

File created: 24-Feb-2024 11:59:44 {WMEDLEY}<library>lafite>LAFITE-NEWSMAIL.;2

edit by: rmk

changes to: (VARS LAFITE-NEWSMAILCOMS NEWSMAILCOMS)  
(FNS \NSMAIL.NEW.CHECK)

previous date: 5-Sep-95 16:43:15 {WMEDLEY}<library>lafite>NEWSMAIL.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

(RPAQQ **LAFITE-NEWSMAILCOMS**

```
[(COURIERPROGRAMS NEW.MAILTRANSPORT NEW.INBASKET)
 (COMS                                     ; Courier type EnvelopeItem
 (FNS \NS.NEW.READ.ENVELOPE.ITEM \NS.NEW.WRITE.ENVELOPE.ITEM)
 (VARS \NSMAIL.NEW.ENVELOPE.ITEM.TYPES)
 (PROP COURIERDEF NEW.ENVELOPE.ITEM))
 (COMS                                     ; Courier type HeadingAttribute
 (FNS \NS.READ.HEADING.ATTRIBUTE \NS.WRITE.HEADING.ATTRIBUTE)
 (VARS \NSMAIL.HEADING.ATTRIBUTES)
 (PROP COURIERDEF HEADING.ATTRIBUTE))
 (COMS                                     ; Courier type RName
 (FNS \NSMAIL.READ.RNAME \NSMAIL.WRITE.RNAME \NSMAIL.RNAME.LENGTH)
 (PROP COURIERDEF NEW.RNAME)
 (FNS RNAME.TO.STRING X400.NAME.TO.STRING EQUAL.RNAMES))
 [COMS                                     ; Posting
 (FNS \NSMAIL.NEW.SEND.PARSE \NSMAIL.CHECK.ENUMERATION \NSMAIL.NEW.SEND
 \NSMAIL.NEW.INVALID.RECIPIENTS \NSMAIL.BUILD.HEADING \NSMAIL.POST.BODY.PART
 \NSMAIL.NEW.PREPARE.ATTACHMENT \NSMAIL.CHECK.ABORT \NSMAIL.NEW.FINDSERVER
 \NSMAIL.NEW.CHECKSERVER)
 (VARS NSMAIL.PARSEFIELDS (\LAPARSE.NSMAIL (LAFITE.MAKE.PARSE.TABLE NSMAIL.PARSEFIELDS)))
 (INITVARS (*NEWSMAIL-POST-AS-TEXTFILE* :TEST)
 (*NEWSMAIL-REPORT-TYPE* 'NON.DELIVERY.ONLY)
 (*NSMAIL-ALLOW-DL-RECIPIENTS* T)
 (*NSMAIL-RETURN-CONTENTS* T)
 (*NSMAIL-MIN-WILLINGNESS* 9)
 (*NSMAIL-TRACE-SERVERS*)
 (*NSMAIL-GENERATE-MESSAGE-ID*)
 (*NSMAIL-DISPLAY-TRANSPORT-ID*)
 (*NSMAIL-DISPLAY-POSTMARK*)
 (*NSMAIL-DISPLAY-ERRORS-TO*)
 (*NSMAIL-CACHE-TIMEOUT* (TIMES 1000 60 60))
 (\NSMAIL.MIN.VP.TYPE 4300)
 (\NSMAIL.MAX.VP.TYPE 5200)
 (\NSMAIL.NEW.SERVER.CACHE))
 [VARS (*NSMAIL-OP-VECTOR* '(NEWNS.POLLNEWMAIL NEWNS.OPENMAILBOX NEWNS.NEXTMESSAGE
 NEWNS.RETRIEVEMESSAGE NEWNS.CLOSEMAILBOX)
 (GLOBALVARS \NSMAIL.NEW.SERVER.CACHE \NSMAIL.MIN.VP.TYPE \NSMAIL.MAX.VP.TYPE)
 (P (CL:PROCLAIM '(CL:SPECIAL *NEWSMAIL-POST-AS-TEXTFILE* *NEWSMAIL-REPORT-TYPE*
 *NSMAIL-ALLOW-DL-RECIPIENTS* *NSMAIL-RETURN-CONTENTS*
 *NSMAIL-MIN-WILLINGNESS* *NSMAIL-TRACE-SERVERS*
 *NSMAIL-GENERATE-MESSAGE-ID* *NSMAIL-DISPLAY-TRANSPORT-ID*
 *NSMAIL-DISPLAY-POSTMARK* *NSMAIL-DISPLAY-ERRORS-TO*
 *NSMAIL-CACHE-TIMEOUT*)
 (COMS                                     ; Retrieving
 (FNS \NSMAIL.NEW.AUTHENTICATE NEWNS.POLLNEWMAIL NEWNS.OPENMAILBOX \NSMAIL.NEW.CHECK
 NEWNS.NEXTMESSAGE NEWNS.RETRIEVEMESSAGE \NSMAIL.READ.BODY.PARTS \NSMAIL.COPY.IA5
 \NSMAIL.COPY.NSTEXTFILE \NSMAIL.READ.HEADING \NSMAIL.PARSE.ANNOTATION \NSMAIL.EMIT.ANNOTATION
 LA.TRIM.WHITESPACE \NSMAIL.READ.FORWARDING \NSMAIL.NEW.PRINT.HEADING \NSMAIL.NEW.PRINT.NAMES
 \NSMAIL.EMIT.FORWARDING \NSMAIL.GDATE \NSMAIL.TRANSLATE.IP.MESSAGEID \NSMAIL.MAYBE.QUOTE
 NULL.NSNAME \NSMAIL.HANDLE.DELIVERY.REPORT \NSMAIL.RECIPIENT.NAME NEW.INBASKET.CALL
 NEWNS.CLOSEMAILBOX \NSMAIL.NEW.LOGOFF)
 (VARS \NSMAIL.GOOD.BODY.PARTS \NSMAIL.DISCARDABLE.BODY.PARTS)
 (GLOBALVARS \NSMAIL.GOOD.BODY.PARTS \NSMAIL.DISCARDABLE.BODY.PARTS)
 (ALISTS (LAFITEMODELST NS))
 (FILES LAFITE-NSMAIL))
 (DECLARE%: EVAL@COMPILE DONTCOPY (LOCALVARS . T)
 (RECORDS FORWARD)
 (MACROS \NSMAIL.BODY.PART.TYPE)
 (GLOBALVARS \NSMAIL.BODY.PART.TYPES \NSMAIL.HEADING.ATTRIBUTES)
 [P (CL:PROCLAIM '(CL:SPECIAL *RETRIEVAL-ERROR*]
 (FILES (SOURCE)
 LAFITE-DECLS)
 (FILES (LOADCOMP)
 LAFITE-NSMAIL ATBL)
                                     ; ATBL has \COMPUTED.FORM macro.
 (CONSTANTS * \NSMAIL.CONTENTS.TYPES)
                                     ; This one we need at run time also
 DOCOPY
 (VARS \NSMAIL.BODY.PART.TYPES))
 (DECLARE%: DONTEVAL@LOAD DNEVAL@COMPILE DONTCOPY COMPILEVARS (ADDVARS (NLAMA)
 (NLAML)
 (LAMA NEW.INBASKET.CALL])
```

(COURIERPROGRAM NEW.MAILTRANSPORT (17 5)

TYPES

```

[(CREDENTIALS (AUTHENTICATION . CREDENTIALS))
 (VERIFIER (AUTHENTICATION . VERIFIER))
 (SESSION (RECORD (TOKEN (ARRAY 2 UNSPECIFIED))
 (VERIFIER VERIFIER)))
 (ENVELOPE.ITEM.TYPE LONGCARDINAL)
 (ENVELOPE (SEQUENCE NEW.ENVELOPE.ITEM))
 (INVALID.NAME (RECORD (ID CARDINAL)
 (REASON INVALID.REASON)))
 (INVALID.NAME.LIST (SEQUENCE INVALID.NAME))
 (INVALID.REASON (ENUMERATION (NoSuchRecipient 0)
 (NoMailboxForRecipient 1)
 (IllegalName 2)
 (NoDlsAllowed 3)
 (ReportNotAllowed 4)))
 (NAME NSNAME)
 (RNAME NEW.RNAME ; (choice (xns 0 name) (gateway 1 gateway.name))
 )
 (RNAME.LIST (SEQUENCE RNAME))
 [GATEWAY.NAME (RECORD (COUNTRY STRING)
 (ADMIN.DOMAIN STRING)
 (PRIVATE.DOMAIN STRING)
 (ORGANIZATION STRING)
 (ORGANIZATIONAL.UNITS (SEQUENCE STRING))
 (PERSONAL (CHOICE (WHOLE 0 STRING)
 (BROKEN 1 BROKEN.NAME)))
 (GATEWAY.SPECIFIC.INFORMATION (SEQUENCE X400.ATTRIBUTE]
 (BROKEN.NAME (RECORD (GIVEN STRING)
 (INITIALS STRING)
 (FAMILY STRING)
 (GENERATION STRING)))
 (X400.ATTRIBUTE (RECORD (TYPE STRING)
 (VALUE STRING)))
 (REPORT.TYPE (ENUMERATION (NONE 0)
 (NON.DELIVERY.ONLY 1)
 (ALL 2)))
 (RECIPIENT (RECORD (NAME RNAME)
 (RECIPIENT.ID CARDINAL)
 (REPORT REPORT.TYPE)))
 (RECIPIENT.LIST (SEQUENCE RECIPIENT))
 (WILLINGNESS (SEQUENCE WILLINGNESS.METRIC))
 (WILLINGNESS.METRIC CARDINAL)
 (BODY.PART.TYPE LONGCARDINAL)
 (CONTENTS.TYPE LONGCARDINAL)
 (MESSAGEID (ARRAY 5 UNSPECIFIED))
 [POSTING.DATA (RECORD (RECIPIENTS RECIPIENT.LIST)
 (CONTENTS.TYPE CONTENTS.TYPE)
 (CONTENTS.SIZE LONGCARDINAL)
 (BODY.PART.TYPES.SEQUENCE (SEQUENCE BODY.PART.TYPE]
 (POSTMARK (RECORD (POSTED.AT RNAME)
 (TIME TIME)))
 (TOC (SEQUENCE TOC.ITEM))
 (TOC.ITEM (RECORD (TYPE BODY.PART.TYPE)
 (SIZE LONGCARDINAL)))
 [REPORT (RECORD (ORIGINAL.ENVELOPE ENVELOPE)
 [FATE (CHOICE (DELIVERED 0 (ENUMERATION (CONTENTS.TRUNCATED 0)
 (NO.PROBLEM 1)))
 (NOT.DELIVERED 1 (RECORD (REASON NON.DELIVERY.REASON)
 (POSTMARK POSTMARK]
 (REPORT.TYPE (CHOICE (DLMEMBER 0 DLREPORT)
 (OTHER 1 OTHER.REPORT]
 [DLREPORT (RECORD (DLNAME RNAME)
 (INVALID.RECIPIENTS (SEQUENCE NON.DELIVERED.RECIPIENT]
 [OTHER.REPORT (RECORD (SUCCEEDED (SEQUENCE DELIVERED.RECIPIENT))
 (FAILED (SEQUENCE NON.DELIVERED.RECIPIENT]
 (DELIVERED.RECIPIENT (RECORD (RECIPIENT RECIPIENT)
 (WHEN TIME)))
 (NON.DELIVERED.RECIPIENT (RECORD (RECIPIENT RECIPIENT)
 (REASON NON.DELIVERY.REASON)))
 (NON.DELIVERY.REASON (ENUMERATION (NoSuchRecipient 0)
 (NoMailboxForRecipient 1)
 (IllegalName 2)
 (Timeout 3)
 (ReportNotAllowed 4)
 (MessageTooLong 5)
 (AmbiguousRName 6)
 (IllegalCharacters 7)
 (UnsupportedBodyParts 8)
 (UnsupportedContentsType 9)
 (TransientProblem 10)
 (ContentSyntaxError 11)
 (TooManyRecipients 12)
 (ProtocolViolation 13)
 (X400PragmaticConstraintViolation 14)
 (x400NoBilateralAgreement 15)
 (AccessRightsInsufficientForDL 16)

```

```

        (Other 17)))
(TRANSPORT.OPTIONS (RECORD (RETURN.OF.CONTENTIS BOOLEAN)
        (ALTERNATE.RECIPIENT.ALLOWED BOOLEAN)))
(PRIORITY (ENUMERATION (NonUrgent 0)
        (Normal 1)
        (Urgent 2)))
(CONVERTED.ITEM (ENUMERATION (IA5TextToTeletex 0)
        (TeletexToTelex 1)
        (TeletexToIA5Text 2)
        (TelexToTeletex 3)))
(IP.MESSAGEID (RECORD (ORIGINATOR RNAME)
        (UNIQUESTRING STRING)))
(AUTHENTICATION.LEVEL (ENUMERATION (Strong 0)
        (Simple 1)
        (Foreign 2)))
[FORWARDED.MESSAGE.INFO (RECORD (ENVELOPE ENVELOPE)
        (HEADING (SEQUENCE HEADING.ATTRIBUTE))
        (ASSOCIATED.BODY.PARTS (SEQUENCE BODY.PART.INDEX))
        (INDEX.OF.PARENT.HEADING (CHOICE (NULL 0 (RECORD))
        (NESTED 1 CARDINAL))

(BODY.PART.INDEX CARDINAL)
(SERVICE.PROBLEM (ENUMERATION (CannotAuthenticate 0)
        (ServiceFull 1)
        (ServiceUnavailable 2)
        (MediumFull 3)))
(TRANSFER.PROBLEM (ENUMERATION (Aborted 0)))
(OTHER.PROBLEM (ENUMERATION (Can'tExpedite 0)
        (MalformedMessage 1)
        (IncorrectContentsSize 2)
        (LAST 65535)))
(SESSION.PROBLEM (ENUMERATION (InvalidHandle 0)
        (WrongState 1])

```

**PROCEDURES**

```

((SERVER.POLL 0 NIL RETURNS (WILLINGNESS (CLEARINGHOUSE . NETWORK.ADDRESS.LIST)
        NAME))
(BEGIN.POST 1 (POSTING.DATA BOOLEAN (SEQUENCE NEW.ENVELOPE.ITEM)
        CREDENTIALS VERIFIER)
        RETURNS
        (SESSION INVALID.NAME.LIST)
        REPORTS
        (AUTHENTICATION.ERROR INVALID.RECIPIENTS SERVICE.ERROR OTHER.ERROR))
(MAILPOLL 7 (NAME CREDENTIALS VERIFIER)
        RETURNS
        (BOOLEAN)
        REPORTS
        (ACCESS.ERROR AUTHENTICATION.ERROR SERVICE.ERROR OTHER.ERROR))
(POST.ONE.BODY.PART 8 (SESSION BODY.PART.TYPE BULK.DATA.SOURCE)
        RETURNS NIL REPORTS (AUTHENTICATION.ERROR SERVICE.ERROR OTHER.ERROR SESSION.ERROR TRANSFER.ERROR))
(END.POST 9 (SESSION BOOLEAN)
        RETURNS
        (MESSAGEID)
        REPORTS
        (AUTHENTICATION.ERROR SERVICE.ERROR OTHER.ERROR SESSION.ERROR TRANSFER.ERROR)))

```

**ERRORS**

```

((ACCESS.ERROR 0 (ACCESS.PROBLEM))
(AUTHENTICATION.ERROR 1 ((AUTHENTICATION . PROBLEM)))
(INVALID.RECIPIENTS 3 (INVALID.NAME.LIST))
(SERVICE.ERROR 4 (SERVICE.PROBLEM))
(TRANSFER.ERROR 5 (TRANSFER.PROBLEM))
(OTHER.ERROR 6 (OTHER.PROBLEM))
(SESSION.ERROR 7 (SESSION.PROBLEM)))

```

(COURIERPROGRAM **NEW.INBASKET** (18 2)

**INHERITS**

(NEW.MAILTRANSPORT)

**TYPES**

```

[(CREDENTIALS (AUTHENTICATION . CREDENTIALS))
(VERIFIER (AUTHENTICATION . VERIFIER))
(NAME NSNAME)
(INDEX LONGCARDINAL)
(RANGE (RECORD (LOW INDEX)
        (HIGH INDEX)))
[MESSAGE.STATUS (RECORD (USER.DEFINED.STATUS CARDINAL)
        (EXISTENCE.OF.MESSAGE (ENUMERATION (NEW 0)
        (KNOWN 1]

(BODY.PART.SEQUENCE (SEQUENCE BODY.PART.INDEX))
(BODY.PART.STATUS (SEQUENCE BOOLEAN))
[BODY.PART.STATUS.CHANGE (RECORD (BODY.PART.INDEX BODY.PART.INDEX)
        (DELETABLE (ENUMERATION (TRUE 0)
        (NOCHANGE 1]
        (BODY.PART.STATUS.CHANGE.SEQUENCE (SEQUENCE BODY.PART.STATUS.CHANGE))
(STATUS (RECORD (MESSAGE.STATUS MESSAGE.STATUS)
        (BODY.PART.STATUS BODY.PART.STATUS)))
(SESSION (RECORD (TOKEN (ARRAY 2 UNSPECIFIED))
        (VERIFIER VERIFIER)))
(ANCHOR (ARRAY 5 UNSPECIFIED))
(STATE (RECORD (NEW CARDINAL)

```

```

(TOTAL CARDINAL)))
(WHICH.MESSAGE (ENUMERATION (THIS 0)
(NEXT 1)))
(ACCESS.PROBLEM (ENUMERATION (AccessRightsInsufficient 0)
(AccessRightsIndeterminate 1)
(NoSuchInbasket 2)
(InbasketIndeterminate 3)
(WrongService 4)))
(CONNECTION.PROBLEM (FILING . CONNECTION.PROBLEM))
(SERVICE.PROBLEM (ENUMERATION (CannotAuthenticate 0)
(ServiceFull 1)
(ServiceUnavailable 2)))
(TRANSFER.PROBLEM (ENUMERATION (Aborted 0)))
(SESSION.PROBLEM (ENUMERATION (TokenInvalid 0)))
(OTHER.PROBLEM (ENUMERATION (USE.COURIER 0)
(MalformedMessage 1)
(InvalidOperation 2)
(LAST 65535)))
(INDEX.PROBLEM (ENUMERATION (InvalidIndex 0)
(InvalidBodyPartIndex 1)

```

**PROCEDURES**

```

((LOGON 5 (NAME CREDENTIALS VERIFIER)
RETURNS
(SESSION STATE ANCHOR)
REPORTS
(ACCESS.ERROR AUTHENTICATION.ERROR INBASKET.IN.USE SERVICE.ERROR OTHER.ERROR))
(LOGOFF 4 (SESSION)
RETURNS NIL REPORTS (AUTHENTICATION.ERROR SESSION.ERROR OTHER.ERROR))
(MAILPOLL 7 (NAME CREDENTIALS VERIFIER)
RETURNS
(STATE)
REPORTS
(ACCESS.ERROR AUTHENTICATION.ERROR SERVICE.ERROR OTHER.ERROR))
(MAILCHECK 6 (SESSION)
RETURNS
(STATE)
REPORTS
(AUTHENTICATION.ERROR SESSION.ERROR SERVICE.ERROR OTHER.ERROR))
(RETRIEVE.ENVELOPES 2 (INDEX WHICH.MESSAGE SESSION)
RETURNS
(ENVELOPE STATUS INDEX))
(RETRIEVE.BODY.PARTS 8 (INDEX BODY.PART.SEQUENCE BULK.DATA.SINK SESSION)
RETURNS NIL REPORTS (AUTHENTICATION.ERROR INDEX.ERROR SESSION.ERROR SERVICE.ERROR OTHER.ERROR
TRANSFER.ERROR))
(CHANGE.MESSAGE.STATUS 0 (RANGE BOOLEAN CARDINAL SESSION)
RETURNS NIL REPORTS (AUTHENTICATION.ERROR INDEX.ERROR SESSION.ERROR SERVICE.ERROR OTHER.ERROR))
(CHANGE.BODY.PARTS.STATUS 3 (INDEX BODY.PART.STATUS.CHANGE.SEQUENCE SESSION)
RETURNS
(BOOLEAN)
REPORTS
(AUTHENTICATION.ERROR INDEX.ERROR SESSION.ERROR SERVICE.ERROR OTHER.ERROR))
(DELETE 1 (RANGE SESSION)
RETURNS NIL REPORTS (AUTHENTICATION.ERROR SESSION.ERROR SERVICE.ERROR OTHER.ERROR))
(GET.SIZE 10 (NAME CREDENTIALS VERIFIER)
RETURNS
(LONGCARDINAL)
REPORTS
(AUTHENTICATION.ERROR ACCESS.ERROR SERVICE.ERROR OTHER.ERROR)))

```

**ERRORS**

```

((ACCESS.ERROR 0 (ACCESS.PROBLEM))
(AUTHENTICATION.ERROR 1 ((AUTHENTICATION . PROBLEM)))
(SESSION.ERROR 5 (SESSION.PROBLEM))
(SERVICE.ERROR 6 (SERVICE.PROBLEM))
(TRANSFER.ERROR 7 (TRANSFER.PROBLEM))
(OTHER.ERROR 8 (OTHER.PROBLEM))
(INDEX.ERROR 9 (INDEX.PROBLEM))
(INBASKET.IN.USE 10 (NAME)))

```

:: Courier type EnvelopeItem

(DEFINEQ

**(\NS.NEW.READ.ENVELOPE.ITEM**

[LAMBDA (STREAM PROGRAM TYPE)

; Edited 22-Nov-89 12:53 by bvm

:: Reads a mailing envelope attribute value pair from STREAM, returning a list of two elements, (TYPE VALUE); if the attribute is not a known attribute, TYPE is an integer and VALUE is a sequence of unspecified

```

(LET* [(TYPE (COURIER.READ STREAM NIL 'LONGCARDINAL))
(VALUETYPE (\COMPUTED.FORM '(CASE TYPE
(\,@ [for TRIPLE in \NSMAIL.NEW.ENVELOPE.ITEM.TYPES
collect '(, (CADR TRIPLE)
[SETQ TYPE ', (CAR TRIPLE)
', (CADDR TRIPLE)]))])
(LIST TYPE (if VALUETYPE
then (\WIN STREAM) ; Skip sequence count
(COURIER.READ STREAM PROGRAM VALUETYPE)
else (COURIER.READ.SEQUENCE STREAM NIL 'UNSPECIFIED))

```



```

    ( (NOT (FIXP TYPE))
      (for X in \NSMAIL.HEADING.ATTRIBUTES when (EQ (CAR X)
                                                    TYPE)
        do (SETQ TYPE (CADR X))
            (SETQ VALUETYPE (CADDR X))
            (RETURN)
        finally (ERROR "Unknown Heading Attribute Type" TYPE]
    (COURIER.WRITE STREAM TYPE NIL 'LONGCARDINAL)
    (COND
      (VALUETYPE (COURIER.WRITE.SEQUENCE.UNSPECIFIED STREAM VALUE PROGRAM VALUETYPE))
      (T (COURIER.WRITE.SEQUENCE STREAM VALUE PROGRAM 'UNSPECIFIED]))
  )

```

(RPAQQ \NSMAIL.HEADING.ATTRIBUTES

```

  ((Message-ID 1 IP.MESSAGEID)
   (Sender 2 RNAME)
   (From 3 RNAME.LIST)
   (To 4 RNAME.LIST)
   (cc 5 RNAME.LIST)
   (bcc 6 RNAME.LIST)
   (In-Reply-to 7 IP.MESSAGEID)
   (Obsoletes 8 (SEQUENCE IP.MESSAGEID))
   (References 9 (SEQUENCE IP.MESSAGEID))
   (Subject 10 STRING)
   (Expiration-Date 11 TIME)
   (Reply-By 12 TIME)
   (Reply-to 13 RNAME.LIST)
   (Importance 14 (ENUMERATION (Low 0)
                                (Normal 1)
                                (High 2)))
   (Sensitivity 15 (ENUMERATION (Personal 0)
                                (Private 1)
                                (CompanyConfidential 2)))
   (Auto-Forwarded 16 BOOLEAN)
   (Immutable 17 (RECORD))
   (Reply-Requested-of 18 RNAME.LIST)
   (TextAnnotation 19 STRING)
   (ForwardedHeadings 20 (SEQUENCE FORWARDED.MESSAGE.INFO))
   (newTextAnnotation 199 STRING)
   (BodyOffset 198 LONGCARDINAL)
   (LispFormatting 4911 STRING))

```

(PUTPROPS HEADING.ATTRIBUTE COURIERDEF (\NS.READ.HEADING.ATTRIBUTE \NS.WRITE.HEADING.ATTRIBUTE))

:: Courier type RName

(DEFINEQ

(\NSMAIL.READ.RNAME

```

  [LAMBDA (STREAM PROGRAM TYPE) ; Edited 29-Nov-89 12:53 by bvm
    ;; Special code to read newmailtransport.rname, whose definition is (choice (xns 0 name) (gateway 1 gateway.name)). The xns name we return as
    ;; an NSNAME object, all other types as if they had been read as the definition reads.
    (LET ((CHOICE (\WIN STREAM)))
      (CASE CHOICE
        (0 (COURIER.READ.NSNAME STREAM PROGRAM 'NSNAME))
        (1 (LIST 'GATEWAY (COURIER.READ STREAM PROGRAM 'GATEWAY.NAME)))
        (T (ERROR "Not a recognized type of RNAME" CHOICE))))))

```

(\NSMAIL.WRITE.RNAME

```

  [LAMBDA (STREAM ITEM PROGRAM TYPE) ; Edited 29-Nov-89 12:52 by bvm
    ;; Special code to write newmailtransport.rname. ITEM can be an NSNAME or a list (GATEWAY gatewayname).
    (if (TYPEP ITEM 'NSNAME)
      then (\WOUT STREAM 0)
      (COURIER.WRITE.NSNAME STREAM ITEM PROGRAM 'NSNAME)
    elseif (EQ (CAR (LISTP ITEM))
              'GATEWAY)
      then (\WOUT STREAM 1)
      (COURIER.WRITE STREAM (CADR ITEM)
                           PROGRAM
                           'GATEWAY.NAME)
    else (ERROR "ARG not RNAME" ITEM])

```

(\NSMAIL.RNAME.LENGTH

```

  [LAMBDA (ITEM PROGRAM TYPE) ; Edited 29-Nov-89 21:22 by bvm
    (+ 1 (if (TYPEP ITEM 'NSNAME)
      then (COURIER.NSNAME.LENGTH ITEM PROGRAM 'NSNAME)
      elseif (EQ (CAR (LISTP ITEM))
                 'GATEWAY)
      then (COURIER.REP.LENGTH (CADR ITEM)
                               PROGRAM
                               'GATEWAY.NAME)
      else (ERROR "ARG not RNAME" ITEM])

```

```
)
(PUTPROPS NEW.RNAME COURIERDEF (\NSMAIL.READ.RNAME \NSMAIL.WRITE.RNAME \NSMAIL.RNAME.LENGTH))
```

(DEFINEQ

**(RNAME.TO.STRING**

```
[LAMBDA (NAME FULLFLG) ; Edited 4-Apr-90 17:26 by bvm
  (CL:ETYPESCASE NAME
   (NSNAME (NSNAME.TO.STRING NAME FULLFLG))
   (LIST (X400.NAME.TO.STRING NAME))))]
```

**(X400.NAME.TO.STRING**

```
[LAMBDA (NAME) ; Edited 4-Apr-90 17:27 by bvm
  (LET ((SLASH "/" )
        TMP)
    (if (NEQ (CAR NAME)
            'GATEWAY)
        then (ERROR "ARG NOT X400 NAME" NAME)
        else (SETQ NAME (CADR NAME)))
    (CONCATLIST `(. SLASH . (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT . GATEWAY.NAME)
                                                            COUNTRY of NAME))
                                (LIST "C=" TMP SLASH))
                ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT . GATEWAY.NAME)
                                                            ADMIN.DOMAIN of NAME))
                        (LIST "ADMD=" TMP SLASH))
                ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT . GATEWAY.NAME)
                                                            PRIVATE.DOMAIN of NAME))
                        (LIST "PRMD=" TMP SLASH))
                ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT . GATEWAY.NAME)
                                                            ORGANIZATION of NAME))
                        (LIST "O=" TMP SLASH))
                ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT . GATEWAY.NAME)
                                                            ORGANIZATIONAL.UNITS of NAME))
                        (LIST "OU=" TMP SLASH))
                ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT . GATEWAY.NAME)
                                                            PERSONAL of NAME))
                        (CASE (CAR TMP)
                            (WHOLE (LIST "PN=" (CADR TMP)
                                          SLASH))
                            (BROKEN [LET ((BROKEN (CADR TMP)))
                                         `(. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT
                                                                                   . BROKEN.NAME)
                                                                                   GIVEN of BROKEN))
                                               (LIST "G=" TMP SLASH))
                                               ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT
                                                                                   . BROKEN.NAME)
                                                                                   INITIALS of BROKEN))
                                               (LIST "I=" TMP SLASH))
                                               ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT
                                                                                   . BROKEN.NAME)
                                                                                   FAMILY of BROKEN))
                                               (LIST "S=" TMP SLASH))
                                               ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT
                                                                                   . BROKEN.NAME)
                                                                                   GENERATION of BROKEN))
                                               (LIST "GQ=" TMP SLASH)))]
                                (LIST "GQ=" TMP SLASH)))]
                ,. (AND (SETQ TMP (COURIER.FETCH (NEW.MAILTRANSPORT . GATEWAY.NAME)
                                                            GATEWAY.SPECIFIC.INFORMATION of NAME))
                        (for PAIR in TMP join (LIST (CAR PAIR)
                                                    "="
                                                    (CADR PAIR)
                                                    SLASH]))]
```

**(EQUAL.RNAMES**

```
[LAMBDA (NAME1 NAME2) ; Edited 4-Apr-90 17:21 by bvm
  (if (type? NSNAME NAME1)
      then (AND (type? NSNAME NAME2)
                (EQUAL.CH.NAMES NAME1 NAME2))
      else (EQUAL NAME1 NAME2))]
```

:: Posting

(DEFINEQ

**(\NSMAIL.NEW.SEND.PARSE**

```
[LAMBDA (MSG EDITORWINDOW) ; Edited 6-Aug-93 16:40 by bvm
  (PROG ((SENDER (fetch (LAFITEMODEDATA UNPACKEDUSERNAME) of *LAFITE-MODE-DATA*))
         RECIPIENTS MSGFIELDS FORMATTEDP HEADREOF INTERESTINGFIELDS SUBJECT ATTACHMENT)
    (OR (SETQ MSGFIELDS (\LAFITE.PREPARE.SEND MSG EDITORWINDOW \LAPARSE.NSMAIL))
        (RETURN))
    [COND
```

```

(EQ (CAAR MSGFIELDS)
'EOF)
(SETQ HEADEREEOF (CADR (pop MSGFIELDS]
(for PAIR in MSGFIELDS
do (SELECTQ (CAR PAIR)
((To cc From Reply-to)
(push INTERESTINGFIELDS (RPLACD PAIR (\NSMAIL.PARSE (CDR PAIR)
SENDER EDITORWINDOW)))
(SELECTQ (CAR PAIR)
((To cc)
[LET [(EXPANDED (for NAME in (CDR PAIR)
join (if (CL:STRING= (fetch NSDOMAIN of NAME)
";")
then
; DL syntax
(\NSMAIL.EXPAND.DL (fetch NSOBJECT of NAME)
SENDER EDITORWINDOW)
else (LIST NAME]
(SETQ RECIPIENTS (COND
(RECIPIENTS (NS.REMOVEDUPLICATES (APPEND EXPANDED
RECIPIENTS)))
(T EXPANDED)])
; Might want to check validity of From and Reply-to
(PROGN
NIL)))
((Subject In-Reply-to)
(LET [(STR (COND
(CDDR PAIR) ; Make one string
(CONCATLIST (CDR PAIR)))
(T (CADR PAIR]
[COND
(EQ (CAR PAIR)
'Subject)
(SETQ SUBJECT STR))
(T
; format is different in new protocol
(SETQ STR (COURIER.CREATE (NEW.MAILTRANSPORT . IP.MESSAGEID)
ORIGINATOR _
(create NSNAME
NSOBJECT _ ""
NSDOMAIN _ ""
NSORGANIZATION _ "")
UNIQUESTRING _ STR]
(RPLACD PAIR STR)
(push INTERESTINGFIELDS PAIR)))
(Date (\SENDMESSAGEFAIL EDITORWINDOW "User-supplied Date not allowed"))
(Sender (\SENDMESSAGEFAIL EDITORWINDOW "User-supplied Sender not allowed"))
(Format (SETQ FORMATTEDP (SELECTQ (CADR PAIR)
(TEDIT T)
NIL)))
((REFERENCE ATTACHMENT)
(if ATTACHMENT
then (\SENDMESSAGEFAIL EDITORWINDOW "Can only send a single attachment"))
(SETQ ATTACHMENT T)
(push INTERESTINGFIELDS PAIR))
((Importance Sensitivity Immutable)
(if (AND (> (NCHARS (CADR PAIR))
0)
(SETQ PAIR (\NSMAIL.CHECK.ENUMERATION PAIR EDITORWINDOW)))
then (push INTERESTINGFIELDS PAIR)))
NIL)
(COND
(NULL RECIPIENTS)
(\SENDMESSAGEFAIL EDITORWINDOW "No recipients!"))
(OR FORMATTEDP (SELECTQ (\LAFITE.CHOOSE.MSG.FORMAT MSG NIL EDITORWINDOW)
(TEDIT (SETQ FORMATTEDP T))
NIL) ; Aborted
(RETURN))
NIL)
(RETURN (create NSMAILPARSE
NSPSUBJECT _ SUBJECT
NSPRECIPIENTS _ RECIPIENTS
NSPSTART _ HEADEREEOF
NSPFIELDS _ INTERESTINGFIELDS
NSPFORMATTED _ FORMATTEDP]))

```

**(\NSMAIL.CHECK.ENUMERATION**

; Edited 24-Jan-90 16:35 by bvm

```

[LAMBDA (PAIR EDITORWINDOW)
(LET* ((FIELD (CAR PAIR))
(VALUE (CADR PAIR))
(EXPECTED (CADDR (ASSOC FIELD \NSMAIL.HEADING.ATTRIBUTES)))
FOUND)
(if (EQ (CAR (LISTP EXPECTED))
'ENUMERATION)
then (SETQ EXPECTED (CDR EXPECTED))
[if (SETQ FOUND (CL:ASSOC VALUE EXPECTED :TEST 'STRING-EQUAL))
then (CONS FIELD (CAR FOUND))
else (\SENDMESSAGEFAIL EDITORWINDOW (CL:FORMAT

```



NIL "Field '~A' not understood--expected one of ~A"  
FIELD (CONCATLIST  
(CDR (for v in EXPECTED  
join (LIST ", " (CAR V)

elseif (OR (STRING-EQUAL VALUE "True")  
(STRING-EQUAL VALUE "Yes")  
(STRING-EQUAL VALUE T))  
then ; Good. Value is actually irrelevant  
PAIR  
elseif (OR (STRING-EQUAL VALUE "False")  
(STRING-EQUAL VALUE "No"))  
then ; Good, omit attribute  
NIL  
else (\SENDMESSAGEFAIL EDITORWINDOW "Field 'Immutable' not understood--expected True or False"])

(\NSMAIL.NEW.SEND

[LAMBDA (MSG PARSE EDITORWINDOW ABORTWINDOW) ; Edited 6-Aug-93 15:20 by bvm

::: MSG is the entire text of the message -- RECIPIENTS is a parsed list of recipients

(RESETLST  
(PROG\* ((PWINDOW (AND EDITORWINDOW (GETPROMPTWINDOW EDITORWINDOW)))  
(RECIPIENTS (fetch NSPRECIPIENTS of PARSE))  
(START (OR (fetch NSPSTART of PARSE)  
(GETEOFPTR MSG)))  
(MSGFIELDS (fetch NSPFIELDS of PARSE))  
(CREDENTIALS (fetch (LAFITEMODEDATA CREDENTIALS) of \*LAFITE-MODE-DATA\*))  
(ALLOW.DL.RECIPIENTS (OR \*NSMAIL-ALLOW-DL-RECIPIENTS\* (ASSOC 'Reply-to MSGFIELDS)))  
USENSTEXTFILE FORMATSTREAM REFERENCE ATTACHMENT ATTACHMENT-TYPE ATTACHMENT-STREAM  
ATTACHED-ATTRIBUTES BODYLENGTH COURIERSTREAM MAILDROP RESULTS HEADING SESSION ESTIMATED-SIZE  
PART-TYPES)

::: Some day maybe try using the ALLOW.DL.RECIPIENTS feature. Unfortunately, there are too many users in XNS who look like groups to  
::: the mail system for this to be very interesting.

[COND  
(PWINDOW ; Make sure prompt window will expand as needed. Probably  
; generic sendmessage should do this  
(RESETSAVE (TTYDISPLAYSTREAM PWINDOW))  
(RESETSAVE (LINELENGTH T])  
(COND  
((AND (fetch NSPFORMATTED of PARSE)  
(TEDIT.FORMATTEDFILEP MSG)) ; Message is formatted, so get info. Have to exclude header,  
; since it is not sent.  
(SETQ MSG (COPYTEXTSTREAM MSG))  
(TEDIT.DELETE MSG 1 START)  
(SETQ FORMATSTREAM (COERCETEXTOBJ MSG 'SPLIT))  
(CLOSEF MSG) ; Get (body . formatting)  
; We're thru with this new textstream, let it clean up after itself.  
(SETQ MSG (OPENSTREAM (CAR FORMATSTREAM)  
' INPUT))  
(SETQ FORMATSTREAM (OPENSTREAM (CDR FORMATSTREAM)  
' INPUT))  
(SETQ START 0))  
((AND (TEXTSTREAMP MSG)  
(TEDIT.FORMATTEDFILEP MSG)) ; Message has formatting, but caller asked to send it as plain  
; text. Carefully coerce it, since TEDIT ns chars and image  
; objects don't pass thru COPYBYTES very well  
(SETQ MSG (LAFITE.MAKE.PLAIN.TEXTSTREAM MSG START))  
(SETQ START 0)))  
(SETQ BODYLENGTH (- (GETEOFPTR MSG)  
START))  
[if FORMATSTREAM  
then ; Formatted messages can only go as text files for now, or else  
; old clients can't receive them  
(SETQ USENSTEXTFILE T)  
else (CASE \*NEWSMAIL-POST-AS-TEXTFILE\*  
(NIL) ; Always send as note  
)  
( (:TEST) ; Send as note only if short enough (the default)  
(if (> BODYLENGTH \*NSMAIL-MAX-NOTE-LENGTH\*)  
then (SETQ USENSTEXTFILE T)))  
(T (SETQ USENSTEXTFILE T)))]  
(SETQ REFERENCE (ASSOC 'REFERENCE MSGFIELDS))  
(SETQ ATTACHMENT (ASSOC 'ATTACHMENT MSGFIELDS))  
(if (OR REFERENCE ATTACHMENT)  
then (if ATTACHMENT  
then ; We're going to send a whole file along with the message  
(SETQ MSGFIELDS (DREMOVE ATTACHMENT MSGFIELDS))  
(SETQ ATTACHMENT (\NSMAIL.NEW.PREPARE.ATTACHMENT (CADR ATTACHMENT)  
EDITORWINDOW))  
(SETQ ATTACHMENT-STREAM (CAR ATTACHMENT))  
(SETQ ATTACHED-ATTRIBUTES (CDDR ATTACHMENT))  
(SETQ ATTACHMENT-TYPE (CADR ATTACHMENT))  
[SETQ ATTACHMENT-TYPE (CASE (\TYPE.FROM.FILETYPE ATTACHMENT-TYPE)  
(INTERPRESS (if NIL  
then

; This way doesn't go thru the backward incompatibility module ; correctly.

(\NSMAIL.BODY.PART.TYPE INTERPRESS) else (\NSMAIL.BODY.PART.TYPE VPDOCUMENT)

(DIRECTORY (\NSMAIL.BODY.PART.TYPE VPFOLDER)) (TEXT (\NSMAIL.BODY.PART.TYPE NSTEXTFILE)) (T (if (AND (>= ATTACHMENT-TYPE \NSMAIL.MIN.VP.TYPE) (<= ATTACHMENT-TYPE \NSMAIL.MAX.VP.TYPE)))

then ; I assume everything in this range is a vpdocument (\NSMAIL.BODY.PART.TYPE VPDOCUMENT) else (\NSMAIL.BODY.PART.TYPE OTHERNSFILE)))]

elseif REFERENCE then ; Just a Vp reference. This is a null file with a special attribute ; giving the file name, etc

(SETQ MSGFIELDS (DREMOVE REFERENCE MSGFIELDS)) [SETQ ATTACHED-ATTRIBUTES (LIST (CONSTANT (CONS 'BodyType \NSMAIL.REFERENCE.BODYTYPE)) (RPLACD REFERENCE (\NSMAIL.PARSE.REFERENCE (CADR REFERENCE) EDITORWINDOW]

(SETQ ATTACHMENT-TYPE (\NSMAIL.BODY.PART.TYPE VPDOCUMENT))) (SETQ PART-TYPES (LIST ATTACHMENT-TYPE))

(if USENSTEXTFILE then (push PART-TYPES (\NSMAIL.BODY.PART.TYPE NSTEXTFILE)) elseif (> BODYLENGTH 0) then (push PART-TYPES (\NSMAIL.BODY.PART.TYPE MULTINATIONAL.NOTE)))

(SETQ HEADING (\NSMAIL.BUILD.HEADING MSGFIELDS (fetch (LAFITEMODEDATA UNPACKEDUSERNAME) of \*LAFITE-MODE-DATA\*)))

[SETQ RECIPIENTS (for R in RECIPIENTS as I from 1 collect (COURIER.CREATE (NEW.MAILTRANSPORT . RECIPIENT) NAME \_ R RECIPIENT.ID \_ I REPORT \_ (OR \*NEWSMAIL-REPORT-TYPE\* 'NON.DELIVERY.ONLY)

[COND (PWINDOW (CLEARW PWINDOW) (LET [(TYPE (if REFERENCE then [\TYPE.FROM.FILETYPE (CADR (ASSOC 'TYPE (CDR REFERENCE] elseif ATTACHMENT-TYPE then (for PAIR in \NSMAIL.BODY.PART.TYPES when (EQL ATTACHMENT-TYPE (CADR PAIR)) do (RETURN (CAR PAIR] (CL:FORMAT PWINDOW "Delivering ~:[~;formatted ~]~@[with ~A ~]~@[~A ~]to ~D recipient~:P" FORMATSTREAM (AND TYPE (CL:STRING-CAPITALIZE (MKSTRING TYPE)) )

(COND (REFERENCE "reference") (ATTACHMENT "attachment")) (LENGTH RECIPIENTS]

[SETQ ESTIMATED-SIZE (PROGN ;; @##!@ protocol demands that you tell the size of the message almost exactly. Specifically, size ;; estimate must not be too large (!), and not be more than 5000 bytes too small. That almost means ;; you have to buffer the whole message before you start. We are lazy here and hope that ;; serialization overhead and file server size estimates don't screw us up.

(+ (GETEOFPTR HEADING) BODYLENGTH (if FORMATSTREAM then ; This plus a few more bytes of serialized file encoding (GETEOFPTR FORMATSTREAM) else 0) (if ATTACHMENT-STREAM then ; This is an underestimate in the case of a non-ns file, but that's ; the safe direction, and it's only by the small length of the ; attributes (GETEOFPTR ATTACHMENT-STREAM) else 0]

[COND ((NULL (SETQ MAILDROP (\NSMAIL.NEW.FINDSERVER ESTIMATED-SIZE))) (RETURN (\LAFITE.SEND.FAIL EDITORWINDOW "Couldn't find a mail drop"]) (to 3 until (SETQ COURIERSTREAM (COURIER.OPEN MAILDROP NIL T 'NSMAILER)) do ; loop 3 times trying to start this send (DISMISS 1000))

[COND ((NULL COURIERSTREAM) (RETURN (\LAFITE.SEND.FAIL EDITORWINDOW "Couldn't connect to a maildrop"]) (RESETSAVE NIL (LIST (FUNCTION \SPP.RESETCLOSE) COURIERSTREAM)) (AND PWINDOW (printout PWINDOW '|...|)) (SETQ RESULTS (COURIER.CALL COURIERSTREAM 'NEW.MAILTRANSPORT 'BEGIN.POST (COURIER.CREATE (NEW.MAILTRANSPORT . POSTING.DATA) RECIPIENTS \_ RECIPIENTS CONTENTS.TYPE \_ \CT.STANDARD.MESSAGE CONTENTS.SIZE \_ ESTIMATED-SIZE BODY.PART.TYPES.SEQUENCE \_ (CONS (\NSMAIL.BODY.PART.TYPE HEADING) PART-TYPES)) NIL ALLOW.DL.RECIPIENTS [AND \*NSMAIL-RETURN-CONTENTS\*

```

' ((TRANSPORT.OPTIONS (T T)
(CAR CREDENTIALS)
(CDR CREDENTIALS)
'RETURNERRORS))
[COND
  ((EQ (CAR (LISTP RESULTS))
'ERROR)
  (RETURN (\LAFITE.SEND.FAIL EDITORWINDOW (SELECTQ (CADR RESULTS)
(INVALID.RECIPIENTS
  (\NSMAIL.NEW.INVALID.RECIPIENTS (CADDR
RESULTS
)
RECIPIENTS))
(MKSTRING (CDR RESULTS))

;; RESULTS = (session invalid-recipients)
(SETQ SESSION (CAR RESULTS))
[if (SETQ RESULTS (CADR RESULTS))
  then
    ; Some were invalid. I think we don't get any here because we
    ; didn't say to post anyway.
    (RETURN (\LAFITE.SEND.FAIL EDITORWINDOW (\NSMAIL.NEW.INVALID.RECIPIENTS RESULTS RECIPIENTS
]

;; Now post body parts
(\NSMAIL.CHECK.ABORT ABORTWINDOW COURIERSTREAM SESSION)
(\NSMAIL.POST.BODY.PART COURIERSTREAM SESSION (\NSMAIL.BODY.PART.TYPE HEADING)
  HEADING 0 EDITORWINDOW)
(\NSMAIL.CHECK.ABORT ABORTWINDOW COURIERSTREAM SESSION)
[if USENSTEXTFILE
  then [\NSMAIL.POST.BODY.PART COURIERSTREAM SESSION (\NSMAIL.BODY.PART.TYPE NSTEXTFILE)
    MSG START EDITORWINDOW `((BodyType ,@\NSMAIL.TEXT.BODYTYPE)
      ,@(AND FORMATSTREAM `(LispFormatting ,@FORMATSTREAM)
    )
  elseif (> BODYLENGTH 0)
  then (\NSMAIL.POST.BODY.PART COURIERSTREAM SESSION (\NSMAIL.BODY.PART.TYPE MULTINATIONAL.NOTE
    )
    MSG START EDITORWINDOW))
(\NSMAIL.CHECK.ABORT ABORTWINDOW COURIERSTREAM SESSION)
[if ATTACHMENT-TYPE
  then (\NSMAIL.POST.BODY.PART COURIERSTREAM SESSION ATTACHMENT-TYPE ATTACHMENT-STREAM NIL
    EDITORWINDOW ATTACHED-ATTRIBUTES)
  (\NSMAIL.CHECK.ABORT ABORTWINDOW COURIERSTREAM SESSION))
[if ABORTWINDOW
  then
    ; Too late to abort now
    (DELETEMENU (CAR (WINDOWPROP ABORTWINDOW 'MENU))
      NIL ABORTWINDOW)
  (SETQ RESULTS (COURIER.CALL COURIERSTREAM 'NEW.MAILTRANSPORT 'END.POST SESSION NIL 'RETURNERRORS)
  )
  [if (EQ (CAR (LISTP RESULTS))
'ERROR)
  then (RETURN (\LAFITE.SEND.FAIL EDITORWINDOW (MKSTRING (CDR RESULTS)
(AND NSMAILDEBUGFLG (printout PROMPTWINDOW T "EndPost results: " RESULTS))
(RETURN (LENGTH RECIPIENTS))))))

```

(\NSMAIL.NEW.INVALID.RECIPIENTS

[LAMBDA (INVALID.NAME.LIST RECIPIENTS) ; Edited 19-Dec-89 13:00 by bvm

;; INVALID.NAME.LIST = Sequence (id reason). id is 1-based.

```

[if (CDR INVALID.NAME.LIST)
  then (CONCAT "Invalid recipients: " (SUBSTRING (for PAIR in INVALID.NAME.LIST
    collect (LIST [COURIER.FETCH (NEW.MAILTRANSPORT
      . RECIPIENT)
      NAME of (CAR (NTH RECIPIENTS
        (CAR PAIR))
        (CADR PAIR)))
    2 -2))
  else (DESTRUCTURING-BIND (ID REASON)
    (CAR INVALID.NAME.LIST)
    (CONCAT (COURIER.FETCH (NEW.MAILTRANSPORT . RECIPIENT)
      NAME of (CAR (NTH RECIPIENTS ID)))
      " -- " REASON])

```

(\NSMAIL.BUILD.HEADING

[LAMBDA (MSGFIELDS SENDER) ; Edited 11-Jul-90 18:03 by bvm

;; Build a heading body part, which is a sequence of attribute. Return a stream

```

(LET ((S (OPENSTREAM "{nodircore}" 'BOTH))
  (COUNT 2))
  (SETFILEPTR S 2) ; Save space for the sequence count
  [COND
    ((ASSOC 'From MSGFIELDS) ; Identify actual sender (single name here)
    (\NS.WRITE.HEADING.ATTRIBUTE S (LIST 'Sender SENDER)
      'NEW.MAILTRANSPORT))
    (T ; Identify sender as the sole "From" name
    (\NS.WRITE.HEADING.ATTRIBUTE S (LIST 'From (LIST SENDER))
      'NEW.MAILTRANSPORT]

```

```

(for PAIR in MSGFIELDS do (\NS.WRITE.HEADING.ATTRIBUTE S (LIST (CAR PAIR)
                                                                (CDR PAIR))
                        'NEW.MAILTRANSPORT)
  (add COUNT 1))
(\NS.WRITE.HEADING.ATTRIBUTE S (LIST 'TextAnnotation (CONCAT "Date: " (DATE (DATEFORMAT TIME.ZONE
                                                                SPACES DAY.OF.WEEK))
                                                                LAFITEEOL))
  'NEW.MAILTRANSPORT) ; Send the Date with time zone, as Cedar does
(if *NSMAIL-GENERATE-MESSAGE-ID*
  then (\NS.WRITE.HEADING.ATTRIBUTE S [LIST 'Message-ID (COURIER.CREATE (NEW.MAILTRANSPORT
                                                                . IP.MESSAGEID)
                                                                ORIGINATOR _ (fetch UNPACKEDUSERNAME
                                                                of *LAFITE-MODE-DATA*)
                                                                UNIQUESTRING _ (DATE (DATEFORMAT
                                                                TIME.ZONE)]
                        'NEW.MAILTRANSPORT)
  (add COUNT 1))
  (SETFILEPTR S 0)
  (\WOUT S COUNT)
  S])

```

(\NSMAIL.POST.BODY.PART

```

[LAMBDA (COURIERSTREAM SESSION TYPE PARTSTREAM START EDITORWINDOW ATTRIBUTES)
  ; Edited 8-Mar-90 12:14 by bvm
  (LET [(RESULTS (COURIER.CALL COURIERSTREAM 'NEW.MAILTRANSPORT 'POST.ONE.BODY.PART SESSION TYPE
        [FUNCTION (LAMBDA (BULKSTREAM)
          (if ATTRIBUTES
            then
              ; Create a serialized file on the fly
              (COURIER.WRITE BULKSTREAM \SERIALIZED.FILE.VERSION NIL
                'LONGCARDINAL)
              ; version. Next comes Sequence Attribute
              (\WOUT BULKSTREAM (LENGTH ATTRIBUTES))
              [for PAIR in ATTRIBUTES
                do (if (EQ (CAR PAIR)
                  'LispFormatting)
                  then
                    ; Do this special so we don't have to cons an enormous string
                    (\NSMAIL.SEND.STREAM.AS.STRING (CDR PAIR)
                      BULKSTREAM 0 (\NSMAIL.ATTRIBUTE.TYPE
                        LispFormatting))
                  else (\NSMAIL.WRITE.ATTRIBUTE BULKSTREAM (CAR PAIR)
                      (CDR PAIR)
                    )
                )
              ;; Next comes StreamOfUnspecified, then lastBytelsSignificant
              (if PARTSTREAM
                then (COURIER.WRITE BULKSTREAM (
                  COURIER.WRITE.STREAM.UNSPECIFIED
                  BULKSTREAM PARTSTREAM
                  (OR START 0)
                  -1)
                  NIL
                  'BOOLEAN)
                else
                  ; no content
                  (\WOUT BULKSTREAM 1)
                  ; Last segment
                  (\WOUT BULKSTREAM 0)
                  ; Empty sequence
                  (\WOUT BULKSTREAM 1)
                  ; Last Byte is Significant = Byte Length is Even.
                  )
                )
              (\WOUT BULKSTREAM 0)
              ; no children
              ; PARTSTREAM is already in proper format, just send it
              (if START
                then (SETFILEPTR PARTSTREAM START))
              (COPYBYTES PARTSTREAM BULKSTREAM))
              ; return NIL so caller can see return value
              NIL]
        'RETURNERRORS]
  (if (EQ (CAR RESULTS)
    'ERROR)
    then (COURIER.CALL COURIERSTREAM 'NEW.MAILTRANSPORT 'END.POST SESSION T 'RETURNERRORS)
      ; Abort the post
      (\LAFITE.SEND.FAIL EDITORWINDOW (CL:FORMAT NIL "Failed to post ~A because: ~A"
        (CAR (find TYP in \NSMAIL.BODY.PART.TYPES
          suchthat (EQ (CADR TYP)
            TYPE))))
        (CDR RESULTS)))
    (ERROR!]))

```

(\NSMAIL.NEW.PREPARE.ATTACHMENT

```

[LAMBDA (FILE EDITORWINDOW) ; Edited 11-Nov-92 17:07 by bvm
  ;; Returns (stream type . attributes)
  (LET* ((HOST (UNPACKFILENAME.STRING FILE 'HOST))
    (SERIALIZED (STRPOS ":" HOST))

```

```

BODYTYPE)
(CL:MULTIPLE-VALUE-BIND (STREAM CONDITION)
 [IGNORE-ERRORS (if SERIALIZED
                  then (\NSMAIL.GETFILE (\GETDEVICEFROMHOSTNAME (MKATOM (U-CASE HOST)))
                  FILE
                  'SERIALIZE
                  'OLD NIL NIL T)
                  else (OPENSTREAM FILE 'INPUT)
(if (NULL STREAM)
    then (\LAFITE.SEND.FAIL EDITORWINDOW (OR CONDITION "Attachment not found.")
        (ERROR!))
[if SERIALIZED
    then ;; Have to copy to core in order to get the length remotely correct. Stupid protocol
        (LET [(COREFILE (OPENSTREAM '{NODIRCORE} 'BOTH)
              (COPYBYTES STREAM COREFILE)
              (PROG1 (LIST (OPENSTREAM (CLOSEF COREFILE)
                                  'INPUT)
                          (GETFILEINFO STREAM 'FILETYPE))
                    (CLOSEF STREAM)))
            else ; Not on an NS server, let's investigate the type
              (RETSAVE NIL (LIST (FUNCTION CLOSEF)
                                STREAM))
              (CASE [SETQ BODYTYPE (\FILETYPE.FROM.TYPE (GETFILEINFO STREAM 'TYPE)
                (NIL 0) ; Under specified
                (if (SETQ BODYTYPE (\NSMAIL.GUESS.FILE.TYPE (FULLNAME STREAM)))
                    then (SETQ BODYTYPE (\FILETYPE.FROM.TYPE BODYTYPE))
                    elseif (\SENDMESSAGE.MENUPROMPT EDITORWINDOW (\LAFITE.CREATE.MENU
                        ' ("Send as BINARY attachment" T)
                        ("Abort" NIL)
                        "Send attachment?")
                        "Warning: Type of attached file is unknown; most mail clients can't do
                        anything interesting with this."
                    then (SETQ BODYTYPE 0)
                    else (ERROR!)))]
              (LIST* STREAM BODYTYPE `((BodyType ,@BODYTYPE)
                                     (MODIFIED.ON ,@(GETFILEINFO STREAM 'ICREATIONDATE)]))

```

(NSMAIL.CHECK.ABORT

```

[LAMBDA (ABORTWINDOW COURIERSTREAM SESSION) ; Edited 28-Nov-89 15:06 by bvm
  ;; Abort a post if user has pressed Abort
  (COND
    ((AND ABORTWINDOW (WINDOWPROP ABORTWINDOW 'ABORT)) ; Abort the post
     (COURIER.CALL COURIERSTREAM 'NEW.MAILTRANSPORT 'END.POST SESSION T 'RETURNERRORS)
     (ERROR!))

```

(NSMAIL.NEW.FINDSERVER

```

[LAMBDA (ESTIMATED-SIZE) ; Edited 25-Jun-90 16:02 by bvm
  (PROG (INFO)
    [if [AND (CDR \NSMAIL.NEW.SERVER.CACHE)
            (NOT (TIMEREXPIRED? (CAR \NSMAIL.NEW.SERVER.CACHE)
                                ESTIMATED-SIZE))]
        then (if (SETQ INFO (find ADDR in (CDR \NSMAIL.NEW.SERVER.CACHE)
                                   suchthat (\NSMAIL.NEW.CHECKSERVER (COURIER.EXPEDITED.CALL ADDR
                                                                       \NSMAIL.SOCKET 'NEW.MAILTRANSPORT
                                                                       'SERVER.POLL
                                                                       'RETURNERRORS)
                                   ESTIMATED-SIZE)))
                then (RETURN INFO))
        else ;; Cache nonexistent or timed out, so refigure from scratch. We like to time out the cache periodically so that we don't permanently
              ;; latch on to some distant server when local ones are flaky.
              (SETQ \NSMAIL.NEW.SERVER.CACHE (LIST (SETUPTIMER *NSMAIL-CACHE-TIMEOUT* (CAR
                                                                                       \NSMAIL.NEW.SERVER.CACHE)
                                                                                       )
            ;; Ask around for a server
            (COND
              ((SETQ INFO (COURIER.BROADCAST.CALL \NSMAIL.SOCKET 'NEW.MAILTRANSPORT 'SERVER.POLL NIL
                [FUNCTION (LAMBDA (RESULT)
                          (\NSMAIL.NEW.CHECKSERVER RESULT ESTIMATED-SIZE)
                          NSMAIL.NET.HINT))
              (push (CDR \NSMAIL.NEW.SERVER.CACHE)
                   INFO))
              (RETURN INFO))

```

(NSMAIL.NEW.CHECKSERVER

```

[LAMBDA (POLLRESULT ESTIMATED-SIZE) ; Edited 4-Jun-92 11:31 by bvm
  ;; Checks that the result of a SERVER.POLL is useful for sending a message of size ESTIMATED-SIZE. Returns the server's address
  ;; POLLRESULT = (willingness network.address.list name)
  (LET ((WILLINGNESS (CAR POLLRESULT))
        (SIZE (OR ESTIMATED-SIZE 4000))) ; The i'th element of willingness defines the server's willingness
    ; to accept messages up to size 8^i.

```

```

(if (AND (LISTP WILLINGNESS)
        (for w in WILLINGNESS as (I _ 8) by (LLSH I 3) while (> I SIZE) always (>= W
                                                    *NSMAIL-MIN-WILLINGNESS*
                                                    )))
  then (PROG [(BESTADDRESS (CAR (SORT.NSADDRESSES.BY.DISTANCE (CADDR POLLRESULT)
                                                             (SELECTQ *NSMAIL-TRACE-SERVERS*
                                                             (NIL NIL)
                                                             (:ASK (if [NOT (EQ 'Y (RESETFORM (TTY.PROCESS (THIS.PROCESS))
                                                                (ASKUSER 30 'Y (LIST "Use posting server" (CADDR
                                                                                                                                 POLLRESULT)
                                                                                                                                 )
                                                                                                                                 (LIST BESTADDRESS))
                                                                NIL T]
                                                                then (RETURN NIL)))
                                                                (PRINTOUT PROMPTWINDOW T "Using posting server " (CADDR POLLRESULT)
                                                                " = " BESTADDRESS))
                                                                (RETURN BESTADDRESS]))
                                                    )
  )

```

(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))

(RPAQ? \*NEWSMAIL-POST-AS-TEXTFILE\* :TEST)

(RPAQ? \*NEWSMAIL-REPORT-TYPE\* 'NON.DELIVERY.ONLY)

(RPAQ? \*NSMAIL-ALLOW-DL-RECIPIENTS\* T)

(RPAQ? \*NSMAIL-RETURN-CONTENTS\* T)

(RPAQ? \*NSMAIL-MIN-WILLINGNESS\* 9)

(RPAQ? \*NSMAIL-TRACE-SERVERS\* )

(RPAQ? \*NSMAIL-GENERATE-MESSAGE-ID\* )

(RPAQ? \*NSMAIL-DISPLAY-TRANSPORT-ID\* )

(RPAQ? \*NSMAIL-DISPLAY-POSTMARK\* )

(RPAQ? \*NSMAIL-DISPLAY-ERRORS-TO\* )

(RPAQ? \*NSMAIL-CACHE-TIMEOUT\* (TIMES 1000 60 60))

(RPAQ? \NSMAIL.MIN.VP.TYPE 4300)

(RPAQ? \NSMAIL.MAX.VP.TYPE 5200)

(RPAQ? \NSMAIL.NEW.SERVER.CACHE )

(RPAQQ \*NSMAIL-OP-VECTOR\* (NEWSNS.POLLNEWMAIL NEWSNS.OPENMAILBOX NEWSNS.NEXTMESSAGE NEWSNS.RETRIEVEMESSAGE NEWSNS.CLOSEMAILBOX))

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS \NSMAIL.NEW.SERVER.CACHE \NSMAIL.MIN.VP.TYPE \NSMAIL.MAX.VP.TYPE)

```

(CL:PROCLAIM '(CL:SPECIAL *NEWSMAIL-POST-AS-TEXTFILE* *NEWSMAIL-REPORT-TYPE* *NSMAIL-ALLOW-DL-RECIPIENTS*
                        *NSMAIL-RETURN-CONTENTS* *NSMAIL-MIN-WILLINGNESS* *NSMAIL-TRACE-SERVERS*
                        *NSMAIL-GENERATE-MESSAGE-ID* *NSMAIL-DISPLAY-TRANSPORT-ID* *NSMAIL-DISPLAY-POSTMARK*
                        *NSMAIL-DISPLAY-ERRORS-TO* *NSMAIL-CACHE-TIMEOUT*))

```

:: Retrieving

(DEFINEQ

(\NSMAIL.NEW.AUTHENTICATE

```

[LAMBDA NIL
  (LET ((INFO (\INTERNAL/GETPASSWORD ' |NS:|))
        NSUSERNAME FULLNAME MSERVERS AUTHENTICATED? CREDENTIALS MSG)

```

; Edited 6-Aug-93 15:08 by bvm

```
(SETQ NSUSERNAME (PARSE.NSNAME (CAR INFO)))
(COND
  ((NEQ [SETQ AUTHENTICATED? (COND
    ((NULL (SETQ FULLNAME (CH.LOOKUP.OBJECT NSUSERNAME)))
      'NONE)
    (T (NS.AUTHENTICATE (SETQ CREDENTIALS (NS.MAKE.SIMPLE.CREDENTIALS
      (CONS FULLNAME (CDR INFO)
      T)
      (printout PROMPTWINDOW T "Cannot authenticate user " (RNAME.TO.STRING (OR FULLNAME NSUSERNAME)
        T)
        " because: "
        (SELECTQ (SETQ \LAFITE.AUTHENTICATION.FAILURE AUTHENTICATED?)
          (CredentialsInvalid
            "Login incorrect")
          (KeysUnavailable
            (CONCAT "Authentication server unavailable for domain " (fetch NSDOMAIN of FULLNAME)
            ))
          (NONE "No such user")
          AUTHENTICATED?)
        ".")
      NIL)
    (T (create LAFITEMODEDATA
      FULLUSERNAME _ (RNAME.TO.STRING FULLNAME T)
      UNPACKEDUSERNAME _ FULLNAME
      CREDENTIALS _ CREDENTIALS
      SHORTUSERNAME _ (CONCAT (fetch NSOBJECT of FULLNAME)
        ' %:
        (COND
          ((NOT (STRING-EQUAL (fetch NSDOMAIN of FULLNAME)
            CH.DEFAULT.DOMAIN))
            (fetch NSDOMAIN of FULLNAME))
          (T "")))
      MAILSERVERS _ (\NSMAIL.MAKE.MAILSERVERS (NS.FINDMAILBOXES FULLNAME)
        FULLNAME CREDENTIALS])
```

**(NEWS.POLLNEWMAIL**

```
[LAMBDA (ADDRESS REGISTEREDNAME CREDENTIALS MAILSERVER) ; Edited 18-Dec-89 18:59 by bvm
  (LET ((RESULT (\NSMAIL.NEW.CHECK ADDRESS REGISTEREDNAME CREDENTIALS MAILSERVER)))
    (COND
      ((OR (NOT RESULT)
        (EQ (CAR RESULT)
          'ERROR)) ; Server down
        '?)
      ((NEQ RESULT 0)
        RESULT])
```

**(NEWS.OPENMAILBOX**

```
[LAMBDA (ADDRESS REGISTEREDNAME CREDENTIALS MAILSERVER) ; Edited 18-Dec-89 18:59 by bvm
  (LET ((STREAM (\NSMAIL.COURIER.OPEN ADDRESS))
    NSMAILSTATE N)
    (COND
      ((NULL STREAM)
        NIL)
      ((OR (NULL (SETQ N (\NSMAIL.NEW.CHECK ADDRESS REGISTEREDNAME CREDENTIALS MAILSERVER STREAM T)))
        (EQ (CAR N)
          'ERROR)) ; Return error msg
        (CLOSEF STREAM)
        (CONS NIL (CDR N)))
      ((EQ (PROGN (SETQ NSMAILSTATE (fetch MAILSTATE of MAILSERVER))
        N)
        0)
        (\NSMAIL.NEW.LOGOFF NSMAILSTATE STREAM)
        'EMPTY)
      (T ; Return (MAILBOX . properties)
        (CONS (create NSMAILBOX
          NSMAILSTREAM _ STREAM
          NSMAILLASTINDEX _ 0
          NSMAILSTATE _ NSMAILSTATE)
          (LIST ' %OFMESSAGES N]))
```

**(\NSMAIL.NEW.CHECK**

```
[LAMBDA (ADDRESS REGISTEREDNAME CREDENTIALS MAILSERVER STREAM RETURNERRORS)
  ; Edited 24-Feb-2024 11:54 by rmk
  ; Edited 6-Aug-93 16:41 by bvm
```

;;; Performs a mail check for user REGISTEREDNAME at ADDRESS, returning INBASKETSTATE if successful, NIL if not. Updates the MAILSTATE of MAILSERVER as appropriate to reflect current SESSION and STATEFIRSTNEW (first new message)

```
(RESETLST
  (PROG ((JUSTCHECKING (NULL STREAM))
    (STATE (fetch (MAILSERVER MAILSTATE) of MAILSERVER))
    (SESSION POLLRESULT TIMER)
    (SETQ SESSION (fetch STATESESSION of STATE)))
  RETRY
```





```

elseif (AND (EQ ERRMSG 'NoSuchInbasket)
             (\NSMAIL.FIX.MAILBOX.LOCATIONS))
  then ;; We get this when the server no longer holds this inbox. At this point we have fixed mail servers in NS
        ;; mode, but there's no good way for us to report the news, so go ahead and return NIL, but set
        ;; "continuance" so that poll will happen again immediately
        (replace (MAILSERVER CONTINUANCE) of MAILSERVER with 0)
else (LET ((*PRINT-CASE* :UPCASE)) ; Lousy atomic error names...
        (CL:FORMAT PROMPTWINDOW "~%From mail server ~A: ~A" (fetch (MAILSERVER
                                                                    MAILSERVERNAME
                                                                    )
                                                                    of MAILSERVER)
              (CASE ERRMSG
                (NoSuchService "Mail service not running")
                (T ERRMSG)))
        (RETURN NIL)))

```

**(NEWS.NEXTMESSAGE**

```

[LAMBDA (MAILBOX) ; Edited 13-Dec-89 17:27 by bvm
  (LET [(NEXT (NEW.INBASKET.CALL MAILBOX 'RETRIEVE.ENVELOPES (fetch NSMAILLASTINDEX of MAILBOX)
                                'NEXT
                                (fetch NSMAILSESSION of MAILBOX)]
        ;; NEXT = (envelope status index)
        (DESTRUCTURING-BIND (ENVELOPE STATUS INDEX)
          NEXT
          (if (EQ INDEX 0)
              then ; No more messages
                NIL
              else (replace NSMAILLASTINDEX of MAILBOX with INDEX)
                    (replace NSMAILENVTAIL of MAILBOX with ENVELOPE)
                    ; Success
                    T))

```

**(NEWS.RETRIEVEMESSAGE**

```

[LAMBDA (MAILBOX MSGOUTFILE) ; Edited 16-Jan-90 15:43 by bvm
  (DECLARE (SPECVARS *ATTACHMENTS* *DISCARDED-PARTS* *ENVELOPE* *FORMAT-STREAM* *HAVE-ATTACHMENTS*
                  *HEADER-EOF* *MSGSTREAM* *RETRIEVAL-ERROR* *TABLE-OF-CONTENTS*)
           ; For the bulk data fn
  (PROG* (( *RETRIEVAL-ERROR* NIL)
          (INDEX (fetch NSMAILLASTINDEX of MAILBOX))
          (*ENVELOPE* (fetch NSMAILENVTAIL of MAILBOX))
          (*TABLE-OF-CONTENTS* (CADR (ASSOC 'TOC *ENVELOPE*)))
          (*MSGSTREAM* MSGOUTFILE)
          (HERE 0)
          *DISCARDED-PARTS* *HAVE-ATTACHMENTS* *ATTACHMENTS* *FORMAT-STREAM* *HEADER-EOF* PARTS-TO-RETRIEVE
          RESULT REPORT)
    (for PAIR in *TABLE-OF-CONTENTS* bind OTHER do (if (FMEMB (CAR PAIR)
                                                                \NSMAIL.GOOD.BODY.PARTS)
                then ; we read this fine
                    (elseif (SETQ OTHER (ASSOC (CAR PAIR)
                                                  \NSMAIL.DISCARDABLE.BODY.PARTS
                                                  ))
                        then (push *DISCARDED-PARTS* OTHER)
                        else ; Will need to arrange for an attachment
                            (SETQ *HAVE-ATTACHMENTS* T)))
                (if (NOT *HAVE-ATTACHMENTS*)
                    then ; Write directly to MSGOUTFILE. Note where we are in case we
                        ; have to retry
                        (SETQ HERE (GETFILEPTR *MSGSTREAM*)))
                (if *DISCARDED-PARTS*
                    then ; Ordinarily we retrieve everything (PARTS-TO-RETRIEVE =
                        ; NIL), but if there were parts we like to ignore, we can skip
                        ; these.
                        (SETQ PARTS-TO-RETRIEVE (for PAIR in *TABLE-OF-CONTENTS* as INDEX from 0 collect INDEX
                                                unless (ASSOC (CAR PAIR)
                                                                *DISCARDED-PARTS*]
                RETRY
                (if *HAVE-ATTACHMENTS*
                    then (SETQ *MSGSTREAM* (OPENSTREAM '{NODIRCORE} 'BOTH)
                    (if (SETQ REPORT (CADR (ASSOC 'REPORT *ENVELOPE*)))
                        then ; This is a delivery report. What a cruffy way to represent it
                            (SETQ *ENVELOPE* (\NSMAIL.HANDLE.DELIVERY.REPORT *MSGSTREAM* REPORT *ENVELOPE*))
                            (if (NULL *TABLE-OF-CONTENTS*)
                                then ; No body, e.g., a bad dl member report
                                    (GO FINISH)
                                else ; Some message parts will follow the report
                                    (PRINTOUT *MSGSTREAM* T "- - - - -" T)))
                    (if (NEQ (CAAR *TABLE-OF-CONTENTS*)
                            (\NSMAIL.BODY.PART.TYPE HEADING))
                        then (HELP "First body part is not heading" *TABLE-OF-CONTENTS*))
                    (SETQ RESULT (COURIER.CALL (fetch NSMAILSTREAM of MAILBOX)

```

```

'NEW.INBASKET
'RETRIEVE.BODY.PARTS INDEX PARTS-TO-RETRIEVE (FUNCTION \NSMAIL.READ.BODY.PARTS)
(fetch NSMAILSESSION of MAILBOX)
'RETURNERRORS))
(if (EQ (CAR (LISTP RESULT))
'ERROR)
then (\NSMAIL.SIGNAL.ERROR RESULT MAILBOX 'NEW.INBASKET 'RETRIEVE.BODY.PARTS)
(if *HAVE-ATTACHMENTS*
then (SETQ *ATTACHMENTS* NIL)
else (SETFILEPTR MSGOUTFILE HERE))
(SETQ *RETRIEVAL-ERROR* NIL)
(GO RETRY))
(COND
(*RETRIEVAL-ERROR* (printout *MSGSTREAM* T *RETRIEVAL-ERROR* T)))
(if *FORMAT-STREAM*
then ; This is a TEdit formatted message
(LA.ADJUST.FORMATTING *FORMAT-STREAM* *MSGSTREAM* (- *HEADER-EOF* HERE)))
(if *HAVE-ATTACHMENTS*
then (SETQ *MSGSTREAM* (OPENTEXTSTREAM *MSGSTREAM* NIL NIL NIL (LIST 'FONT LAFITEDISPLAYFONT)))
[LET ((ATTACHPOINT (TEDIT.FIND *MSGSTREAM* "
Attachment: " 1)))
(SETQ ATTACHPOINT (if ATTACHPOINT
then ; Insert object at end of this line
(+ ATTACHPOINT 14)
else ; Shouldn't happen
(+ (TEDIT.FIND *MSGSTREAM* "
" 1)
2)))
(for AT in *ATTACHMENTS*
do (LET (TYPE)
(SETFILEPTR AT 4) ; Skip the version number (LONGCARDINAL). Next comes
; SEQUENCE Filing.Attribute
; unknown
[to (\WIN AT) bind X ATTR
do (if (EQ (SETQ ATTR (COURIER.READ AT NIL 'LONGCARDINAL))
(\NSMAIL.ATTRIBUTE.TYPE BodyType))
then (\WIN AT)
[SETQ TYPE (\TYPE.FROM.FILETYPE (COURIER.READ AT NIL
'LONGCARDINAL])
else (COURIER.SKIP.SEQUENCE AT NIL 'UNSPECIFIED)
(TEDIT.INSERT.OBJECT (\MAILOBJ.CREATE AT TYPE (GETFILEPTR AT))
*MSGSTREAM* ATTACHPOINT)
;; Would like the following to be (COERCETEXTOBJ OUTSTREAM 'FILE MSGOUTFILE) but Tedit has a bug
(COPYBYTES (OPENSTREAM (COERCETEXTOBJ *MSGSTREAM* 'FILE)
'INPUT)
MSGOUTFILE))
FINISH
(push (fetch NSMAILENVELOPES of MAILBOX)
INDEX])

```

**(\NSMAIL.READ.BODY.PARTS**

```

[LAMBDA (BULKSTREAM) ; Edited 14-Aug-90 16:13 by bvm
(DECLARE (SPECVARS *ATTACHMENTS* *DISCARDED-PARTS* *ENVELOPE* *FORMAT-STREAM* *HAVE-ATTACHMENTS*
*HEADER-EOF* *MSGSTREAM* *TABLE-OF-CONTENTS* *BODY-OFFSET*))
;; Bulk data handler for RetrieveBodyParts call. We see the body parts, one directly after the other, per toc.
;; I hope the heading part is first
(for PAIR in *TABLE-OF-CONTENTS* as INDEX from 0 bind (START _ (GETFILEPTR BULKSTREAM))
(*BODY-OFFSET* _ 0)
END HAVETEXT DISCARDING HEADERFIELDS FORWARDINFO FINFO
FORWARDSTREAM PART-TYPE PART-LENGTH
unless (ASSOC (SETQ PART-TYPE (CAR PAIR))
*DISCARDED-PARTS*)
do ;; Assertion: START = (getfileptr bulkstream)
(SETQ PART-LENGTH (CADR PAIR))
[if DISCARDING
then ; We already ate some of this, have to skip the rest
(if (> (SETQ DISCARDING (- DISCARDING PART-LENGTH))
0)
then ; We've eaten the entire part, keep discarding
else ; We've eaten all but -DISCARDING bytes
(SETFILEPTR BULKSTREAM (SETQ START (- START DISCARDING)))
(SETQ DISCARDING NIL))
else (SETQ END (+ START PART-LENGTH))
[SETQ FINFO (find F in FORWARDINFO suchthat ; See if this is a forwarded part
(FMEMB INDEX (fetch (FORWARD PARTS) of F]
[SELECTC PART-TYPE
((\NSMAIL.BODY.PART.TYPE HEADING) ; The heading = Sequence of Heading Attribute
(CL:MULTIPLE-VALUE-SETQ (HEADERFIELDS *FORMAT-STREAM* FORWARDINFO)
(\NSMAIL.READ.HEADING BULKSTREAM END))
(\NSMAIL.NEW.PRINT.HEADING *MSGSTREAM* HEADERFIELDS *ENVELOPE*)
; Print your basic heading. May set *BODY-OFFSET*

```

```

    (if *DISCARDED-PARTS*
      then
        (MAPRINT (CL:REMOVE-DUPLICATES (MAPCAR *DISCARDED-PARTS*
          (FUNCTION CADR))
            :TEST
            'STRING-EQUAL)
          *MSGSTREAM* "Discarded-Parts: " NIL ", ")
        (TERPRI *MSGSTREAM*))
    (if *HAVE-ATTACHMENTS*
      then
        (PRINTOUT *MSGSTREAM* "
          Attachment: " T))
        (TERPRI *MSGSTREAM*)
        (SETQ *HEADER-EOF* (GETFILEPTR *MSGSTREAM*))
    [if FORWARDINFO
      then
        (SETQ FORWARDSTREAM (OPENSTREAM ' {NODIRCORE} ' BOTH])
        ((LIST (\NSMAIL.BODY.PART.TYPE MULTINATIONAL.NOTE)
          (\NSMAIL.BODY.PART.TYPE NSTEXTFILE)
          (\NSMAIL.BODY.PART.TYPE IA5.NOTE))
          ; This is text
        (LET ((OUTSTREAM *MSGSTREAM*)
          (OFFSET *BODY-OFFSET*)
          FORWARDSTART)
          (if FINFO
            then
              (SETQ FORWARDSTART (GETFILEPTR (SETQ OUTSTREAM FORWARDSTREAM)))
              (SETQ OFFSET 0)
            else
              (if HAVETEXT
                then
                  (PRIN3 "
                    - - - - -
                    " *MSGSTREAM*)
                  (SETQ HAVETEXT T))
                (SELECTC PART-TYPE
                  ((\NSMAIL.BODY.PART.TYPE MULTINATIONAL.NOTE)
                    ; Xerox character set--just copy.
                    (SETFILEPTR BULKSTREAM (+ START OFFSET))
                    (COPYBYTES BULKSTREAM OUTSTREAM (- PART-LENGTH OFFSET)))
                  ((\NSMAIL.BODY.PART.TYPE IA5.NOTE)
                    ; ia5 takes a little bit of conversion. Note that the skip case never
                    ; happens here
                    (\NSMAIL.COPY.IA5 BULKSTREAM OUTSTREAM PART-LENGTH))
                  ((\NSMAIL.BODY.PART.TYPE NSTEXTFILE)
                    ; nstextfile--decode serialized file
                    (\NSMAIL.COPY.NSTEXTFILE BULKSTREAM OUTSTREAM END OFFSET))
                  NIL)
          (if FINFO
            then
              (push (fetch (FORWARD MAP) of FINFO)
                (LIST INDEX FORWARDSTART (- (GETFILEPTR FORWARDSTREAM)
                  FORWARDSTART)))
              ; Record where the text went
            else
              (SETQ *BODY-OFFSET* 0)))
              ; We've finished whatever skipping we were going to do.
        (LET [(BODY (OPENSTREAM ' {NODIRCORE} ' BOTH]
          ;; Parts we don't handle become opaque attachments
        (if (OR (EQL PART-TYPE (\NSMAIL.BODY.PART.TYPE VPFOLDER))
          (EQL PART-TYPE (\NSMAIL.BODY.PART.TYPE VPDOCUMENT))
          (EQL PART-TYPE (\NSMAIL.BODY.PART.TYPE OTHERNSFILE)))
          then
            (COPYBYTES BULKSTREAM BODY PART-LENGTH)
            ; It's already serialized
          else
            (COURIER.WRITE BODY \SERIALIZED.FILE.VERSION NIL 'LONGCARDINAL)
            ; for now, make a serialized file
            ; version
            (\WOUT BODY 1)
            ; Length of attribute sequence
            (\NSMAIL.WRITE.ATTRIBUTE BODY 'BodyType (if (EQL PART-TYPE (
              \NSMAIL.BODY.PART.TYPE
              INTERPRESS))
                then (CONSTANT (\FILETYPE.FROM.TYPE
              ' INTERPRESS))
                else (+ PART-TYPE 100000000)))
            (COURIER.WRITE BODY (COURIER.WRITE.STREAM.UNSPECIFIED BODY BULKSTREAM START END)
              NIL
              'BOOLEAN)
            ; StreamOfUnspecified followed by lastBytelsSignificant
            (\WOUT BODY 0)
            ; no children
          )
        (push *ATTACHMENTS* BODY)
        (if FINFO
          then
            (push (fetch (FORWARD MAP) of FINFO)
              (LIST INDEX (LENGTH *ATTACHMENTS*)
                (LET [ (BODY (OPENSTREAM ' {NODIRCORE} ' BOTH]
                  (if [NOT (EQL END (SETQ START (GETFILEPTR BULKSTREAM)
                    then (HELP (CL:FORMAT NIL "Body part ~A wrong length: parsed as ~D, should have been ~D"
                      PART-TYPE (+ PART-LENGTH (- START END))

```

```

PART-LENGTH)
(CL:FORMAT NIL "Type 'RETURN' to " (if (> START END)
                                     then "flush rest of message"
                                     else "flush unread portion"))
(if (> START END)
    then (SETQ DISCARDING (- START END))
    else (SETFILEPTR BULKSTREAM (SETQ START END)
finally (if FORWARDINFO
          then ;; At this point we have written all the original parts. Now walk thru the Forwarding info and write those messages
            (LET ((*NSMAIL-DISPLAY-TRANSPORT-ID* NIL)
                  (*NSMAIL-DISPLAY-POSTMARK* NIL)) ; Those fields are boring in forwarded mail
              (\NSMAIL.EMIT.FORWARDING FORWARDINFO FORWARDSTREAM *MSGSTREAM* NIL)))
          ;; Return NIL to let Courier result show thru
          (RETURN NIL))

```

(\NSMAIL.COPY.IA5

```

[LAMBDA (INSTREAM OUTSTREAM NBYTES) ; Edited 22-Dec-89 18:06 by bvm
  ;; Convert NBYTES of ia5 text on INSTREAM to Xerox charset on OUTSTREAM
  (while (>= (SETQ NBYTES (SUB1 NBYTES))
          0)
    bind CH do (SELCHARQ (SETQ CH (\BIN INSTREAM))
                      (CR) ; CR followed by some number of lfs indicates line breaks
                  [bind GOT1 while (AND (>= (SETQ NBYTES (SUB1 NBYTES))
                                           0)
                                       (EQ (SETQ CH (\BIN INSTREAM))
                                           (CHARCODE LF)))
                                do ; One eol for each lf
                                  (\BOUT OUTSTREAM (CHARCODE CR))
                                  (SETQ GOT1 T)
                                finally (if (NOT GOT1)
                                           then ; Naked CR? Well, go ahead and print one anyway--we don't
                                             ; know how else to do it
                                             (\BOUT OUTSTREAM (CHARCODE CR))
                                           (if (< NBYTES 0)
                                               then ; Text ended in eol
                                               (RETURN)))
                                           NIL)
                                  (\BOUT OUTSTREAM CH])

```

(\NSMAIL.COPY.NSTEXTFILE

```

[LAMBDA (INSTREAM OUTSTREAM END OFFSET) ; Edited 22-May-90 10:37 by bvm
  ;; Copies the serialized text file from INSTREAM to OUTSTREAM. If there's a formatting item, sets *FORMAT-STREAM*. Just in case of trouble,
  ;; END is the file pointer where we expect the file to end. If OFFSET is specified, it is an initial number of bytes to skip.
  (\NSMAIL.CHECK.SERIALIZED.VERSION INSTREAM) ; Now Sequence of Filing.Attribute
  [to (\WIN INSTREAM) bind TYPE do (SETQ TYPE (COURIER.READ INSTREAM NIL 'LONGCARDINAL))
    (if (AND (EQL TYPE (\NSMAIL.ATTRIBUTE.TYPE LispFormatting))
            (NOT *FORMAT-STREAM*))
        then ; Read formatting
          [\NSMAIL.READ.STRING.AS.STREAM INSTREAM (SETQ *FORMAT-STREAM*
                                                         (OPENSTREAM '{NODIRCORE}
                                                         'BOTH))
        else ; Skip over the value
          (COURIER.SKIP.SEQUENCE INSTREAM NIL 'UNSPECIFIED)]
  ;; Now read the text content. This is adapted from \nsmail.read.serialized.content
  (if (NOT OFFSET)
      then (SETQ OFFSET 0))
  (bind LASTSEGMENT? BYTE BYTECOUNT do (SETQ LASTSEGMENT? (NEQ (\WIN INSTREAM)
                                                                0))
    (COND
      [(NEQ (SETQ BYTECOUNT (UNFOLD (\WIN INSTREAM)
                                     BYTESPERWORD))
            0)
       (if (AND (> OFFSET 0)
                (LET ((SKIPLength (MIN OFFSET BYTECOUNT))
                    ; How much of this segment to skip
                    (SETFILEPTR INSTREAM (+ (GETFILEPTR INSTREAM)
                                             SKIPLength))
                    (SETQ OFFSET (- OFFSET SKIPLength))
                    (EQ (SETQ BYTECOUNT (- BYTECOUNT SKIPLength))
                        0)))
            then ; We skipped the entire segment
              (if LASTSEGMENT?
                  then ; Have to consume the lastBytelsSignificant flag
                  (\WIN INSTREAM))
              else (COPYBYTES INSTREAM OUTSTREAM (SUB1 BYTECOUNT))
                    (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
                                (\ABOUT OUTSTREAM BYTE]
                                (LASTSEGMENT? ; Null body. Throw out the lastBytelsSignificant flag
                                (\WIN INSTREAM)))

repeatuntil LASTSEGMENT?)
(LET ((NCHILDREN (\WIN INSTREAM)))
  (if (> NCHILDREN 0)
    then (HELP "nsTextFile has children!! -- return to skip them" NCHILDREN)
    (SETFILEPTR INSTREAM END]))

```

(\NSMAIL.READ.HEADING

[LAMBDA (BULKSTREAM HEADING-END)

; Edited 21-Dec-89 17:09 by bvm

:: Read a Heading body part, which consists of Sequence of Heading Attribute. Returns 4 values: headerfields (an alist), formatstream (if there was tedit formatting item), forwardInfo (if there was a forwarding structure), malformedP (if we had to advance the file pointer manually to :: HEADING-END

```

(LET
  (TYPE VALUE HEADERFIELDS TYPEINFO DISCARDED FORMATSTREAM FORWARDINFO MALFORMED COURIERTYPE)
  [to (\WIN BULKSTREAM)
  do
    (SETQ TYPE (COURIER.READ BULKSTREAM NIL 'LONGCARDINAL))
    (COND
      ((NOT (find old TYPEINFO in \NSMAIL.HEADING.ATTRIBUTES suchthat (EQ (CADR TYPEINFO)
                                     TYPE))))
      ; We don't understand this attribute

      (if NSMAILDEBUGFLG
        then (push DISCARDED TYPE))
      (COURIER.SKIP.SEQUENCE BULKSTREAM NIL 'UNSPECIFIED))
      ((EQ (SETQ TYPE (CAR TYPEINFO))
            'LispFormatting)
       ; Save the formatting so we can munge it
      (SETQ FORMATSTREAM (OPENSTREAM '{NODIRCORE} 'BOTH))
      (\NSMAIL.READ.STRING.AS.STREAM BULKSTREAM FORMATSTREAM))
      (T
       (LET
         ((VALUE-END (+ (UNFOLD (\WIN BULKSTREAM)
                                BYTESPERWORD)
                        (GETFILEPTR BULKSTREAM))))
          (COURIERTYPE (CADDR TYPEINFO))
          HERE
          ; Note careful order of args to +
          (if (EQ TYPE 'ForwardedHeadings)
            then (SETQ FORWARDINFO (\NSMAIL.READ.FORWARDING BULKSTREAM VALUE-END))
            else (CL:MULTIPLE-VALUE-BIND (VALUE CONDITION)
              (IGNORE-ERRORS (COURIER.READ BULKSTREAM 'NEW.MAILTRANSPORT COURIERTYPE))
              [if (OR CONDITION (NOT (EQL (SETQ HERE (GETFILEPTR BULKSTREAM))
                                         VALUE-END))))
                then (if (NOT CONDITION)
                  then (SETQ CONDITION "wrong length"))
                  (if NSMAILDEBUGFLG
                    then (HELP (CL:FORMAT NIL "Error reading attribute ~A: ~A" TYPE CONDITION)))
                    (push HEADERFIELDS (CONS (MKSTRING TYPE)
                                             (CL:FORMAT NIL "XNS encoding error: ~A" CONDITION))))
                  (if (< HERE VALUE-END)
                    then (SETFILEPTR BULKSTREAM VALUE-END)
                    elseif (AND (> HERE VALUE-END)
                               (< HERE HEADING-END))
                    then (SETFILEPTR BULKSTREAM HEADING-END)
                    (push HEADERFIELDS ('("Header-Errors"
                                         . "Malformed XNS heading, some fields may be missing."))
                      ; Exit this heading reader loop
                      (RETURN (SETQ MALFORMED T)))
                    ; Save field
                    else (push HEADERFIELDS (CONS TYPE (if (EQ TYPE 'Immutable)
                                                            then
                                                              ; Strange null-valued type
                                                              "True"
                                                            elseif (LISTP COURIERTYPE)
                                                              then (if (EQUAL COURIERTYPE '(SEQUENCE IP.MESSAGEID)
                                                                )
                                                                then (MAPCAR VALUE (FUNCTION
                                                                    \NSMAIL.TRANSLATE.IP.MESSAGEID
                                                                    ))
                                                                else VALUE)
                                                              else (SELECTQ COURIERTYPE
                                                                (TIME (\NSMAIL.GDATE VALUE))
                                                                (IP.MESSAGEID (
                                                                    \NSMAIL.TRANSLATE.IP.MESSAGEID
                                                                    VALUE))
                                                                VALUE]))])
                    ]
                (if DISCARDED
                  then (push HEADERFIELDS (CONS "Discarded-Fields" (CONCATLIST (CDR (for D in (REVERSE DISCARDED)
                                                                 join (LIST ", " D]
                                                                (CL:VALUES HEADERFIELDS FORMATSTREAM FORWARDINFO MALFORMED]))

```



**(\NSMAIL.NEW.PRINT.HEADING**

```
[LAMBDA (OUTSTREAM HEADERFIELDS ENVELOPE) ; Edited 26-Sep-90 11:35 by bvm
;; Compose message header from HEADERFIELDS and ENVELOPE, printing to OUTSTREAM.
(PROG (*ORIGINAL-DATE* ORIGIDATE POSTED.DATE ORIGINATOR RETURN-TO VALUE TYPE SENDER FROMFIELD FULLFROMFIELD)
(DECLARE (SPECVARS *ORIGINAL-DATE* *BODY-OFFSET*))
[for PAIR in (SETQ HEADERFIELDS (REVERSE HEADERFIELDS))
do ; Before we start printing anything, look for some special fields
(CASE (CAR PAIR)
(Sender (SETQ SENDER (CDR PAIR)))
(From
(SETQ FULLFROMFIELD (CDR PAIR))
[COND
(NULL (CDDR PAIR)) ; Only interesting to eliminate if there's only one
(SETQ FROMFIELD (CADR PAIR))]
((TextAnnotation newTextAnnotation)
(\NSMAIL.PARSE.ANNOTATION (CDR PAIR)
OUTSTREAM HEADERFIELDS)
(RPLACD PAIR NIL))
(BodyOffset ; Says how much of body duplicates the textannotation
(SETQ *BODY-OFFSET* (CDR PAIR))
(RPLACD PAIR NIL))))]
;; Look at the envelope to see if there is any additional info we should supply that wasn't in the headers
[for PAIR in ENVELOPE do (SETQ VALUE (CADR PAIR))
(CASE (SETQ TYPE (CAR PAIR))
(Originator (if [OR (NULL (OR SENDER FROMFIELD))
(NOT (EQUAL.RNAMES VALUE (OR SENDER FROMFIELD)
then (SETQ ORIGINATOR VALUE))]
(RETURN.TO.NAME (SETQ RETURN-TO VALUE))
(Message-ID (if *NSMAIL-DISPLAY-TRANSPORT-ID*
then (CL:FORMAT OUTSTREAM "XNS-Transport-ID:
~{~4,'0x~}~%%" VALUE)))
(Postmark
(SETQ POSTED.DATE (COURIER.FETCH (NEW.MAILTRANSPORT . POSTMARK)
TIME of VALUE))
[if *NSMAIL-DISPLAY-POSTMARK*
then (CL:FORMAT OUTSTREAM "Postmark: ~A at ~A~%%"
(RNAME.TO.STRING (COURIER.FETCH (NEW.MAILTRANSPORT
. POSTMARK)
POSTED.AT of VALUE)
T)
(GDATE POSTED.DATE (DATEFORMAT TIME.ZONE))]]
(if POSTED.DATE
then ; Date is found only in the envelope
(if (AND *ORIGINAL-DATE* (SETQ ORIGIDATE (IDATE *ORIGINAL-DATE*))
(< (IABS (- POSTED.DATE ORIGIDATE))
(TIMES 5 60)))
then ; Text-annotation portion gave a date that is within 5 minutes, so
; don't bother mentioning the posting date.
else (if *ORIGINAL-DATE*
then ; Already have a Date field printed, so this one we'll call
; "Posted-Date"
(PRINTOUT OUTSTREAM "Posted-"))
(PRINTOUT OUTSTREAM "Date: " (\NSMAIL.GDATE POSTED.DATE
T)))
(if (NULL FULLFROMFIELD) ; Derive From field from somewhere else
[if SENDER
then (RPLNODE (ASSOC 'Sender HEADERFIELDS)
'From
(LIST SENDER))
(if ORIGINATOR
then (push HEADERFIELDS (CONS 'Sender ORIGINATOR)))
elseif ORIGINATOR
then ; Neither From nor Sender in heading, take it out of envelope
(push HEADERFIELDS (LIST 'From (SETQ SENDER ORIGINATOR)
elseif (NULL SENDER) ; From but no Sender
(if ORIGINATOR
then ; ORIGINATOR only set when it's different from From
(push HEADERFIELDS (CONS 'Sender (SETQ SENDER ORIGINATOR)))
else (SETQ SENDER FROMFIELD))
elseif (AND FROMFIELD (EQUAL.RNAMES SENDER FROMFIELD)) ; Sender is redundant with From--get rid of it, unless the
; envelope originator is different
(RPLACD (ASSOC 'Sender HEADERFIELDS)
ORIGINATOR)
elseif ORIGINATOR ; Three distinct fields
then (push HEADERFIELDS (CONS 'Originator ORIGINATOR)))
(if (AND RETURN-TO (OR (NULL SENDER)
(NOT (EQUAL.RNAMES RETURN-TO SENDER)))
*NSMAIL-DISPLAY-ERRORS-TO*)
then ; Usually same as originator, so we omit. (NULL SENDER) is only true when there's no originator in envelope, allegedly illegal
```

```

(push HEADERFIELDS (CONS 'Errors-To RETURN-TO))
(if (NOT (type? NSNAME SENDER))
    then
        (SETQ SENDER NIL) ; Can't resolve domain/orgs against this
    (for PAIR in [SORT HEADERFIELDS (FUNCTION (LAMBDA (X Y)
        ;; X sorts before Y if X is in the well-known order and either Y appears after it or doesn't appear at
        ;; all. Non-symbols sort after everything
        (AND (LITATOM (CAR X))
            (OR (NOT (LITATOM (CAR Y)))
                (AND (SETQ X (FMEMB (CAR X)
                    NSMAIL.HEADER.ORDER))
                    (OR (FMEMB (CAR Y)
                        X)
                        (NULL (FMEMB (CAR Y)
                            NSMAIL.HEADER.ORDER))
                    )
                )
            )
        )
    when (SETQ VALUE (CDR PAIR))
    do
        (printout OUTSTREAM (SETQ TYPE (CAR PAIR))
            ": ")
        (CASE TYPE
            ((From To cc bcc Reply-to)
                (\NSMAIL.NEW.PRINT.NAMES
                    VALUE OUTSTREAM
                    (SELECTQ TYPE
                        (From
                            (if [AND SENDER (NOT (for NAME in VALUE
                                always (OR (EQ NAME SENDER)
                                    (AND (STRING-EQUAL (fetch NSDOMAIN of NAME)
                                        (fetch NSDOMAIN of SENDER))
                                        (STRING-EQUAL (fetch NSORGANIZATION
                                            of NAME)
                                            (fetch NSORGANIZATION of SENDER])
                                )
                            then
                                ; Ugh, From and Sender are different domains. To reduce
                                ; confusion, force everything to be fully qualified
                                (SETQ SENDER NIL))
                            NIL)
                        (Reply-to
                            NIL) ; always full-qualified
                        SENDER)))
                ((Sender Originator Errors-To) (printout OUTSTREAM (RNAME.TO.STRING VALUE T)))
                (T [if (LISTP VALUE)
                    then
                        ; List of things we'll print as each thing separated by spaces
                        ; (e.g., References)
                        (SETQ VALUE (CONCATLIST (CDR (for X in VALUE join (LIST " " X)
                            (while (AND (> (NCHARS VALUE)
                                0)
                                    (EQ (NTHCHARCODE VALUE -1)
                                        (CHARCODE CR)))
                                do
                                    ; Trailing cr's, e.g., in the Subject line, will cause the header not
                                    ; to parse
                                    (SETQ VALUE (SUBSTRING VALUE 1 -2)))
                            [bind (CR _ 1) while (SETQ CR (STRPOS "
                                " VALUE CR))
                                do
                                    ; Given internal CR, have to make sure subsequent lines are
                                    ; continuation lines, i.e., start with whitespace.
                                    (SELCHARQ (NTHCHARCODE VALUE (ADD1 CR))
                                        ((SPACE TAB)
                                            (SETQ CR (ADD1 CR)))
                                        (PROGN
                                            ; Not followed by whitespace, so print this much (including cr),
                                            ; then a tab.
                                            (PRIN3 (SUBSTRING VALUE 1 CR)
                                                OUTSTREAM)
                                            (PRINTCCODE (CHARCODE TAB)
                                                OUTSTREAM)
                                            (SETQ VALUE (SUBSTRING VALUE (ADD1 CR)))
                                            (SETQ CR 1)
                                            (PRIN3 VALUE OUTSTREAM)))
                                        (TERPRI OUTSTREAM]))

```

(\NSMAIL.NEW.PRINT.NAMES

```

[LAMBDA (RNames OUTSTREAM DEFAULTNAME) ; Edited 4-Apr-90 17:32 by bvm
    (for NAME in RNames bind (FIRSTTIME _ T)
        ORGDIFFERS
    do (if (type? NSNAME NAME)
        then (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) ; Have to print the org, too
                  (PRIN3 ORG OUTSTREAM]
      else (PRIN3 (RNAME.TO.STRING NAME)
                OUTSTREAM])

```

(\NSMAIL.EMIT.FORWARDING

[LAMBDA (FORWARDINFO FORWARDSTREAM OUTSTREAM PARENT-INDEX) ; Edited 22-May-90 10:41 by bvm

;; Recursively emit Forwarded body structure. In this pass, we print all the body parts subsidiary to the PARENT-INDEXTth item, or the top level
;; items if PARENT-INDEX is nil.

```

(for FINFO in FORWARDINFO as I from 0 bind NTHTIME when (EQ (fetch (FORWARD PARENT) of FINFO)
                  PARENT-INDEX))
do ;; This bit of forwarding info describes a child of PARENT-INDEX
[LET ((*BODY-OFFSET* 0))
  (DECLARE (SPECVARS *BODY-OFFSET*)) ; set by \nsmail.new.print.heading
  (TERPRI OUTSTREAM)
  (PRIN3 (if NTHTIME
          then ; "Next Message"
              (CADDR LAFITEFORWARDSTRINGS)
          else (SETQ NTHTIME T) ; "Begin Forwarded Messages"
              (CADDR LAFITEFORWARDSTRINGS))
  OUTSTREAM)
  (TERPRI OUTSTREAM)
  (\NSMAIL.NEW.PRINT.HEADING OUTSTREAM (fetch (FORWARD HEADINGS) of FINFO)
   (fetch (FORWARD ENVELOPE) of FINFO)) ; Print header of this part
  (TERPRI OUTSTREAM)
  (for INDEX in (fetch (FORWARD PARTS) of FINFO) bind (MAP _ (fetch (FORWARD MAP) of FINFO))
              MAPENTRY NTHPART)
  do (if NTHPART
      then ; Yet another body part
          (PRIN3 "
          - - - - -
          " OUTSTREAM)
          else (SETQ NTHPART T)
          (if [NOT (SETQ MAPENTRY (CDR (ASSOC INDEX MAP)
              then (PRIN3 "[Missing part]
              " OUTSTREAM)
          elseif (CDR MAPENTRY)
              then ; (start length)
                  (SETFILEPTR FORWARDSTREAM (+ (CAR MAPENTRY)
                                                  *BODY-OFFSET*))
                  (COPYBYTES FORWARDSTREAM OUTSTREAM (CADDR MAPENTRY))
                  (SETQ *BODY-OFFSET* 0)
              else ; (attachment#)
                  (if (CL:FORMAT OUTSTREAM "[See Attachment #-D]~%%" (CAR MAPENTRY)
                      ; If there are children, do them
                      (\NSMAIL.EMIT.FORWARDING FORWARDINFO FORWARDSTREAM OUTSTREAM I)
                  finally (if NTHTIME
                          then ; Yes, we printed some parts, so time for "End Forwarded
                              ; Messages"
                              (TERPRI OUTSTREAM)
                              (PRIN3 (CADDR LAFITEFORWARDSTRINGS)
                                      OUTSTREAM])

```

(\NSMAIL.GDATE

[LAMBDA (TIME) ; Edited 11-Jul-90 18:03 by bvm
(GDATE TIME (DATEFORMAT SPACES TIME.ZONE])

(\NSMAIL.TRANSLATE.IP.MESSAGEID

[LAMBDA (ID) ; Edited 11-May-90 10:45 by bvm

```

(LET ((RNAME (COURIER.FETCH (NEW.MAILTRANSPORT . IP.MESSAGEID)
                            ORIGINATOR of ID))
      (USTRING (COURIER.FETCH (NEW.MAILTRANSPORT . IP.MESSAGEID)
                              UNIQUESTRING of ID)))
  (if (NOT (NULL.NSNAME RNAME))
      then ; Really has name
          (CONCAT #\< USTRING #\* (RNAME.TO.STRING RNAME T)
                  #\>)
      elseif (AND (EQ (CL:CHAR USTRING 0)
                     #\<)
              (EQ (CL:CHAR USTRING (SUB1 (NCHARS USTRING)))
                  #\>))

```



```

    (if BADNAMES
      then (PRINTOUT OUTSTREAM "Undeliverable mail" T T)
            (CL:FORMAT OUTSTREAM "This message could not be delivered to the following
              recipient~P:" (LENGTH BADNAMES))
      else ; Strictly a delivery report
            (PRINTOUT OUTSTREAM "Delivery report"))
    (T ; Shouldn't happen
      (PRINTOUT OUTSTREAM "Erroneous (non-)delivery report" T T REPORT))
    (PRINTOUT OUTSTREAM T T)
    (for PAIR in BADNAMES do (PRINTCCODE (CHARCODE TAB)
      OUTSTREAM)
      (PRINTOUT OUTSTREAM (\NSMAIL.RECIPIENT.NAME (COURIER.FETCH (NEW.MAILTRANSPORT
        . NON.DELIVERED.RECIPIENT)
        RECIPIENT of PAIR))
        " -- "
        (COURIER.FETCH (NEW.MAILTRANSPORT . NON.DELIVERED.RECIPIENT)
        REASON of PAIR)
      T))
    (if GOODNAMES
      then ; A delivery report
        (if BADNAMES
          then (TERPRI OUTSTREAM))
        (CL:FORMAT OUTSTREAM "This message was delivered to the following recipient~P::~2%"
          (LENGTH GOODNAMES))
        (for PAIR in GOODNAMES do (PRINTCCODE (CHARCODE TAB)
          OUTSTREAM)
          (PRINTOUT OUTSTREAM (\NSMAIL.RECIPIENT.NAME (COURIER.FETCH
            (NEW.MAILTRANSPORT
            . DELIVERED.RECIPIENT)
            RECIPIENT of PAIR))
            " at "
            (\NSMAIL.GDATE (COURIER.FETCH (NEW.MAILTRANSPORT
            . DELIVERED.RECIPIENT)
            WHEN of PAIR)
            (DATEFORMAT TIME.ZONE))
          T)))
    OLD.ENVELOPE])

```

(\NSMAIL.RECIPIENT.NAME

```

[LAMBDA (RECIPIENT) ; Edited 4-Apr-90 17:26 by bvm
  ;; Printable rep for a MailTransport.Recipient
  (RNAME.TO.STRING (COURIER.FETCH (NEW.MAILTRANSPORT . RECIPIENT)
    NAME of RECIPIENT)
  T))

```

(NEW.INBASKET.CALL

```

[CL:LAMBDA (MAILBOX PROCEDURE &REST ARGS) ; Edited 13-Dec-89 17:17 by bvm
  (PROG ((STREAM (fetch NSMAILSTREAM of MAILBOX))
    RESULT)
    LP (if (AND (EQ [CAR (LISTP (SETQ RESULT (CL:APPLY (FUNCTION COURIER.CALL)
      STREAM
      'NEW.INBASKET PROCEDURE ARGS]
      'ERROR)
      (CASE (CAR (LAST ARGS))
        (NOERROR NIL)
        (RETURNERRORS ; We'll only handle stream lost--caller gets the rest
          (EQ (CADR RESULT)
            'STREAM.LOST))
        (T ; Probably an error was already signaled
          T)))
      then (SETQ STREAM (\NSMAIL.SIGNAL.ERROR RESULT MAILBOX 'NEW.INBASKET PROCEDURE))
        (GO LP)
      else (RETURN RESULT]))

```

(NEWS.CLOSEMAILBOX

```

[LAMBDA (MAILBOX FLUSH?) ; Edited 18-Dec-89 17:35 by bvm
  [COND
    (FLUSH? ; Delete everything we retrieved
      (LET ((INDICES (REVERSE (fetch NSMAILLENVELOPES of MAILBOX)))
        (SESSION (fetch NSMAILSESSION of MAILBOX)))
        (while INDICES do ; Delete a message or more. To keep the calls down, try to
          ; delete consecutive ranges when possible.
          (LET* ((START (CAR INDICES))
            (END START))
            (while (AND (SETQ INDICES (CDR INDICES))
              (EQL (CAR INDICES)
                (ADD1 END)))
              do (SETQ END (ADD1 END)))
            (NEW.INBASKET.CALL MAILBOX 'DELETE
              (COURIER.CREATE (NEW.INBASKET . RANGE)
                LOW _ START HIGH _ END)
              SESSION)
            (\NSMAIL.NEW.LOGOFF (fetch NSMAILSTATE of MAILBOX)

```

(fetch NSMAILSTREAM of MAILBOX)

(\NSMAIL.NEW.LOGOFF

[LAMBDA (STATE STREAM)

; Edited 19-Dec-89 11:08 by bvm

:: Executes the Inbasket.Logoff procedure and clears appropriate state. Returns true if LOGOFF call succeeded.

(LET [(RESULT (COURIER.CALL STREAM 'NEW.INBASKET 'LOGOFF (fetch STATESESSION of STATE) 'RETURNERRORS] (PROG1 (NEQ (CAR (LISTP RESULT)) 'ERROR) (replace STATESESSION of STATE with NIL) (CLOSEF STREAM))])])

)

(RPAQQ \NSMAIL.GOOD.BODY.PARTS (0 5 6 2))

(RPAQQ \NSMAIL.DISCARDABLE.BODY.PARTS ((201 "Tioga formatting") (202 "Tioga header")))

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS \NSMAIL.GOOD.BODY.PARTS \NSMAIL.DISCARDABLE.BODY.PARTS)

(ADDTOVAR LAFITEMODELST (NS 1 \NSMAIL.NEW.SEND.PARSE \NSMAIL.NEW.SEND \NSMAIL.MAKEANSWERFORM \NSMAIL.NEW.AUTHENTICATE \NSMAIL.MESSAGE.P \NSMAIL.MESSAGE.FROM.SELF.P \NSMAIL.LOGIN))

(FILESLOAD LAFITE-NSMAIL)

(DECLARE%: EVAL@COMPILE DONTCOPY

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(LOCALVARS . T)

(DECLARE%: EVAL@COMPILE

(RECORD FORWARD (ENVELOPE HEADINGS PARTS PARENT . MAP))

(DECLARE%: EVAL@COMPILE

(PUTPROPS \NSMAIL.BODY.PART.TYPE MACRO [ARGS (COND ((CADR (ASSOC (CAR ARGS) \NSMAIL.BODY.PART.TYPES))) (T (ERROR "Unknown body part type" (CAR ARGS)) 'IGNOREMACRO])

)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS \NSMAIL.BODY.PART.TYPES \NSMAIL.HEADING.ATTRIBUTES)

(CL:PROCLAIM '(CL:SPECIAL \*RETRIEVAL-ERROR\*))

(FILESLOAD (SOURCE) LAFITE-DECLS)

(FILESLOAD (LOADCOMP) LAFITE-NSMAIL ATBL)

(RPAQQ \NSMAIL.CONTENTS.TYPES ((\CT.NULL 0) (\CT.STANDARD.MESSAGE 4) (\CT.REPORT 6)))

(DECLARE%: EVAL@COMPILE

(RPAQQ \CT.NULL 0)

(RPAQQ \CT.STANDARD.MESSAGE 4)

(RPAQQ \CT.REPORT 6)

(CONSTANTS (\CT.NULL 0) (\CT.STANDARD.MESSAGE 4) (\CT.REPORT 6))

)

(RPAQQ \NSMAIL.BODY.PART.TYPES ((HEADING 0) (VPFOLDER 1)

```
(NSTEXTFILE 2)
(VPDOCUMENT 3)
(OTHERNSFILE 4)
(MULTINATIONAL.NOTE 5)
(IA5.NOTE 6)
(PILOTFILE 7)
(G3FAX 8)
(TELETEX 9)
(TELEX 10)
(ISO6937.NOTE 11)
(INTERPRESS 12))
)

(DECLARE%: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILERVERS

(ADDTOVAR NLAMA )

(ADDTOVAR NLAML )

(ADDTOVAR LAMA NEW.INBASKET.CALL)
)
```

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