

File created: 24-Feb-2024 10:05:37 {WMEDLEY}<library>lafite>LAFITE-MIME.;1

edit by: rmk

changes to: (VARS MIMECOMS)

previous date: 3-Aug-2005 09:39:34 {WMEDLEY}<library>lafite>MIME.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

(RPAQQ LAFITE-MIMECOMS

```
((FNS DEMIME PARSEMIME DEMIMEPART DEMIMETEXT DEMIMEAPPL MIMEERROR MIMEHEADERS MIMEPARAMS
  PARSE-SUNATTACHMENT RECODEMIMEHEADER)
 (COMS
  ;; Replaces function on LAFITECOMMANDS and LAFITEHARDCOPY, so that MIME objects are decoded in messages. These
  ;; functions require the LAFITEMSG and MAILFOLDER records to be available:
  (DECLARE%: DONTEVAL@LOAD DONTCOPY EVAL@COMPILE (FILES (LOADCOMP)
                                                         LAFITE-DECLS))
  (FNS LA.COPY.MESSAGE.TEXT \LAFITE.APPEND.MESSAGE.BODY)
  ;; Replaces function on LAFITEBROWSE, so that browser window interprets different character sets.
  (FNS PRINTMESSAGE SUMMARY.STRING))
 (FNS ADDMIMEOBJECT MIMEOBJINIT MIMEOBJ.DISPLAYFN MIMEOBJ.COPYFN MIMEOBJ.BUTTONEVENTINFN
  MIMEOBJ.IMAGEBOXFN)
 (P (MIMEOBJINIT))
 (FNS DEPS FINDPSSEGMENTS POSTSCRIPTPART)
 (FNS STREAMFROMBASE64 STREAMFROMBINHEX STREAMFROMASCII STREAMFROMENRICHEDTEXT STREAMFROMUUENCODE
  STREAMFROMQUOTEDPRINTABLE STREAMFROMUTF-8)
 (CONSTANTS BINHEXCHARS)
 (INITVARS (BINHEXCHARARRAY NIL))
 (DECLARE%: EVAL@COMPILE DONTCOPY (GLOBALVARS BINHEXCHARARRAY)
  (MACROS BINHEXBYTE BINHEXWORD BINHEXLONG))
 [INITVARS (ATTACHMENTDIR '(CONCAT "{dsk}/tilde/" (L-CASE (USERNAME))
  "/attachments"))
 (GLOBALVARS ATTACHMENTDIR)
 [COMS
  ;; MIMFASTRECODECHARCODE is a copy of FASTRECODECHARCODED on /project/dict/code/CHARACTERFNS
  (FNS CACHEMIMECHARRECODEMAPS MIMFASTRECODECHARCODE MIMERECODEMAP)
  (INITVARS (CURRENTCHAREN CODING 'XEROX-RENDERING))
  [VARS (CACHEDCHAREN CODINGS '(ISO8859/1 ISO-8859-1 ISO8859_1 ISO% 8859-1 LATIN1 ISO8859/2
  ISO-8859-2 ISO8859_2 LATIN2 CP1252 WINDOWS-1252 CP1250
  WINDOWS-1250])
  ;; MIMERECODEMAPS must be set up by executing
  ;; (CACHEMIMECHARRECODEMAPS CACHEDCHAREN CODINGS)
  ;; in a system that has /project/dict/code/CHARACTERFNS loaded.
  (ARRAY MIMERECODEMAPS)
  (P (MOVD? 'NIL 'CHARRECODEMAP)
  (DECLARE%: DONTCOPY (RECORDS MIMEPART))))]
```

(DEFINEQ

(DEMIME

```
[LAMBDA (MSGWINDOW TEXTSTREAM OUTFILE)
; Edited 19-Jan-2000 07:14 by rmk:
; Edited 17-Jan-2000 22:05 by rmk:
; Edited 25-Feb-99 18:26 by rmk:
; Edited 31-Oct-98 13:54 by rmk:
```

```
(RESETLST
 (LET [(INSTREAM (OR MSGWINDOW (WHICHW)
 (SETQ INSTREAM (IF (GETSTREAM INSTREAM 'INPUT T)
 ELSEIF (CAR (NLSETQ (TEXTSTREAM INSTREAM)))
 ELSE [RESETSAVE [SETQ INSTREAM (OPENSTREAM INSTREAM 'INPUT NIL
 '(TYPE TEXT)
 '(PROGN (CLOSEF? OLDVALUE)
 INSTREAM))
 (SETFILEPTR INSTREAM 0)
 (FILEPOS "MIME-Version:" INSTREAM)
 (DEMIMEPART INSTREAM TEXTSTREAM (PARSEMIME INSTREAM 1 (GETEOFPTR INSTREAM))
 NIL OUTFILE)))]])
```

(PARSEMIME

```
[LAMBDA (INSTREAM PARTNUM ENDPOS MAILFOLDER)
; Edited 19-Mar-2002 08:50 by rmk:
;; Returns a tree of MIMEPART records, NIL if there are none. Note that the STARTPOS of the first part is the end of the main set of message
;; headers.
(DECLARE (SPECVARS MAILFOLDER))
; MAILFOLDER is available so that messages can be printed in
; the appropriate prompt window
(LET (PART (HEADERS (MIMEHEADERS INSTREAM))
 (STARTPOS (GETFILEPTR INSTREAM))
 TYPE)
 (IF HEADERS
 THEN (SETQ TYPE (CDR (ASSOC 'CONTENT-TYPE HEADERS))))]
```

```
(SETQ PART (CREATE MIMEPART
  STARTPOS _ STARTPOS
  ENDPOS _ ENDPOS
  MAINTYPE _ (OR (CAAR TYPE)
    'TEXT)
  SUBTYPE _ (OR (CADAR TYPE)
    'PLAIN)
  TYPEPROPS _ (CDR TYPE)
  ENCODING _ (CADR (ASSOC 'CONTENT-TRANSFER-ENCODING HEADERS))
  DISPOSITION _ (CDR (ASSOC 'CONTENT-DISPOSITION HEADERS))
  PARTNUM _ PARTNUM))
(SELECTQ (FETCH MAINTYPE OF PART)
  (MULTIPART (REPLACE SUBPARTS OF PART
    WITH (FOR PARTNUM PARTSTART PARTEND
      [BOUNDARY _ (CONCAT "--" (CADR (ASSOC 'BOUNDARY
        (FETCH TYPEPROPS
          OF PART])
```

FROM 1 FIRST

:: Back up to start first search, since MIMEHEADERS might have read the crucial CR. But also have
 :: to confirm that an EOL occurred before the boundary; FFILEPOS doesn't seem to match when the
 :: file's EOL convention is not CR. This would all get simpler if FFILEPOS were fixed: simply give T
 :: as the tail argument.

```
(AND (SETQ PARTSTART (FFILEPOS BOUNDARY INSTREAM
  (SUB1 STARTPOS)))
  (IF (MEMB (\BACKPEEKBIN INSTREAM)
    (CHARCODE (CR LF)))
    THEN (SETFILEPTR INSTREAM
      (ADD PARTSTART (NCHARS BOUNDARY
        )))
    T
    ELSE (SETFILEPTR INSTREAM STARTPOS)
      NIL))
```

```
UNTIL [AND (EQ (CHARCODE -)
  (PEEKCCODE INSTREAM))
  (PROGN (READCCODE INSTREAM)
    (EQ (CHARCODE -)
      (PEEKCCODE INSTREAM)))]
```

COLLECT

:: 2 hyphens marks the end of the last boundary. Probably should also check for
 :: final EOL, but...

```
(IF (AND (EQ (PEEKCCODE INSTREAM)
  (CHARCODE CR)))
  THEN (READCCODE INSTREAM)
  (SETQ PARTSTART (GETFILEPTR INSTREAM))
  (IF (SETQ PARTEND (FFILEPOS BOUNDARY INSTREAM NIL ENDPOS))
    THEN (SELCHARQ (\BACKBIN INSTREAM)
      ((CR LF)
        (SETQ PARTEND (SUB1 PARTEND))))
    NIL)
```

ELSE

:: If part doesn't end with a boundary, it's an illformed mime message, but deal with it anyway.
 :: REPEATUNTIL will stop the iteration in this peculiar case.

```
(SETQ PARTEND ENDPOS)
(SETFILEPTR INSTREAM PARTSTART)
(PROGN (PARSEMIME INSTREAM PARTNUM PARTEND)
  (SETFILEPTR INSTREAM (IPLUS PARTEND (NCHARS BOUNDARY))))
REPEATUNTIL (IEQP PARTEND ENDPOS)))
(MESSAGE [LET ((P (PARSEMIME INSTREAM PARTNUM ENDPOS)))
```

:: P is the part for the message body. We also add a separate part for the message headers, so they
 :: will be displayed.

```
(REPLACE SUBPARTS OF PART
  WITH (IF P
    THEN (LIST (CREATE MIMEPART
      MAINTYPE _ 'TEXT
      STARTPOS _ STARTPOS
      ENDPOS _ (SUB1 (FETCH STARTIPOS OF P)))
      P)
    ELSE (CONS (CREATE MIMEPART
      MAINTYPE _ 'TEXT
      STARTPOS _ STARTPOS
      ENDPOS _ ENDPOS
      PARTNUM _ 1])
      ; Text could have postscript hidden in it, if it's long enough
```

```
(TEXT (SETQ PART (OR (POSTSCRIPTPART INSTREAM STARTIPOS ENDPOS)
  PART)))
(X-SUN-ATTACHMENT (PARSE-SUNATTACHMENT PART INSTREAM))
```

```
(NIL)
ELSE (SETQ PART (POSTSCRIPTPART INSTREAM STARTIPOS ENDPOS))
PART])
```

(DEMIMEPART

[LAMBDA (INSTREAM TEXTSTREAM PART OBJECTFLAG OUTFILE) ; Edited 3-Aug-2005 09:39 by N.H.Briggs

```

(CL:WHEN PART
  (SELECTQ (FETCH MAINTYPE OF PART)
    (MULTIPART (SELECTQ (FETCH SUBTYPE OF PART)
      ((MIXED X-SUN-ATTACHMENT REPORT) ; Don't know what REPORT is, put it here
        (FOR P IN (FETCH SUBPARTS OF PART)
          DO (DEMIMEPART INSTREAM TEXTSTREAM P OBJECTFLAG OUTFILE)))
      ((RELATED ALTERNATIVE SIGNED)
        (FOR P TEXT IN (FETCH SUBPARTS OF PART)
          WHEN [AND (EQ 'TEXT (FETCH MAINTYPE OF P)]
            (PROGN (SETQ TEXT P)
              (EQ 'PLAIN (FETCH SUBTYPE OF P)]
            DO (DEMIMEPART INSTREAM TEXTSTREAM P OBJECTFLAG OUTFILE)
            (RETURN)
          FINALLY (DEMIMEPART INSTREAM TEXTSTREAM (OR TEXT
            (CAR (FETCH SUBPARTS
              OF PART))))
            OBJECTFLAG OUTFILE)))
      (APPLEDOUBLE (FOR P IN (FETCH SUBPARTS OF PART)
        UNLESS (EQ 'APPLEFILE (FETCH SUBTYPE OF P))
        DO (DEMIMEPART INSTREAM TEXTSTREAM P OBJECTFLAG OUTFILE)
        (RETURN)
        FINALLY (DEMIMEPART INSTREAM TEXTSTREAM
          (CAR (FETCH SUBPARTS OF PART))
          OBJECTFLAG OUTFILE)))
      (ERROR "UNRECOGNIZED MULTIPLE SUBTYPE" PART)))
    (MESSAGE (FOR P IN (FETCH SUBPARTS OF PART) DO (DEMIMEPART INSTREAM TEXTSTREAM P OBJECTFLAG
      OUTFILE)))
    (TEXT (CL:WHEN OBJECTFLAG
      (SETFILEPTR TEXTSTREAM (ADD1 (GETFILEPTR TEXTSTREAM)))
      (CL:UNLESS (EQ 1 (FETCH PARTNUM OF PART))
        (TEDIT.INSERT TEXTSTREAM "
          --Included text:
          ")
        (CL:UNLESS (AND (EQ 'PLAIN (FETCH SUBTYPE OF PART))
          (ILEQ (- (FETCH ENDPOS OF PART)
            (FETCH STARTPOS OF PART))
            10000))
          ;; So the text can be saved to a file if needed. Use doc since that invokes MSWord which is somewhat intelligent
          ;; about EOL conventions.
          (ADDMIMEOBJECT INSTREAM PART TEXTSTREAM "Attachedtext.doc")))
        (DEMIMETEXT INSTREAM TEXTSTREAM PART OBJECTFLAG OUTFILE))
      (APPLICATION IMAGE)
      (DEMIMEAPPL INSTREAM PART OBJECTFLAG TEXTSTREAM OUTFILE))
      (PROGN (HELP (CONCAT "UNRECOGNIZED MIME TYPE: " (FETCH MAINTYPE OF PART)
        "; RETURN for APPLICATION type")
        PART)
        (DEMIMEAPPL INSTREAM PART OBJECTFLAG TEXTSTREAM OUTFILE))))))

```

(DEMIMETEXT

[LAMBDA (INSTREAM TEXTSTREAM PART OBJECTFLAG OUTFILE) ; Edited 28-Jun-2002 16:21 by rmk:

```

(IF [AND (NULL TEXTSTREAM)
  (OR OUTFILE (ASSOC 'NAME (FETCH (MIMEPART TYPE) OF PART)
    THEN (DEMIMEAPPL INSTREAM PART OBJECTFLAG TEXTSTREAM OUTFILE)
  ELSE (LET (TEDITSTREAM RICHTEXT (TTYPROCESS (TTY.PROCESS))
    [CHARSET (CADR (ASSOC 'CHARSET (FETCH TYPEPROPS OF PART)
      (STARTPOS (FETCH STARTPOS OF PART))
      (ENDPOS (FETCH ENDPOS OF PART)))
    (SETQ TEXTSTREAM (IF (NULL TEXTSTREAM)
      THEN (TEXTSTREAM (TEDIT))
      ELSEIF (GETSTREAM TEXTSTREAM 'OUTPUT T)
      ELSEIF (CAR (NLSETQ (TEXTSTREAM TEXTSTREAM)))
      ELSE [RESETSAVE [SETQ TEXTSTREAM (OPENSTREAM TEXTSTREAM 'OUTPUT 'NEW
        '(TYPE TEXT)
        '(PROGN (CLOSEF? OLDVALUE)
          (AND RESETSTATE (DELFILE OLDVALUE)
            TEXTSTREAM))
      (CL:WHEN (TEXTSTREAMP TEXTSTREAM)
        (SETQ TEDITSTREAM TEXTSTREAM)
        (SETQ TEXTSTREAM (OPENSTREAM '{NODIRCORE} 'BOTH)))
      ;; If TEXTSTREAM is a tedit stream, the output is copied to a dummy NODIRCORE stream, so that it then then be included back
      ;; in TEXTSTREAM in a single action. To do this, we save the original TEXTSTREAM in a new variable TEDITSTREAM, then
      ;; bind TEXTSTREAM to a NODIRCORE.
      (IF (MEMB (FETCH SUBTYPE OF PART)
        '(ENRICHED HTML))
        THEN (SETQ RICHTEXT (LIST TEXTSTREAM CHARSET))
        ;; Save CHARSET conversion as part of richtext
        (SETQ TEXTSTREAM (OPENSTREAM '{NODIRCORE} 'BOTH))
        (SETQ CHARSET NIL))
      [SELECTQ (FETCH ENCODING OF PART)
        (QUOTED-PRINTABLE
          (STREAMFROMQUOTEDPRINTABLE INSTREAM TEXTSTREAM STARTPOS ENDPOS CHARSET))

```

```

(BASE64 (STREAMFROMBASE64 INSTREAM TEXTSTREAM STARTPOS ENDPOS CHARSET T))
((X-UUENCODE UUENCODE)
 (STREAMFROMUUENCODE INSTREAM TEXTSTREAM STARTPOS ENDPOS CHARSET T))
(UTF-8 (STREAMFROMUTF-8 INSTREAM TEXTSTREAM STARTPOS ENDPOS CHARSET T))
(LET [(CHARMAP (AND CHARSET (NEQ 'US-ASCII (U-CASE CHARSET))
 (MIMERECODEMAP CHARSET]
 (COND
 (CHARMAP (SETFILEPTR INSTREAM STARTPOS)
 (WHILE (ILESSP (GETFILEPTR INSTREAM)
 ENDPOS)
 DO (PRINTCCODE (MIMEFASTRECODECHARCODE (READCCODE INSTREAM)
 CHARMAP)
 TEXTSTREAM)))
 (T (COPYCHARS INSTREAM TEXTSTREAM STARTPOS ENDPOS]
(CL:WHEN RICHTEXT
 (STREAMFROMENRICHEDTEXT TEXTSTREAM (CAR RICHTEXT)
 NIL NIL (CADR RICHTEXT)
 (FETCH SUBTYPE OF PART))
 (SETQ TEXTSTREAM (CAR RICHTEXT)))
(CL:WHEN TEDITSTREAM
 (TEDIT.INCLUDE TEDITSTREAM TEXTSTREAM)
 (SETQ TEXTSTREAM TEDITSTREAM)
 (TEDIT.STREAMCHANGEDP TEXTSTREAM T)
 (TTY.PROCESS TTYPROCESS))
TEXTSTREAM])

```

(DEMIMEAPPL

```

[LAMBDA (INSTREAM PART OBJECTFLAG TEXTSTREAM OUTFILE) ; Edited 27-Jun-2002 16:52 by rmk:
;; If OBJECTFLAG, inserts a MIMEOBJECT in TEXTSTREAM, for later demiming. If OUTFILE is given, then that file/stream is used instead of
;; FILENAME as the destination of the demimed information.
(IF OBJECTFLAG
 THEN (ADDMIMEOBJECT INSTREAM PART TEXTSTREAM)
 ELSE (LET ((FILENAME)
 (STARTPOS (FETCH STARTPOS OF PART))
 (ENDPOS (FETCH ENDPOS OF PART)))
 (CL:WHEN (FETCH MAINDISPOSITION OF PART)
 (PRINTOUT T (FETCH MAINDISPOSITION OF PART)
 ": "))
 (CL:UNLESS (EQ OUTFILE '{LPT})
 [SETQ FILENAME (CADR (OR (ASSOC 'FILENAME (FETCH (MIMEPART DISPOSITIONPROPS) OF PART))
 (ASSOC 'NAME (FETCH (MIMEPART TYPE) OF PART]))
 (CL:WHEN OUTFILE
 (SETQ FILENAME (IF FILENAME
 THEN (PACKFILENAME 'BODY OUTFILE 'BODY FILENAME)
 ELSE OUTFILE)))
 (TERPRI T)
 (PRINTOUT T (FETCH SUBTYPE OF PART)
 T)
 (CL:UNLESS FILENAME
 (SETQ FILENAME (PACKFILENAME 'NAME (CONCAT (L-CASE (FETCH (MIMEPART SUBTYPE) OF PART)
 "-attachment")
 'EXTENSION
 (SELECTQ (U-CASE (FETCH (MIMEPART SUBTYPE) OF PART))
 (POSTSCRIPT 'ps)
 NIL)))
 (PRINTOUT T "filename not specified, using %" FILENAME "%" T))
 (CL:UNLESS (EQ FILENAME '{LPT})
 (SETQ FILENAME (PACKFILENAME 'BODY FILENAME 'DIRECTORY (EVAL ATTACHMENTDIR))))
 (SELECTQ (FETCH SUBTYPE OF PART)
 (MSWORD (CL:UNLESS (EQ '.doc (L-CASE (SUBATOM FILENAME -4 -1)))
 (SETQ FILENAME (PACK* FILENAME '.doc))))
 (MSEXCEL (CL:UNLESS (EQ '.xls (L-CASE (SUBATOM FILENAME -4 -1)))
 (SETQ FILENAME (PACK* FILENAME '.xls))))
 (HTML (CL:UNLESS (MEMB (L-CASE (SUBATOM FILENAME -4 -1))
 '(htm .html))
 (SETQ FILENAME (PACK* FILENAME '.html))))
 (VND.PDF (CL:UNLESS (EQ (L-CASE (SUBATOM FILENAME -4 -1))
 'pdf)
 (SETQ FILENAME (PACK* FILENAME '.pdf))))
 NIL)
 (CL:UNLESS (OR OUTFILE (EQ 'MAC-BINHEX40 (FETCH SUBTYPE OF PART)))
 ;; Wait to see if extension changes on BINHEX
 (PRINTOUT T "Filename = " FILENAME))
 (SELECTQ (FETCH ENCODING OF PART)
 (BASE64 (STREAMFROMBASE64 INSTREAM FILENAME STARTPOS ENDPOS))
 (QUOTED-PRINTABLE
 (STREAMFROMQUOTEDPRINTABLE INSTREAM FILENAME STARTPOS ENDPOS))
 (UTF-8 (STREAMFROMUTF-8 INSTREAM FILENAME STARTPOS ENDPOS))
 (X-UUENCODE (STREAMFROMUUENCODE INSTREAM FILENAME STARTPOS ENDPOS))
 ((NIL 7BIT 8BIT)
 (IF (EQ 'MAC-BINHEX40 (FETCH SUBTYPE OF PART))
 THEN (STREAMFROMBINHEX INSTREAM FILENAME STARTPOS ENDPOS)
 ELSE ;; Assumes default encoding is vanilla ascii, with EOL conversions

```

(STREAMFROMASCII INSTREAM FILENAME STARTPOS ENDPOS))
(PRINTOUT T "Unknown transfer encoding: " (FETCH ENCODING OF PART
T])

(MIMEERROR

[LAMBDA (MSG)

; Edited 21-Oct-2001 17:55 by rmk:

:: Prints MSG in appropriate window

(DECLARE (USEDFREE MAILFOLDER))
(IF (BOUNDP 'MAILFOLDER)
THEN (LAB.PROMPTPRINT MAILFOLDER MSG)
ELSE (PROMPTPRINT MSG))

(MIMEHEADERS

[LAMBDA (INSTREAM X-SUN)

; Edited 1-Nov-99 16:59 by rmk:

(BIND TAG LINE POS UNTIL [EQ 0 (NCHARS (SETQ LINE (CL:READ-LINE INSTREAM NIL ""))
WHEN (SETQ POS (STRPOS ":" LINE)) DO [SETQ TAG (U-CASE (SUBATOM LINE 1 (SUB1 POS))
[SETQ LINE (CL:STRING-TRIM " " (SUBSTRING LINE (ADD1 POS)
NIL
(CONSTANT (CONCAT

:: Lines can have internal semi-colons that separate parameters. If a line ends in a semicolon, then
:: the tag is continued on the next line. If a parameter has an =, then it is an av pair.

(SELECTQ TAG
(CONTENT-TYPE ; Extract type/subtype, then parameters
[PUSH \$\$VAL `(', TAG ,@(MIMEPARAMS INSTREAM LINE
)])
(CONTENT-TRANSFER-ENCODING
; Should be a single value
[PUSH \$\$VAL (LIST TAG (U-CASE (MKATOM LINE))
(CONTENT-DESCRIPTION
(PUSH \$\$VAL (LIST TAG LINE)))
(CONTENT-DISPOSITION
[PUSH \$\$VAL `(', TAG ,@(MIMEPARAMS INSTREAM LINE)]
(CL:WHEN [AND X-SUN (STREQUAL "X-SUN" (SUBSTRING TAG 1 5
(CONSTANT (CONCAT
)])
[PUSH \$\$VAL (LIST TAG (U-CASE (MKATOM LINE)))]))

(MIMEPARAMS

[LAMBDA (INSTREAM LINE MORE)

; Edited 12-Jan-2000 12:37 by rmk:
; Edited 12-Jan-2000 12:29 by rmk:
; Edited 12-Jan-2000 12:27 by rmk:
; Edited 12-Jan-2000 12:26 by rmk:
; Edited 1-Nov-99 16:46 by rmk:
; Edited 9-Mar-99 15:58 by rmk:
; Edited 9-Mar-99 15:52 by rmk:

:: Assumes first "parameter" is a singleton type, perhaps with a subtype

(LET (MORE POS TYPE)
[SETQ TYPE (U-CASE (IF (SETQ POS (STRPOS ":" LINE))
THEN (SETQ MORE T)
(PROG1 (SUBSTRING LINE 1 (SUB1 POS))
(SETQ LINE (SUBSTRING LINE (ADD1 POS)))
(CL:WHEN LINE
(SETQ LINE (CL:STRING-TRIM " " LINE))))
ELSE (PROG1 LINE (SETQ LINE NIL))
[SETQ TYPE (IF (SETQ POS (STRPOS "/" TYPE))
THEN [LIST [MKATOM (CL:STRING-TRIM " " (SUBSTRING TYPE 1 (SUB1 POS))
[MKATOM (CL:STRING-TRIM " " (SUBSTRING TYPE (ADD1 POS))
ELSE (LIST (MKATOM TYPE))
(CONS TYPE (BIND PNAME PVALUE PARAM POS WHILE MORE
COLLECT (CL:UNLESS LINE
(SETQ LINE (CL:READ-LINE INSTREAM NIL NIL))
(CL:WHEN LINE
(SETQ LINE (CL:STRING-TRIM " " LINE))))
[SETQ PARAM (IF (SETQ POS (STRPOS ":" LINE))
THEN (SETQ MORE T)
(PROG1 (CL:STRING-TRIM " " (SUBSTRING LINE 1 (SUB1 POS)))
(SETQ LINE (SUBSTRING LINE (ADD1 POS)))
(CL:WHEN LINE
(SETQ LINE (CL:STRING-TRIM " " LINE))))
ELSE (SETQ MORE NIL)
(PROG1 LINE (SETQ LINE NIL))
(IF (SETQ POS (STRPOS "=" PARAM))
THEN [SETQ PNAME (MKATOM (U-CASE (CL:STRING-TRIM " " (SUBSTRING
PARAM 1 (SUB1 POS))
[SETQ PVALUE (CL:STRING-TRIM " %" (SUBSTRING PARAM (ADD1 POS))
(LIST PNAME PVALUE)
ELSE (LIST (U-CASE PARAM))

(PARSE-SUNATTACHMENT

[LAMBDA (PART INSTREAM)

; Edited 14-Sep-99 10:11 by rmk:

; Edited 14-Sep-99 10:00 by rmk:

```

(REPLACE SUBTYPE OF PART WITH (FETCH MAINTYPE OF PART))
(REPLACE MAINTYPE OF PART WITH 'MULTIPART)
(REPLACE SUBPARTS OF PART
  WITH (FOR PARTNUM STARTPOS ENDPOS SUBPART SUNHEADERS SUBPART TEMP MAINTYPE (PARTEND
                                             (FETCH ENDPOS
                                              OF PART))

```

```

[BOUNDARY _ (CONCAT "-----" (CHARACTER (CHARCODE CR] FROM 1
FIRST (SETQ STARTPOS (FILEPOS BOUNDARY INSTREAM (FETCH STARTPOS OF PART)
      (PARTEND NIL T))
COLLECT (SETQ SUNHEADERS (MIMEHEADERS INSTREAM T))
  (SETQ STARTPOS (GETFILEPTR INSTREAM))
  (FOR I FROM 1 TO (CADR (ASSOC 'X-SUN-CONTENT-LINES SUNHEADERS))
    DO (FILEPOS (CHARACTER (CHARCODE CR))
      INSTREAM NIL PARTEND NIL T))
  (SETQ ENDPOS (GETFILEPTR INSTREAM))
  (SETQ MAINTYPE (SELECTQ (SETQ TEMP (CADR (ASSOC 'X-SUN-DATA-TYPE SUNHEADERS)))
    ((NIL DEFAULT)
     'TEXT)
    TEMP))
  (SETQ SUBPART (CREATE MIMEPART
    STARTPOS _ STARTPOS
    ENDPOS _ ENDPOS
    MAINTYPE _ MAINTYPE
    ENCODING _ (CADR (ASSOC 'X-SUN-ENCODING-INFO SUNHEADERS))
    DISPOSITION _ (CDR (ASSOC 'CONTENT-DISPOSITION SUNHEADERS))
    PARTNUM _ PARTNUM))
  (CL:WHEN (SETQ TEMP (CADR (ASSOC 'X-SUN-CHARSET SUNHEADERS)))
    (PUSH (FETCH TYPEPROPS OF SUBPART)
      (LIST 'CHARSET TEMP)))
  (CL:WHEN (AND (SETQ TEMP (CADR (ASSOC 'X-SUN-DATA-NAME SUNHEADERS)))
    (NEQ MAINTYPE 'TEXT)
    (NEQ TEMP 'TEXT))
    (PUSH (FETCH TYPEPROPS OF SUBPART)
      (LIST 'NAME TEMP)))
  SUBPART
REPEATWHILE (SETQ STARTPOS (FILEPOS BOUNDARY INSTREAM NIL PARTEND NIL T))

```

(RECODEMIMEHEADER

[LAMBDA (INSTREAM OUTPUTSTREAM STARTPOS ENDPOS TEDITFLAG)

```

;; The description for message headers is in /project/rfc/RFC2047.TXT, and it relies on a lot of the definitions in /project/rfc/RFC2045.TXT.
;; According to the spec, encoded words can appear even if there isn't a MIME-VERSION property, but here we assume that only mime messages
;; will in fact use this kind of encoding.

```

(BIND RUNPOS ENDRUN CHARSET ENCODING BADCHARSETS BADENCODINGS

```

DO
  ;; Char-encoding runss are sequences of the form ?=charset?encoding?stuff=?, where charset is something like iso-8859-1, and encoding
  ;; is Q for printed quotable, B for BASE64.

```

(IF (SETQ RUNPOS (FILEPOS "?=" INSTREAM STARTPOS ENDPOS))

THEN ;; Copy since the end of the last run

```

(IF TEDITFLAG
  THEN (TEDIT.INCLUDE OUTPUTSTREAM INSTREAM STARTPOS RUNPOS)
  ELSE (COPYCHARS INSTREAM OUTPUTSTREAM STARTPOS RUNPOS))

```

;; Decode this run: skip =?, get charset and encoding

```

(SETFILEPTR INSTREAM (IPLUS 2 RUNPOS))
(SETQ CHARSET (PACKC (BIND C UNTIL (EQ (CHARCODE ?)
                                       (SETQ C (BIN INSTREAM))))
  COLLECT C))

```

```

(IF (MEMB CHARSET BADCHARSETS)
  THEN (SETQ CHARSET NIL)
  ELSEIF (MIMERECODEMAP CHARSET T)
  ELSE (PUSH BADCHARSETS CHARSET)
      (SETQ CHARSET NIL))

```

```

(SETQ ENCODING (U-CASE (READC INSTREAM)))
(BIN INSTREAM) ; Skip the ? after the Q/B

```

```

(SETQ STARTPOS (GETFILEPTR INSTREAM))
(SETQ ENDRUN (FILEPOS "?=" INSTREAM STARTPOS ENDPOS))
[SELECTQ (AND CHARSET ENCODING)

```

```

(Q (STREAMFROMQUOTEDPRINTABLE INSTREAM OUTPUTSTREAM STARTPOS ENDRUN CHARSET))
(B (STREAMFROMBASE64 INSTREAM OUTPUTSTREAM STARTPOS ENDRUN CHARSET T))
(NIL (IF TEDITFLAG

```

```

  THEN (TEDIT.INCLUDE OUTPUTSTREAM INSTREAM RUNPOS ENDRUN)
  ELSE (COPYCHARS INSTREAM OUTPUTSTREAM RUNPOS ENDRUN)))

```

```

(PROGN (CL:UNLESS (MEMB ENCODING BADENCODINGS)
  (MIMEERROR (CONCAT ENCODING " is not recognized as a MIME encoding"))
  (PUSH BADENCODINGS ENCODING))

```

```

(IF TEDITFLAG
  THEN (TEDIT.INCLUDE OUTPUTSTREAM INSTREAM STARTPOS ENDRUN)
  ELSE (COPYCHARS INSTREAM OUTPUTSTREAM STARTPOS ENDRUN])

```

```

(IF ENDRUN
  THEN (SETQ STARTPOS (IPLUS 2 ENDRUN))
  ELSE (RETURN))

```

ELSE ;; Copy the remaining bytes

```

(IF TEDITFLAG
 THEN (TEDIT.INCLUDE OUTPUTSTREAM INSTREAM STARTPOS ENDPOS)
 ELSE (COPYCHARS INSTREAM OUTPUTSTREAM STARTPOS ENDPOS))
(SETFILEPTR INSTREAM ENDPOS)
(RETURN])
)

```

:: Replaces function on LAFITECOMMANDS and LAFITEHARDCOPY, so that MIME objects are decoded in messages. These functions require the
:: LAFITEMSG and MAILFOLDER records to be available:

```

(DECLARE%: DONTEVAL@LOAD DONTCOPY EVAL@COMPILE

(FILESLoad (LOADCOMP)
 LAFITE-DECLS)
)

```

(DEFINEQ

(LA.COPY.MESSAGE.TEXT

[LAMBDA (MAILFOLDER MSGDESCRIPTOR NEWWINDOWFLG) ; Edited 19-Feb-2001 10:21 by rmk:

:: NEWWINDOWFLG is used for MIME messages, indicates that any mime text must be copied out of the folder, to avoid dangling references.
:: Otherwise, the mime objects just point into the mail folder, not copied until they are decoded.

```

(LET (OUTPUTSTREAM MIMEPARSE (MSGSTART (fetch (LAFITEMSG START) of MSGDESCRIPTOR))
      (MSGEND (fetch (LAFITEMSG END) of MSGDESCRIPTOR))
      (INSTREAM (\LAFITE.OPEN.FOLDER MAILFOLDER 'INPUT :ABORT)))
      (SETFILEPTR INSTREAM MSGSTART)
      (IF (SETQ MIMEPARSE (PARSEMIME INSTREAM 1 MSGEND MAILFOLDER))
          THEN

```

;; The first mime part should describe just the header section, but not the boilerplate text that comes after it. We have to
;; produce all the headers, then the text parts in line, and other parts by mime objects.

(CL:WHEN NEWWINDOWFLG

;; We copy all the bytes to a NODIRCORE stream, which then becomes the INPUTSTREAM. This will be preserved if any
;; MIMEOBJECT is created that points to it, otherwise it will be collected. OUTPUTSTREAM here is just

```

[LET [(TEMPSTRM (OPENSTREAM '{NODIRCORE} 'BOTH)
      (COPYBYTES INSTREAM TEMPSTRM MSGSTART MSGEND)
      (CLOSEF TEMPSTRM)
      (SETQ INSTREAM (OPENSTREAM TEMPSTRM 'INPUT)
      (SETQ MSGSTART 0)
      (SETQ MSGEND (GETEOFPTR INSTREAM))

```

;; We have to reparse, because all the byte positions have changed. We could also go through and update all byte
;; positions by subtraction

```

      (SETQ MIMEPARSE (PARSEMIME INSTREAM 1 MSGEND MAILFOLDER)))
[SETQ OUTPUTSTREAM (OPENTEXTSTREAM NIL NIL NIL NIL '(FONT ,LAFITEDISPLAYFONT)
 (RECODEMIMEHEADER INSTREAM OUTPUTSTREAM MSGSTART (FETCH (MIMEPART STARTPOS) OF MIMEPARSE)
 T)
 (DEMIMEPART INSTREAM OUTPUTSTREAM MIMEPARSE T)
 OUTPUTSTREAM

```

```

ELSE (SETQ OUTPUTSTREAM (OPENSTREAM '{NODIRCORE} 'BOTH))
      (COPYBYTES INSTREAM OUTPUTSTREAM MSGSTART MSGEND)
      (CLOSEF OUTPUTSTREAM)
      (OPENSTREAM OUTPUTSTREAM 'INPUT NIL '((ENDOFSTREAMOP \LAFITE.EOF]))

```

(\LAFITE.APPEND.MESSAGE.BODY

[LAMBDA (TEXTSTREAM MSGSTREAM MSGDESCRIPTOR FILTERS) ; Edited 15-Jul-99 10:09 by rmk:
; Edited 15-Jul-99 10:05 by rmk:
; Edited 15-Jul-99 09:48 by rmk:
; Edited 15-Jul-99 09:27 by rmk:
; Edited 5-Aug-93 20:20 by bvm

:: Appends the text of the indicated message to TEXTSTREAM, filtering out any header fields found in FILTERS

```

(LET ((START (fetch (LAFITEMSG START) of MSGDESCRIPTOR))
      (END (fetch (LAFITEMSG END) of MSGDESCRIPTOR))
      (EOF (GETEOFPTR TEXTSTREAM))
      FILTERED MIMEPARSE)
      (if FILTERS
          then (SETQ FILTERED (LAFITE.NEW.PARSE.HEADER MSGSTREAM FILTERS START END)))
      (TEDIT.SETSEL TEXTSTREAM (ADD1 EOF)
      0
      'LEFT)
      (SETFILEPTR MSGSTREAM START)

```

; Get selection right for TEDIT.INCLUDE

```
[IF (SETQ MIMEPARSE (PARSEMIME MSGSTREAM 1 END))
```

THEN
;; MAILFOLDER not passed to PARSEMIME, so error messages will appear in PROMPTWINDOW, not in browser
;; promptwindow.

```
(TEDIT.INCLUDE TEXTSTREAM MSGSTREAM START (FETCH (MIMEPART STARTPOS) OF MIMEPARSE))
```

:: The headers have to be fixed up before we start demiming, because END is not accurate in the DEMIME case.

```
(CL:WHEN [AND FILTERED (NOT (= (GETEOFPTR TEXTSTREAM)
 (+ EOF (- (FETCH (MIMEPART STARTPOS) OF MIMEPARSE)
 START]

```

; Rats, we have to recalculate more slowly now, since there
; could be ns chars in header. TEdit counts them differently than

```

; the plain text file does
      (SETQ FILTERED (LAFITE.PARSE.HEADER TEXTSTREAM FILTERS EOF))
      (SETFILEPTR MSGSTREAM (FETCH (MIMEPART STARTPOS) OF MIMEPARSE))
      (DEMIMEPART MSGSTREAM TEXTSTREAM MIMEPARSE T)
ELSE (TEDIT.INCLUDE TEXTSTREAM MSGSTREAM START END)
      (CL:WHEN [AND FILTERED (NOT (= (GETEOFPTR TEXTSTREAM)
                                     (+ EOF (- END START)
                                             ; Rats, we have to recalculate more slowly now, since there
                                             ; could be ns chars in header. TEdit counts them differently than
                                             ; the plain text file does
                                             (SETQ FILTERED (LAFITE.PARSE.HEADER TEXTSTREAM FILTERS EOF)))]
              [for PAIR in FILTERED do ;; Note: we are depending on the pairs being in reverse order from the parse, so that the deletions do not
              ;; affect the char count
              (TEDIT.DELETE TEXTSTREAM (+ EOF (- (CAR PAIR)
                                                  START)
                                              1)
                                   (- (CADR PAIR)
                                       (CAR PAIR)
                                       (TEDIT.SETSEL TEXTSTREAM (ADD1 (GETEOFPTR TEXTSTREAM)
                                                                    0)
                               (SETFILEPTR TEXTSTREAM -1])
                               )

```

;; Replaces function on LAFITEBROWSE, so that browser window interprets different character sets.

```

(DEFINEQ
(PRINTMESSAGESUMMARY.STRING
[LAMBDA (X FILE)
  (IF (STRPOS "=" X)
    THEN (RECODEMIMEHEADER (OPENSTRINGSTREAM X 'INPUT)
                           FILE 0 (NCHARS X))
    ELSE (PRIN3 X FILE))
  X])
)

```

```

(DEFINEQ
(ADDMIMEOBJECT
[LAMBDA (INSTREAM PART TEXTSTREAM DEFAULTFILENAME)
; Edited 15-Dec-99 16:29 by rmk:
; Edited 25-Jun-99 23:17 by rmk:
; Edited 25-Jun-99 23:09 by rmk:
(TEDIT.INSERT TEXTSTREAM "
")
(TEDIT.INSERT.OBJECT (IMAGEOBJCREATE (LIST PART (OR [CADR (OR (ASSOC 'FILENAME (FETCH (MIMEPART
                                                                                   DISPOSITIONPROPS
                                                                                   OF PART))
                                                                                   (ASSOC 'NAME (FETCH (MIMEPART TYPE)
                                                                                   OF PART]
                                                                                   DEFAULTFILENAME)
                                                                                   INSTREAM)
MIMEOBJIMAGEFN))
TEXTSTREAM)
(TEDIT.INSERT TEXTSTREAM "
"]
)

```

```

(MIMEOBJINIT
[LAMBDA NIL
; Edited 25-Jun-99 23:35 by rmk:
; Edited 25-Jun-99 22:58 by rmk:
; Edited 25-Jun-99 20:10 by rmk:
; Edited 25-Jun-99 20:05 by rmk:
; Edited 25-Jun-99 20:03 by rmk:
(SETQ MIMEOBJIMAGEFN (IMAGEFNCREATE 'MIMEOBJ.DISPLAYFN 'MIMEOBJ.IMAGEBOXFN 'MIMEOBJ.PUTFN 'MIMEOBJ.GETFN
'MIMEOBJ.COPYFN
'MIMEOBJ.BUTTONEVENTINFN
'MIMEOBJ.COPYBUTTONEVENTINFN NIL NIL NIL NIL NIL 'MIMEOBJ.PREPRINTFN])
)

```

```

(MIMEOBJ.DISPLAYFN
[LAMBDA (OBJ STREAM)
; Edited 29-Jun-99 11:25 by rmk:
; Edited 29-Jun-99 11:19 by rmk:
; Edited 29-Jun-99 11:11 by rmk:
; Edited 25-Jun-99 22:01 by rmk:
(LET ([PART (CAR (IMAGEOBJPROP OBJ 'OBJECTDATUM)
[FILENAME (CADR (IMAGEOBJPROP OBJ 'OBJECTDATUM)
(MARGIN (TIMES 3 (DSPSCALE NIL STREAM)))
(ONEPOINT (DSPSCALE NIL STREAM))
(FONT (FONTCREATE 'TERMINAL 10 'BOLD 0 STREAM))
OLDFONT)
(SETQ OLDFONT (DSPFONT FONT STREAM))
;; 10 is compensating for some kind of confusion with TEDIT. It seems to invoke the DISPLAYFN 10 points to the left of the image box.

```


(MIMEOBJ.IMAGEBOXFN

[LAMBDA (OBJ STREAM)

; Edited 29-Jun-99 10:55 by rmk:
; Edited 29-Jun-99 10:52 by rmk:
; Edited 29-Jun-99 10:14 by rmk:
; Edited 25-Jun-99 20:54 by rmk:

:: The imagebox has 1 point of white space, then the border (1 pt), then another point of white space, the text, with spaces before and after the text,
:: and an extra DESCENT above the text. So the margin around the text is 3 points.

```
(LET ([PART (CAR (IMAGEOBJPROP OBJ 'OBJECTDATUM)
[FILENAME (CADR (IMAGEOBJPROP OBJ 'OBJECTDATUM)
(MARGIN (TIMES 3 (DSPSCALE NIL STREAM)))
(FONT (FONTCREATE 'TERMINAL 10 'BOLD 0 STREAM))])
```

:: I dont understand why I only need to allocate one point (DSPSCALE) for the top margin, instead of 3. But that's what makes it look
:: symmetric.

```
(CREATE IMAGEBOX
  XSIZE _ (PLUS (TIMES 2 (PLUS MARGIN (CHARWIDTH (CHARCODE SPACE)
    FONT)))
    (STRINGWIDTH FILENAME FONT))
  YSIZE _ (PLUS MARGIN (FONTPROP FONT 'HEIGHT)
    (FONTPROP FONT 'DESCENT)
    (DSPSCALE NIL STREAM))
  YDESC _ (PLUS MARGIN (FONTPROP FONT 'DESCENT))
  XKERN _ 0])
```

)

(MIMEOBJINIT)

(DEFINEQ

(DEPS

[LAMBDA (PSFILE MSGWINDOW)

; Edited 29-Jun-99 18:10 by rmk:
; Edited 29-Jun-99 17:28 by rmk:
; Edited 29-Jun-99 17:12 by rmk:
; Edited 25-Jun-99 09:18 by rmk:
; Edited 21-Apr-99 09:19 by rmk:
; Edited 7-Apr-99 07:50 by rmk:
; Edited 29-Dec-98 15:23 by rmk:

:: Extracts PostScript text in MSGWINDOW, puts it in PSFILE

```
(RESETLST
[LET [(INSTREAM (OR MSGWINDOW (WHICHW
  (SETQ INSTREAM (IF (GETSTREAM INSTREAM 'INPUT T)
    ELSEIF (CAR (NLSETQ (TEXTSTREAM INSTREAM)))
    ELSE [RESETSAVE (SETQ INSTREAM (OPENSTREAM (PACKFILENAME 'BODY INSTREAM
      'DIRECTORY
      (EVAL ATTACHMENTDIR))
      'INPUT))
      (PROGN (CLOSEF? OLDVALUE]
      INSTREAM))
(FOR SEG STARTPOS ENDPOS PSSTREAM IN (FINDPSSEGMENTS INSTREAM 0)
  DO (CL:UNLESS PSFILE
    [SETQ PSFILE (OR (CADDR SEG)
      (ASKUSER NIL NIL "Postscript file name? " ' (Y))]
    [RESETSAVE [SETQ PSSTREAM (OPENSTREAM (PACKFILENAME 'VERSION NIL 'BODY PSFILE 'DIRECTORY
      (EVAL ATTACHMENTDIR)
      'EXTENSION
      'ps)
      'OUTPUT
      'NEW
      '((TYPE TEXT]
      (PROGN (CLOSEF? OLDVALUE)
        (AND RESETSTATE (DELFILE OLDVALUE]
        (COPYCHARS INSTREAM PSSTREAM (CAR SEG)
          (CADR SEG))
        (SETFILEPTR INSTREAM (CADR SEG))
        (PROG1 (FULLNAME (CLOSEF? PSSTREAM))
          (SETQ PSFILE NIL))
        NIL
        FINALLY (RETURN (IF (CDR $$VAL)
          THEN $$VAL
          ELSE (CAR $$VAL]))])
```

(FINDPSSEGMENTS

[LAMBDA (INSTREAM BEGINPOS EOFPOS)

; Edited 17-Jan-2000 22:07 by rmk:
; Edited 29-Jun-99 18:08 by rmk:
; Edited 29-Jun-99 17:00 by rmk:

:: Returns a list of pairs of starting/ending byte positions for all postscript segments in INSTREAM

```
(CL:WHEN BEGINPOS (SETFILEPTR INSTREAM BEGINPOS))
(BIND STARTPOS ENDPOS PSSTREAM TITLE WHILE (SETQ STARTPOS (FFILEPOS "%!PS-Adobe" INSTREAM (GETFILEPTR
  INSTREAM)
  EOFPOS))
DO (CL:WHEN (FFILEPOS "%Title: " INSTREAM NIL (PLUS STARTPOS 500)
```

```

NIL T)
[SETQ TITLE (MKATOM (CL:STRING-TRIM " " (CL:READ-LINE INSTREAM NIL ""))
[IF (EQ 0 (NCHARS TITLE))
  THEN (SETQ TITLE NIL)
  ELSE (SELECTQ (U-CASE (FILENAMEFIELD TITLE 'EXTENSION))
    (PS)
    ((DVI NIL)
     (SETQ TITLE (PACKFILENAME 'EXTENSION 'ps 'BODY TITLE))
     NIL)
    ((SETQ TITLE (PACK* TITLE ".ps"]])
(IF (SETQ ENDPOS (OR (FFILEPOS "%%EOF" INSTREAM NIL EOFPOS NIL T)
                    (FFILEPOS "%%Trailer" INSTREAM NIL EOFPOS NIL T)))
  THEN
    ;; Add 1 because we didn't search for the closing CR, because of EOL foolishness. But 1 should include it.
    (PUSH $$VAL (LIST STARTPOS (ADD1 ENDPOS)
                      TITLE))
  ELSE (PRINTOUT T "Can't find Postscript terminator" T)
        (SETFILEPTR INSTREAM (IPLUS STARTPOS 5))
        NIL])

```

(POSTSCRIPTPART

```

[LAMBDA (INSTREAM STARTPOS ENDPOS)
; Edited 17-Jan-2000 23:14 by rmk:
; Edited 17-Jan-2000 23:07 by rmk:
; Edited 17-Jan-2000 23:02 by rmk:

(LET (HEADERS PART)
  (CL:WHEN (AND ENDPOS (IGREATERP (- ENDPOS (GETFILEPTR INSTREAM)
                                     20000)
                                (SETQ HEADERS (FINDPSSEGMENTS INSTREAM STARTPOS ENDPOS))))
    [SETQ HEADERS (FOR PSTAIL PS NEXT PSPART TEXTPART ON HEADERS AS PARTNUM FROM 1
                   JOIN (SETQ PS (CAR PSTAIL))
                        (SETQ PSPART (CREATE MIMEPART
                                             STARTPOS _ (CAR PS)
                                             ENDPOS _ (CADR PS)
                                             TYPE _ ' ((APPLICATION POSTSCRIPT)
                                                       (CHARSET "iso-8859-1"))
                                             ENCODING _ (CADR (ASSOC 'CONTENT-TRANSFER-ENCODING
                                                                    HEADERS))
                                             DISPOSITIONPROPS _
                                             [AND (CADDR PS)
                                                  `((FILENAME , (CADDR PS)
                                                    PARTNUM _ PARTNUM))
                                             (SETQ NEXT (CADR PSTAIL))
                                             (CL:WHEN (AND NEXT (IGREATERP (- (CAR NEXT)
                                                                              (CADR PS))
                                                                              2))
                                               (ADD PARTNUM 1)
                                               (SETQ TEXTPART (CREATE MIMEPART
                                                                      STARTPOS _ (CADR PS)
                                                                      ENDPOS _ (CAR NEXT)
                                                                      TYPE _ ' ((TEXT PLAIN)
                                                                              (CHARSET "iso-8859-1"))
                                                                      ENCODING _ (CADR (ASSOC 'CONTENT-TRANSFER-ENCODING
                                                                                             HEADERS))
                                                                      PARTNUM _ PARTNUM)))
                                             (CONS PSPART (AND TEXTPART (CONS TEXTPART)
                                                    ;; Is there text after the message headers and before the first postscript part? STARTPOS is the position after the headers. Assume
                                                    ;; that anything interesting is at least 2 bytes long.
                                                    ;; Not sure about the SUB1. Perhaps the ENDPOS of X=STARTPOS of X+1.
                                                    (CL:WHEN (IGREATERP (- (FETCH STARTPOS OF (CAR HEADERS))
                                                                              STARTPOS)
                                                                              2)
                                                      (PUSH HEADERS (CREATE MIMEPART
                                                                           STARTPOS _ STARTPOS
                                                                           ENDPOS _ (SUB1 (FETCH STARTPOS OF (CAR HEADERS)))
                                                                           TYPE _ ' ((TEXT PLAIN)
                                                                                 (CHARSET "iso-8859-1"))
                                                                           PARTNUM _ 1)))
                                                    (SETQ PART (IF (CDR HEADERS)
                                                                THEN (CREATE MIMEPART
                                                                           STARTPOS _ (FETCH (MIMEPART STARTPOS) OF (CAR HEADERS))
                                                                           ENDPOS _ (FETCH (MIMEPART ENDPOS) OF (CAR (LAST HEADERS)))
                                                                           TYPE _ ' ((MULTIPART MIXED)
                                                                                 SUBPARTS _ HEADERS)
                                                                ELSE (CAR HEADERS))))])

```

)

(DEFINEQ

(STREAMFROMBASE64

```

[LAMBDA (INSTREAM OUTSTREAM STARTPOS ENDPOS FROMCHARENCODING TEXTP)
; Edited 25-Jun-99 18:06 by rmk:
; Edited 25-Jun-99 18:06 by rmk:
; Edited 20-Oct-98 13:59 by rmk:

```

;; TEXTP if this is a text file, in which case charencoding and CR/LF conventions should be observed

```

(RESETLST
  [IF (GETSTREAM INSTREAM 'INPUT T)
    ELSEIF (CAR (NLSETQ (TEXTSTREAM INSTREAM)))
      THEN (SETQ INSTREAM (TEXTSTREAM INSTREAM))
    ELSE (RESETSAVE (SETQ INSTREAM (OPENSTREAM INSTREAM 'INPUT))
      ' (PROGN (CLOSEF? OLDVALUE)
        (SETQ OUTSTREAM (OPENSTREAM ' {NODIRCORE} ' BOTH)))])
  [IF (GETSTREAM OUTSTREAM 'OUTPUT T)
    ELSEIF (CAR (NLSETQ (TEXTSTREAM OUTSTREAM)))
      THEN (SETQ OUTSTREAM (TEXTSTREAM OUTSTREAM))
    ELSE (RESETSAVE [SETQ OUTSTREAM (OPENSTREAM OUTSTREAM 'OUTPUT 'NEW (AND TEXTP ' ((TYPE TEXT)
      ' (PROGN (CLOSEF? OLDVALUE)
        (AND RESETSTATE (DELFILE OLDVALUE)
          (SETQ OUTSTREAM (OPENSTREAM ' {NODIRCORE} ' BOTH)))])])
      (RECODEMAP _ (MIMERECODEMAP FROMCHARENCODING)) FROM (- (OR ENDPOS (GETEOPTR INSTREAM))
        STARTPOS))
  TO 1 BY -1
  DO (SETQ C (BIN INSTREAM))
    (IF (AND (IGEQ C (CHARCODE A))
      (ILEQ C (CHARCODE Z)))
      THEN (SETQ C (IDIFFERENCE C (CHARCODE A)))
      ELSEIF (AND (IGEQ C (CHARCODE a))
        (ILEQ C (CHARCODE z)))
        THEN (SETQ C (IDIFFERENCE C (IDIFFERENCE (CHARCODE a)
          26)))
      ELSEIF (AND (IGEQ C (CHARCODE 0))
        (ILEQ C (CHARCODE 9)))
        THEN (SETQ C (IDIFFERENCE C (IDIFFERENCE (CHARCODE 0)
          52)))
      ELSEIF (EQ C (CHARCODE +))
        THEN (SETQ C 62)
      ELSEIF (EQ C (CHARCODE /))
        THEN (SETQ C 63)
      ELSEIF (EQ C (CHARCODE =))
        THEN ; Pad with 0 at very end
          (SELECTQ I
            (1
              (CL:UNLESS (EQ (CHARCODE =)
                (BIN INSTREAM))
                (HELP "Padding = in ill-formed configuration"))
              (SETQ BYTE (LOGOR (LLSH VAL 4)
                (LRSH C 2)))
              (IF TEXTP
                THEN (SELCHARQ BYTE
                  (CR (SETQ CRFLAG T)
                    (BOUT OUTSTREAM BYTE))
                  (LF (IF CRFLAG
                    THEN (SETQ CRFLAG NIL)
                    ELSE (BOUT OUTSTREAM BYTE))))
                  (PROGN (BOUT OUTSTREAM BYTE)
                    (SETQ CRFLAG NIL)))
                ELSE (BOUT OUTSTREAM BYTE)))
            (0 ; 3 chars read, expect one pad
              (SETQ BYTE (LOGOR (LLSH VAL 6)
                C))
              (IF TEXTP
                THEN (SELCHARQ BYTE
                  (CR (SETQ CRFLAG T)
                    (BOUT OUTSTREAM BYTE))
                  (LF (IF CRFLAG
                    THEN (SETQ CRFLAG NIL)
                    ELSE (BOUT OUTSTREAM BYTE))))
                  (PROGN (BOUT OUTSTREAM BYTE)
                    (SETQ CRFLAG NIL)))
                ELSE (BOUT OUTSTREAM BYTE)))
              (HELP "Padding = in ill-formed configuration"))
            (RETURN) ; throw everything else away
          )
      (GO $$ITERATE))
  (SELECTQ I
    (3 ; Just read first byte, save
      (SETQ VAL C)
      (SETQ I 2))
    (2 ; Read second byte, can output first result
      (SETQ BYTE (LOGOR (LLSH VAL 2)
        (LRSH C 4)))
      (IF TEXTP
        THEN (SELCHARQ BYTE
          (CR (SETQ CRFLAG T)
            (BOUT OUTSTREAM BYTE))
          (LF (IF CRFLAG
            THEN (SETQ CRFLAG NIL)

```

```

                ELSE (BOUT OUTSTREAM BYTE))
                (PROGN (BOUT OUTSTREAM BYTE)
                    (SETQ CRFLAG NIL)))
        ELSE (BOUT OUTSTREAM BYTE))
        (SETQ VAL (LOGAND C 15))
        (SETQ I 1))
    (1 (SETQ BYTE (LOGOR (LLSH VAL 4)
                        (LRSH C 2)))
      (IF TEXTP
        THEN (SELCHARQ BYTE
              (CR (SETQ CRFLAG T)
                  (BOUT OUTSTREAM BYTE))
              (LF (IF CRFLAG
                    THEN (SETQ CRFLAG NIL)
                    ELSE (BOUT OUTSTREAM BYTE))))
              (PROGN (BOUT OUTSTREAM BYTE)
                      (SETQ CRFLAG NIL)))
        ELSE (BOUT OUTSTREAM BYTE))
        (SETQ VAL (LOGAND C 3))
        (SETQ I 0))
      (PROGN (SETQ BYTE (LOGOR (LLSH VAL 6)
                              C))
            (IF TEXTP
              THEN (SELCHARQ BYTE
                    (CR (SETQ CRFLAG T)
                        (BOUT OUTSTREAM BYTE))
                    (LF (IF CRFLAG
                          THEN (SETQ CRFLAG NIL)
                          ELSE (BOUT OUTSTREAM BYTE))))
                    (PROGN (BOUT OUTSTREAM BYTE)
                            (SETQ CRFLAG NIL)))
              ELSE (BOUT OUTSTREAM BYTE))
            (SETQ I 3)))
    FINALLY (CL:WHEN TEDITSTREAM
            (TEDIT.INCLUDE TEDITSTREAM OUTSTREAM)
            (SETQ OUTSTREAM TEDITSTREAM)))
    OUTSTREAM])

```

(STREAMFROMBINHEX

```

[LAMBDA (INSTREAM OUTSTREAM STARTPOS ENDPOS FROMCHARENCODING TEXTP)
; Edited 10-Jun-2001 22:00 by rmk:

```

```

;; TEXTP if this is a text file, in which case charencoding and CR/LF conventions should be observed
(RESETLST
  (CL:UNLESS STARTPOS (SETQ STARTPOS 0))
  (CL:UNLESS (AND (FILEPOS "file must be converted with BinHex 4.0)" INSTREAM STARTPOS ENDPOS NIL T
                UPPERCASEARRAY)
    (EQ (CHARCODE CR)
        (READCCODE INSTREAM)))
    (ERROR "Header missing from BinHex file part"))
  (UNTIL (SELCHARQ (BIN INSTREAM)
                ((CR LF)
                 NIL)
                (%: T)
                (ERROR "Colon missing from BinHex file part")))
  (CL:UNLESS BINHEXCHARARRAY
    (LET [(TMP (CL:MAKE-ARRAY (CONSTANT (ADD1 (- (NTHCHARCODE BINHEXCHARS -1)
                                                (CHCON1 BINHEXCHARS)))
                            (NTHCHARCODE BINHEXCHARS I)))
          (FOR I C FROM 1 WHILE (SETQ C (NTHCHARCODE BINHEXCHARS I))
            DO (CL:SETF [CL:SVREF TMP (- C (CONSTANT (CHCON1 BINHEXCHARS)
                                                    (SUB1 I)))]
                    (SETQ BINHEXCHARARRAY TMP)))]
      (LET (TEDITSTREAM NEXTBYTE LASTBYTE FNAME VERSION TYPE CREATOR FLAGS DATALENGTH EXTENSION (REPEAT 0)
            (POS 0)
            (RECODEMAP (MIMERECODEMAP FROMCHARENCODING)))
        (SETQ FNAME (ALLOCSTRING (BINHEXBYTE)))
        (FOR I FROM 1 TO (NCHARS FNAME) DO (RPLCHARCODE FNAME I (BINHEXBYTE)))
        (SETQ VERSION (BINHEXBYTE))
        (SETQ TYPE (BINHEXLONG))
        (SETQ CREATOR (BINHEXLONG))
        ; Perhaps creator could be used to attach proper extension for
        ; PC?
        (SETQ EXTENSION (CASE CREATOR
                          (1297307460 ; Word
                           (PRINTOUT T "Microsoft Word file" T)
                           'doc)
                          ((1297303877 1297044307) ; HTML? First is for IE, 2nd for Netscape
                           (PRINTOUT T "HTML file" T)
                           'html)
                          (T NIL)))
        (SETQ FLAGS (BINHEXWORD))
        (SETQ DATALENGTH (BINHEXLONG))
        (BINHEXLONG) ; Length of resource fork
        (SETQ CREATOR (BINHEXWORD)) ; CRC
        ))
  ;;
  ;; Now, open the output stream, done after decoding the type so that we can finagle the extension based on the kind of file. Except
  ;; that we don't yet know how to map type-numbers into extensions.

```

```

[IF (GETSTREAM INSTREAM 'INPUT T)
  ELSEIF (CAR (NLSETQ (TEXTSTREAM INSTREAM)))
    THEN (SETQ INSTREAM (TEXTSTREAM INSTREAM))
  ELSE (RESETSAVE (SETQ INSTREAM (OPENSTREAM INSTREAM 'INPUT))
    ' (PROGN (CLOSEF? OLDVALUE)
[IF (GETSTREAM OUTSTREAM 'OUTPUT T)
  ELSEIF (CAR (NLSETQ (TEXTSTREAM OUTSTREAM)))
    THEN (SETQ OUTSTREAM (TEXTSTREAM OUTSTREAM))
  ELSE (RESETSAVE [SETQ OUTSTREAM (OPENSTREAM (IF EXTENSION
    THEN (PACKFILENAME 'BODY OUTSTREAM 'EXTENSION
      EXTENSION)
    ELSE OUTSTREAM)
    'OUTPUT
    'NEW
    (AND TEXTP ' ((TYPE TEXT]
    ' (PROGN (CLOSEF? OLDVALUE)
      (AND RESETSTATE (DELFILE OLDVALUE)
(IF (TEXTSTREAMP OUTSTREAM)
  THEN (SETQ TEDITSTREAM OUTSTREAM)
    (SETQ OUTSTREAM (OPENSTREAM '{NODIRCORE} 'BOTH))
  ELSE (PRINTOUT T "BinHex name: " (FULLNAME OUTSTREAM)
    T))
;;
;; Finally, decode the data fork
(FOR I FROM 1 TO DATALENGTH DO (BOUT OUTSTREAM (BINHEXBYTE)))
;; File now contains Word: CRC, Bytes: Resource Fork, Word CRC, which we ignore since we don't care about error checking or the
;; resource fork.
(CL:WHEN TEDITSTREAM
  (TEDIT.INCLUDE TEDITSTREAM OUTSTREAM)
  (SETQ OUTSTREAM TEDITSTREAM)))
OUTSTREAM])

```

(STREAMFROMASCII

[LAMBDA (INSTREAM OUTSTREAM STARTPOS ENDPOS) ; Edited 27-Oct-98 07:39 by rmk:

```

;; Default encoding: no conversion, except for EOL
(RESETLST
[IF (GETSTREAM INSTREAM 'INPUT T)
  ELSEIF (CAR (NLSETQ (TEXTSTREAM INSTREAM)))
    THEN (SETQ INSTREAM (TEXTSTREAM INSTREAM))
  ELSE (RESETSAVE (SETQ INSTREAM (OPENSTREAM INSTREAM 'INPUT))
    ' (PROGN (CLOSEF? OLDVALUE)
[IF (GETSTREAM OUTSTREAM 'OUTPUT T)
  ELSEIF (CAR (NLSETQ (TEXTSTREAM OUTSTREAM)))
    THEN (SETQ OUTSTREAM (TEXTSTREAM OUTSTREAM))
  ELSE (RESETSAVE [SETQ OUTSTREAM (OPENSTREAM OUTSTREAM 'OUTPUT 'NEW ' ((TYPE TEXT]
    ' (PROGN (CLOSEF? OLDVALUE)
      (AND RESETSTATE (DELFILE OLDVALUE)
(COPYCHARS INSTREAM OUTSTREAM (OR STARTPOS 0)
  ENDPOS))
OUTSTREAM])

```

(STREAMFROMENRICHEDTEXT

[LAMBDA (INSTREAM OUTSTREAM STARTPOS ENDPOS FROMCHARENCODING SUBTYPE)

; Edited 27-Dec-2000 10:58 by rmk:
; Edited 27-Dec-2000 10:58 by rmk:
; Edited 10-Dec-99 10:17 by rmk:
; Edited 16-Nov-99 18:26 by rmk:

```

;; Assumes that INSTREAM is a text file without NS run-encoding, hence does BIN's instead of READCCODE's and EOL conversion. This function
;; skips <> and </> tags, interpreting whichever ones it can. SUBTYPE is one of ENRICHED, HTML, NIL(=ENRICHED).
(CL:UNLESS SUBTYPE
  (SETQ SUBTYPE 'ENRICHED))
(RESETLST
[IF (GETSTREAM INSTREAM 'INPUT T)
  ELSEIF (CAR (NLSETQ (TEXTSTREAM INSTREAM)))
    THEN (SETQ INSTREAM (TEXTSTREAM INSTREAM))
  ELSE (RESETSAVE (SETQ INSTREAM (OPENSTREAM INSTREAM 'INPUT))
    ' (PROGN (CLOSEF? OLDVALUE)
[IF (GETSTREAM OUTSTREAM 'OUTPUT T)
  ELSEIF (CAR (NLSETQ (TEXTSTREAM OUTSTREAM)))
    THEN (SETQ OUTSTREAM (TEXTSTREAM OUTSTREAM))
  ELSE (RESETSAVE [SETQ OUTSTREAM (OPENSTREAM OUTSTREAM 'OUTPUT 'NEW ' ((TYPE TEXT]
    ' (PROGN (CLOSEF? OLDVALUE)
      (AND RESETSTATE (DELFILE OLDVALUE)
(CL:UNLESS STARTPOS (SETQ STARTPOS 0))
(SETFILEPTR INSTREAM STARTPOS)
(FOR NBINS C CLOSE STACK TAG PARAMS [TEDITSTREAM _ (IF (TEXTSTREAMP OUTSTREAM)
  THEN (PROG1 OUTSTREAM
    (SETQ OUTSTREAM (OPENSTREAM
      ' {NODIRCORE}
      ' BOTH))))

```

```

[RECODEMAP _ (MIMERECODEMAP (OR FROMCHARENCODING 'ISO8859/1)
FROM (- (OR ENDPPOS (GETEOFPTR INSTREAM))
STARTPOS)
BY -1 WHILE (IGE0 NBINS 1)
DO (SELCHAR0 (SETQ C (BIN INSTREAM))
(< (CL:WHEN (SETQ CLOSE (EQ (\PEEKBIN INSTREAM T)
(CharCODE /)))
(ADD NBINS -1)
(BIN INSTREAM))
[SETQ TAG (CONCATLIST (UNTIL [EQ (CHARCODE >)
(SETQ C (PROGN (ADD NBINS -1)
(BIN INSTREAM)]
COLLECT (U-CASE (CHARACTER C)
(IF CLOSE
THEN
;; Flush stack. Do we need to restore parameters or reinstall previous looks?
;; At least in HTML, open and closes are not related: <i> means switch to italics, </i> means nonitalics. But
;; 2 <i>'s can be followed by a single </i>. More like commands. Must be an rfc on this.
(WHILE STACK UNTIL (STREQUAL (POP STACK)
TAG))
ELSEIF (STREQUAL TAG "BR")
THEN (TERPRI OUTSTREAM)
ELSEIF (STREQUAL TAG "PARAM")
THEN (UNTIL (EQ (CHARCODE <)
(\PEEKBIN INSTREAM T))
DO (ADD NBINS -1)
(BIN INSTREAM))
ELSE (PUSH STACK TAG))
(& (IF (EQ SUBTYPE 'HTML)
THEN [SETQ TAG
(UNTIL [EQ (CHARCODE ;)
(SETQ C (PROGN (ADD NBINS -1)
(BIN INSTREAM)]
COLLECT C
FINALLY (RETURN (IF (LEQ (LENGTH $$VAL)
20)
THEN (PACK (FOR C IN $$VAL COLLECT (FCHARACTER C)))
ELSE (LET [(STR (ALLOCSTRING (LENGTH $$VAL)
(FOR I FROM 1 AS C IN $$VAL
DO (RPLCHARCODE STR I C))
STR]
(SELECTQ TAG
(amp (PRINTCCODE (CHARCODE &)
OUTSTREAM))
(nbsp (SPACES 1 OUTSTREAM))
(quot (PRINTCCODE (CHARCODE %')
OUTSTREAM))
(IF (AND (EQ (CHARCODE %#)
(CHCON1 TAG))
(FIXP (SUBATOM TAG 2 -1)))
THEN (PRINTCCODE (MIMEFASTRECODECHARCODE (SUBATOM TAG 2 -1)
RECODEMAP)
OUTSTREAM)
ELSE (PRINTOUT OUTSTREAM "&" TAG ";"))
ELSE (PRINTCCODE (IF RECODEMAP
THEN (MIMEFASTRECODECHARCODE C RECODEMAP)
ELSE C)
OUTSTREAM)))
(CR (IF (EQ (CHARCODE LINEFEED)
(\PEEKBIN INSTREAM T))
THEN (BIN INSTREAM)
(ADD NBINS -1))
(IF (EQ SUBTYPE 'HTML)
THEN (SPACES 1 OUTSTREAM)
ELSE (TERPRI OUTSTREAM)))
(LF (CL:UNLESS (EQ SUBTYPE 'HTML)
(IF (EQ SUBTYPE 'HTML)
THEN (SPACES 1 OUTSTREAM)
ELSE (TERPRI OUTSTREAM))))
(PRINTCCODE (IF RECODEMAP
THEN (MIMEFASTRECODECHARCODE C RECODEMAP)
ELSE C)
OUTSTREAM))
FINALLY (CL:WHEN TEDITSTREAM
(TEDIT.INCLUDE TEDITSTREAM OUTSTREAM)
(SETQ OUTSTREAM TEDITSTREAM))
OUTSTREAM) ]))

```

(STREAMFROMUUCODE

```

[LAMBDA (INSTREAM FILENAME STARTPOS ENDPPOS FROMCHARENCODING TEXTP)

```

; Edited 21-Jan-2001 20:03 by rmk:

```

(RESETLST
[LET (TEMP STR)
[RESETSAVE [SETQ TEMP (OPENSTREAM '/tmp/uudecodefile 'OUTPUT NIL '(TYPE TEXT)
' (PROGN (CLOSEF? OLDVALUE)
(DELFILE (FULLNAME OLDVALUE)

```

```

(SETFILEPTR INSTREAM STARTPOS)
(SKIPSEPCODES INSTREAM FILERDTBL)
(CL:UNLESS (EQUAL (CHARCODE (begin SPACE))
  (FOR I FROM 1 TO 6 COLLECT (READCCODE INSTREAM)))
  (ERROR "%begin%" line missing from uuencoded file"))
(PRINTOUT TEMP "begin ")
;; Copy mode characters
(BIND C DO (SETQ C (READCCODE INSTREAM))
  (PRINTCCODE C TEMP)
  REPEATUNTIL (EQ C (CHARCODE SPACE)))
;; Have to convert spaces in filename
(SETQ STR (CL:STRING-TRIM " " (CL:READ-LINE INSTREAM NIL "")))
(FOR I C FROM 1 WHILE (SETQ C (NTHCHARCODE STR I)) WHEN (EQ C (CHARCODE SPACE))
  DO (RPLCHARCODE STR I (CHARCODE _)))
(PRINTOUT TEMP STR T)
(COPYCHARS INSTREAM TEMP (GETFILEPTR INSTREAM)
  ENDPOS)
(CLOSEF TEMP)
(ShellCommand (CONCAT "cd /tmp; uudecode uudecodefile"))
(IF (EQ FILENAME T)
  THEN [COPYFILE (PACKFILENAME 'DIRECTORY '{dsk}/tmp 'BODY STR)
    T
    (AND TEXTP '((TYPE TEXT]
  ELSEIF (STREAMP FILENAME)
  THEN ;; Logic copied from DEMIMETEXT:
    (LET (CHARMAP)
      [SETQ TEMP (OPENSTREAM (PACKFILENAME 'DIRECTORY '{dsk}/tmp 'BODY STR)
        'INPUT NIL '((TYPE TEXT]
      (COND
        ((AND CHARSET (NEQ 'US-ASCII (U-CASE CHARSET)))
          (SETQ CHARMAP (MIMERECODEMAP CHARSET)))
        (UNTIL (EOFP TEMP) DO (PRINTCCODE (MIMEFASTRECODECHARCODE (READCCODE TEMP)
          CHARMAP)
          FILENAME)))
      (T (COPYCHARS TEMP FILENAME)))
      (CLOSEF TEMP))
    ELSE (RENAMEFILE (PACKFILENAME 'DIRECTORY '{dsk}/tmp 'BODY STR)
      (PACKFILENAME 'DIRECTORY (EVAL ATTACHMENTDIR)
        'BODY STR]))

```

(STREAMFROMQUOTEDPRINTABLE

```

[LAMBDA (INSTREAM OUTSTREAM STARTPOS ENDPOS FROMCHARENCODING) ; Edited 27-Dec-2000 10:59 by rmk:
; Edited 27-Dec-2000 10:59 by rmk:
; Edited 25-Jun-99 18:07 by rmk:
; Edited 25-Jun-99 18:07 by rmk:
; Edited 17-Sep-98 08:22 by rmk:

```

;; Assumes that INSTREAM is a text file, hence does EOL conversion

```

(RESETLST
  [IF (GETSTREAM INSTREAM 'INPUT T)
    ELSEIF (CAR (NLSETQ (TEXTSTREAM INSTREAM)))
    THEN (SETQ INSTREAM (TEXTSTREAM INSTREAM))
    ELSE (RESETSAVE (SETQ INSTREAM (OPENSTREAM INSTREAM 'INPUT))
      ' (PROGN (CLOSEF? OLDVALUE]
  [IF (GETSTREAM OUTSTREAM 'OUTPUT T)
    ELSEIF (CAR (NLSETQ (TEXTSTREAM OUTSTREAM)))
    THEN (SETQ OUTSTREAM (TEXTSTREAM OUTSTREAM))
    ELSE (RESETSAVE [SETQ OUTSTREAM (OPENSTREAM OUTSTREAM 'OUTPUT 'NEW '((TYPE TEXT]
      ' (PROGN (CLOSEF? OLDVALUE]
      (AND RESETSTATE (DELFILE OLDVALUE]
  (CL:UNLESS STARTPOS (SETQ STARTPOS 0))
  (SETFILEPTR INSTREAM STARTPOS)
  (FOR NBINS C [TEDITSTREAM _ (IF (TEXTSTREAMP OUTSTREAM)
    THEN (PROG1 OUTSTREAM
      (SETQ OUTSTREAM (OPENSTREAM '{NODIRCORE} 'BOTH)))]
    [RECODEMAP _ (MIMERECODEMAP (OR FROMCHARENCODING 'ISO8859/1)
  FROM (- (OR ENDPOS (GETEOFPTR INSTREAM))
    STARTPOS)
  TO 1 BY -1
  DO (SELCHARQ (SETQ C (BIN INSTREAM))
    (= (ADD NBINS -1) ; Special code
      [SELCHARQ (SETQ C (BIN INSTREAM))
        (CR ; CR(LF) or LF after = is flushed
          (LET ((POS (GETFILEPTR INSTREAM)))
            (IF (EQ (CHARCODE LINEFEED)
              (BIN INSTREAM))
              THEN ; Bin above should be VPEEKBIN, but that doesn't work for
                ; TEDIT streams.
                (ADD NBINS -1)
            ELSE (SETFILEPTR INSTREAM POS)))
      (LF)
      (PROGN (CL:WHEN [OR (AND (IGEQ C (CHARCODE 0))
        (ILEQ C (CHARCODE 9))

```



```

(1 (LRSH C2 4))
; NEXTBYTE has 4 left-adjusted bits, use 4 bits from current
; code, save 2 bits
(SETQ POS 2)
(PROG1 (LOGOR NEXTBYTE (LRSH C 2))
(SETQ NEXTBYTE (LOGAND 255 (LLSH C 6))))))
(2
; NEXTBYTE has 2 left-adjusted bits, use all 6 bits from current
; code, save nothing
(SETQ POS 0)
(PROG1 (LOGOR NEXTBYTE C)
(SETQ NEXTBYTE 0)))
NIL)

```

:: 144 is hex 90, the repetition mark

```

(IF REPFLAG
  THEN ;; C now contains the repetition factor
    (IF (EQ C 0)
      THEN (SETQ LASTBYTE 144)
           (RETURN 144))
      ELSE ;; We already put out the prefix byte, and now we are putting out one that
           ;; corresponds to the repeat-mark+number.
            (SETQ REPEAT (- C 2))
            (RETURN LASTBYTE))
    ELSEIF (EQ C 144)
      THEN (SETQ REPFLAG T)
           (GO GETBYTE)
    ELSE (SETQ LASTBYTE C)
         (RETURN C)))]
ELSE (CL:DECF REPEAT)
     (LASTBYTE))

```

```

(PUTPROPS BINHEXWORD MACRO (NIL (LOGOR (LLSH (BINHEXBYTE)
8)
(BINHEXBYTE))))

```

```

(PUTPROPS BINHEXLONG MACRO (NIL (LOGOR (LLSH (BINHEXWORD)
16)
(BINHEXWORD))))
)
)

```

```

(RPAQ? ATTACHMENTDIR ' (CONCAT "{dsk}/tilde/" (L-CASE (USERNAME))
"/attachments"))

```

```

(DECLARE%: DOEVAL@COMPILE DONTCOPY

```

```

(GLOBALVARS ATTACHMENTDIR)
)

```

:: MIMFASTRECODECHARCODE is a copy of FASTRECODECHARCODED on /project/dict/code/CHARACTERFNS

```

(DEFINEQ

```

(CACHEMIMECHARRECODEMAPS

```

[LAMBDA (CHARENCODINGS)

```

```

; Edited 27-Dec-2000 11:31 by rmk:
; Edited 27-Dec-2000 11:17 by rmk:
; Edited 27-Dec-2000 11:03 by rmk:
; Edited 27-Dec-2000 10:54 by rmk:
; Edited 27-Dec-2000 10:52 by rmk:

```

```

(CL:UNLESS (BOUNDP 'MIMERECODEMAPS)
(SETQ MIMERECODEMAPS NIL))

```

:: This depends on CHARACTERFNS and RECODEMAPS on /project/dict/code/. It creates the mapping arrays that are then cached on MIME.

```

(FOR C M INSIDE CHARENCODINGS WHEN (SETQ M (CHARRECODEMAP C CURRENTCHARENCODING))
DO (SETQ M (FASTRECODEMAP M T))
(PRINTOUT T C " " (CL:IF M
"cached"
"not found")
T)
(PUSH MIMERECODEMAPS (LIST (LIST C CURRENTCHARENCODING)
(FOR X IN MIMERECODEMAPS WHEN (EQ M (CADR X))
DO ;; If the same mapping array already exists, just put its name instead of a copy of the array,
;; to make the file smaller.
(RETURN (CAR X))
FINALLY (RETURN M])

```

(MIMFASTRECODECHARCODE

```

[LAMBDA (CODE MAPARRAY)

```

```

; Edited 27-Dec-2000 10:40 by rmk:
; Edited 7-Dec-95 14:29 by
; Edited 21-Jun-95 10:18 by rmk:

```

:: Recodes a singleton charcode. Leaves everything else unchanged. MAPARRAY can contain a list of possible sequences, or an entry can be a simple SMALLP recoding.

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