PUSHL    MAIL$L_MSG_NUM            0285
                     FF76 CF 9F 0007E      PUSHAB   P.AAA                     0284
               64       06 FB 00082        CALLS    #6, MAIL$PUT_OUTPUT
                        19 11 00085        BRB      7$                        0272
                        66 DD 00087 6$:    PUSHL    MAIL$L_MSG_NUM            0290
               007EDDE0 8F DD 00089        PUSHL    #8314336
               67       01 FB 0008F        CALLS    #1, MAIL$GETMSG
                        50 DD 00092        PUSHL    R0
               64       02 FB 00094        CALLS    #2, MAIL$PUT_OUTPUT
                        53 DD 00097        PUSHL    R3                        0291
     00000000G 00       01 FB 00099        CALLS    #1, STR$FREE1_DX
               09    08 AC E9 000A0 7$:    BLBC     FULL_FLAG, 8$             0293
                        63 B5 000A4        TSTW     FLAGS_DESC                0294
                        05 13 000A6        BEQL     8$
                        53 DD 000A8        PUSHL    R3                        0295
               64       01 FB 000AA        CALLS    #1, MAIL$PUT_OUTPUT
               39 00000000G 00 E8 000AD 8$: BLBS    MAIL$GL_FLAGS+1, 12$     0296
                        01 DD 000B4        PUSHL    #1                        0298
                        7E 7C 000B6        CLRQ     -(SP)
     00000000G 00       03 FB 000B8        CALLS    #3, MAIL$FIND_I_MSG
               2B       50 E9 000BF 9$:    BLBC     R0, 12$
     0C 00000000G 00    04 E1 000C2        BBC      #4, MAIL$GL_FLAGS, 10$    0304
                        52 D7 000CA        DECL     NUMLINES                  0306
               06    08 AC E9 000CC        BLBC     FULL_FLAG, 10$           0307
                        63 B5 000D0        TSTW     FLAGS_DESC                0308
                        02 13 000D2        BEQL     10$
                        52 D7 000D4        DECL     NUMLINES                  0309
                        52 D5 000D6 10$:   TSTL     NUMLINES                  0312
                        03 15 000D8        BLEQ     11$
                     FF4C 31 000DA         BRW      1$
                        7E D4 000DD 11$:   CLRL     -(SP)                     0314
               007EDDC0 8F DD 000DF        PUSHL    #8314304
```

```
                        67          01 FB 000E5          CALLS   #1, MAIL$GETMSG
                                    50 DD 000E8          PUSHL   R0
                        64          02 FB 000EA          CALLS   #2, MAIL$PUT_OUTPUT
                                    04 000ED 12$:        RET
```

; Routine Size:  238 bytes,    Routine Base:  $CODE$ + 001C

                                                                                                           0316

```
 175   0317  1  GLOBAL ROUTINE MAIL$DIRECTORY(FULL_FLAG) : NOVALUE =
 176   0318  1
 177   0319  1  !++
 178   0320  1  ! FUNCTIONAL DESCRIPTION:
 179   0321  1  !
 180   0322  1  !       Displays a summary of each of the messages in the current
 181   0323  1  !       message file.
 182   0324  1  !
 183   0325  1  ! INPUTS:
 184   0326  1  !
 185   0327  1  !       MAIL$W_MSG_RSIZ = Size of current message record.
 186   0328  1  !       MAIL$L_MSG_RADR = Address of current message record.
 187   0329  1  !
 188   0330  1  ! OUTPUTS:
 189   0331  1  !
 190   0332  1  !       NONE
 191   0333  1  !
 192   0334  1  !--
 193   0335  2  BEGIN
 194   0336  2  LOCAL
 195   0337  2        PTR,                                    ! Pointer
 196   0338  2        SENDER_SIZ,                             ! Sender size
 197   0339  2        SENDER_PTR,                             ! Sender pointer
 198   0340  2        LAST_SIZ,                               ! Last size found
 199   0341  2        LAST_PTR,                               ! Last pointer
 200   0342  2        NUMLINES;                               ! Number of lines left on page
 201   0343  2
 202   0344  2  !
 203   0345  2  ! Erase the screen and get the number of lines per page/screen
 204   0346  2  !
 205   0347  2  MAIL$CMD_ERASE();
 206   0348  2  MAIL$PUT_OUTPUT(DESCRIPTOR('!/* !AS'),            ! Display file or folder name
 207   0349  3                   80-(IF .MAIL$GL_FLAGS[MAIF_V_ISAM]
 208   0350  3                       THEN .MAIL$Q_CURFOLDER[DSC$W_LENGTH]
 209   0351  2                       ELSE .MAIL$Q_MSG_FNM[DSC$W_LENGTH]),
 210   0352  3                   (IF .MAIL$GL_FLAGS[MAIF_V_ISAM]
 211   0353  3                    THEN MAIL$Q_CURFOLDER
 212   0354  2                    ELSE MAIL$Q_MSG_FNM));
 213   0355  2  MAIL$PUT_OUTPUT(MAIL$GETMSG(MAIL$_DIRHDO));
 214   0356  2  MAIL$PUT_OUTPUT(DESCRIPTOR(' '));
 215   0357  2  NUMLINES = MAX(.MAIL$L_OUTLINES-7,1);
 216   0358  2
 217   0359  2  IF .MAIL$GL_FLAGS[MAIF_V_ISAM]
 218   0360  3  THEN BEGIN
 219   0361  3      ISAM_DIRECTORY(.NUMLINES,.FULL_FLAG);
 220   0362  3      RETURN
 221   0363  3      END;
 222   0364  2  !
 223   0365  2  ! Loop, displaying a summary of each message and getting the next one,
 224   0366  2  ! until the screen is filled or there aren't any more messages.
 225   0367  2  !
 226   0368  2  DO
 227   0369  3      BEGIN
 228   0370  3      IF NOT MAIL$INFO_MSG(SENDER,SUBJ,DATE)
 229   0371  3      THEN
 230   0372  3              RETURN;
 231   0373  3      !
```

```
 232   0374   3                    ; Strip all but the last node name from the sender's name
 233   0375   3                    !
 234   0376   3                    LAST_SIZ = SENDER_SIZ = .SENDER[DSC$W_LENGTH];
 235   0377   3                    LAST_PTR = SENDER_PTR = .SENDER[DSC$A_POINTER];
 236   0378   3                    WHILE NOT CH$FAILT
 237   0379   3                            PTR = CH$FIND_SUB(.LAST_SIZ,.LAST_PTR,
 238   0380   3                                              %CHARCOUNT('::'),UPLIT('::')))
 239   0381   4                    DO      BEGIN
 240   0382   4                            SENDER_SIZ = .LAST_SIZ;
 241   0383   4                            SENDER_PTR = .LAST_PTR;
 242   0384   4                            LAST_SIZ = .LAST_SIZ - (.PTR + %CHARCOUNT('::') - .LAST_PTR);
 243   0385   4                            LAST_PTR = .PTR + %CHARCOUNT('::');
 244   0386   4                            END;
 245   0387   3                    !
 246   0388   3                    ! Display the summary for this message
 247   0389   3                    !
 248   0390   3                    MAIL$PUT_OUTPUT(DESCRIPTOR('!5UL !20AD !12AS !AD'),
 249   0391   3                                    .MAIL$L_MSG_NUM,
 250   0392   3                                    .SENDER_SIZ,
 251   0393   3                                    .SENDER_PTR,
 252   0394   3                                    DATE,
 253   0395   3                                    MIN(.SUBJ[DSC$W_LENGTH],40),
 254   0396   3                                    .SUBJ[DSC$A_POINTER]);
 255   0397   3                    IF .MAIL$GL_FLAGS[MAIF_V_CTRLCFL]
 256   0398   3                    THEN
 257   0399   3                            RETURN;
 258   0400   3                    IF NOT MAIL$FIND_MSG(0)
 259   0401   3                    THEN
 260   0402   3                            RETURN;
 261   0403   3                    !
 262   0404   3                    ! Check if output device is a scope terminal
 263   0405   3                    !
 264   0406   3                    IF .MAIL$GL_FLAGS[MAIF_V_SCOPE]
 265   0407   3                    THEN
 266   0408   3                            NUMLINES = .NUMLINES - 1;        ! Decrement number lines page
 267   0409   3                    END
 268   0410   2  UNTIL .NUMLINES LEQ 0;
 269   0411   2  MAIL$PUT_OUTPUT(MAIL$GETMSG(MAIL$_MOREMSG),0)    ! Tell user there is more
 270   0412   1  END;
```

```
                      53  41  21  20  2A  23  21  0010A  P.AAD:  .ASCII   \!#* !AS\
                                                   00111          .BLKB    3
                                      00000007     00114  P.AAC:  .LONG    7
                                      00000000'    00118          .ADDRESS P.AAD
                                            20     0011C  P.AAF:  .ASCII   \ \
                                                   0011D          .BLKB    3
                                      00000001     00120  P.AAE:  .LONG    1
                                      00000000'    00124          .ADDRESS P.AAF
                              00  00  3A  3A  00128  P.AAG:  .ASCII   \::\<0><0>
 41  32  31  21  20  44  41  30  32  21  20  4C  55  35  21  0012C  P.AAI:  .ASCII   \!5UL !20AD !12AS !AD\
                              44  41  21  20  53  0013B
                                      00000014     00140  P.AAH:  .LONG    20
                                      00000000'    00144          .ADDRESS P.AAI
```

```
                                   OFFC 00000           .ENTRY   MAIL$DIRECTORY, Save R2,R3,R4,R5,R6,R7,R8,-  ; 0317
                                                                 R9,R10,R11
                      5B 00000000G  00   9E 00002        MOVAB    MAIL$PUT_OUTPUT, R11
                      5A          CO   AF 9E 00009        MOVAB    P.AAC, RTO
                      59 00000000'  00   9E 0000D        MOVAB    DATE, R9
        51 00000000G  00           00   FB 00014        CALLS    #0, MAIL$CMD_ERASE                               0347
                                   01   00  EF 0001B     EXTZV    #0, #1, MAIL$GL_FLAGS, R1                        0352
                                   09   51  E9 00024     BLBC     R1, 1$
                      50 00000000G  00   9E 00027        MOVAB    MAIL$Q_CURFOLDER, RO
                                   07   11 0002E         BRB      2$
                      50 00000000G  00   9E 00030 1$:    MOVAB    MAIL$Q_MSG_FNM, RO
                                   50   DD 00037 2$:     PUSHL    RO
                                   09   51  E9 00039     BLBC     R1, 3$                                           0349
                      50 00000000G  00   3C 0003C        MOVZWL   MAIL$Q_CURFOLDER, RO                            0350
                                   07   11 00043         BRB      4$
                      50 00000000G  00   3C 00045 3$:    MOVZWL   MAIL$Q_MSG_FNM, RO                              0351
                                   B0   A0 9F 0004C 4$:  PUSHAB   -80(RO)                                         0349
                      6E           6E   CE 0004F         MNEGL    (SP), (SP)
                                   5A   DD 00052         PUSHL    R10                                             0348
                      6B           03   FB 00054         CALLS    #3, MAIL$PUT_OUTPUT
                         007EDDC8   8F   DD 00057        PUSHL    #8314312                                        0355
             00000000G  00   01   FB 0005D              CALLS    #1, MAIL$GETMSG
                                   50   DD 00064         PUSHL    RO
                      6B           01   FB 00066         CALLS    #1, MAIL$PUT_OUTPUT
                                   OC   AA 9F 00069       PUSHAB   P.AAE                                          0356
                      6B           01   FB 0006C         CALLS    #1, MAIL$PUT_OUTPUT
                      50 00000000G  00   07  C3 0006F    SUBL3    #7, MAIL$L_OUTLINES, RO                         0357
                                   03   14 00077         BGTR     5$
                                   50   01  DO 00079     MOVL     #1, RO
                                   56   50  DO 0007C 5$: MOVL     RO, NUMLINES
                      0B 00000000G  00   E9 0007F        BLBC     MAIL$GL_FLAGS, 6$                               0359
                                   04   AC DD 00086      PUSHL    FULL_FLAG                                       0361
                                   56   DD 00089         PUSHL    NUMLINES
              FE44     CF           02   FB 0008B        CALLS    #2, ISAM_DIRECTORY
                                   04 00090              RET                                                      0360
                                   59   DD 00091 6$:     PUSHL    R9                                              0370
                         F8   A9 9F 00093               PUSHAB   SUBJ
                         FO   A9 9F 00096               PUSHAB   SENDER
             00000000G  00   03   FB 00099              CALLS    #3, MAIL$INFO_MSG
                                   5E   50  E9 000A0     BLBC     RO, 11$
                                   58   FO  A9 3C 000A3  MOVZWL   SENDER, SENDER_SIZ                              0376
                                   57   F4  A9 DO 000A7  MOVL     SENDER+4, SENDER_PTR                            0377
                                   54   57  7D 000AB     MOVQ     SENDER_PTR, LAST_PTR
        64        55        14 AA   02   39 000AE 7$:    MATCHC   #2, P.AAG, LAST_SIZ, (LAST_PTR)                 0380
                                   03   13 000B4         BEQL     8$
                                   53   02  DO 000B6     MOVL     #2, R3
                                   53   02  C2 000B9 8$: SUBL2    #2, R3
                                   12   13 000BC         BEQL     9$
                                   57   54  7D 000BE     MOVQ     LAST_PTR, SENDER_PTR                            0383
                   50              54   53  C3 000C1     SUBL3    PTR, LAST_PTR, RO                               0384
                                   55   FE A045 9E 000C5 MOVAB    -2(RO)[LAST_SIZ], LAST_SIZ
                                   54   02  A3 9E 000CA  MOVAB    2(R3), LAST_PTR                                 0385
                                   DE   11 000CE         BRB      7$                                              0378
                                   FC   A9 DD 000DO 9$:  PUSHL    SUBJ+4                                          0396
                                   7E   F8  A9 3C 000D3  MOVZWL   SUBJ, -(SP)                                     0395
                                   28   6E  B1 000D7     CMPW     (SP), #40
```

MAIL$DIRECTORY  DISPLAY SUMMARY OF EACH MESSAGE
V04-000

N 11
16-Sep-1984 00:50:27    VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:42:16    [MAIL.SRC]DIRECTORY.B32;1

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```
                                03 1B 000DA         BLEQU   10$
                        6E      28 D0 000DC         MOVL    #40, (SP)
                      0280      8F BB 000DF  10$:   PUSHR   #^M<R7,R9>
                                58 DD 000E3         PUSHL   SENDER_SIZ
                 00000000G      00 DD 000E5         PUSHL   MAIL$L_MSG_NUM
                        2C      AA 9F 000EB         PUSHAB  P.AAH
                        6B      07 FB 000EE         CALLS   #7, MAIL$PUT_OUTPUT
                 31 00000000G   00 C8 000F1         BLBS    MAIL$GL_FLAGS+1, 14$
                                7E D4 000F8         CLRL    -(SP)
       00000000G      00        01 FB 000FA         CALLS   #1, MAIL$FIND_MSG
                      25         50 E9 00101  11$:   BLBC    R0, 14$
    02 00000000G      00        04 E1 00104         BBC     #4, MAIL$GL_FLAGS, 12$
                                56 D7 0010C         DECL    NUMLINES
                                56 D5 0010E  12$:   TSTL    NUMLINES
                                03 15 00110         BLEQ    13$
                   FF7C         31 00112            BRW     6$
                                7E D4 00115  13$:   CLRL    -(SP)
             007EDDC0           8F DD 00117         PUSHL   #8314304
       00000000G      00        01 FB 0011D         CALLS   #1, MAIL$GETMSG
                                50 DD 00124         PUSHL   R0
                        6B      02 FB 00126         CALLS   #2, MAIL$PUT_OUTPUT
                                04 00129  14$:      RET
```

; Routine Size:  298 bytes,    Routine Base:  $CODE$ + 0148

0393
0392
0391
0390

0397

0400

0406
0408
0410

0411

0412

```
:  272        0413  1 ROUTINE OUTPUT_HEADER : NOVALUE =
:  273        0414  1 !++
:  274        0415  1 ! FUNCTIONAL DESCRIPTION:
:  275        0416  1 !
:  276        0417  1 !     Output the header for the dir/folder listing
:  277        0418  1 !
:  278        0419  1 !--
:  279        0420  2 BEGIN
:  280        0421  2
:  281        0422  2 MAIL$PUT_OUTPUT(MAIL$GETMSG(MAIL$_DIRHD10),MAIL$Q_RD_DESC);
:  282        0423  2 MAIL$PUT_OUTPUT (MAIL$GETMSG(MAIL$_DIRHD20));
:  283        0424  2 RETURN;
:  284        0425  1 END;
```

```
                              000C 00000 OUTPUT_HEADER:
                                               .WORD    Save R2,R3                        ; 0413
                  53 00000000G  00  9E 00002    MOVAB    MAIL$PUT_OUTPUT, R3
                  52 00000000G  00  9E 00009    MOVAB    MAIL$GETMSG, R2
                     00000000G  00  9F 00010    PUSHAB   MAIL$Q_RD_DESC                   ; 0422
                     007EDDD0   8F  DD 00016    PUSHL    #8314320
                  62            01  FB 0001C    CALLS    #1, MAIL$GETMSG
                                50  DD 0001F    PUSHL    R0
                  63            02  FB 00021    CALLS    #2, MAIL$PUT_OUTPUT
                     007EDDD8   8F  DD 00024    PUSHL    #8314328                         ; 0423
                  62            01  FB 0002A    CALLS    #1, MAIL$GETMSG
                                50  DD 0002D    PUSHL    R0
                  63            01  FB 0002F    CALLS    #1, MAIL$PUT_OUTPUT
                                    04 00032    RET                                       ; 0425
```

; Routine Size:  51 bytes,     Routine Base:  $CODE$ + 0272

MAIL$DIRECTORY   DISPLAY SUMMARY OF EACH MESSAGE
V04-000

C 12
16-Sep-1984 00:50:27    VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:42:16    [MAIL.SRC]DIRECTORY.B32;1

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```
  286      0426  1  GLOBAL ROUTINE MAIL$DIR_FOLDER (START_DESC) =
  287      0427  1  !++
  288      0428  1  !  FUNCTIONAL DESCRIPTION:
  289      0429  1  !
  290      0430  1  !       Display a listing of the folders in the current ISAM mail file
  291      0431  1  !
  292      0432  1  !  INPUTS:
  293      0433  1  !
  294      0434  1  !       START_DESC is a descriptor of the starting folder name
  295      0435  1  !--
  296      0436  2  BEGIN
  297      0437  2  MAP
  298      0438  2      START_DESC : REF $BBLOCK;
  299      0439  2
  300      0440  2  LOCAL
  301      0441  2      SEARCH_MODE,
  302      0442  2      LISTFLAG : WORD,
  303      0443  2      HEAD_FLAG : WORD,
  304      0444  2      FOLDERBUF : VECTOR[80,BYTE],
  305      0445  2      BUFDESC : VECTOR[2,LONG],
  306      0446  2      FOLDER_DESC : $BBLOCK[DSC$C_S_BLN];
  307      0447  2
  308      0448  2  FOLDER_DESC[DSC$W_LENGTH] = .START_DESC[DSC$W_LENGTH];
  309      0449  2  FOLDER_DESC[DSC$B_DTYPE] = 0;
  310      0450  2  FOLDER_DESC[DSC$B_CLASS] = 0;
  311      0451  2  FOLDER_DESC[DSC$A_POINTER] = .START_DESC[DSC$A_POINTER];
  312      0452  2  SEARCH_MODE = (.FOLDER_DESC[DSC$W_LENGTH] NEQ 0);
  313      0453  2  HEAD_FLAG = 0;
  314      0454  2  LISTFLAG = 0;
  315      0455  2  BUFDESC[0] = 0;
  316      0456  2  BUFDESC[1] = FOLDERBUF;
  317      0457  2  WHILE MAIL$INFO_FOLDER(FOLDER_DESC,.SEARCH_MODE)
  318      0458  3  DO BEGIN
  319      0459  3      CH$COPY(.FOLDER_DESC[DSC$W_LENGTH],.FOLDER_DESC[DSC$A_POINTER],%C' ',
  320      0460  4                      (IF .LISTFLAG
  321      0461  4                              THEN .FOLDER_DESC[DSC$W_LENGTH]
  322      0462  3                              ELSE MFR_S_FILEKEY+1),FOLDERBUF[.BUFDESC[0]]);
  323      0463  4      BUFDESC[0] = .BUFDESC[0] + (IF .LISTFLAG
  324      0464  4                              THEN .FOLDER_DESC[DSC$W_LENGTH]
  325      0465  3                              ELSE MFR_S_FILEKEY+1);
  326      0466  3      IF .LISTFLAG
  327      0467  4      THEN BEGIN
  328      0468  4          IF NOT .HEAD_FLAG
  329      0469  5          THEN BEGIN
  330      0470  5              OUTPUT_HEADER();
  331      0471  5              HEAD_FLAG = TRUE;
  332      0472  4              END;
  333      0473  4          MAIL$PUT_OUTPUT(BUFDESC);
  334      0474  4          BUFDESC[0] = 0;
  335      0475  3          END;
  336      0476  3      LISTFLAG = .LISTFLAG XOR 1;
  337      0477  3      IF .MAIL$GL_FLAGS[MAIF_V_CTRLCFL]
  338      0478  3          THEN EXITLOOP;
  339      0479  3      SEARCH_MODE = 0;
  340      0480  2      END;
  341      0481  2
  342      0482  2  IF .MAIL$GL_FLAGS[MAIF_V_CTRLCFL]
```

MAIL$DIRECTORY    DISPLAY SUMMARY OF EACH MESSAGE          D 12
V04-000                                                    16-Sep-1984 00:50:27    VAX-11 Bliss-32 V4.0-742      Page 14
                                                           14-Sep-1984 12:42:16    [MAIL.SRC]DIRECTORY.B32;1          (6)

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```
:   343          0483  2         THEN RETURN TRUE;
:   344          0484  2
:   345          0485  2    IF .BUFDESC[0] NEQ 0
:   346          0486  3    THEN BEGIN
:   347          0487  3         IF NOT .HEAD_FLAG
:   348          0488  3             THEN (OUTPUT_HEADER(); HEAD_FLAG = 1);
:   349          0489  3         MAIL$PUT_OUTPUT(BUFDESC);
:   350          0490  2         END;
:   351          0491  2
:   352          0492  2    IF NOT .HEAD_FLAG
:   353          0493  3         THEN IF (.FOLDER_DESC[DSC$W_LENGTH] EQL 0)
:   354          0494  2             THEN SIGNAL(MAIL$_FILEMPTY,1,MAIL$Q_RD_DESC)
:   355          0495  2             ELSE SIGNAL(MAIL$_NONEFOUND,2,MAIL$Q_RD_DESC,FOLDER_DESC);
:   356          0496  2
:   357          0497  2    RETURN TRUE
:   358          0498  1    END;
```

```
                              OFFC 00000           .ENTRY   MAIL$DIR_FOLDER, Save R2,R3,R4,R5,R6,R7,R8,-; 0426
                                                            ',R10,R11
                5B 00000000G  00  9E 00002          MOVAB   MAIL$Q_RD_DESC, R11
                5A 00000000G  00  9E 00009          MOVAB   MAIL$PUT_OUTPUT, R10
                59        BA  AF  9E 00010          MOVAB   OUTPUT_HEADER, R9
                5E        A4  AE  9E 00014          MOVAB   -92(SP), SP
                50        04  AC  D0 00018          MOVL    START_DESC, R0                     : 0448
                7E            60  3C 0001C          MOVZWL  (R0), FOLDER_DESC
          04    AE        04  A0  D0 0001F          MOVL    4(R0), FOLDER_DESC+4              : 0451
                          50      D4 00024          CLRL    R0                                : 0452
                          6E      B5 00026          TSTW    FOLDER_DESC
                          02      13 00028          BEQL    1$
                          50      D6 0002A          INCL    R0
                58            50  D0 0002C 1$:       MOVL    R0, SEARCH_MODE
                              56  B4 0002F          CLRW    HEAD_FLAG                         : 0453
                              57  B4 00031          CLRW    LISTFLAG                          : 0454
                08        AE      D4 00033          CLRL    BUFDESC                           : 0455
          0C    AE        10  AE  9E 00036          MOVAB   FOLDERBUF, BUFDESC+4             : 0456
                          58      DD 0003B 2$:       PUSHL   SEARCH_MODE                       : 0457
                04        AE          9F 0003D      PUSHAB  FOLDER_DESC
          00000000G  00  02  FB 00040              CALLS   #2, MAIL$INFO_FOLDER
                          4A  50  E9 00047          BLBC    R0, 9$
                          05  57  E9 0004A          BLBC    LISTFLAG, 3$                      : 0460
                          51  6E  3C 0004D          MOVZWL  FOLDER_DESC, R1                   : 0461
                          03      11 00050          BRB     4$
                          51  28  D0 00052 3$:       MOVL    #40, R1                          : 0462
                          50  10  AE  9E 00055 4$:   MOVAB   FOLDERBUF, R0
 51          20    04  BE  6E  2C 00059          MOVC5   FOLDER_DESC, @FOLDER_DESC+4, #32, R1, -
                          08 BE40     0005F                  @BUFDESC[R0]
                          05  57  E9 00062          BLBC    LISTFLAG, 5$                      : 0463
                          50  6E  3C 00065          MOVZWL  FOLDER_DESC, R0                   : 0464
                          03      11 00068          BRB     6$
                          50  28  D0 0006A 5$:       MOVL    #40, R0                          : 0465
                08        AE  50  C0 0006D 6$:       ADDL2   R0, BUFDESC                      : 0463
                          12  57  E9 00071          BLBC    LISTFLAG, 8$                      : 0466
                          06  56  E8 00074          BLBS    HEAD_FLAG, 7$                     : 0468
```

```
              69              00 FB 00077           CALLS    #0, OUTPUT_HEADER              ; 0470
              56              01 B0 0007A           MOVW     #1, HEAD_FLAG                  ; 0471
                        08    AE 9F 0007D  7$:      PUSHAB   BUFDESC                       ; 0473
              6A              01 FB 00080           CALLS    #1, MAIL$PUT_OUTPUT
                        08    AE D4 00083           CLRL     BUFDESC                       ; 0474
              57              01 8C 00086  8$:      XORB2    #1, LISTFLAG                  ; 0476
              4C 00000000G    00 E8 00089           BLBS     MAIL$GL_FLAGS+1, 13$         ; 0477
              58              D4 00090              CLRL     SEARCH_MODE                   ; 0479
              A7              11 00092              BRB      2$                            ; 0457
              41 00000000G    00 E8 00094  9$:      BLBS     MAIL$GL_FLAGS+1, 13$         ; 0482
                        08    AE D5 0009B           TSTL     BUFDESC                       ; 0485
                        0F    13 0009E              BEQL     11$
              06              56 E8 000A0           BLBS     HEAD_FLAG, 10$                ; 0487
              69              00 FB 000A3           CALLS    #0, OUTPUT_HEADER             ; 0488
              56              01 B0 000A6           MOVW     #1, HEAD_FLAG
                        08    AE 9F 000A9  10$:     PUSHAB   BUFDESC                       ; 0489
              6A              01 FB 000AC           CALLS    #1, MAIL$PUT_OUTPUT
              2A              56 E8 000AF  11$:     BLBS     HEAD_FLAG, 13$                ; 0492
              6E              B5 000B2              TSTW     FOLDER_DESC                   ; 0493
                        13    12 000B4              BNEQ     12$
                        5B    DD 000B6              PUSHL    R11                           ; 0494
                        01    DD 000B8              PUSHL    #1
                   007EDF98   8F DD 000BA           PUSHL    #8314776
        00000000G    00       03 FB 000C0           CALLS    #3, LIB$SIGNAL
                        13    11 000C7              BRB      13$
                      4800    8F BB 000C9  12$:     PUSHR    #^M<R11,SP>                   ; 0495
                        02    DD 000CD              PUSHL    #2
                   007EDFA0   8F DD 000CF           PUSHL    #8314784
        00000000G    00       04 FB 000D5           CALLS    #4, LIB$SIGNAL
              50              01 D0 000DC  13$:     MOVL     #1, R0                        ; 0497
                              04 000DF              RET                                    ; 0498
```

; Routine Size:  224 bytes,    Routine Base:  $CODE$ + 02A5

```
: 360           0499 1 END
: 361           0500 0 ELUDOM
```

```
                                                                                          .EXTRN  LIB$SIGNAL
:                              PSECT SUMMARY
:
:          Name                         Bytes                              Attributes
:
: $OWN$                                     32  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
: $CODE$                                    901  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]STARLET.L32;1     9776       13        0       581        00:00.7
: _$255$DUA28:[MAIL.OBJ]MAILDEF.L32;1    457       11        2        26        00:00.2
```

```
:                              COMMAND QUALIFIERS
:
:         BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:DIRECTORY/OBJ=OBJ$:DIRECTORY MSRC$:DIRECTORY/UPDATE=(ENH$:DIRECTORY)
: Size:          811 code + 122 data bytes
: Run Time:          00:09.8
: Elapsed Time:      00:33.6
: Lines/CPU Min:     3051
: Lexemes/CPU-Min: 22187
: Memory Used:  114 pages
: Compilation Complete
```

CMDS
LIS

DIRECTORY
LIS

SPAWNCMD
CLD

MAILREQ
REQ

EDIT
LIS

GETUSER
LIS

MAILDEF
SDL

ADDRLIST
LIS

GETNEW
LIS