

File created: 24-Feb-2024 11:55:46 {WMEDLEY}<library>lafite>LAFITE-NSMAIL.;1

edit by: rmk

changes to: (VARS NSMAILCOMS)
(FNS \NSMAIL.COURIER.OPEN)

previous date: 13-Jan-2024 18:26:57 {WMEDLEY}<library>lafite>NSMAIL.;2

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

(RPAQQ **LAFITE-NSMAILCOMS**

(;; Stuff used by both LAFITE-NEWNSMAIL & OLDNSMAIL

```
(COMS ; Support of authentication
(FNS \NSMAIL.LOGIN NS.FINDMAILBOXES \NSMAIL.MAKE.MAILSERVERS \NSMAIL.FIX.MAILBOX.LOCATIONS))
[COMS ; Utilities
(FNS \NSMAIL.CHECK.SERIALIZED.VERSION \NSMAIL.READ.SERIALIZED.CONTENT
\NSMAIL.DISCARD.SERIALIZED.CONTENT \NSMAIL.READ.STRING.AS.STREAM)
; Error handling
(FNS \NSMAIL.COURIER.OPEN \NSMAIL.ERRORHANDLER \NSMAIL.SIGNAL.ERROR)
(INITVARS (NSMAILDEBUGFLG)
(NSMAIL.HEADER.ORDER ' (Date Sender From Subject In-Reply-to To cc Message-ID Reply-to)
; Handling attachments as a special kind of image object
[COMS (FNS \MAILOBJ.CREATE \MAILOBJ.TYPE.NAME \MAILOBJ.NS.TO.LISP.NAME \MAILOBJ.DISPLAY \MAILOBJ.GET
\MAILOBJ.IMAGEBOX \MAILOBJ.PUT \MAILOBJ.INIT)
(FNS \MAILOBJ.BUTTONEVENTFN \MAILOBJ.DO.COMMAND \MAILOBJ.HARDCOPY \MAILOBJ.FB \MAILOBJ.PUT.FILE
\MAILOBJ.VIEW \MAILOBJ.MUNGE.NAME \MAILOBJ.COPY.BODY \MAILOBJ.EXPAND \MAILOBJ.COPY.CHILD
\MAILOBJ.COPY.SEQUENCE \MAILOBJ.EXTRACT.TEXT \MAILOBJ.PARSE.ATTRIBUTES)
(ADDVARS (FILING.TYPES (VIEWPOINT 4353)
(RES 4428)
(XEROX860 5120)
(REFERENCE 4427)
(MAILFOLDER 4417)))
(VARS MAILOBJ.REFERENCE.FIELD)
(INITVARS (MAILOBJ.WINDOWOFFSET 16)
(MAILOBJ.SKIPCHAR (CHARCODE ".")))
(DECLARE%: EVAL@COMPILE DONTCOPY (RECORDS MAILOBJ)
(CONSTANTS \MAILOBJ.REFERENCE.LAST.FILED))
(DECLARE%: DONTEVAL@LOAD DOCOPY (P (\MAILOBJ.INIT
(AND (EQ MAKESYSNAME :LYRIC)
(FILESLoad (SYSLOAD)
NSRANDOM]
[COMS (FNS \NSMAIL.WRITE.ATTRIBUTE)
(DECLARE%: EVAL@COMPILE DOCOPY (VARS \NSMAIL.ATTRIBUTES)))
[COMS ; sending mail
(FNS \NSMAIL.PARSE.REFERENCE \NSMAIL.EXPAND.DL \NSMAIL.PARSE \NSMAIL.PARSE1 NS.REMOVEDUPLICATES
\NSMAIL.GUESS.FILE.TYPE COURIER.WRITE.STREAM.UNSPECIFIED \NSMAIL.SEND.STREAM.AS.STRING)
(FILESLAFITE-MAIL)
; for LAFITE.MAKE.PARSE.TABLE
(VARS NSMAIL.PARSEFIELDS (\LAPARSE.NSMAIL (LAFITE.MAKE.PARSE.TABLE NSMAIL.PARSEFIELDS))
(GLOBALVARS \LAPARSE.NSMAIL)
(INITVARS (NSMAIL.NET.HINT)
(*NSMAIL-MAX-NOTE-LENGTH* 8000)
(*NSMAIL-CACHE-TIMEOUT* 14400000)
(*NSMAIL-GENEROUS-SELF-TEST* T)
(LAFITEDL.EXT "DL"))
[P (CL:PROCLAIM ' (GLOBAL NSMAIL.NET.HINT *NSMAIL-MAX-NOTE-LENGTH* *NSMAIL-CACHE-TIMEOUT*
*NSMAIL-GENEROUS-SELF-TEST*
(FNS \NSMAIL.MESSAGE.P \NSMAIL.MESSAGE.FROM.SELF.P \NSMAIL.MAKEANSWERFORM \NSMAIL.PRINT.NAMES))
(DECLARE%: EVAL@COMPILE DONTCOPY (RECORDS NSMAILBOX NSMAILSTATE NSMAILPARSE)
(CONSTANTS \NSMAIL.SOCKET \SERIALIZED.FILE.VERSION \SERIALIZED.FILE.VERSIONS
\NSMAIL.TEXT.BODYTYPE \NSMAIL.EMPTY.BODYTYPE \NSMAIL.REFERENCE.BODYTYPE
MAX.BULK.SEGMENT.LENGTH)
(MACROS \NSMAIL.ATTRIBUTE.TYPE \NSMAIL.WRITE.ATTRIBUTE \NSMAIL.WRITE.ATTRIBUTE.MACRO)
(PROP INFO \NSMAIL.ATTRIBUTE.TYPE)
(GLOBALVARS *NSMAIL-OP-VECTOR* DEFAULTICONFONT FILING.TYPES MAILOBJ.REFERENCE.FIELD
MAILOBJ.SKIPCHAR MAILOBJ.WINDOWOFFSET NSMAIL.HEADER.ORDER NSMAIL.NET.HINT NSMAILDEBUGFLG
NSPRINT.WATCHERFLG NSWIZARDFLG \MAILOBJ.IMAGEFNS \NSMAIL.ATTRIBUTES \NSMAIL.ATTRIBUTES)
(FILESLAFITE-DECLS LLNSDECLS)
;; LLNSDECLS to get NSADDRESS, needed by \NSMAIL.SIGNAL.ERROR
(LOCALVARS . T))))
```

;; Stuff used by both LAFITE-NEWNSMAIL & OLDNSMAIL

;; Support of authentication

(DEFINEQ

(**NSMAIL.LOGIN**

[LAMBDA NIL

(if (LAFITE.PROMPT.FOR.LOGIN ' |NS:|)

; Edited 7-Jun-88 19:37 by bvm

)

:: Utilities

(DEFINEQ

{\NSMAIL.CHECK.SERIALIZED.VERSION

```
[LAMBDA (STREAM) ; Edited 5-May-89 14:47 by bvm
  (LET [(V (COURIER.READ STREAM NIL 'LONGCARDINAL]
    (SELECTC V
      (\SERIALIZED.FILE.VERSIONS
        T)
      (HELP (CL:FORMAT NIL "Lafite does not understand serialized file version ~D.
        RETURN to attempt retrieval anyway." V]))
```

{\NSMAIL.READ.SERIALIZED.CONTENT

```
[LAMBDA (INSTREAM OUTSTREAM) ; Edited 17-Jan-89 17:14 by bvm
```

:: Interprets INSTREAM as SerializedTree.Content, i.e., as a Bulkdata.StreamOfUnspecified followed by the lastBytelsSignificant flag. Copies the raw
:: data therein to OUTSTREAM

```
(bind LASTSEGMENT? BYTE BYTECOUNT do (SETQ LASTSEGMENT? (NEQ (\WIN INSTREAM)
  0))
  (COND
    [(NEQ (SETQ BYTECOUNT (UNFOLD (\WIN INSTREAM)
      BYTESPERWORD))
      0)
    (RPTQ (SUB1 BYTECOUNT)
      (\BOUT OUTSTREAM (\BIN INSTREAM)))
    (SETQ BYTE (\BIN INSTREAM))
      ; Final byte of this segment. Don't copy until we know whether
      ; it's significant
    (COND
      ((OR (NULL LASTSEGMENT?)
        (NEQ (\WIN INSTREAM)
          0)) ; Not last segment, or the word after says the final byte was
        ; significant
      (\BOUT OUTSTREAM BYTE]
      (LASTSEGMENT? ; Null body. Throw out the lastBytelsSignificant flag
        (\WIN INSTREAM)))
  repeatuntil LASTSEGMENT?])
```

{\NSMAIL.DISCARD.SERIALIZED.CONTENT

```
[LAMBDA (INSTREAM) ; Edited 17-Jan-89 17:17 by bvm
```

:: Interprets INSTREAM as SerializedTree.Content, i.e., as a Bulkdata.StreamOfUnspecified followed by the lastBytelsSignificant flag and discards it all

```
(do (if (NEQ (PROG1 (\WIN INSTREAM)
  (RPTQ (UNFOLD (\WIN INSTREAM)
    BYTESPERWORD)
    (\BIN INSTREAM)))
  0)
  then ; Finished. Read the lastBytelsSignificant flag
    (\WIN INSTREAM)
    (RETURN])
```

{\NSMAIL.READ.STRING.AS.STREAM

```
[LAMBDA (INSTREAM OUTSTREAM) (* bvm%: "30-Jul-84 16:13")
```

:: Considers INSTREAM to be positioned at a sequence of unspecified, and reads it as if its datatype were string, and copies said bytes to
:: OUTSTREAM

```
(PROG (LENGTH)
  (\WIN INSTREAM) ; Skip sequence count
  (COPYBYTES INSTREAM OUTSTREAM (SETQ LENGTH (\WIN INSTREAM)))
  (COND
    ((ODDP LENGTH)
      (\BIN INSTREAM]))
```

)

:: Error handling

(DEFINEQ

{\NSMAIL.COURIER.OPEN

```
[LAMBDA (ADDRESS) ; Edited 24-Feb-2024 11:52 by rmk
  ; Edited 9-Sep-88 12:06 by bvm
```

```
(COURIER.OPEN ADDRESS NIL T 'LAFITE-NSMAIL NIL (CONSTANT (LIST 'ERRORHANDLER (FUNCTION \NSMAIL.ERRORHANDLER]
```

)

{\NSMAIL.ERRORHANDLER

[LAMBDA (STREAM ERRCODE) ; Edited 9-Sep-88 12:35 by bvm
;; Called when SPP error occurs on NS mail courier connection STREAM. Fakes an error return from the courier.call.

```
(LET (POS)
  (if [AND (EQ ERRCODE 'STREAM.LOST)
          (SETQ POS (STKPOS (FUNCTION COURIER.CALL))]
    then (BLOCK 500)
         (RETFROM POS '(ERROR STREAM.LOST)
                     T)
    else (\SPP.DEFAULT.ERRORHANDLER STREAM ERRCODE]))
```

(\NSMAIL.SIGNAL.ERROR

[LAMBDA (ERROR MAILBOX PROGRAM PROCEDURE) ; Edited 9-Sep-88 12:37 by bvm

;; Called when we get an error on an NS mail courier call. If stream lost, then tries to reestablish the connection, returning a new stream on
;; success.

```
(if (EQ (CADR ERROR)
        'STREAM.LOST)
  then (PRINTOUT PROMPTWINDOW T "Lost NS mail connection, trying to reestablish...")
       (LET [(STREAM (\NSMAIL.COURIER.OPEN (create NSADDRESS using (SPP.DESTADDRESS (fetch NSMAILSTREAM
                                                                                   of MAILBOX))
                                           NSSOCKET _ 0)
      (if STREAM
        then (PRINTOUT PROMPTWINDOW "done.")
              (replace NSMAILSTREAM of MAILBOX with STREAM)
        else (PRINTOUT PROMPTWINDOW "failed.")
              (ERROR "NS mail connection lost, can't reestablish")))]
    else (COURIER.SIGNAL.ERROR PROGRAM PROCEDURE ERROR]))
```

)

(RPAQ? NSMAILDEBUGFLG)

(RPAQ? NSMAIL.HEADER.ORDER '(Date Sender From Subject In-Reply-to To cc Message-ID Reply-to))

;; Handling attachments as a special kind of image object

(DEFINEQ

(\MAILOBJ.CREATE

[LAMBDA (DATA TYPE ATTR.LENGTH NAME MORE.INFO START) ; Edited 14-Feb-90 16:59 by bvm

;; Create a mail object encapsulating data (a core file in serialized file format). TYPE is the type of the serialized data.

```
(OR START (SETQ START 0))
(LET* [(TITLE (SELECTQ TYPE
                      (REFERENCE ; Reference to a file.
                                (if (NOT MORE.INFO)
                                  then ; Try parsing the reference info--returns (REFERENCE info)
                                      (LET* [(INFO (CADR (\MAILOBJ.PARSE.ATTRIBUTES DATA (LIST
                                                                                   MAILOBJ.REFERENCE.FIELD
                                                                                   START)))
                                     (TYPE (\TYPE.FROM.FILETYPE (CADR (ASSOC 'TYPE INFO)
                                     [SETQ NAME (\MAILOBJ.NS.TO.LISP.NAME
                                     (CADR (ASSOC 'HOST INFO))
                                     (CADR (ASSOC 'DIRECTORY INFO))
                                     (CADR (ASSOC 'NAME INFO))
                                     (AND (NEQ (CADR (ASSOC 'FLAGS INFO))
                                     \MAILOBJ.REFERENCE.LAST.FILED)
                                     (CADR (ASSOC 'VERSION INFO)))
                                     (EQ TYPE 'DIRECTORY]
                                     (SETQ MORE.INFO `(FILE.ID ,(CADR (ASSOC 'FILE.ID INFO))
                                     TYPE
                                     ,TYPE]
                                     (CL:FORMAT NIL "Reference to ~A ~A" (\MAILOBJ.TYPE.NAME (LISTGET MORE.INFO
                                     'TYPE))
                                     NAME))
      (if NAME
        then (CONCAT NAME " (" (\MAILOBJ.TYPE.NAME TYPE T)
                      ")")
        else (\MAILOBJ.TYPE.NAME TYPE]
(TITLELEN (NCHARS TITLE))
[FONT (AND (> TITLELEN 20)
(LET* [(FONT DEFAULTICONFONT)
      (SIZE (FONTPROP FONT 'SIZE) ; Use a smaller font if available
      (if (> TITLELEN 30) ; This is really getting out of hand...
        then
          (SETQ TITLE (CONCAT (SUBSTRING TITLE 1 25)
                              "..."))
          (AND (> SIZE 8)
              (CAR (NLSETQ (FONTCOPY FONT 'SIZE (- SIZE 2]
              (IMAGE (WINDOWPROP (TITLEDICONW NIL TITLE FONT '(0 . 0)
              T NIL 'FILE)
              'ICONIMAGE] ; Crude way of getting a bitmap with some text printed on it
                          ; nicely
(IMAGEOBJCREATE [create MAILOBJ
```

```

MAILOBJ.IMAGE _ IMAGE
MAILOBJ.BOX _ (create IMAGEBOX
                XSIZE _ (BITMAPWIDTH IMAGE)
                YSIZE _ (BITMAPHEIGHT IMAGE)
                YDESC _ (LRSH (BITMAPHEIGHT IMAGE)
                             1)
                XKERN _ 0)
MAILOBJ.TYPE _ TYPE
MAILOBJ.DATA _ DATA
MAILOBJ.ATTR.LENGTH _ ATTR.LENGTH
MAILOBJ.START _ START
MAILOBJ.NAME _ NAME
MAILOBJ.INFO _ MORE.INFO
MAILOBJ.EXPANDABLE _ (PROGN ; True if object has children
                      (CADR (\MAILOBJ.PARSE.ATTRIBUTES
                              DATA
                              (CONSTANT (LIST (ASSOC 'IS.DIRECTORY
                                                    \NSFILING.ATTRIBUTES)
                                              )
                                           )
                              START]
                      )
\MAILOBJ.IMAGEFN])

```

(MAILOBJ.TYPE.NAME

```

[LAMBDA (TYPE SHORT) ; Edited 29-Sep-87 14:21 by bvm:
  ;; Translate filing TYPE into a descriptive string, e.g., "Interpress Document". If SHORT is true, leave out "Document". If TYPE is numeric, it is
  ;; rendered as "Type nnn Document".
  (if (EQ TYPE 'DIRECTORY)
      then ; Viewpoint calls these "folders"
        "Viewpoint Folder"
      else (CL:FORMAT NIL "~:[~:(~A~)~;Type ~D~]~@[ Document~]" (FIXP TYPE)
            TYPE
            (NOT SHORT]))

```

(MAILOBJ.NS.TO.LISP.NAME

```

[LAMBDA (HOST DIRECTORY NAME VERSION DIRECTORYFLG) ; Edited 29-Sep-87 17:54 by bvm:
  ;; Turn these pieces parsed out of a reference icon into a Lisp-style file name. Mainly this means turning the slashes into angles. This code is
  ;; stolen from \NSFILING.FULLNAME, which is what we would use if it didn't require a filing session arg.
  (LET ((PATHNAME (if DIRECTORYFLG
                      then (CONCAT DIRECTORY "/" NAME (if (AND VERSION (NEQ VERSION 1))
                                                            then (CONCAT "!" VERSION)
                                                            else ""))
                      else DIRECTORY))
        FILENAME DIRLST FULLNAME FUNNYCHAR DOTSEEN QUOTEDDIRS)
    (for I from 1 bind CH (START _ 1) while (SETQ CH (NTHCHARCODE PATHNAME I))
      do (SELCHARQ CH
            (%' ; quote mark, skip it and next char
              (add I 1))
            (/ ; Directory marker
              (push DIRLST (SUBSTRING PATHNAME START (SUB1 I)))
              (SETQ START (ADD1 I)))
            ((; %: < > } %]) ; Funny characters that filing doesn't care about but we do --
            ; need to quote these
              (SETQ FUNNYCHAR T))
      NIL)
    finally (push DIRLST (SUBSTRING PATHNAME START)))
  ;; DIRLST is in reverse order now.
  (for DIR in DIRLST do (push QUOTEDDIRS (COND
                                          (FUNNYCHAR (\NSFILING.ADDQUOTES DIR T))
                                          (T DIR))
                          '>))
  (CONCATLIST (NCONC (LIST '{ HOST " }<")
                     QUOTEDDIRS
                     (AND (NOT DIRECTORYFLG)
                          (CONS (\NSFILING.ADDQUOTES NAME)
                                (AND VERSION (LIST (if (STRPOS "." NAME)
                                                       then ";"
                                                       else ".;"))
                                                  VERSION)))

```

(MAILOBJ.DISPLAY

```

[LAMBDA (OBJ STREAM) ; Edited 29-Jun-87 17:34 by bvm:
  (LET [(IMAGE (fetch MAILOBJ.IMAGE of (fetch OBJECTDATUM of OBJ) ; Display the image, centered on the baseline
                (BITBLT IMAGE NIL NIL STREAM (DSPXPOSITION NIL STREAM)
                  (- (DSPYPOSITION NIL STREAM)
                     (LRSH (BITMAPHEIGHT IMAGE)
                          1))
                ]])

```

(MAILOBJ.GET

```

[LAMBDA (STREAM TEXTSTREAM) ; Edited 14-Feb-90 16:50 by bvm
  (DESTRUCTURING-BIND (LEN TYPE ATTR.LEN NAME . INFO)

```

```
(READ STREAM FILERDTBL)
(LET (DATASTREAM START)
  (if (EQ (fetch DEVICENAME of (fetch (STREAM DEVICE) of STREAM))
      'NODIRCORE)
    then
      (SETQ DATASTREAM (NCREATE 'STREAM STREAM))
      (SETQ START (GETFILEPTR STREAM))
      (LET ((EOF (+ START LEN)))
        (replace (STREAM EPAGE) of DATASTREAM with (FOLDLO EOF BYTESPERPAGE))
        (replace (STREAM EOFSET) of DATASTREAM with (IMOD EOF BYTESPERPAGE)))
      ; No need to copy the data, just copy the cover
    else (SETQ DATASTREAM (OPENSTREAM 'NODIRCORE) 'BOTH))
  (COPYBYTES STREAM DATASTREAM LEN)
  (SETQ START 0))
(\MAILOBJ.CREATE DATASTREAM TYPE ATTR.LEN NAME INFO START])
```

(\MAILOBJ.IMAGEBOX

```
[LAMBDA (OBJ)
  (fetch MAILOBJ.BOX of (fetch OBJECTDATUM of OBJ])
; Edited 29-Jun-87 16:57 by bvm:
```

(\MAILOBJ.PUT

```
[LAMBDA (OBJ STREAM)
  (LET* ((MAILOBJ (fetch OBJECTDATUM of OBJ))
        (COREFILE (fetch MAILOBJ.DATA of MAILOBJ))
        (END (GETEOFPTR COREFILE))
        (START (fetch MAILOBJ.START of MAILOBJ)))
    (LET ((*PRINT-BASE* 10)
          (*READTABLE FILERDTBL)
          (NAME (fetch MAILOBJ.NAME of MAILOBJ))
          (INFO (fetch MAILOBJ.INFO of MAILOBJ)))
      (PRIN4 (LIST* (- END START)
                    (fetch MAILOBJ.TYPE of MAILOBJ)
                    (fetch MAILOBJ.ATTR.LENGTH of MAILOBJ)
                    (AND (OR NAME INFO)
                          (CONS NAME INFO)))
              STREAM))
  (COPYBYTES COREFILE STREAM START END])
; Edited 14-Feb-90 16:16 by bvm
; Make sure we can read it back.
```

(\MAILOBJ.INIT

```
[LAMBDA NIL
  (SETQ \MAILOBJ.IMAGEFNS (IMAGEFNSCREATE (FUNCTION \MAILOBJ.DISPLAY)
                                           (FUNCTION \MAILOBJ.IMAGEBOX)
                                           (FUNCTION \MAILOBJ.PUT)
                                           (FUNCTION \MAILOBJ.GET)
                                           (FUNCTION CL:IDENTITY)
                                           (FUNCTION \MAILOBJ.BUTTONEVENTFN])
; Edited 29-Jun-87 16:36 by bvm:
```

)

(DEFINEQ

(\MAILOBJ.BUTTONEVENTFN

```
[LAMBDA (OBJ WINDOWSTREAM SELECTION RELX RELY WINDOW TEXTSTREAM BUTTON)
; Edited 15-Aug-89 17:44 by bvm
  (if (.COPYKEYDOWNP.)
    then
      [AND NIL (LET [(NAME (fetch MAILOBJ.NAME of (IMAGEOBJPROP OBJ 'OBJECTDATUM)
                        (AND NAME (BKSYSEBUF NAME)
; There's more to copy selection than this
      elseif (IMAGEOBJPROP OBJ 'BUSY)
        then
          (PRINTOUT PROMPTWINDOW T "Attachment is busy")
; Busy
      else (LET* [(MAILOBJ (IMAGEOBJPROP OBJ 'OBJECTDATUM))
                (TYPE (fetch MAILOBJ.TYPE of MAILOBJ))
                (REAL.TYPE (if (EQ TYPE 'REFERENCE)
                              then (LISTGET (fetch MAILOBJ.INFO of MAILOBJ)
                                             'TYPE)
                              else TYPE))]
        (CMD (MENU (create MENU
                      ITEMS -
                    `(("View as text" '\MAILOBJ.VIEW "View the attachment as raw text, using
                      Tedit")
                    (if (EQ TYPE 'REFERENCE)
                      then
; Note that we are storing the reference itself, not the referenced
; file
                        "Store reference"
                      else "Put to file")
                    '\MAILOBJ.PUT.FILE "Store the attachment in a file. This operation loses
                    information unless the file is on an NS File Server.")
                    ,@[AND (EQ REAL.TYPE 'INTERPRESS)
                        ' ("Send to Printer" '\MAILOBJ.HARDCOPY "Send the document to the
                        printer of your choice.")
                    ,@[AND (fetch MAILOBJ.EXPANDABLE of MAILOBJ)
                        ' ("Expand folder" '\MAILOBJ.EXPAND "Extract the first-level
                        subparts of the folder"]
                    ,@(SELECTQ TYPE
```

```

                (REFERENCE [AND (GETD 'FILEBROWSER)
                                (EQ (NTHCHARCODE (fetch MAILOBJ.NAME of MAILOBJ)
                                                -1)
                                (CHARCODE >))
                                `(("FileBrowse" '\MAILOBJ.FB "Invoke the File
                                Browser on the referenced object"'])
                                NIL))
                CENTERFLG _ T]
(if (NULL CMD)
    then
        ; Nothing selected; allow TEdit to select
    else
        ; Do the command in its own process so that the window can
        ; return to its more natural state (instead of severely clipped)
        (ADD.PROCESS (LIST (FUNCTION \MAILOBJ.DO.COMMAND)
                            (KWOTE CMD)
                            (KWOTE OBJ)
                            (KWOTE WINDOW)
                            (KWOTE TEXTSTREAM))
                    'NAME
                    'MAILOBJ
                    'RESTARTABLE
                    'HARDRESET
                    'BEFOREEXIT
                    'DON'T)
        ; Return DON'T so that the window doesn't pop on top to select
    'DON'T])

```

(\MAILOBJ.DO.COMMAND

```

[LAMBDA (CMD OBJ WINDOW TEXTSTREAM)
    (RESETLST
        (RESETSAVE (IMAGEOBJPROP OBJ 'BUSY T)
                    (LIST 'IMAGEOBJPROP OBJ 'BUSY NIL))
        (CL:FUNCALL CMD OBJ WINDOW TEXTSTREAM)))
; Edited 3-Jul-87 17:51 by bvm:

```

(\MAILOBJ.HARDCOPY

```

[LAMBDA (OBJ WINDOW)
; Edited 14-Feb-90 17:08 by bvm
;; Hardcopy the attachment in MAILOBJ. WINDOW is the window in which we are viewing it (not currently used).

```

```

(LET* ((*UPPER-CASE-FILE-NAMES* NIL)
       (PRINTER (GetPrinterName))
       (MAILOBJ (IMAGEOBJPROP OBJ 'OBJECTDATUM))
       (REFP (EQ (fetch MAILOBJ.TYPE of MAILOBJ)
                 'REFERENCE)))
  ATTRIBUTES PRINTRESULTS NAME DATA START)
(if (NULL PRINTER)
    then
        ; abort
    elseif (NOT (STRPOS ":" PRINTER))
        ; not ns
    then
        (PRINTOUT PROMPTWINDOW T PRINTER " is not an Interpress printer")
    else (SETQ PRINTER (GETNSPRINTER PRINTER))
        (if REFP
            then (NSPRINT PRINTER (SETQ NAME (fetch MAILOBJ.NAME of MAILOBJ)))
            else
                ; Have to do this by hand, since we don't have a nice standalone
                ; stream
                [SETQ ATTRIBUTES (\MAILOBJ.PARSE.ATTRIBUTES
                                (SETQ DATA (fetch MAILOBJ.DATA of MAILOBJ))
                                [CONSTANT `([DOCUMENT.NAME ,@(CDR (ASSOC 'NAME \NSFILING.ATTRIBUTES)
                                (DOCUMENT.CREATION.DATE ,@(CDR (ASSOC 'CREATED.ON
                                \NSFILING.ATTRIBUTES)
                                (SETQ START (fetch MAILOBJ.START of MAILOBJ))
                                ; Parse out the name and creation date, and use them for the
                                ; document name/date
                                [if (SETQ NAME (LISTGET ATTRIBUTES 'DOCUMENT.NAME))
                                    then
                                        ; Fix up any wayward subject
                                        (LISTPUT ATTRIBUTES 'DOCUMENT.NAME (SETQ NAME (\MAILOBJ.MUNGE.NAME NAME))
                                [SETQ PRINTRESULTS (\NSPRINT.INTERNAL PRINTER ATTRIBUTES
                                (FUNCTION (LAMBDA (DATASTREAM)
                                    (\MAILOBJ.COPY.BODY DATA DATASTREAM
                                        (+ START (fetch MAILOBJ.ATTR.LENGTH
                                        of MAILOBJ)))
                                    NIL]
                                (if (AND PRINTRESULTS NSPRINT.WATCHERFLG)
                                    then
                                        ; Set up a 'watchdog' process to keep the guy informed of the
                                        ; print job's status.
                                        (\NSPRINT.WATCH.JOB PRINTRESULTS PRINTER NAME))
                                (PRINTOUT PROMPTWINDOW T NAME " sent to " (fetch NSOBJECT of (CAR PRINTER)))

```

(\MAILOBJ.FB

```

[LAMBDA (OBJ WINDOW)
; Edited 29-Sep-87 17:33 by bvm:
;; Invoke the File Browser on the referenced object
(FILEBROWSER (fetch MAILOBJ.NAME of (IMAGEOBJPROP OBJ 'OBJECTDATUM))

```

(MAILOBJ.PUT.FILE

[LAMBDA (OBJ WINDOW)

; Edited 14-Feb-90 16:20 by bvm

:: Store the attachment of MAILOBJ as file of user's choosing. Prompt for file name. If it's on an NS directory, we can deserialize and thus preserve the whole thing.

```
(LET* ((MAILOBJ (IMAGEOBJPROP OBJ 'OBJECTDATUM))
      (DATA (fetch MAILOBJ.DATA of MAILOBJ))
      (START (fetch MAILOBJ.START of MAILOBJ))
      (PW (CREATEW (create REGION
                    LEFT _ LASTMOUSEX
                    BOTTOM _ LASTMOUSEY
                    WIDTH _ (WINDOWPROP WINDOW 'WIDTH)
                    HEIGHT _ (HEIGHTIFWINDOW (TIMES 4 (FONTPROP DEFAULTFONT 'HEIGHT))
                                         NIL 8))
                NIL 8))
      (FILE DEVICE CONDITION)
      (if [NULL (SETQ FILE (TTYINPROMPTFORWORD "Put attachment to file: " NIL NIL PW NIL 'TTY (CHARCODE (CR)
      then (PRINTOUT PW "...aborted")
      elseif (NULL (SETQ DEVICE (\GETDEVICEFROMNAME (SETQ FILE (\ADD.CONNECTED.DIR FILE))
      then (PRINTOUT PW T "No such server/device")
      else (ALLOW.BUTTON.EVENTS)
           (PRINTOUT PW " ... ")
           (if [CL:MULTIPLE-VALUE-SETQ (FILE CONDITION)
              (IGNORE-ERRORS (if (EQ (fetch OPENFILE of DEVICE)
                                   (FUNCTION \NSFILING.OPENFILE))
                               then ; NS device. Really need better test than this.
                                   (SETFILEPTR DATA START)
                                   (LET ((*UPPER-CASE-FILE-NAMES* NIL))
                                       (DECLARE (CL:SPECIAL *UPPER-CASE-FILE-NAMES*))
                                       ; Get name pretty
                                       (\NSFILING.DESERIALIZE FILE DATA DEVICE))
                                   else [SETQ FILE (OPENSTREAM FILE 'OUTPUT 'NEW
                                                             '(TYPE , (fetch MAILOBJ.TYPE of MAILOBJ))
                                                             (SEQUENTIAL T)
                                                             (PRINTOUT PW "(some attributes will be lost) ")
                                                             (\MAILOBJ.COPY.BODY DATA FILE (+ START (fetch MAILOBJ.ATTR.LENGTH
                                                                                                     of MAILOBJ))
                                                                                                     PW)
                                                             (CLOSEF FILE)
                                                             then (PRINTOUT PW T FILE " written.")
                                                             else (PRINTOUT PW "failed: " CONDITION])
```

(MAILOBJ.VIEW

[LAMBDA (OBJ WINDOW)

; Edited 14-Feb-90 16:24 by bvm

:: View the text of the attachment. This is often enough to tell you whether you want to bother doing something more exciting with it.

```
(RESETLST
[LET*
  ((MAILOBJ (IMAGEOBJPROP OBJ 'OBJECTDATUM))
   (TYPE (fetch MAILOBJ.TYPE of MAILOBJ))
   (REFP (EQ TYPE 'REFERENCE))
   (WREG (WINDOWREGION (OR (CAR (WINDOWPROP WINDOW 'EXTRAWINDOWS))
                           WINDOW)))
   (PROPS W SUBJECT START DATA DATASTART)
  [if REFP
    then (SETQ SUBJECT (fetch MAILOBJ.NAME of MAILOBJ))
         (SETQ TYPE (LISTGET (fetch MAILOBJ.INFO of MAILOBJ)
                             'TYPE))
         (SETQ START NIL)
    else (SETQ DATA (fetch MAILOBJ.DATA of MAILOBJ))
         [SETQ SUBJECT (CADR (\MAILOBJ.PARSE.ATTRIBUTES DATA (CONSTANT (LIST (ASSOC 'NAME
                                                                                   \NSFILING.ATTRIBUTES))
                                                                                   (SETQ DATASTART (fetch MAILOBJ.START of MAILOBJ))
                                                                                   (SETQ START (+ DATASTART (fetch MAILOBJ.ATTR.LENGTH of MAILOBJ))
                                                                                   [SETQ W (CREATEW (create REGION using WREG LEFT _ (+ (fetch (REGION LEFT) of WREG)
                                                                                   (if (> (+ (fetch (REGION LEFT) of WREG)
                                                                                   (fetch (REGION WIDTH) of WREG)
                                                                                   MAILOBJ.WINDOWOFFSET)
                                                                                   SCREENWIDTH)
                                                                                   then (- MAILOBJ.WINDOWOFFSET)
                                                                                   else MAILOBJ.WINDOWOFFSET))
                                                                                   BOTTOM _ (- (fetch (REGION BOTTOM) of WREG)
                                                                                   (if (< (- (fetch (REGION BOTTOM) of WREG)
                                                                                   MAILOBJ.WINDOWOFFSET)
                                                                                   0)
                                                                                   then (- MAILOBJ.WINDOWOFFSET)
                                                                                   else MAILOBJ.WINDOWOFFSET)))
                                                                                   (CONCAT "Attachment: " (\MAILOBJ.MUNGE.NAME SUBJECT)
                                                                                   ; Make window slightly overlapping display window
                                                                                   (WINDOWADDPROP WINDOW 'EXTRAWINDOWS W T)
                                                                                   [if (NEQ TYPE 'TEDIT)
                                                                                   then ; TEdit's not so good on binary files, so just pull out the text.
                                                                                   (LET [(COMPACTDATA (OPENSTREAM '{NODIRCORE} 'BOTH]
```


(TEDIT.INSERT.OBJECT C TEXTSTREAM
IMAGEPOS))]]

(\MAILOBJ.COPY.CHILD

```
[LAMBDA (INSTREAM OUTSTREAM) ; Edited 6-Jul-87 14:41 by bvm:
;; This is the counterpart to \nsmail.read.serialized.tree, except that it copies the data as it parses it, rather than interpreting it. Returns file pointer
;; of the start of the main child's data section.
;; We are parsing here the recursive part of Filing.SerializedFile: SerializedTree, which consists of: Sequence of Attribute; Content; children =
;; Sequence of SerializedTree
(LET (ATTRLENGTH SUBSTART NCHILDREN LASTSEGMENT?)
(\WOUT OUTSTREAM (SETQ ATTRLENGTH (\WIN INSTREAM))) ; number of attributes
(to ATTRLENGTH do (RPTQ 4 (\BOUT OUTSTREAM (\BIN INSTREAM)))
; Copy attribute type (longcardinal)
(\MAILOBJ.COPY.SEQUENCE INSTREAM OUTSTREAM)
; Copy attribute value (sequence unspecified)
)
)
(SETQ SUBSTART (GETFILEPTR OUTSTREAM))
;; Now copy the body, which is StreamOfUnspecified followed by lastBytelsSignificant boolean
(do (\WOUT OUTSTREAM (SETQ LASTSEGMENT? (\WIN INSTREAM)))
; 1 => this is last segment
(\MAILOBJ.COPY.SEQUENCE INSTREAM OUTSTREAM) ; Copy the sequence repeatuntil (NEQ LASTSEGMENT? 0)
finally (\WOUT OUTSTREAM (\WIN INSTREAM)) ; Copy lastBytelsSignificant boolean
)
(\WOUT OUTSTREAM (SETQ NCHILDREN (\WIN INSTREAM)))
(to NCHILDREN do (\MAILOBJ.COPY.CHILD INSTREAM OUTSTREAM))
SUBSTART])
```

(\MAILOBJ.COPY.SEQUENCE

```
[LAMBDA (INSTREAM OUTSTREAM) ; Edited 6-Jul-87 14:37 by bvm:
;; Copy a Sequence of Unspecified from in to out.
(LET ((SEQLENGTH (\WIN INSTREAM)))
(\WOUT OUTSTREAM SEQLENGTH) ; Representation is sequence length (word) followed by that
; many words
(RPTQ (UNFOLD SEQLENGTH BYTESPERWORD)
(\BOUT OUTSTREAM (\BIN INSTREAM]))
```

(\MAILOBJ.EXTRACT.TEXT

```
[LAMBDA (DATA OUTSTREAM LEN) ; Edited 15-Aug-89 16:38 by bvm
;; Copy LEN bytes from the stream DATA to OUTSTREAM, where all the runs of non-printing characters are replaced by some small number of
;; ugly characters that won't upset edit.
(to LEN bind CH HELDCH (SKIPPING _ -1) do (if (OR (>= (SETQ CH (\BIN DATA))
127)
(AND (< CH (CHARCODE SPACE))
(SELCHARQ CH
((TAB CR)
NIL)
( ; VP eol
(SETQ CH (CHARCODE CR))
NIL)
T)))
then ; Junk
(SETQ HELDCH NIL)
; I don't care if the previous byte was accidentally ascii
(if (EVENP (add SKIPPING 1)
16)
then (BOUT OUTSTREAM MAILOBJ.SKIPCHAR))
elseif (< SKIPPING 0)
then ; in a nice ascii section
(BOUT OUTSTREAM CH)
elseif HELDCH
then ; We were just waiting to see...
(BOUT OUTSTREAM HELDCH)
(SETQ HELDCH NIL)
(SETQ SKIPPING -1)
(BOUT OUTSTREAM CH)
else ; We had been skipping. Don't print this byte until we see the
; next byte is nice, too, so as to reduce the gibberish of
; accidental ascii in the middle of binary
(SETQ HELDCH CH)))
OUTSTREAM])
```

(\MAILOBJ.PARSE.ATTRIBUTES

```
[LAMBDA (DATA FIELDS START) ; Edited 14-Feb-90 16:26 by bvm
;; Parse the SUBJECT field out of the serialized stream DATA beginning at START. FIELDS is in the format of \nsmail.attributes entries
(SETFILEPTR DATA (+ START 4)) ; Skip the version number (LONGCARDINAL). Next comes
; SEQUENCE Filing.Attribute
(to (\WIN DATA) bind (CNT _ (LENGTH FIELDS))
X TYPE
```

```

do (SETQ TYPE (COURIER.READ DATA NIL 'LONGCARDINAL))
  (if (find old X in FIELDS suchthat (EQ (CADR X)
                                         TYPE))
      then
        (\WIN DATA)
        (push $$VAL (CAR X)
                 (COURIER.READ DATA NIL (CADDR X)))
        (if (<= (SETQ CNT (SUB1 CNT))
            0)
            then ;; Found them all
              (RETURN $$VAL))
        else (COURIER.SKIP.SEQUENCE DATA NIL 'UNSPECIFIED])
)

(ADDTOVAR FILING.TYPES (VIEWPOINT 4353)
                  (RES 4428)
                  (XEROX860 5120)
                  (REFERENCE 4427)
                  (MAILFOLDER 4417))

(RPAQQ MAILOBJ.REFERENCE.FIELD
  (REFERENCE 4421 (NAMEDRECORD (FILE.ID (FILING . FILE.ID))
                              (SERVICE NSNAME)
                              (ADDRESS NSADDRESS)
                              (HOST STRING)
                              (DIRECTORY STRING)
                              (NAME STRING)
                              (TYPE (FILING . ATTRIBUTE.TYPE))
                              (NIL UNSPECIFIED)
                              (PAGES CARDINAL)
                              (VERSION CARDINAL)
                              (FLAGS CARDINAL))))

(RPAQ? MAILOBJ.WINDOWOFFSET 16)

(RPAQ? MAILOBJ.SKIPCHAR (CHARCODE "."))

(DECLARE%: EVAL@COMPILE DONTCOPY

(DECLARE%: EVAL@COMPILE

(RECORD MAILOBJ (MAILOBJ.IMAGE MAILOBJ.BOX MAILOBJ.TYPE MAILOBJ.DATA MAILOBJ.ATTR.LENGTH MAILOBJ.START
                 MAILOBJ.NAME MAILOBJ.EXPANDABLE . MAILOBJ.INFO))

(DECLARE%: EVAL@COMPILE

(RPAQQ \MAILOBJ.REFERENCE.LAST.FILED 8192)

(CONSTANTS \MAILOBJ.REFERENCE.LAST.FILED)
)
)

(DECLARE%: DONTEVAL@LOAD DOCOPY

(\MAILOBJ.INIT)

(AND (EQ MAKESYSNAME :LYRIC)
      (FILESLOAD (SYSLOAD)
                 NSRANDOM))
)

(DEFINEQ

(\NSMAIL.WRITE.ATTRIBUTE
  [LAMBDA (STREAM TYPE VALUE)
    (LET* [FILINGP (TYPEINFO (if (EQ TYPE 'REFERENCE)
                                then
                                  MAILOBJ.REFERENCE.FIELD
                                else (OR (ASSOC TYPE \NSMAIL.ATTRIBUTES)
                                         (SETQ FILINGP (ASSOC TYPE \NSFILING.ATTRIBUTES)]
                                (if TYPEINFO
                                  then (COURIER.WRITE STREAM (CADR TYPEINFO)
                                         NIL
                                         'LONGCARDINAL)
                                         ; Type code
                                         (COURIER.WRITE.SEQUENCE.UNSPECIFIED STREAM VALUE (if FILINGP
                                                                                          then 'FILING
                                                                                          else 'MAILTRANSPORT)
                                         (CADDR TYPEINFO))
                                  else (ERROR "Unknown mail attribute" TYPE)]
)

(DECLARE%: EVAL@COMPILE DOCOPY

```

```

; Edited 17-Jan-89 16:39 by bvm
; This is handled specially so that we don't read references on
; input
; Type code

```

```
(RPAQQ \NSMAIL.ATTRIBUTES
  ((From 4672 NAME.LIST)
   (Date 4673 TIME)
   (Reply-to 4674 NAME.LIST)
   (To 4676 NAME.LIST)
   (cc 4677 NAME.LIST)
   (Subject 9 STRING)
   (Message-ID 4693 MESSAGEID)
   (Sender 4705 NAME)
   (BodySize 16 LONGCARDINAL)
   (BodyType 17 LONGCARDINAL)
   (Note 4687 STRING)
   (OldLispFormatting 4910 STRING)
   (LispFormatting 4911 STRING)
   (In-Reply-to 4690 STRING)))
)
```

:: sending mail

(DEFINEQ

(\NSMAIL.PARSE.REFERENCE

; Edited 17-Jan-89 15:55 by bvm

```
[LAMBDA (FILENAME EDITWINDOW)
  (LET*
    ((*UPPER-CASE-FILE-NAMES* NIL)
     (FULLNAME (FINDFILE FILENAME T)))
    (COND
     ((NULL FULLNAME)
      (\SENDMESSAGEFAIL EDITWINDOW "Can't find reference file " FILENAME))
     (T
      (LET*
        [(FIELDS (UNPACKFILENAME.STRING FULLNAME))
         (HOST (LISTGET FIELDS 'HOST))
         (NSHOST (PARSE.NSNAME HOST))
         (ADDRESS (LOOKUP.NS.SERVER NSHOST))
         (NAME (LISTGET FIELDS 'NAME))
         (EXT (LISTGET FIELDS 'EXTENSION))
         (VERSION (LISTGET FIELDS 'VERSION))
         (ID (GETFILEINFO FULLNAME 'FILE.ID))
         (TYPE (GETFILEINFO FULLNAME 'FILE.TYPE))
         (SIZE (GETFILEINFO FULLNAME 'SIZE)]
         (COND
          ((NOT (AND (STRPOS ":" HOST)
                     ADDRESS))
           (\SENDMESSAGEFAIL EDITWINDOW "Reference file must be on NS server"))
          ((NOT (AND ID TYPE SIZE))
           (\SENDMESSAGEFAIL EDITWINDOW "Can't lookup info on " FULLNAME))
          (T `( (FILE.ID , ID)
                (SERVICE , NSHOST)
                (ADDRESS , ADDRESS)
                (HOST , HOST)
                [DIRECTORY , (CL:SUBSTITUTE #\ / #\> (UNPACKFILENAME.STRING FULLNAME 'DIRECTORY)
                (NAME , (if EXT
                            then (SETQ NAME (CONCAT NAME "." EXT))
                            else NAME))
                (TYPE , (if (OR (NEQ TYPE 0)
                                (NULL EXT))
                            then
                                ; Interesting type, or no clue from extension
                                TYPE
                            elseif [AND (SETQ TYPE (\NSMAIL.GUESS.FILE.TYPE NAME EXT))
                                     (SELECTQ (\SENDMESSAGE.MENUPROMPT EDITWINDOW
                                             (\LAFITE.CREATE.MENU `((, (CONCAT "Change file type to "
                                             TYPE)
                                             T)
                                             ("Leave as type BINARY" NIL)
                                             ("Abort" 'ABORT))
                                             "Fix type of reference file?")
                                             "Referenced document is of type BINARY; some mail clients
                                             will not understand.")
                                     (NIL NIL)
                                     (ABORT (ERROR!))
                                     (if (SETFILEINFO FULLNAME 'TYPE (SETQ TYPE (\FILETYPE.FROM.TYPE TYPE)))
                                         then TYPE
                                         else (\SENDMESSAGEFAIL EDITWINDOW "Could not set the file type"]
                            else
                                ; Oh, give up, leave it binary
                                0))
                (NIL 0)
                (PAGES , (ADD1 SIZE))
                (VERSION , (OR (AND VERSION (MKATOM VERSION))
                                0))
                (FLAGS 0])
          ))))
      ))))
  ))))
```

(\NSMAIL.EXPAND.DL

; Edited 16-Jan-89 14:04 by bvm

```
[LAMBDA (DL SENDER EDITWINDOW)
  (LET ((FILENAME (PACKFILENAME.STRING 'BODY (if (EQL (CL:CHAR DL 0)
```

```

                                #\)
                                then      ; quoted file name, take off the quotes first
                                (CL:SUBSEQ DL 1 (- (CL:LENGTH DL)
                                1))
                                else DL)
                                'EXTENSION LAFITEDL.EXT))
STREAM)
(if [NULL (SETQ FILENAME (if (OR (UNPACKFILENAME.STRING FILENAME 'HOST)
                                (UNPACKFILENAME.STRING FILENAME 'DIRECTORY))
                                then (INFILEP FILENAME)
                                else      ; Search default directories
                                (FINDFILE FILENAME T (CONS LAFITEDEFAULTHOST&DIR LAFITEDLDIRECTORIES])
                                then (\SENDMESSAGEFAIL EDITWINDOW "Can't find file named " DL)
                                elseif [NULL (SETQ STREAM (CAR (NLSETQ (OPENTEXTSTREAM (MKATOM FILENAME)
                                then (\SENDMESSAGEFAIL EDITWINDOW "Can't open " DL)
                                else (RESETLST
                                (RESETSAVE NIL (LIST 'CLOSEF STREAM))
                                ; I hope this closes the file. We used OPENTEXTSTREAM
                                ; instead of OPEN so that file can contain tedit formatting.
                                (bind LINE while (SETQ LINE (CL:READ-LINE STREAM NIL NIL)) join (\NSMAIL.PARSE LINE SENDER
                                EDITWINDOW)))]))

```

(\NSMAIL.PARSE

```

[LAMBDA (FIELD DEFAULTDOMAIN EDITWINDOW)
(NS.REMOVEDUPLICATES (COND
((LISTP FIELD)
(for PIECE in FIELD join (\NSMAIL.PARSE1 PIECE DEFAULTDOMAIN EDITWINDOW)))
(T (\NSMAIL.PARSE1 FIELD DEFAULTDOMAIN EDITWINDOW]))
(* bvm%: "3-Jul-84 16:21")

```

(\NSMAIL.PARSE1

```

[LAMBDA (FIELD DEFAULTDOMAIN EDITWINDOW)
(COND
(FIELD (bind ADDR (START _ 1)
COMMA DOT when (PROGN [SETQ ADDR (SUBSTRING FIELD START (AND (SETQ COMMA (STRPOS
'%, FIELD START))
(SUB1 COMMA])
(do      ; Strip leading blanks
(SELCHARQ (CHCON1 ADDR)
((SPACE TAB)
(GNC ADDR))
(RETURN)))
(do      ; Strip trailing blanks
(SELCHARQ (NTHCHARCODE ADDR -1)
((SPACE TAB)
(GLC ADDR))
(RETURN)))
(NEQ (NCHARS ADDR)
0))
collect (if (AND (STRPOS '@ ADDR)
(NOT (STRPOS '%: ADDR))
(EQ DEFAULTDOMAIN (fetch (LAFITEMODEDATA UNPACKEDUSERNAME) of *LAFITE-MODE-DATA*))
(SETQ DOT (STRPOS '%. ADDR NIL NIL NIL NIL NIL T)))
then ; It's an Internet address--turn the last dot into a colon. Don't do this if we're not being called from the places
; that parse with respect to the user's own name. E.g., when building an answer form, there are often names
; that are abbreviated relative to the message sender's name.
(create NSNAME
NSOBJECT _ (SUBSTRING ADDR 1 (SUB1 DOT))
NSDOMAIN _ (SUBSTRING ADDR (ADD1 DOT))
NSORGANIZATION _ "Xerox")
else (PARSE.NSNAME ADDR NIL DEFAULTDOMAIN))
repeatwhile (COND
(COMMA (SETQ START (ADD1 COMMA]))
; Edited 26-Feb-93 14:34 by bvm

```

(NS.REMOVEDUPLICATES

```

[LAMBDA (LST)
(CL:REMOVE-DUPLICATES LST :TEST (FUNCTION EQUAL.CH.NAMES))
; Edited 6-Jun-88 13:38 by bvm

```

(\NSMAIL.GUESS.FILE.TYPE

```

[LAMBDA (FILENAME EXT)
; Edited 17-Jan-89 15:42 by bvm
;; Given a file name, try to guess what type it is from the extension, since file's TYPE property was boring. EXT is computed from FILENAME if
;; omitted.
(OR (CAR (CL:ASSOC (OR EXT (UNPACKFILENAME.STRING FILENAME 'EXTENSION))
FILING.TYPES :TEST 'STRING-EQUAL))
(LET ((TYPE (PRINTFILETYPE.FROM.EXTENSION FILENAME)))
(AND TYPE (CAR (CL:ASSOC TYPE FILING.TYPES :TEST 'STRING-EQUAL]))

```

(COURIER.WRITE.STREAM.UNSPECIFIED

```

[LAMBDA (OUTSTREAM INSTREAM START END)
(* bvm%: "16-May-85 14:24")

```

;;; Copies INSTREAM from START to END onto OUTSTREAM in the form of Bulkdata.StreamOfUnspecified --- format is one or more concatenations of
;;; {lastSegmentP,SequenceUnspecified} --- returns T if even number of bytes written, NIL if odd

```
(LET (LENGTH)
  [COND
    (END (SETFILEPTR INSTREAM START)
      (SETQ LENGTH (IDIFFERENCE (COND
        ((EQ END -1)
          (GETEOFPTR INSTREAM))
        (T END))
        START)))
    (START (SETQ LENGTH START))
    (T (SETQ LENGTH (IDIFFERENCE (GETEOFPTR INSTREAM)
      (GETFILEPTR INSTREAM)
      (while (GREATERP LENGTH MAX.BULK.SEGMENT.LENGTH) do (\WOUT OUTSTREAM 0)
        ; Not last segment
        (\WOUT OUTSTREAM (FOLDHI MAX.BULK.SEGMENT.LENGTH
          BYTESPERWORD))
        ; Word length of this segment
        (COPYBYTES INSTREAM OUTSTREAM
          MAX.BULK.SEGMENT.LENGTH)
        (SETQ LENGTH (IDIFFERENCE LENGTH
          MAX.BULK.SEGMENT.LENGTH)))
        ; Last segment
        (\WOUT OUTSTREAM 1)
        ; Word length of this segment
        (\WOUT OUTSTREAM (FOLDHI LENGTH BYTESPERWORD))
        (COPYBYTES INSTREAM OUTSTREAM LENGTH)
      (COND
        ((EVENP LENGTH)
          T)
        (T
          ; Garbage last byte
          (\BOUT OUTSTREAM 0)
          NIL]))
    )
  )
```

(NSMAIL.SEND.STREAM.AS.STRING

```
[LAMBDA (INSTREAM OUTSTREAM START ATTRIBUTE)
  (* bvm%: "30-Jul-84 15:31")
  ;; Writes the contents of INSTREAM, beginning at byte START, to OUTSTREAM in the form of a Filing Attribute whose type is ATTRIBUTE and
  ;; whose value is a string
  (PROG ((EOF (GETEOFPTR INSTREAM))
    LENGTH)
    (COURIER.WRITE OUTSTREAM ATTRIBUTE NIL 'LONGCARDINAL)
    (\WOUT OUTSTREAM (ADD1 (FOLDHI (SETQ LENGTH (IDIFFERENCE EOF START))
      BYTESPERWORD)))
    ; Sequence length
    ; String length
    (\WOUT OUTSTREAM LENGTH)
    (COPYBYTES INSTREAM OUTSTREAM START EOF)
    (COND
      ((ODDP LENGTH)
        (\BOUT OUTSTREAM 0])
    )
  )
  )
  (FILESLOAD LAFITE-MAIL)
```

;; for LAFITE.MAKE.PARSE.TABLE

```
(RPAQQ NSMAIL.PARSEFIELDS
  ("DATE:" LAFITE.READ.LINE.FOR.TOC Date)
  ("SUBJECT:" LAFITE.READ.LINE.FOR.TOC Subject)
  ("SENDER:" LAFITE.READ.NAME.FIELD Sender)
  ("FROM:" LAFITE.READ.NAME.FIELD From)
  ("REPLY-TO:" LAFITE.READ.NAME.FIELD Reply-to)
  ("IN-REPLY-TO:" LAFITE.READ.LINE.FOR.TOC In-Reply-to)
  ("TO:" LAFITE.READ.NAME.FIELD To)
  ("CC:" LAFITE.READ.NAME.FIELD cc)
  ("FORMAT:" LAFITE.READ.FORMAT)
  ("ATTACHED-REFERENCE:" LAFITE.READ.LINE.FOR.TOC REFERENCE)
  ("ATTACHED-FILE:" LAFITE.READ.LINE.FOR.TOC ATTACHMENT)
  ("Importance:" LAFITE.READ.LINE.FOR.TOC Importance)
  ("Sensitivity:" LAFITE.READ.LINE.FOR.TOC Sensitivity)
  ("Immutable:" LAFITE.READ.LINE.FOR.TOC Immutable))
  (RPAQ \LAPARSE.NSMAIL (LAFITE.MAKE.PARSE.TABLE NSMAIL.PARSEFIELDS))
  (DECLARE%: DOEVAL@COMPILE DONTCOPY
  (GLOBALVARS \LAPARSE.NSMAIL)
  )
  (RPAQ? NSMAIL.NET.HINT )
  (RPAQ? *NSMAIL-MAX-NOTE-LENGTH* 8000)
  (RPAQ? *NSMAIL-CACHE-TIMEOUT* 14400000)
  (RPAQ? *NSMAIL-GENEROUS-SELF-TEST* T)
  (RPAQ? LAFITEDL.EXT "DL")
```

(CL:PROCLAIM ' (GLOBAL NSMAIL.NET.HINT *NSMAIL-MAX-NOTE-LENGTH* *NSMAIL-CACHE-TIMEOUT* *NSMAIL-GENEROUS-SELF-TEST*))

(DEFINEQ

(\NSMAIL.MESSAGE.P

[LAMBDA (MSG)
(AND (STRPOS ":" (fetch (LAFITEMSG FROM) of MSG))
'?)

; Edited 6-May-88 13:58 by bvm

(\NSMAIL.MESSAGE.FROM.SELF.P

[LAMBDA (MSG)
;; True if message is from current user. Easy in NS case because we always make the From field be exactly our full name. However, the from field
;; might already be munged to be a "pretty" name, so first check that from is a prefix of the full name, and if so, see if it's a valid abbreviation.
(LET* ((FROM (fetch (LAFITEMSG FROM) of MSG))
(FROMLEN (NCHARS FROM))
(FULL (fetch (LAFITEMODEDATA FULLUSERNAME) of *LAFITE-MODE-DATA*))
(FULEN (NCHARS FULL)))

; Edited 6-Aug-93 17:03 by bvm

;; All sorts of checking so that STRING-EQUAL doesn't barf...

(AND (>= FULEN FROMLEN)
(STRING-EQUAL FROM FULL :END2 FROMLEN)
(COND
(= FULEN FROMLEN) ; completely identical
T)
(AND *NSMAIL-GENEROUS-SELF-TEST* (EQL (CL:CHAR FULL FROMLEN)
#\:)
(NOT (STRPOS ":" FROM))))

;; From is and rfc822 'real name' identical to the name component of my ns name. We generously assume that this is an smtp
;; alter ego of self, though we could be confused by someone out on the net with a name identical to mine, which is why this is
;; under a flag.

T)
(T (LET ((UP (fetch (LAFITEMODEDATA UNPACKEDUSERNAME) of *LAFITE-MODE-DATA*))
;; From is shorter than my full nsname. Following is a non-consy way of writing (= FROMLEN (NCHARS
;; (NSNAME.TO.STRING UP))), slightly optimized by noting that if the org is not the default, then the abbreviated
;; name is the same as the full name, which we've already checked for.

(AND (STRING-EQUAL (fetch NSORGANIZATION of UP)
CH.DEFAULT.ORGANIZATION)
(= FROMLEN (+ (NCHARS (fetch NSOBJECT of UP))
1
(if (STRING-EQUAL (fetch NSDOMAIN of UP)
CH.DEFAULT.DOMAIN)
then 0
else (NCHARS (fetch NSDOMAIN of UP]))

(\NSMAIL.MAKEANSWERFORM

[LAMBDA (MSGDESCRIPTORS MAILFOLDER)
(LET ((MSGFIELDS (\LAFITE.PARSE.MESSAGE MAILFOLDER (OR (CAR (LISTP MSGDESCRIPTORS))
MSGDESCRIPTORS)))

; Edited 6-Jun-88 14:09 by bvm

SUBJECT FROM DATE SENDER REPLYTO TO CC ORIGINALREGISTRY OLDFROM NEWTO)
; get the fields from the file

(for PAIR in MSGFIELDS do (SELECTQ (CAR PAIR)
(Subject (SETQ SUBJECT (CADR PAIR)))
(Sender (SETQ SENDER (CADR PAIR)))
(From (SETQ FROM (CADR PAIR)))
(Date (SETQ DATE (CADR PAIR)))
(Reply-to (SETQ REPLYTO (CDR PAIR)))
(To (SETQ TO (CDR PAIR)))
(cc (SETQ CC (CDR PAIR)))
NIL)) ; first parse the strings into recipients

(COND
[SENDER ; Sender is a mail address, and has the official registry
(SETQ ORIGINALREGISTRY (PARSE.NSNAME SENDER))
(SETQ OLDFROM (AND FROM (\NSMAIL.PARSE FROM ORIGINALREGISTRY)
; Have to parse the From field before we can get its registry

(SETQ ORIGINALREGISTRY (CAR (SETQ OLDFROM (\NSMAIL.PARSE FROM
(T (LAB.PROMPTPRINT MAILFOLDER T "Can't reply--no FROM or SENDER field"))
(SETQ NEWTO (OR (AND REPLYTO (SETQ REPLYTO (\NSMAIL.PARSE REPLYTO ORIGINALREGISTRY)))
OLDFROM))

(LAFITE.FILL.IN.ANSWER.FORM SUBJECT FROM DATE NEWTO
(CL:SET-DIFFERENCE [COND
(REPLYTO ; Only this address, so can only cc to self now
(LIST (fetch (LAFITEMODEDATA UNPACKEDUSERNAME) of *LAFITE-MODE-DATA*
)))
(T ; Take everyone who got the original, removing duplicates, of
; course.

(NS.REMOVEDUPLICATES (APPEND (AND TO (\NSMAIL.PARSE TO
ORIGINALREGISTRY))
(AND CC (\NSMAIL.PARSE CC
ORIGINALREGISTRY]

NEWTO :TEST (FUNCTION EQUAL.CH.NAMES))
(FUNCTION \NSMAIL.PRINT.NAMES])

(**NSMAIL.PRINT.NAMES**

; Edited 5-Jan-90 18:30 by bvm

```

[LAMBDA (NSNAMES OUTSTREAM DEFAULTNAME)
  (for NAME in NSNAMES bind (FIRSTTIME _ T)
    ORGDIFFERS
  do (COND
    (FIRSTTIME (SETQ FIRSTTIME NIL))
    (T (PRIN3 ", " OUTSTREAM)))
  (PRIN3 (fetch NSOBJECT of NAME)
    OUTSTREAM)
  (LET ((ORG (fetch NSORGANIZATION of NAME))
    (DOM (fetch NSDOMAIN of NAME)))
    (if [OR [SETQ ORGDIFFERS (NOT (AND DEFAULTNAME (OR (STRING-EQUAL ORG (fetch NSORGANIZATION
      of DEFAULTNAME))
      (EQ (NCHARS ORG)
        0])
      (NOT (OR (STRING-EQUAL DOM (fetch NSDOMAIN of DEFAULTNAME))
        (EQ (NCHARS DOM)
          0])
      then
      ;; Have to print the domain. The null string tests are because there exists buggy software that doesn't fill in the domain
      ;; and org--we want them to default correctly eventually.
      (PRIN3 ":" OUTSTREAM)
      (PRIN3 DOM OUTSTREAM)
      (if ORGDIFFERS
        then
        (PRIN3 ":" OUTSTREAM)
        (PRIN3 ORG OUTSTREAM])
      )
    )
  (DECLARE%: EVAL@COMPILE DONTCOPY
  (DECLARE%: EVAL@COMPILE
  [RECORD NSMAILBOX (NSMAILSTREAM NSMAILENVTAIL NSMAILENVELOPES NSMAILLASTINDEX . NSMAILSTATE)
    (ACCESSFNS NSMAILBOX ((NSMAILSESSION (fetch STATESESSION of (fetch NSMAILSTATE of DATUM)))
      (NSMAILFIRSTINDEX (fetch STATEFIRSTNEW of (fetch NSMAILSTATE of DATUM))
  (RECORD NSMAILSTATE (STATESESSION STATEFIRSTNEW STATEOLDLAST STATENAME STATECREDENTIALS STATEADDRESS
    STATELASTERROR STATETIMER))
  (RECORD NSMAILPARSE (NSPSSUBJECT NSPRECIPIENTS NSPSTART NSPFORMATTED . NSPFIELDS)
  )
  (DECLARE%: EVAL@COMPILE
  (RPAQQ \NSMAIL.SOCKET 26)
  (RPAQQ \SERIALIZED.FILE.VERSION 2)
  (RPAQQ \SERIALIZED.FILE.VERSIONS (2 3))
  (RPAQQ \NSMAIL.TEXT.BODYTYPE 2)
  (RPAQQ \NSMAIL.EMPTY.BODYTYPE 4)
  (RPAQQ \NSMAIL.REFERENCE.BODYTYPE 4427)
  (RPAQQ \MAX.BULK.SEGMENT.LENGTH 32768)
  (CONSTANTS \NSMAIL.SOCKET \SERIALIZED.FILE.VERSION \SERIALIZED.FILE.VERSIONS \NSMAIL.TEXT.BODYTYPE
    \NSMAIL.EMPTY.BODYTYPE \NSMAIL.REFERENCE.BODYTYPE \MAX.BULK.SEGMENT.LENGTH)
  )
  (DECLARE%: EVAL@COMPILE
  (PUTPROPS \NSMAIL.ATTRIBUTE.TYPE MACRO [ARGS (COND
    ((CADR (ASSOC (CAR ARGS)
      \NSMAIL.ATTRIBUTES)))
    (T (ERROR "Unknown mail attribute" (CAR ARGS))
      'IGNOREMACRO])
  (PUTPROPS \NSMAIL.WRITE.ATTRIBUTE MACRO [ARGS (LET [(INFO (CDR (ASSOC (CAR (CONSTANTEXPRESSIONP (CADR ARGS)))
    \NSMAIL.ATTRIBUTES]
    (COND
      [INFO (LIST '\NSMAIL.WRITE.ATTRIBUTE.MACRO (CAR ARGS)
        (CAR INFO)
        (CADDR ARGS)
        (KWOTE (CADR INFO))
      (T 'IGNOREMACRO])
  (PUTPROPS \NSMAIL.WRITE.ATTRIBUTE.MACRO MACRO (OPENLAMBDA (STREAM TYPENO VALUE VALUETYPE)
    (COURIER.WRITE STREAM TYPENO NIL 'LONGCARDINAL)
    (COURIER.WRITE.SEQUENCE.UNSPECIFIED STREAM VALUE
      'MAILTRANSPORT VALUETYPE)))

```



```
)  
(PUTPROPS NSMAIL.ATTRIBUTE.TYPE INFO NOEVAL)  
(DECLARE%: DOEVAL@COMPILE DONTCOPY  
(GLOBALVARS *NSMAIL-OP-VECTOR* DEFAULTICONFONT FILING.TYPES MAILOBJ.REFERENCE.FIELD MAILOBJ.SKIPCHAR  
  MAILOBJ.WINDOWOFFSET NSMAIL.HEADER.ORDER NSMAIL.NET.HINT NSMAILDEBUGFLG NSPRINT.WATCHERFLG NSWIZARDFLG  
  \MAILOBJ.IMAGEFNS \NSFILING.ATTRIBUTES \NSMAIL.ATTRIBUTES)  
)  
(FILESLOAD (SOURCE)  
  LAFITE-DECLS LLNSDECLS)  
(DECLARE%: DOEVAL@COMPILE DONTCOPY  
(LOCALVARS . T)  
)  
)
```

FUNCTION INDEX

COURIER.WRITE.STREAM.UNSPECIFIED	13	\MAILOBJ.VIEW	8
NS.FINDMAILBOXES	2	\NSMAIL.CHECK.SERIALIZED.VERSION	3
NS.REMOVEDUPLICATES	13	\NSMAIL.COURIER.OPEN	3
\MAILOBJ.BUTTONEVENTFN	6	\NSMAIL.DISCARD.SERIALIZED.CONTENT	3
\MAILOBJ.COPY.BODY	9	\NSMAIL.ERRORHANDLER	3
\MAILOBJ.COPY.CHILD	10	\NSMAIL.EXPAND.DL	12
\MAILOBJ.COPY.SEQUENCE	10	\NSMAIL.FIX.MAILBOX.LOCATIONS	2
\MAILOBJ.CREATE	4	\NSMAIL.GUESS.FILE.TYPE	13
\MAILOBJ.DISPLAY	5	\NSMAIL.LOGIN	1
\MAILOBJ.DO.COMMAND	7	\NSMAIL.MAKE.MAILSERVERS	2
\MAILOBJ.EXPAND	9	\NSMAIL.MAKEANSWERFORM	15
\MAILOBJ.EXTRACT.TEXT	10	\NSMAIL.MESSAGE.FROM.SELF.P	15
\MAILOBJ.FB	7	\NSMAIL.MESSAGE.P	15
\MAILOBJ.GET	5	\NSMAIL.PARSE	13
\MAILOBJ.HARDCOPY	7	\NSMAIL.PARSE.REFERENCE	12
\MAILOBJ.IMAGEBOX	6	\NSMAIL.PARSE1	13
\MAILOBJ.INIT	6	\NSMAIL.PRINT.NAMES	16
\MAILOBJ.MUNGE.NAME	9	\NSMAIL.READ.SERIALIZED.CONTENT	3
\MAILOBJ.NS.TO.LISP.NAME	5	\NSMAIL.READ.STRING.AS.STREAM	3
\MAILOBJ.PARSE.ATTRIBUTES	10	\NSMAIL.SEND.STREAM.AS.STRING	14
\MAILOBJ.PUT	6	\NSMAIL.SIGNAL.ERROR	4
\MAILOBJ.PUT.FILE	8	\NSMAIL.WRITE.ATTRIBUTE	11
\MAILOBJ.TYPE.NAME	5		

VARIABLE INDEX

NSMAIL-CACHE-TIMEOUT	14	MAILOBJ.REFERENCE.FIELD	11	NSMAIL.PARSEFIELDS	14
NSMAIL-GENEROUS-SELF-TEST	14	MAILOBJ.SKIPCHAR	11	NSMAILDEBUGFLG	4
NSMAIL-MAX-NOTE-LENGTH	14	MAILOBJ.WINDOWOFFSET	11	\LAPARSE.NSMAIL	14
FILING.TYPES	11	NSMAIL.HEADER.ORDER	4	\NSMAIL.ATTRIBUTES	12
LAFITEDL.EXT	14	NSMAIL.NET.HINT	14		

CONSTANT INDEX

MAX.BULK.SEGMENT.LENGTH	16	\NSMAIL.REFERENCE.BODYTYPE	16	\SERIALIZED.FILE.VERSION	16
\MAILOBJ.REFERENCE.LAST.FILED	11	\NSMAIL.SOCKET	16	\SERIALIZED.FILE.VERSIONS	16
\NSMAIL.EMPTY.BODYTYPE	16	\NSMAIL.TEXT.BODYTYPE	16		

RECORD INDEX

MAILOBJ	11	NSMAILBOX	16	NSMAILPARSE	16	NSMAILSTATE	16
---------------	----	-----------------	----	-------------------	----	-------------------	----

MACRO INDEX

\NSMAIL.ATTRIBUTE.TYPE	16	\NSMAIL.WRITE.ATTRIBUTE	16	\NSMAIL.WRITE.ATTRIBUTE.MACRO	16
------------------------------	----	-------------------------------	----	-------------------------------------	----

PROPERTY INDEX

\NSMAIL.ATTRIBUTE.TYPE	17
------------------------------	----
