

File created: 23-Feb-2024 22:24:01 {WMEDLEY}<library>lafite>LAFITE-BROWSE.;2

edit by: rmk

changes to: (VARS LAFITE-BROWSECOMS)

previous date: 23-Feb-2024 21:54:27 {WMEDLEY}<library>lafite>LAFITE-BROWSE.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

(RPAQQ **LAFITE-BROWSECOMS**

```
[ (COMS
    (FNS \LAFITE.BROWSE \LAFITE.SUBBROWSE \LAFITE.BROWSE.PROC \LAFITE.BROWSE.FORGET
      LAFITE.BROWSE.FOLDER \LAFITE.PREPARE.BROWSER \LAFITE.MAYBE.OPEN.FOLDER LAB.LOADFOLDER
      LAB.DISPLAYFOLDER LAB.MAKE.INITIAL.SELECTION LAB.CREATEWINDOW LAB.TITLE.STRING LAB.COMMANDFN
      LAB.DO.COMMAND LAB.ASSURE.SELECTIONS)
    (FNS BUILD.LAFITE.LAYOUTS \LAFITE.LAYOUT.FROM.WINDOW \LAFITE.MAKE.DUMMY.WINDOWS)
    (VARS LAFITE.DUMMY.SHADE LAFITE.DUMMY.HALF.SHADE)
    (INITVARS (\LAFITE.LAST.FOLDER.NAME))
    (GLOBALVARS \LAFITE.LAST.FOLDER.NAME))
  (COMS
    ; Browser operations
    (FNS LAB.SETUP LAB.BUTTONEVENTFN LAB.DO.UNLESS.BUSY LOADMAILFOLDER LAFITE.OBTAIN.FOLDER
      \LAFITE.FIND.EXISTING.FOLDER \LAFITE.CONFLICTING.OLD.FOLDER LAB.REPAINTFN LAB.SCROLLFN
      LAB.RESHAPEFN LAB.CLOSEFN LAB.SHRIKFN LAB.CLOSE/SHRINK LAB.EXPANDFN
      LAFITEEXTRABROWSERCOMMANDFN))
  [ (COMS
    ; Browser selection
    (FNS LAB.SELECTMESSAGE LAB.CHANGEMARK LA.READ.NEW.MARK YPOS.TO.MESSAGE# MESSAGE#.TO.YPOS)
    (FNS LA.CONSIDERRANGE LA.DECONSIDERRANGE LA.RECONSIDERRANGE LA.SELECTRANGE LA.DESELETRANGE
      LAB.FIND.SELECTED.MSG LAB.REV.FIND.SELECTED.MSG LA.UNDOSELECTION LA.VERIFY.SELECTION)
    (FNS LAB.COPYBUTTONEVENTFN LAB.SHOW.COPY.SELECTION)
    (DECLARE%: EVAL@COMPILE DONTCOPY (P (CL:PROCLAIM ' (CL:SPECIAL *MAILFOLDER* *MESSAGES*
      *FIRST-VISIBLE* *LAST-VISIBLE*
      *TOC-STATE*))
      (CL:PROCLAIM ' (GLOBAL LASTMOUSEBUTTONS))
    ; Browser display
    (FNS LAB.PROMPTPRINT LAB.FORMAT LAB.MOUSECONFIRM LAB.PRINT.TO.PROMPTWINDOW LAB.PAGEFULFN
      \LAFITE.MAYBE.CLEAR.PROMPT)
    (PROP ARGNAME LAB.PROMPTPRINT LAB.FORMAT LAB.MOUSECONFIRM)
    (FNS PRINTMESSAGESUMMARY FIRSTVISIBLEMESSAGE LASTVISIBLEMESSAGE LAB.DISPLAYLINES LAB.EXPOSEMESSAGE
      LAB.SELECTED.MESSAGES UNSELECTALLMESSAGES SELECTMESSAGE LAB.GO.TO.MESSAGE MARKMESSAGE
      LAB.MARKS.CHANGED LA.SHOW.MARK LA.INVERT.MARK.BOX LA.BLT.MARK.BOX LA.SHOW.DELETION
      LA.SHOW.SELECTION SEENMESSAGE DELETMESSAGE UNDELETMESSAGE LAB.SET.EXPUNGEABILITY)
    ;; PRINTMESSAGESUMMARY.STRING prints From and Subject. Redefined when MIME is loaded to deal with different character
    ;; encodings.
    (P (MOVD? 'PRIN3 'PRINTMESSAGESUMMARY.STRING)
    ; ICON stuff
    (FILES ICONW)
    (FNS LAB.ICONFN LAB.ICON.BUTTONEVENTFN)
    (VARS LAFITE.FOLDER.ICON))
  (COMS (INITVARS (LAFITEFROMFRACTION 0.3)
    (LAFITEMINFROMCHARS 15)
    (LAFITEVERIFYFLG T)
    (LAFITEDELETEDLINEHEIGHT 1)
    (LAFITE.BROWSER.ICON.PREFERENCE))
    (VARS LAFITEBROWSERMENUITEMS LAFITESUBBROWSEMENUIITEMS LAFITEBROWSERICONMENUIITEMS)
    (INITVARS (LAFITESUBBROWSEMENU)
      (LAFITEBROWSERICONMENU)
      (LAFITEEXTRAMENU))
    (GLOBALVARS LAFITESUBBROWSEMENU LAFITEBROWSERICONMENU LAFITEEXTRAMENU)
    [ADDVARS (LAFITEMENUVARS LAFITESUBBROWSEMENU LAFITEBROWSERICONMENU LAFITEEXTRAMENU)
      (LAFITEEXTRAMENUIITEMS ("Describe Folder" "\LAFITE.DESCRIBE.FOLDER "Display some relevant
        info about this folder" (SUBITEMS ("Inspect Folder"
          'INSPECT "Inspect the
          MAILFOLDER data structure
          associated with this
          browser"]
      (VARS (BROWSERMARKXPOSITION 8))
      (BITMAPS LA.SELECTION.BITMAP))
  [ (COMS
    ; Obsolete
    (INITVARS (LAFITEBROWSERREGION (CREATEREGION 30 30 575 210)
    (DECLARE%: DOEVAL@COMPILE DONTCOPY (CONSTANTS * TOCSTATES)
      [P (CL:PROCLAIM ' (CL:SPECIAL \CURRENTDISPLAYLINE)
        (FILES (SOURCE)
          LAFITE-DECLS)
        (LOCALVARS . T))
    (DECLARE%: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILERVARS (ADDVARS (NLAMA)
      (NLAML)
      (LAMA LAB.MOUSECONFIRM LAB.FORMAT
        LAB.PROMPTPRINT]))

```

:: BROWSE


```
(SETQ OPTIONS (CONS :BROWSE (MKLIST OPTIONS)))
(WITH.MONITOR \LAFITE.BROWSELOCK
 (LET ((MAILFOLDER (LAFITE.OBTAIN.FOLDER FOLDERNAME 'INPUT NIL OPTIONS))
      BROWSERWINDOW STREAM)
      (AND MAILFOLDER (COND
        ((SETQ BROWSERWINDOW (fetch (MAILFOLDER BROWSERWINDOW) of MAILFOLDER))
         ; Already have browser
        (COND
         ((OPENWP BROWSERWINDOW)
          (TOTOPW BROWSERWINDOW))
         ((NOT (FMEMB :SHRINK OPTIONS))
          ; Make sure the EXPANDFN runs
          (EXPANDW BROWSERWINDOW)))
        T)
      ((COND
        ((SETQ STREAM (fetch (MAILFOLDER FOLDERSTREAM) of MAILFOLDER))
         ; Already have folder open, e.g., from MOVETO, but no browser
         ; yet
        (SETFILEINFO STREAM 'BUFFERS LAFITEBUFFERSIZE)
        T)
        (T (LAFITE.MAYBE.OPEN.FOLDER MAILFOLDER 'INPUT NIL OPTIONS)))
      (LAB.CREATEWINDOW MAILFOLDER LAYOUT)))
      MAILFOLDER)))
```

(\LAFITE.MAYBE.OPEN.FOLDER

```
[LAMBDA (FOLDER ACCESS PROMPTFOLDER OPTIONS RETURNERRORS) ; Edited 8-Sep-88 17:41 by bvm
```

;; Open FOLDER for indicated access, with the possibility that the file does not yet exist. If it doesn't, then create it, asking for confirmation if
 ;; PROMPTFOLDER is supplied (a folder in whose browser to prompt for confirmation, or T for global prompt). Returns the stream on success. On
 ;; failure, returns the condition if RETURNERRORS true, else NIL.

```
(PROG* ((FOLDERNAME (OR (fetch (MAILFOLDER FULLFOLDERNAME) of FOLDER)
                        (fetch (MAILFOLDER VERSIONLESSFOLDERNAME) of FOLDER)))
      (OLDP (EQMEMB :OLD OPTIONS))
      (RECOG (AND (OR OLDP PROMPTFOLDER)
                  'OLD))
      STREAM CONDITION)
  RETRY
```

;; Just try opening. If confirmation desired, open only OLD file on first try.

```
[CL:MULTIPLE-VALUE-SETQ (STREAM CONDITION)
 (IGNORE-ERRORS (\LAFITE.OPENSTREAM FOLDERNAME ACCESS RECOG (FUNCTION \LAFITE.EOF)
                                (EQMEMB :BROWSE OPTIONS)
                                'LAFITE]
 (RETURN (if CONDITION
          then ; Failed to open
            (if (AND (NEQ RECOG 'NEW)
                    (NOT OLDP)
                    (TYPEP CONDITION 'XCL:FILE-NOT-FOUND))
                then ; Just couldn't find it, so maybe create it. If RECOG was NEW,
                    ; we normally shouldn't be getting this error
                (if (OR (NOT (EQMEMB :CONFIRM OPTIONS))
                        (LAB.MOUSECONFIRM PROMPTFOLDER "Click LEFT to confirm creating ~A"
                        FOLDERNAME))
                    then (SETQ RECOG 'NEW)
                        (SETQ ACCESS 'BOTH)
                        (GO RETRY)
                    else ; Disconfirmed the create request.
                    NIL)
                elseif RETURNERRORS
                then ; Caller wants to know why
                else ; File wouldn't open for some other reason than just not existing,
                    ; so report it. Should probably be a little more discriminating
                    ; here.
                    (\LAFITE.REPORT.FILE.WONT.OPEN (AND (NEQ PROMPTFOLDER T)
                                                         PROMPTFOLDER)
                    CONDITION FOLDERNAME)
                NIL)
          else (\LAFITE.SET.FOLDER.STREAM FOLDER STREAM)
          ; Notice name fields and such
          STREAM])
```

(\LAB.LOADFOLDER

```
[LAMBDA (MAILFOLDER) ; Edited 13-Sep-88 17:42 by bvm
```

```
(COND
 ((LOADMAILFOLDER MAILFOLDER)
  (replace (MAILFOLDER FIRSTSELECTEDMESSAGE) of MAILFOLDER with 1)
  ; Nothing selected
  (replace (MAILFOLDER LASTSELECTEDMESSAGE) of MAILFOLDER with 0)
  (LAB.DISPLAYFOLDER MAILFOLDER)
 MAILFOLDER])
```

(LAB.DISPLAYFOLDER

```
[LAMBDA (FOLDER) ; Edited 28-Apr-89 15:50 by bvm
  (LET* ((WINDOW (fetch (MAILFOLDER BROWSERWINDOW) of FOLDER))
        (CLIPREGION (DSPCLIPPINGREGION NIL WINDOW))
        MSG)
    (CLEARW WINDOW)
    (LAB.SETUP FOLDER)
    (replace (MAILFOLDER CURRENTDISPLAYEDMESSAGE) of FOLDER with NIL)
    (replace (MAILFOLDER CURRENTDISPLAYEDSTREAM) of FOLDER with NIL)
    (COND
      ((AND (SETQ MSG (LAB.MAKE.INITIAL.SELECTION FOLDER))
            (< (MESSAGE#.TO.YPOS MSG FOLDER)
              (fetch (REGION BOTTOM) of CLIPREGION))) ; Quietly scroll so that selected message is in window
        (WYOFFSET (TIMES [- (fetch (LAFITEMSG #) of MSG)
                          (QUOTIENT (fetch (REGION HEIGHT) of CLIPREGION)
                                    (TIMES 2 (fetch (MAILFOLDER BROWSERFONTHEIGHT) of FOLDER]
                                             (fetch (MAILFOLDER BROWSERFONTHEIGHT) of FOLDER))
                          WINDOW)))
      (COND
        ((EQ (fetch (MAILFOLDER %OFMESSAGES) of FOLDER)
             0)
         (LAB.PROMPTPRINT FOLDER T "Folder is empty.")
         (T (LAB.DISPLAYLINES FOLDER NIL NIL CLIPREGION]))
```

(LAB.MAKE.INITIAL.SELECTION

```
[LAMBDA (MAILFOLDER) (* bvm%: "24-Feb-86 16:31")
  (LET ((LASTMSG# (fetch (MAILFOLDER %OFMESSAGES) of MAILFOLDER))
        (MESSAGES (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of MAILFOLDER))
        MSGDESCRIPTOR I)
    (COND
      ((EQ LASTMSG# 0)
       NIL)
      ((SETQ I (LAB.FIND.SELECTED.MSG MAILFOLDER 1 LASTMSG#))
       ; There are already selected messages
       (NTHMESSAGE MESSAGES I))
      (T [find old I from 1 to LASTMSG# suchthat (AND [NOT (fetch (LAFITEMSG SEEN?) of (SETQ MSGDESCRIPTOR
                                                                    (NTHMESSAGE MESSAGES I]
                                                                    (NOT (fetch (LAFITEMSG DELETED?) of MSGDESCRIPTOR]
                                                                    ; Found an unseen, undeleted message. If we don't find one, the last MSGDESCRIPTOR is the one to select
                                                                    (SELECTMESSAGE MSGDESCRIPTOR MAILFOLDER)
                                                                    MSGDESCRIPTOR]))
```

(LAB.CREATEWINDOW

```
[LAMBDA (FOLDER LAYOUT TITLE) ; Edited 20-Apr-89 16:05 by bvm
```

;;; Build a browser window, which consists of three attached windows: the main BROWSERWINDOW, the BROWSERMENUWINDOW containing the
 ;;; menu, and a BROWSERPROMPTWINDOW for displaying random info

```
(if (NULL TITLE)
  then (SETQ TITLE (if FOLDER
                      then (LAB.TITLE.STRING FOLDER)
                      else "Dummy Browser")))
(PROG (BROWSERPROMPTWINDOW BROWSERMENUWINDOW BROWSERMENU BROWSERWINDOW WIDTH HEIGHT MENUREGION WHOLEREGION)
  (SETQ BROWSERMENU (create MENU
                             ITEMS _ LAFITEBROWSERMENUITEMS
                             CENTERFLG _ T
                             WHENSELECTEDFN _ (if FOLDER
                                                  then (FUNCTION LAB.COMMANDFN)
                                                  else (FUNCTION NIL))
                             MENUFONT _ LAFITEMENUFONT))
  (SETQ MENUREGION (WINDOWPROP (SETQ BROWSERMENUWINDOW (MENUWINDOW BROWSERMENU))
                              'REGION))
  (SETQ WIDTH (fetch (REGION WIDTH) of MENUREGION))
  [SETQ HEIGHT (HEIGHTIFWINDOW (FONTPROP LAFITEBROWSERFONT 'HEIGHT)

  ;; Now figure out where to put it all
  (if LAYOUT
    then ; user tells us all. If this happens to match one of the default ; regions, make sure to use it instead (future test is with EQ).
        (if (EQ LAYOUT T) ; Requires prompting
          then (SETQ LAYOUT NIL)
              else (for SPEC in LAFITE.BROWSER.LAYOUTS when (EQUAL SPEC LAYOUT)
                    do (RETURN (SETQ LAYOUT SPEC)
                          elseif LAFITE.BROWSER.LAYOUTS
                            then ; Take the first layout not currently in use
                                (for SPEC in LAFITE.BROWSER.LAYOUTS unless (for OPEN in \ACTIVE\LAFITE\FOLDERS
                                                                              thereis (EQ (fetch (MAILFOLDER BROWSERLAYOUT)
                                                                              of OPEN)
                                                                              SPEC))
                                do (RETURN (SETQ LAYOUT SPEC)))
                            elseif (AND LAFITEBROWSERREGION (for OPEN in \ACTIVE\LAFITE\FOLDERS never (fetch (MAILFOLDER BROWSERWINDOW)
                                                                              of OPEN)))
                              then ; For backward compatibility: if there are no open browsers, use ; LAFITEBROWSERREGION
```

```

        (SETQ LAYOUT (LIST LAFITEBROWSERREGION NIL LAFITEDISPLAYREGION))
[COND
  ((SETQ WHOLEREGION (LISTP (CAR LAYOUT)))
   [COND
     ((> (fetch (REGION WIDTH) of WHOLEREGION)
          WIDTH)
          ; Only use specified region width if it is wide enough
          (SETQ WIDTH (fetch (REGION WIDTH) of WHOLEREGION))
          (SETQ WHOLEREGION (create REGION using WHOLEREGION WIDTH _ WIDTH))
          ; Copy the region so we don't smash user variable
          )
     (T
          ; Prompt for region
          (SETQ WHOLEREGION (GETBOXREGION WIDTH (TIMES HEIGHT 9)
                                   NIL NIL NIL (CONCAT "Specify region for " TITLE)
                                   (fetch (REGION HEIGHT) of WHOLEREGION)
                                   (+ HEIGHT (fetch (REGION HEIGHT) of MENUREGION)
                                       ; Shrink user-supplied region by the combined heights of the
                                       ; menu and prompt window
                                       )
                                   )
          [replace (REGION HEIGHT) of WHOLEREGION with (- (fetch (REGION HEIGHT) of WHOLEREGION)
                                                         (+ HEIGHT (fetch (REGION HEIGHT) of MENUREGION)
                                                             ; Shrink user-supplied region by the combined heights of the
                                                             ; menu and prompt window
                                                             )
                                                         )
          (SETQ BROWSERWINDOW (CREATEW WHOLEREGION TITLE))
          (ATTACHWINDOW BROWSERMENUWINDOW BROWSERWINDOW 'TOP 'JUSTIFY)
          (DSPFONT LAFITEBROWSERFONT BROWSERWINDOW)
          (SETQ BROWSERPROMPTWINDOW (GETPROMPTWINDOW BROWSERWINDOW 1 LAFITEBROWSERFONT))
          (CLEARW BROWSERPROMPTWINDOW)
          ; Get the xy set correctly for the actual font being used
          (LINELENGTH MAX.SMALLP BROWSERPROMPTWINDOW)
          ; Make LINELENGTH ignored -- we try not to overflow window
          ; anyway, and the LINELENGTH is no good for variable width
          ; font
          (if FOLDER
              then
              ; MAILFOLDER = NIL is used by dummy routine to set up
              ; regions
              [WINDOWADDPROP BROWSERPROMPTWINDOW 'RESHAPEFN (FUNCTION (LAMBDA (W)
                                                                      (LINELENGTH MAX.SMALLP W)
                                                                      )
                                                                      )
              (WINDOWADDPROP BROWSERPROMPTWINDOW 'RESHAPEFN (FUNCTION RESHAPEBYREPAINTFN))
              ; Adding our own reshapefn overrode the default, so add the
              ; default back in.
              (WINDOWPROP BROWSERPROMPTWINDOW 'PAGEFULLFN (FUNCTION LAB.PAGEFULLFN))
              (replace (MAILFOLDER ORIGINALBROWSTITLE) of FOLDER with TITLE)
              (WINDOWPROP BROWSERWINDOW 'MAILFOLDER FOLDER)
              (WINDOWPROP BROWSERWINDOW 'SCROLLFN (FUNCTION LAB.SCROLLFN))
              (replace (MAILFOLDER BROWSERWINDOW) of FOLDER with BROWSERWINDOW)
              (replace (MAILFOLDER BROWSERMENUWINDOW) of FOLDER with BROWSERMENUWINDOW)
              (replace (MAILFOLDER BROWSERMENU) of FOLDER with BROWSERMENU)
              (replace (MAILFOLDER BROWSERPROMPTWINDOW) of FOLDER with BROWSERPROMPTWINDOW)
              (replace (MAILFOLDER FOLDERDISPLAYREGION) of FOLDER with (CADDR LAYOUT))
              (replace (MAILFOLDER BROWSERLAYOUT) of FOLDER with LAYOUT)
              (WINDOWPROP BROWSERWINDOW 'REPAINTFN (FUNCTION LAB.REPAINTFN))
              (WINDOWPROP BROWSERWINDOW 'ICONFN (FUNCTION LAB.ICONFN))
              (WINDOWPROP BROWSERWINDOW 'ICONPOSITION (CADR LAYOUT))
              (WINDOWPROP BROWSERWINDOW 'BUTTONEVENTFN (FUNCTION LAB.BUTTONEVENTFN))
              (WINDOWPROP BROWSERWINDOW 'RIGHTBUTTONFN (FUNCTION LAB.BUTTONEVENTFN))
              (WINDOWPROP BROWSERWINDOW 'COPYBUTTONEVENTFN (FUNCTION LAB.COPYBUTTONEVENTFN))
              ; make sure Lafite has the first CLOSEFN and SHRINKFN
              (WINDOWADDPROP BROWSERWINDOW 'CLOSEFN (FUNCTION LAB.CLOSEFN)
                              T)
              (WINDOWADDPROP BROWSERWINDOW 'SHRINKFN (FUNCTION LAB.SHRINKFN)
                              T)
              (WINDOWADDPROP BROWSERWINDOW 'RESHAPEFN (FUNCTION LAB.RESHAPEFN))
              (RETURN BROWSERWINDOW)]
          )
          )
  )
]

```

(LAB.TITLE.STRING

```

[LAMBDA (FOLDER)
  ; Edited 24-Oct-88 18:07 by bvm
  ;; Returns string to be used for FOLDER's browser's title. It is arranged to convey as much info as possible before it falls off the right edge of the
  ;; window.
  (LET* ((DEST (fetch (MAILFOLDER DEFAULTMOVETOFILE) of FOLDER))
         (FIELDS (UNPACKFILENAME.STRING (fetch (MAILFOLDER FULLFOLDERNAME) of FOLDER)))
         (BODY (FMEMB 'NAME FIELDS)))
    (RPLACD (NLEFT FIELDS 1 BODY))
    ; detach name.ext;version from host/directory
    (CONCAT "Browsing " (if (STRING-EQUAL (LISTGET BODY 'EXTENSION)
                                          LAFITEMAIL.EXT)
                          then
                          ; Just the name field will do
                          (LISTGET BODY 'NAME)
                          else (CL:APPLY (FUNCTION PACKFILENAME.STRING)
                                          BODY))
            (if DEST
                then (CONCAT " (Move To: " (fetch (MAILFOLDER SHORTFOLDERNAME) of DEST)
                             ") ")
                else "")
            " on "
            (if (U-CASEP (SETQ FIELDS (CL:APPLY (FUNCTION PACKFILENAME.STRING)
                                                FIELDS)))
                then (CL:STRING-CAPITALIZE FIELDS)
                else
                ; Leave the capitalization alone
                FIELDS))
    )
  )
]

```

(LAB.COMMANDFN

```
[LAMBDA (ITEM MENU KEY) ; Edited 18-Jul-88 11:41 by bvm
  (OR \LAFITE.READY (\LAFITE.MARK.FOLDERS.OBSOLETE))
  (LET ((MENUW (WFROMMENU MENU))
        WINDOW FOLDER)
    (AND MENUW (SETQ WINDOW (WINDOWPROP MENUW 'MAINWINDOW))
           (SETQ FOLDER (WINDOWPROP WINDOW 'MAILFOLDER))
           (fetch (MAILFOLDER BROWSERREADY) of FOLDER)
           (CL:FUNCALL (EXTRACTMENUCOMMAND ITEM)
                       WINDOW FOLDER ITEM MENU KEY]))
```

(LAB.DO.COMMAND

```
[LAMBDA (WINDOW ITEM/FN MENU KEY) ; Edited 18-Jul-88 11:41 by bvm
  ;; Runs some browser command--variant on LAB.COMMANDFN to be called programmatically. If ITEM/FN is a function name, we get the real
  ;; item and MENU from the window.
  (OR \LAFITE.READY (\LAFITE.MARK.FOLDERS.OBSOLETE))
  (LET [(FOLDER (WINDOWPROP WINDOW 'MAILFOLDER)
        (AND FOLDER (fetch (MAILFOLDER BROWSERREADY) of FOLDER)
              (CL:FUNCALL (if (LITATOM ITEM/FN)
                            then (PROG1 ITEM/FN
                                         (OR MENU (SETQ MENU (fetch (MAILFOLDER BROWSERMENU) of FOLDER)))
                                         (SETQ ITEM/FN (LA.MENU.ITEM ITEM/FN MENU)))
                            else (EXTRACTMENUCOMMAND ITEM/FN))
              WINDOW FOLDER ITEM/FN MENU KEY))])
```

(LAB.ASSURE.SELECTIONS

```
[LAMBDA (MAILFOLDER) (* bvm%: " 3-Feb-86 14:44")
  (COND
    ((IGREATERP (fetch (MAILFOLDER FIRSTSELECTEDMESSAGE) of MAILFOLDER)
                (fetch (MAILFOLDER LASTSELECTEDMESSAGE) of MAILFOLDER))
     (LAB.PROMPTPRINT MAILFOLDER T "No messages selected.")
    T])
```

(DEFINEQ

(BUILD.LAFITE.LAYOUTS

```
[LAMBDA NIL ; Edited 23-Nov-87 16:48 by bvm:
  (LET (DUMMYWINDOWS)
    (CL:UNWIND-PROTECT
      (PROG ((ICONBM (fetch (TITLEDICON ICON) of LAFITE.FOLDER.ICON))
            (N 0)
            W MAILFOLDER LAYOUTS LAYOUT CURRENT OLDLAYOUTS POS)
        (if (AND (LISTP LAFITE.BROWSER.LAYOUTS)
                 (CL:Y-OR-N-P "Do you wish to retain the ~D browser specifications you already have? "
                              (LENGTH LAFITE.BROWSER.LAYOUTS)))
            then (SETQ OLDLAYOUTS LAFITE.BROWSER.LAYOUTS)
                [for LAYOUT in OLDLAYOUTS do (for FOLDER in \ACTIVE.LAFITE.FOLDERS
                                                when (EQ (fetch (MAILFOLDER BROWSERLAYOUT)
                                                                of FOLDER)
                                                    LAYOUT)
                                                do (add N 1)
                                                    (RETURN (CL:FORMAT T "Retaining layout in use by
                                                                ~A.~%" (fetch (MAILFOLDER
                                                                SHORTFOLDERNAME)
                                                                of FOLDER)))
                                                finally ; Display dummy browser and icon to aid in positioning.
                                                    [SETQ W (LAB.CREATEWINDOW NIL LAYOUT
                                                                (CONCAT "Sample Browser "
                                                                (add N 1)
                                                                (push DUMMYWINDOWS (\LAFITE.MAKE.DUMMY.WINDOWS
                                                                W LAYOUT N]
                                                    (SETQ LAYOUTS (REVERSE OLDLAYOUTS)))
                                                    (CL:FORMAT T "Click in preference order in each browser or browser icon whose current layout
                                                                you wish to include; click in background to finish~%"
                                                    (while (SETQ W (WHICHW (GETPOSITION)))
                                                        do (if [AND [NOT (SETQ MAILFOLDER (WINDOWPROP W 'MAILFOLDER)
                                                                (OR [NOT (SETQ W (WINDOWPROP W 'ICONFOR)
                                                                (NOT (SETQ MAILFOLDER (WINDOWPROP W 'MAILFOLDER)
                                                                then (CL:FORMAT T "That's not a Lafite browser window/icon; try again.~%"
                                                                elseif (OR (MEMB (fetch (MAILFOLDER BROWSERLAYOUT) of MAILFOLDER)
                                                                OLDLAYOUTS)
                                                                (MEMBER (SETQ LAYOUT (\LAFITE.LAYOUT.FROM.WINDOW W MAILFOLDER ICONBM)
                                                                LAYOUTS))
                                                                then (CL:FORMAT T "You have already included that browser's specification.~%"
                                                                else ; It's a Lafite browser window or icon.
                                                                (push LAYOUTS LAYOUT)
                                                                (CL:FORMAT T "Browser for ~A noted.~%" (fetch (MAILFOLDER SHORTFOLDERNAME)
                                                                of MAILFOLDER))
                                                                (add N 1)))
                                                    (while (OR (NULL LAYOUTS)
                                                                (MENU (create MENU
                                                                ITEMS _ ' ("Specify another browser" T)
```

```

("Finish" 'NIL))
MENUFONT _ LAFITEMENUFONT
CENTERFLG _ T))
do [SETQ W (LAB.CREATEWINDOW NIL T (CONCAT "Sample Browser " (add N 1)
(push DUMMYWINDOWS (\LAFITE.MAKE.DUMMY.WINDOWS W (SETQ LAYOUT (
\LAFFITE.LAYOUT.FROM.WINDOW
W NIL ICONBM))
N))
(push LAYOUTS LAYOUT))
(RETURN (if (AND LAYOUTS (MOUSECONFIRM "Click LEFT to confirm setting LAFITEBROWSERLAYOUTS to
these values" T T T))
then (/SETTOPVAL 'LAFITE.BROWSER.LAYOUTS (REVERSE LAYOUTS))
(MARKASCHANGED 'LAFITE.BROWSER.LAYOUTS 'VARS)
LAFITE.BROWSER.LAYOUTS)))
;; Cleanup dummy windows put up earlier
(for x in DUMMYWINDOWS bind TMP do (CLOSEW X)
(if (SETQ TMP (WINDOWPROP X 'DUMMY.ICON))
then (CLOSEW TMP))
(if (SETQ TMP (WINDOWPROP X 'DUMMY.DISPLAY))
then (CLOSEW TMP))))]
```

(\LAFITE.LAYOUT.FROM.WINDOW

[LAMBDA (W FOLDER ICONBM) ; Edited 10-Dec-87 17:15 by bvm:

;; Return a browser layout spec corresponding to window W optionally containing FOLDER.

```

(LET ((PW (if (OPENWP W)
then (GETPROMPTWINDOW W 1 LAFITEBROWSERFONT)
else PROMPTWINDOW)))
(LIST (WINDOWREGION W)
(if (WINDOWPROP W 'ICONPOSITION)
else (CLEARW PW)
(CL:FORMAT PW "Specify position for icon."
(PROG1 (GETBOXPOSITION (BITMAPWIDTH ICONBM)
(BITMAPHEIGHT ICONBM))
(CLEARW PW)))
(PROG (CURRENT)
[if FOLDER
then
(RETURN (OR (if (CAR (SETQ CURRENT (fetch (MAILFOLDER FOLDERDISPLAYWINDOWS)
of FOLDER)))
; Use current values, if known
then
; take current primary window region
(COPY (WINDOWPROP (CAR CURRENT)
'REGION))
elseif (COPY (fetch (MAILFOLDER FOLDERDISPLAYREGION) of FOLDER)))
(GO PROMPT]
PROMPT
(CLEARW PW)
(CL:FORMAT PW "Specify region for display window")
(RETURN (PROG1 (if LAFITE.DISPLAY.SIZE
then (GETBOXREGION (CAR LAFITE.DISPLAY.SIZE)
(CDR LAFITE.DISPLAY.SIZE)
NIL NIL)
else (GETREGION))
(CLEARW PW])
```

(\LAFITE.MAKE.DUMMY.WINDOWS

[LAMBDA (MAINW LAYOUT N) ; Edited 23-Nov-87 16:44 by bvm:

```

(LET (TMP SUBW)
(DSPFILL NIL LAFITE.DUMMY.SHADE 'REPLACE MAINW)
(WINDOWPROP MAINW 'SHRINKFN 'DON'T)
(if (SETQ TMP (CADR LAYOUT))
then
; An icon position is given
(SETQ SUBW (TITLEDICONW LAFITE.FOLDER.ICON (CONCAT "Icon " N)
LAFITETITLEFONT TMP))
(ICONW.SHADE SUBW LAFITE.DUMMY.HALF.SHADE)
(WINDOWPROP SUBW 'BUTTONEVENTFN (FUNCTION ICONBUTTONEVENTFN))
(WINDOWPROP MAINW 'DUMMY.ICON SUBW))
(if (SETQ TMP (CADDR LAYOUT))
then
; A display region is given
(SETQ SUBW (CREATEW TMP (CONCAT "Lafite Display window " N)
LAFITETITLEFONT TMP))
(DSPFILL NIL LAFITE.DUMMY.SHADE 'REPLACE SUBW)
(WINDOWPROP MAINW 'DUMMY.DISPLAY SUBW))
MAINW])
```

)

(RPAQQ LAFITE.DUMMY.SHADE 

(RPAQQ LAFITE.DUMMY.HALF.SHADE 

(RPAQ? \LAFITE.LAST.FOLDER.NAME)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS \LAFITE.LAST.FOLDER.NAME)
)

:: Browser operations

(DEFINEQ

(LAB.SETUP

```
[LAMBDA (MAILFOLDER) (* bvm%: "31-Jul-84 14:39")
  (PROG ((WINDOW (fetch (MAILFOLDER BROWSERWINDOW) of MAILFOLDER))
    WIDTH HEIGHT TOTALHEIGHT ASCENT DIGITWIDTH SPACEWIDTH XPOS)
    (CLEARW WINDOW)
    (SETQ LAFITEBROWSERFONT (FONTCREATE LAFITEBROWSERFONT))
    (DSPFONT LAFITEBROWSERFONT WINDOW)
    (DSPRIGHTMARGIN MAX.SMALLP WINDOW)
    (LINELENGTH 10000 WINDOW)
    [replace (MAILFOLDER BROWSERFONTHEIGHT) of MAILFOLDER with (SETQ HEIGHT (FONTPROP LAFITEBROWSERFONT 'HEIGHT])
    [replace (MAILFOLDER BROWSERFONTASCENT) of MAILFOLDER with (SETQ ASCENT (FONTPROP LAFITEBROWSERFONT 'ASCENT])
    (replace (MAILFOLDER BROWSERFONTDESCENT) of MAILFOLDER with (FONTPROP LAFITEBROWSERFONT 'DESCENT))
    (replace (MAILFOLDER BROWSERORIGIN) of MAILFOLDER with (+ (DSPYPOSITION NIL WINDOW) ASCENT))
    [replace (MAILFOLDER BROWSERMAXXPOS) of MAILFOLDER with (SETQ WIDTH (WINDOWPROP WINDOW 'WIDTH])
    (SETQ TOTALHEIGHT (TIMES (fetch (MAILFOLDER %OFMESSAGES) of MAILFOLDER) HEIGHT))
    (WINDOWPROP WINDOW 'EXTENT (replace (MAILFOLDER BROWSEREXTENT) of MAILFOLDER with (create REGION
      LEFT _ 0
      BOTTOM _ (- (fetch (MAILFOLDER BROWSERORIGIN) of MAILFOLDER) TOTALHEIGHT)
      WIDTH _ WIDTH
      HEIGHT _ TOTALHEIGHT)))
```

:: Now figure out columns for printing toc entries

```
(SETQ DIGITWIDTH (CHARWIDTH (CHARCODE 9) LAFITEBROWSERFONT))
(SETQ SPACEWIDTH (CHARWIDTH (CHARCODE r) LAFITEBROWSERFONT))
[replace (MAILFOLDER ORDINALXPOS) of MAILFOLDER with (SETQ XPOS (+ BROWSERMARKXPOSITION (CHARWIDTH (CHARCODE m) LAFITEBROWSERFONT) (LRSH DIGITWIDTH 1]
; Message # starts here
[replace (MAILFOLDER DATEXPOS) of MAILFOLDER with (add XPOS (+ (TIMES 2 SPACEWIDTH) (TIMES 4 DIGITWIDTH)
; Date starts here. Allow 4 columns of digits plus some space
[replace (MAILFOLDER FROMXPOS) of MAILFOLDER with (add XPOS (+ (TIMES 2 DIGITWIDTH) (TIMES 2 SPACEWIDTH) (CHARWIDTH (CHARCODE -) LAFITEBROWSERFONT) (STRINGWIDTH 'MAY LAFITEBROWSERFONT]
; From field starts here. Allow 3 columns of digits, a month, and some space
[replace (MAILFOLDER SUBJECTXPOS) of MAILFOLDER with (add XPOS (IMAX (TIMES LAFITEMINFROMCHARS (CHARWIDTH (CHARCODE A) LAFITEBROWSERFONT)) (FIXR (FTIMES LAFITEFROMFRACTION (- WIDTH XPOS]
; Subject field starts here. Space is divided up between From and Subject so that From field gets LAFITEFROMFRACTION of the available ; space, but at least LAFITEMINFROMCHARS wide
(replace (MAILFOLDER FROMMAXXPOS) of MAILFOLDER with (- XPOS (TIMES 2 SPACEWIDTH)))
; From field gets truncated beyond this position
(replace (MAILFOLDER BROWSERDIGITWIDTH) of MAILFOLDER with DIGITWIDTH])
```

(LAB.BUTTONEVENTFN

```
[LAMBDA (WINDOW) ; Edited 28-Jul-88 17:37 by bvm
  (TOTOPW WINDOW)
  (COND
    ((INSIDEP (DSPCLIPPINGREGION NIL WINDOW)
      (LASTMOUSEX WINDOW)
      (LASTMOUSEY WINDOW))
      (LAB.DO.UNLESS.BUSY WINDOW (FUNCTION LAB.SELECTMESSAGE)))
    ((LASTMOUSESTATE (ONLY RIGHT))
      (DOWINDOWCOM WINDOW))
    ((LASTMOUSESTATE (ONLY MIDDLE))
      (LAB.DO.UNLESS.BUSY WINDOW (FUNCTION LAFITEEXTRABROWSERCOMMANDFN))
```

(LAB.DO.UNLESS.BUSY

```
[LAMBDA (WINDOW FN ARGUMENT) ; Edited 3-Sep-87 18:01 by bvm:
  (RESETLST
```



```

[PROG [(MAILFOLDER (WINDOWPROP WINDOW 'MAILFOLDER)
(COND
((AND (fetch (MAILFOLDER BROWSERREADY) of MAILFOLDER)
(OBTAIN.MONITORLOCK (fetch (MAILFOLDER FOLDERLOCK) of MAILFOLDER)
T T))
(CL:FUNCALL FN WINDOW MAILFOLDER ARGUMENT))]]

```

(LOADMAILFOLDER

```

[LAMBDA (FOLDER) ; Edited 10-May-89 12:42 by bvm
;; LAFITEVERSION# is used to keep track of changed in internal datastructures that get written out to Lafite TOC files. If the datastructures
;; change, then just change the version number to LAFITEVERSION#+1 and the rest of Lafite should adjust appropriately.
(replace (MAILFOLDER FOLDEROUTOFORDER) of FOLDER with NIL)
(replace (MAILFOLDER FOLDERNEEDSUPDATE) of FOLDER with NIL) ; Assume ok until we hear otherwise
(COND
((OR (\LAFITE.READ.TOC.FILE FOLDER)
(\LAFITE.PARSE.FOLDER FOLDER))
(LAB.PROMPTPRINT FOLDER " done.")
[replace (MAILFOLDER FIRSTCHANGEDMESSAGE) of FOLDER with (OR (LAB.SET.EXPUNGEABILITY FOLDER)
(MAX 1 (fetch (MAILFOLDER %OFMESSAGES)
of FOLDER)
; Only "changed" messages are deleted ones now, except for
; possibly the last message in the case where it was truncated.
FOLDER])

```

(LAFITE.OBTAIN.FOLDER

```

[LAMBDA (FOLDERNAME ACCESS PROMPTFOLDER OPTIONS) ; Edited 12-Sep-88 17:42 by bvm
;;; Locates a MAILFOLDER on FOLDERNAME, or creates one if there is none. If the folder is not already on the active list, we will try to open it for
;;; ACCESS, or just return NIL if ACCESS is NIL. If PROMPTFOLDER is supplied, it is a folder (or T for PROMPTWINDOW) indicating focus of attention
;;; for prompting for confirmation to create new folder. OPTIONS may include :FORGET, in which case we don't add this folder name to the set of known
;;; folders, or :BROWSE, meaning we plan to browse the folder.
(WITH.MONITOR \LAFITE.BROWSELOCK
[OR (for FOLDER in \ACTIVELAFITEFOLDERS when (OR (STRING-EQUAL (fetch (MAILFOLDER VERSIONLESSFOLDERNAME)
of FOLDER)
FOLDERNAME)
(STRING-EQUAL (fetch (MAILFOLDER FULLFOLDERNAME)
of FOLDER)
FOLDERNAME))
do ; Found existing folder without sweating too hard
(RETURN FOLDER))
(AND ACCESS (LET* ((UNPACKEDNAME (UNPACKFILENAME.STRING FOLDERNAME))
(OLDVERSION (LISTGET UNPACKEDNAME 'VERSION))
(VERSIONLESSNAME (PROGN (LISTPUT UNPACKEDNAME 'VERSION NIL)
(PACKFILENAME.STRING UNPACKEDNAME)))
SHORTNAME NEWNAME NEWFOLDER OLDFOLDER STREAM)
(COND
((AND (NOT (STRING-EQUAL VERSIONLESSNAME FOLDERNAME))
(SETQ NEWFOLDER (\LAFITE.FIND.EXISTING.FOLDER VERSIONLESSNAME))
(\LAFITE.CONFLICTING.OLD.FOLDER NEWFOLDER FOLDERNAME OLDVERSION))
; Found a folder describing a different version--can't have more
; than one version up at once
NIL)
(NULL (SETQ STREAM
(\LAFITE.MAYBE.OPEN.FOLDER (SETQ NEWFOLDER
(create MAILFOLDER
FULLFOLDERNAME _ FOLDERNAME
VERSIONLESSFOLDERNAME _
VERSIONLESSNAME
FOLDERLOCK _ (CREATE.MONITORLOCK
VERSIONLESSNAME)))
ACCESS PROMPTFOLDER OPTIONS T)))
; File not found and user didn't confirm creating it
NIL)
((type? STREAM STREAM) ; succeeded in opening the new folder.
(PROG ((VERSIONLESSNEW (PACKFILENAME.STRING 'VERSION NIL 'BODY
(fetch (MAILFOLDER FULLFOLDERNAME) of NEWFOLDER))
)
(SHORTNAME (fetch SHORTFOLDERNAME of NEWFOLDER)))
(if (NOT (STRING-EQUAL VERSIONLESSNEW VERSIONLESSNAME))
then ; We guessed wrong about the versionless name--having
; actually opened the file, here's the canonical name
(if (SETQ OLDFOLDER (\LAFITE.FIND.EXISTING.FOLDER VERSIONLESSNEW))
then ; it turns out we already had this file open under a different full
; name. Close the new one and return the old
(\LAFITE.CLOSE.FOLDER NEWFOLDER T)
(RETURN (AND (NOT (\LAFITE.CONFLICTING.OLD.FOLDER
OLDFOLDER FOLDERNAME
OLDVERSION))
OLDFOLDER))
else (replace (MAILFOLDER VERSIONLESSFOLDERNAME) of NEWFOLDER
with VERSIONLESSNEW)))
(push \ACTIVELAFITEFOLDERS NEWFOLDER)
[if (NOT (CL:MEMBER SHORTNAME (CDR LAFITEMAILFOLDERS)

```

```

                                :TEST
                                'STRING-EQUAL))
    then                          ; This is a new folder
      (COND
        ((EQMEMB :FORGET OPTIONS)
         ; Don't remember it, but do set default for next Browse&Forget
         (SETQ \LAFITE.LAST.FOLDER.NAME SHORTNAME))
        (T
         ; Add to list for menu
         (\LAFITE.NOTICE.FILE SHORTNAME]
          (RETURN NEWFOLDER)))
      (T
       ; STREAM is a condition signaled by the attempt to open the file
       (if (AND (TYPEP STREAM 'XCL:FILE-WONT-OPEN)
                [SETQ OLDFOLDER (OR (AND (SETQ NEWNAME (XCL:FILE-WONT-OPEN-PATHNAME
                                                    STREAM))
                                         [NOT (STRING-EQUAL VERSIONLESSNAME
                                                             (SETQ VERSIONLESSNAME
                                                             (PACKFILENAME.STRING
                                                             'VERSION NIL 'BODY NEWNAME]
                                                             (\LAFITE.FIND.EXISTING.FOLDER VERSIONLESSNAME
                                                             ))
                                         (AND (SETQ NEWNAME (INFILEP VERSIONLESSNAME))
                                              [NOT (STRING-EQUAL VERSIONLESSNAME
                                                             (SETQ VERSIONLESSNAME
                                                             (PACKFILENAME.STRING
                                                             'VERSION NIL 'BODY NEWNAME]
                                                             (\LAFITE.FIND.EXISTING.FOLDER VERSIONLESSNAME
                                                             ))
                                              (NOT (\LAFITE.CONFLICTING.OLD.FOLDER NEWFOLDER FOLDERNAME OLDVERSION)
                                              ))
                )
         then                          ; Looks like file wouldn't open because we already have it open
                                         ; by a different name. Return that folder
          OLDFOLDER
        else                          ; Report the problem
          (\LAFITE.REPORT.FILE.WONT.OPEN PROMPTFOLDER STREAM (OR NEWNAME
                                                                FOLDERNAME))
          NIL]))

```

(\LAFITE.FIND.EXISTING.FOLDER

```

[LAMBDA (VERSIONLESSNAME)
                                ; Edited 22-Aug-88 17:32 by bvm
  ;; Returns an existing mail folder object whose versionless name is (case-insensitively) equal to VERSIONLESSNAME, or NIL on failure.
  (find FOLDER in \ACTIVELAFITEFOLDERS suchthat (STRING-EQUAL (fetch (MAILFOLDER VERSIONLESSFOLDERNAME)
                                                                    of FOLDER)
                                                                VERSIONLESSNAME]))

```

(\LAFITE.CONFLICTING.OLD.FOLDER

```

[LAMBDA (NEWFOLDER FOLDERNAME OLDVERSION)
                                ; Edited 22-Aug-88 18:30 by bvm
  ;; NEWFOLDER is a folder we found somewhere during the search for FOLDERNAME. Check that it works, i.e., that it doesn't have a version
  ;; number that differs from that of FOLDERNAME
  (COND
    ((NULL OLDVERSION)
     ; User didn't ask for a specific version, so this folder is fine
     NIL)
    ((OR (fetch (MAILFOLDER BROWSERWINDOW) of NEWFOLDER)
         (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of NEWFOLDER))
     (printout PROMPTWINDOW T "A different version of " FOLDERNAME " is already being browsed." "Multiple
                               versions may not be manipulated at once.")
     T)
    (T
     ; Not being browsed, so kill it and pretend it never existed
     (\LAFITE.CLOSE.FOLDER NEWFOLDER T)
     (SETQ \ACTIVELAFITEFOLDERS (DREMOVE NEWFOLDER \ACTIVELAFITEFOLDERS))
     NIL))

```

(LAB.REPAINTFN

```

[LAMBDA (WINDOW REGION)
                                ; Edited 28-Apr-89 16:00 by bvm
  (LET [(FOLDER (WINDOWPROP WINDOW 'MAILFOLDER]
        (AND (NEQ (fetch (MAILFOLDER %#OFMESSAGES) of FOLDER)
                  0)
              (fetch (MAILFOLDER BROWSERREADY) of FOLDER)
              (RESETLST
                (COND
                  ((OBTAIN.MONITORLOCK (fetch (MAILFOLDER FOLDERLOCK) of FOLDER)
                                         T T)
                   (LAB.DISPLAYLINES FOLDER NIL NIL REGION))
                  (T (MAILFOLDERBUSY FOLDER))))))

```

(LAB.SCROLLFN

```

[LAMBDA (WINDOW DX DY CONTINUOUSFLG)
                                (* bvm%: " 3-Jan-84 14:53")

```

;;; only scroll if can get the monitor lock

```

(RESETLST
 [PROG [(MAILFOLDER (WINDOWPROP WINDOW 'MAILFOLDER]

```

```
(COND
  ((AND (fetch (MAILFOLDER BROWSERREADY) of MAILFOLDER)
        (OBTAIN.MONITORLOCK (fetch (MAILFOLDER FOLDERLOCK) of MAILFOLDER)
                             T T))
   (SCROLLBYREPAINTFN WINDOW DX DY CONTINUOUSFLG))
 (T (MAILFOLDERBUSY MAILFOLDER))])
```

(LAB.RESHAPEFN

```
[LAMBDA (WINDOW OLDIMAGEBM OLDREGION) ; Edited 28-Apr-89 15:57 by bvm
  (RESETLST
   (PROG ((FOLDER (WINDOWPROP WINDOW 'MAILFOLDER))
          (REGION (DSPCLIPPINGREGION NIL WINDOW))
          MSG#)
    [COND
      ((NOT (OBTAIN.MONITORLOCK (fetch (MAILFOLDER FOLDERLOCK) of FOLDER)
                                 T T))
       ; Folder is busy, have to wait until it is ready. But don't tie up
       ; mouse!
       (ALLOW.BUTTON.EVENTS)
       (OBTAIN.MONITORLOCK (fetch (MAILFOLDER FOLDERLOCK) of FOLDER)
                            NIL T))
      ((NOT (fetch (MAILFOLDER BROWSERREADY) of FOLDER))
       ; Browser not functional
       (RETURN (RESHAPEBYREPAINTFN WINDOW OLDIMAGEBM OLDREGION))
      (SETQ MSG# (FIRSTVISIBLEMESSAGE FOLDER REGION))
      (LAB.SETUP FOLDER)
      (WYOFFSET (ITIMES (SUB1 MSG#)
                       (fetch (MAILFOLDER BROWSERFONTHEIGHT) of FOLDER))
               WINDOW)
      (LAB.DISPLAYLINES FOLDER MSG# NIL REGION))])])
```

(LAB.CLOSEFN

```
[LAMBDA (BROWSERWINDOW) ; Edited 15-Sep-87 17:56 by bvm
  (LAB.CLOSE/SHRINK BROWSERWINDOW :CLOSE)]
```

(LAB.SHRINKFN

```
[LAMBDA (WINDOW) ; Edited 15-Sep-87 17:56 by bvm
  (LAB.CLOSE/SHRINK WINDOW :SHRINK)]
```

(LAB.CLOSE/SHRINK

```
[LAMBDA (BROWSERWINDOW FLG) ; Edited 7-Jun-88 14:42 by bvm
  ;; Called from CLOSEFN or SHRINKFN of BROWSERWINDOW with FLG = :CLOSE or :SHRINK. Before doing anything, let user update file.
  (RESETLST
   [LET ((MAILFOLDER (WINDOWPROP BROWSERWINDOW 'MAILFOLDER))
         HOW?)
     (COND
      [(OBTAIN.MONITORLOCK (fetch (MAILFOLDER FOLDERLOCK) of MAILFOLDER)
                           T T)
       (AND (OPENWP BROWSERWINDOW)
            (CLEARW (fetch (MAILFOLDER BROWSERPROMPTWINDOW) of MAILFOLDER))
            (SELECTQ [SETQ HOW? (COND
                      ((AND (fetch (MAILFOLDER BROWSERREADY) of MAILFOLDER)
                            (SETQ HOW? (LAB.CHOOSE.UPDATE.MENU MAILFOLDER FLG)))
                     (MENU HOW?))
                     (T (FUNCTION \LAFITE.FINISH.UPDATE)
                        (NIL 'DON'T)
                        (PROGN (\LAFITE.PROCESS (LIST HOW? (KWOTE BROWSERWINDOW)
                                                    (KWOTE MAILFOLDER)
                                                    (KWOTE FLG))
                                'LAFITEUPDATE)
                                ; Return DON'T now, for UPDATE.PROC will do it later
                                'DON'T)]
                      (T (printout PROMPTWINDOW T "Browser is busy, can't close")
                         'DON'T))])])])])
```

(LAB.EXPANDFN

```
[LAMBDA (BROWSERWINDOW) ; Edited 28-Apr-89 18:50 by bvm
  (LET [(FOLDER (WINDOWPROP BROWSERWINDOW 'MAILFOLDER))
        (WITH.MONITOR (fetch (MAILFOLDER FOLDERLOCK) of FOLDER)
          [LET ((FIRSTCHANGEDMSG# (fetch (MAILFOLDER BROWSERUPDATEFROMHERE) of FOLDER))
                ; Restore SHRINKFN prop if necessary
                (WINDOWADDPROP BROWSERWINDOW 'SHRINKFN (FUNCTION LAB.SHRINKFN)
                                   T))
            (COND
             (FIRSTCHANGEDMSG# ; Browser has changed since shrinking
              (COND
               ((EQ FIRSTCHANGEDMSG# 0) ; After expunge
                (LAB.DISPLAYFOLDER FOLDER))
               (T (LAB.DISPLAYLINES FOLDER FIRSTCHANGEDMSG# NIL NIL T)))
              (replace (MAILFOLDER BROWSERUPDATEFROMHERE) of FOLDER with NIL))])])])
```

(LAFITEEXTRABROWSERCOMMANDFN

```
[LAMBDA (WINDOW MAILFOLDER) ; Edited 28-Jul-88 17:37 by bvm
  (PROG [(FN (MENU (.LAFITEMENU. LAFITEEXTRAMENU LAFITEEXTRAMENUITEMS)
    (COND
      (FN (\LAFITE.MAYBE.CLEAR.PROMPT MAILFOLDER)
        (CL:FUNCALL FN MAILFOLDER])
    )
  )
```

:: Browser selection

(DEFINEQ

(LAB.SELECTMESSAGE

```
[LAMBDA (WINDOW) ; Edited 7-Jun-88 17:37 by bvm
```

```
(PROG ((MAILFOLDER* (WINDOWPROP WINDOW 'MAILFOLDER))
  *MESSAGES* *FIRST-VISIBLE* *LAST-VISIBLE* *TOC-STATE* SELECTIONREGION FIRST# LAST# SEL# OLDSEL#
  CTRLDOWN OLDLASTMOUSEBUTTONS MSG LASTX LASTY MARKRIGHT)
```

```
(COND
  ((EQ (fetch (MAILFOLDER %#OFMESSAGES) of *MAILFOLDER*)
    0) ; Nothing to select
  (RETURN)))
```

```
(SETQ SELECTIONREGION (DSPCLIPPINGREGION NIL WINDOW))
(SETQ LAST# (fetch (MAILFOLDER LASTSELECTEDMESSAGE) of *MAILFOLDER*))
(SETQ FIRST# (fetch (MAILFOLDER FIRSTSELECTEDMESSAGE) of *MAILFOLDER*))
(SETQ *FIRST-VISIBLE* (FIRSTVISIBLEMESSAGE *MAILFOLDER* SELECTIONREGION))
(SETQ *LAST-VISIBLE* (LASTVISIBLEMESSAGE *MAILFOLDER* SELECTIONREGION))
(SETQ *MESSAGES* (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of *MAILFOLDER*))
(SETQ MARKRIGHT (fetch (MAILFOLDER ORDINALXPOS) of *MAILFOLDER*))
```

:: keep looping until all mouse buttons are up

```
[do (GETMOUSESTATE)
  (COND
```

```
[[NOT (INSIDEP SELECTIONREGION (SETQ LASTX (LASTMOUSEX WINDOW))
  (SETQ LASTY (LASTMOUSEY WINDOW))
```

:: I would like to just return here and let the next window take over, but current mouse arrangement means I'll never get control
:: back unless user lets up on mouse

```
(COND
  ((NEQ *TOC-STATE* TS.IDLE)
  (LA.UNDOSELECTION)
  (SETQ OLDSEL#)))
```

```
(COND
  ((LASTMOUSESTATE UP)
  (RETURN))
  (T (BLOCK)
```

```
((LASTMOUSESTATE UP) ; Make selection permanent
  (SELECTC *TOC-STATE*
```

```
(TS.REPLACING (for MSG selectedin *MAILFOLDER*
  do (replace SELECTED? of MSG with NIL))
  (replace SELECTED? of (NTHMESSAGE *MESSAGES* OLDSEL#) with T)
  (replace FIRSTSELECTEDMESSAGE of *MAILFOLDER*
  with (replace LASTSELECTEDMESSAGE of *MAILFOLDER* with OLDSEL#)))
(TS.ADDING (LA.SELECTRANGE *MAILFOLDER* OLDSEL# OLDSEL# T))
(TS.REMOVING (LA.DESELECTRANGE *MAILFOLDER* OLDSEL# OLDSEL#))
(TS.EXTENDING.HI
```

```
(LA.SELECTRANGE *MAILFOLDER* (ADD1 LAST#)
  OLDSEL# CTRLDOWN))
```

```
(TS.EXTENDING.LO
  (LA.SELECTRANGE *MAILFOLDER* OLDSEL# (SUB1 FIRST#)
  CTRLDOWN))
```

```
(TS.SHRINKING.HI
  (LA.DESELECTRANGE *MAILFOLDER* (ADD1 OLDSEL#)
  LAST#))
```

```
(TS.SHRINKING.LO
  (LA.DESELECTRANGE *MAILFOLDER* FIRST# (SUB1 OLDSEL#)))
NIL)
```

```
(RETURN)
((AND (>= LASTX BROWSERMARKXPOSITION)
  (< LASTX MARKRIGHT)) ; Inside mark region
```

```
(COND
  ((NEQ *TOC-STATE* TS.IDLE)
  (LA.UNDOSELECTION)
  (SETQ OLDSEL#))
```

```
(LAB.CHANGEMARK *MAILFOLDER*)
((OR (NEQ (SETQ SEL# (YPOS.TO.MESSAGE# (LASTMOUSEY WINDOW)
  *MAILFOLDER*))
  OLDSEL#)
  (NEQ LASTMOUSEBUTTONS OLDLASTMOUSEBUTTONS))
```

```
[COND
  [(AND (SHIFTDOWNP 'CTRL)
  (NOT (LASTMOUSESTATE RIGHT))) ; Deselect this message
  (SELECTC *TOC-STATE*
```

```
(TS.REMOVING (LA.SHOW.SELECTION *MAILFOLDER* (NTHMESSAGE *MESSAGES* OLDSEL#)
  'REPLACE))
```

```
(TS.IDLE)
(LA.UNDOSELECTION))
```

```
(SETQ *TOC-STATE* (COND
```

```

((fetch SELECTED? of (SETQ MSG (NTHMESSAGE *MESSAGES* SEL#)))
(LA.SHOW.SELECTION *MAILFOLDER* MSG 'ERASE)
TS.REMOVING)
(T TS.IDLE]
((LASTMOUSESTATE LEFT) ; Set (change) the selection to this single message
(COND
(EQ *TOC-STATE* TS.REPLACING)
(LA.SHOW.SELECTION *MAILFOLDER* (NTHMESSAGE *MESSAGES* OLDSEL#)
'ERASE))
(T (LA.DECONSIDERRANGE *FIRST-VISIBLE* *LAST-VISIBLE*)
(SETQ *TOC-STATE* TS.REPLACING)))
(LA.SHOW.SELECTION *MAILFOLDER* (NTHMESSAGE *MESSAGES* SEL#)
'REPLACE))
[(LASTMOUSESTATE MIDDLE) ; Add this message to the selection
(SELECTC *TOC-STATE*
(TS.ADDING (LA.SHOW.SELECTION *MAILFOLDER* (NTHMESSAGE *MESSAGES* OLDSEL#)
'ERASE))
(TS.IDLE)
(LA.UNDOSELECTION))
(SETQ *TOC-STATE* (COND
([NOT (fetch SELECTED? of (SETQ MSG (NTHMESSAGE *MESSAGES* SEL#)
(LA.SHOW.SELECTION *MAILFOLDER* MSG 'REPLACE)
TS.ADDING)
(T TS.IDLE]
((LASTMOUSESTATE RIGHT) ; Extend: either up or down, or shrink a selection. This is messy
(SELECTC *TOC-STATE*
(TS.EXTENDING.HI
(COND
(> SEL# OLDSEL#) ; Extend further
(LA.CONSIDERRANGE (ADD1 OLDSEL#)
SEL# CTRLDOWN))
(T ; Shrinking back
(LA.RECONSIDERRANGE (ADD1 (COND
(> SEL# LAST#)
SEL#)
(T (SETQ *TOC-STATE* TS.IDLE)
LAST#))))
OLDSEL#)))
(TS.EXTENDING.LO
[COND
(<< SEL# OLDSEL#) ; Extend further
(LA.CONSIDERRANGE SEL# (SUB1 OLDSEL#)
CTRLDOWN))
(T ; Shrinking back
(LA.RECONSIDERRANGE OLDSEL# (SUB1 (COND
(<< SEL# FIRST#)
SEL#)
(T (SETQ *TOC-STATE* TS.IDLE)
FIRST#)))
(TS.SHRINKING.HI
(COND
[(>= SEL# OLDSEL#) ; Shrinking less
(LA.RECONSIDERRANGE (ADD1 OLDSEL#)
(COND
(<< SEL# LAST#)
SEL#)
(T (SETQ *TOC-STATE* TS.IDLE)
LAST#])
(>= SEL# FIRST#) ; Shrinking further
(LA.DECONSIDERRANGE (ADD1 SEL#)
OLDSEL#))
(T ; Too far to shrink
(LA.RECONSIDERRANGE FIRST# LAST#)
(SETQ *TOC-STATE* TS.IDLE))))
(TS.SHRINKING.LO
(COND
(<= SEL# OLDSEL#) ; Shrinking less
(LA.RECONSIDERRANGE (COND
(> SEL# FIRST#)
SEL#)
(T (SETQ *TOC-STATE* TS.IDLE)
FIRST#)
(SUB1 OLDSEL#)))
(<= SEL# LAST#) ; Shrinking further
(LA.DECONSIDERRANGE OLDSEL# (SUB1 SEL#)))
(T ; Too far to shrink
(LA.RECONSIDERRANGE FIRST# LAST#)
(SETQ *TOC-STATE* TS.IDLE))))
(COND
((NOT (> FIRST# LAST#))
(COND
((NEQ *TOC-STATE* TS.IDLE)
(LA.UNDOSELECTION)))
(SETQ CTRLDOWN (SHIFTDOWNP 'CTRL))
(SETQ *TOC-STATE* (COND
(> SEL# LAST#)
(LA.CONSIDERRANGE (ADD1 LAST#)

```

```

                SEL# CTRLDOWN)
                TS.EXTENDING.HI)
                (< SEL# FIRST#)
                (LA.CONSIDERRANGE SEL# (SUB1 FIRST#)
                 CTRLDOWN)
                TS.EXTENDING.LO)
                (> SEL# (LRSH (+ LAST# FIRST#
                               1)))
                (LA.DECONSIDERRANGE (ADD1 SEL#)
                 LAST#)
                TS.SHRINKING.HI)
                (T (LA.DECONSIDERRANGE FIRST# (SUB1 SEL#))
                 TS.SHRINKING.LO])
                (SETQ OLDDLASTMOUSEBUTTONS LASTMOUSEBUTTONS)
                (SETQ OLDSEL# (AND (NEQ *TOC-STATE* TS.IDLE)
                                   SEL#])
(COND
  ((EQ LAFITEVERIFYFLG 'TOC)
   (LA.VERIFY.SELECTION *MAILFOLDER*])

```

(LAB.CHANGEMARK

[LAMBDA (MAILFOLDER)

(* bvm%: "17-Feb-84 15:46")

:: Called when mouse is inside the 'mark' region of a browser. Tracks mouse while in that region and does whatever is appropriate

```

(PROG ((WINDOW (fetch (MAILFOLDER BROWSERWINDOW) of MAILFOLDER))
       (RIGHT (fetch (MAILFOLDER ORDINALXPOS) of MAILFOLDER))
       SEL# OLDSEL# COCKED REGION X Y TOP BOTTOM)
 [SETQ BOTTOM (fetch (REGION BOTTOM) of (SETQ REGION (DSPCLIPPINGREGION NIL WINDOW))
 (SETQ TOP (fetch (REGION TOP) of REGION))
 (do (GETMOUSESTATE)
     (COND
      ((OR (< (SETQ X (LASTMOUSEX WINDOW))
              BROWSERMARKXPOSITION)
           (> X RIGHT)
           (< (SETQ Y (LASTMOUSEY WINDOW))
              BOTTOM)
           (> Y TOP))
       (COND
        (COCKED (LA.INVERT.MARK.BOX MAILFOLDER OLDSEL#)))
        (RETURN))
      ((LASTMOUSESTATE UP)
       (COND
        (COCKED (LA.READ.NEW.MARK MAILFOLDER OLDSEL#)))
        (RETURN))
      ((NEQ (SETQ SEL# (YPOS.TO.MESSAGE# Y MAILFOLDER))
           OLDSEL#)
       (COND
        (COCKED (LA.INVERT.MARK.BOX MAILFOLDER OLDSEL#))
        (T (SETQ COCKED T)))
        (LA.INVERT.MARK.BOX MAILFOLDER (SETQ OLDSEL# SEL#))

```

(LA.READ.NEW.MARK

[LAMBDA (FOLDER MSG#)

; Edited 25-Apr-89 17:55 by bvm

```

(PROG ((MSG (NTHMESSAGE (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of FOLDER)
                          MSG#))
       (WINDOW (fetch (MAILFOLDER BROWSERWINDOW) of FOLDER))
       YPOS MARK)
 (RESETSAVE NIL (LIST (FUNCTION CLEARW)
                      (fetch (MAILFOLDER BROWSERPROMPTWINDOW) of FOLDER)))
 (RESETSAVE NIL (LIST (FUNCTION LA.SHOW.MARK)
                      MSG FOLDER))
 (RESETSAVE (TTYDISPLAYSTREAM WINDOW))
 (RESETSAVE NIL (LIST 'WINDOWPROP WINDOW 'PROCESS NIL))

```

; Display correct mark on exit no matter what happens
; So caret flashes in the right place

:: PROCESS prop put there by TTYDISPLAYSTREAM -- don't want it to linger, else MOUSE proc will get tty in future when we bug browser

```

(LA.BLT.MARK.BOX FOLDER WINDOW (SETQ YPOS (MESSAGE#.TO.YPOS MSG FOLDER))
 'REPLACE WHITESHADE)
(LAB.PROMPTPRINT FOLDER T "Type single character mark, or ESC to abort")
(MOVETO BROWSERMARKXPOSITION YPOS WINDOW)
(COND
 ((AND (>= (SETQ MARK (\GETKEY))
           (CHARCODE SPACE))
       (<= MARK (CHARCODE DEL)))
  (LAB.MARKS.CHANGED MSG FOLDER)
  (replace (LAFITEMSG SEEN?) of MSG with (NOT (UNSEENMARKP MARK)))
  (replace (LAFITEMSG MARKCHAR) of MSG with MARK])

```

(YPOS.TO.MESSAGE#

[LAMBDA (YPOS MAILFOLDER)

(* bvm%: "24-Dec-83 17:45")

```

(PROG [(N (IQUOTIENT (IPLUS (IDIFFERENCE (fetch (MAILFOLDER BROWSERORIGIN) of MAILFOLDER)
                                         YPOS)
                    (fetch (MAILFOLDER BROWSERFONTASCENT) of MAILFOLDER))
       (fetch (MAILFOLDER BROWSERFONTHEIGHT) of MAILFOLDER)]
 (RETURN (COND

```

```
((ILEQ N 0)
 1)
(T (IMIN N (fetch (MAILFOLDER %#OFMESSAGES) of MAILFOLDER]))
```

(MESSAGE#.TO.YPOS

```
[LAMBDA (MSGDESCRIPTOR MAILFOLDER) (* bvm%: "24-Dec-83 16:37")
 (IDIFFERENCE (fetch (MAILFOLDER BROWSERORIGIN) of MAILFOLDER)
 (ITIMES (fetch (MAILFOLDER BROWSERFONTHEIGHT) of MAILFOLDER)
 (fetch (LAFITEMSG %#) of MSGDESCRIPTOR))
)
```

(DEFINEQ

(LA.CONSIDERRANGE

```
[LAMBDA (FIRST# LAST# EVENIFDELETED) ; Edited 7-Jun-88 17:34 by bvm
```

;;; Change display so that messages from FIRST# to LAST# are marked as selected. Deleted messages are not selected unless EVENIFDELETED is true

```
(for I from (IMAX FIRST# *FIRST-VISIBLE*) to (IMIN LAST# *LAST-VISIBLE*) bind MSG
 do (SETQ MSG (NTHMESSAGE *MESSAGES* I))
 (COND
 ((OR EVENIFDELETED (NOT (fetch DELETED? of MSG)))
 (LA.SHOW.SELECTION *MAILFOLDER* MSG 'REPLACE]))
```

(LA.DECONSIDERRANGE

```
[LAMBDA (FIRST# LAST#) ; Edited 7-Jun-88 17:35 by bvm
```

;;; Change display so that messages from FIRST# to LAST# are marked as unselected.

```
(for I from (IMAX FIRST# *FIRST-VISIBLE*) to (IMIN LAST# *LAST-VISIBLE*) do (LA.SHOW.SELECTION *MAILFOLDER*
(NTHMESSAGE *MESSAGES* I)
'ERASE])
```

(LA.RECONSIDERRANGE

```
[LAMBDA (FIRST# LAST#) ; Edited 7-Jun-88 17:35 by bvm
```

;;; Change display so that messages from FIRST# to LAST# are marked as selected or unselected according to the truth of the matter.

```
(for I from (IMAX FIRST# *FIRST-VISIBLE*) to (IMIN LAST# *LAST-VISIBLE*) bind MSG
 do (LA.SHOW.SELECTION *MAILFOLDER* (SETQ MSG (NTHMESSAGE *MESSAGES* I))
 (COND
 ((fetch SELECTED? of MSG)
 'REPLACE)
 (T 'ERASE]))
```

(LA.SELECTRANGE

```
[LAMBDA (MAILFOLDER FIRST# LAST# EVENIFDELETED) (* bvm%: "15-Feb-84 15:39")
```

;;; Mark internally messages FIRST# thru LAST# as selected. Do not select deleted messages unless EVENIFDELETED is true. Keeps MAILFOLDER:LASTSELECTEDMESSAGE and MAILFOLDER:FIRSTSELECTEDMESSAGE up to date. Assumes display has already been appropriately modified

```
(PROG ((MESSAGES (fetch MESSAGEDESCRIPTORS of MAILFOLDER))
 (FIRSTSEL (fetch FIRSTSELECTEDMESSAGE of MAILFOLDER))
 (LASTSEL (fetch LASTSELECTEDMESSAGE of MAILFOLDER))
 MSG)
 [for I from FIRST# to LAST# do (SETQ MSG (NTHMESSAGE MESSAGES I))
 (COND
 ((OR EVENIFDELETED (NOT (fetch DELETED? of MSG)))
 (replace SELECTED? of MSG with T])
 (COND
 ((OR (> FIRSTSEL LASTSEL)
 (< FIRST# (fetch FIRSTSELECTEDMESSAGE of MAILFOLDER)))
 (replace FIRSTSELECTEDMESSAGE of MAILFOLDER with FIRST#)))
 (COND
 ((OR (> FIRSTSEL LASTSEL)
 (> LAST# (fetch LASTSELECTEDMESSAGE of MAILFOLDER)))
 (replace LASTSELECTEDMESSAGE of MAILFOLDER with LAST#]))
```

(LA.DESELECTRANGE

```
[LAMBDA (MAILFOLDER FIRST# LAST#) (* bvm%: "28-Mar-84 14:52")
```

;;; Mark internally messages FIRST# thru LAST# as unselected. Keeps MAILFOLDER:LASTSELECTEDMESSAGE and MAILFOLDER:FIRSTSELECTEDMESSAGE up to date. Assumes display has already been appropriately modified

```
(COND
 ((ILEQ FIRST# LAST#)
 (PROG ((MESSAGES (fetch MESSAGEDESCRIPTORS of MAILFOLDER)))
 (for I from FIRST# to LAST# do (replace SELECTED? of (NTHMESSAGE MESSAGES I) with NIL))
 (COND
```

```

[ (EQ FIRST# (fetch FIRSTSELECTEDMESSAGE of MAILFOLDER))
  (replace FIRSTSELECTEDMESSAGE of MAILFOLDER with (COND
    ((LAB.FIND.SELECTED.MSG MAILFOLDER
      (ADD1 LAST#)
      (fetch LASTSELECTEDMESSAGE
        of MAILFOLDER)))
    (T (replace LASTSELECTEDMESSAGE of MAILFOLDER
      with 0)
      ; Null selection indicated by first GT last.
      (ADD1 (fetch (MAILFOLDER %OFMESSAGES)
        of MAILFOLDER]
    ((EQ LAST# (fetch LASTSELECTEDMESSAGE of MAILFOLDER))
      (replace LASTSELECTEDMESSAGE of MAILFOLDER with (OR (LAB.REV.FIND.SELECTED.MSG MAILFOLDER
        (fetch FIRSTSELECTEDMESSAGE
          of MAILFOLDER)
        (SUB1 FIRST#))
      1])

```

(LAB.FIND.SELECTED.MSG

```

[LAMBDA (MAILFOLDER FIRST# LAST#) (* bvm%: "15-Feb-84 12:22")
  (find I from FIRST# to LAST# bind (MESSAGES _ (fetch MESSAGEDESCRIPTORS of MAILFOLDER))
    suchthat (fetch SELECTED? of (NTHMESSAGE MESSAGES I))

```

(LAB.REV.FIND.SELECTED.MSG

```

[LAMBDA (MAILFOLDER FIRST# LAST#) (* bvm%: " 2-Mar-84 18:02")
  (find I from LAST# to FIRST# by -1 bind (MESSAGES _ (fetch MESSAGEDESCRIPTORS of MAILFOLDER))
    suchthat (fetch SELECTED? of (NTHMESSAGE MESSAGES I))

```

(LA.UNDOSELECTION

```

[LAMBDA NIL ; Edited 7-Jun-88 17:37 by bvm

```

::: Restore browser to state before any selections were attempted

```

(LA.RECONSIDERRANGE *FIRST-VISIBLE* *LAST-VISIBLE*)
(SETQ *TOC-STATE* TS.IDLE])

```

(LA.VERIFY.SELECTION

```

[LAMBDA (MAILFOLDER) (* bvm%: "15-Feb-84 11:53")
  (PROG ((FIRST# (fetch FIRSTSELECTEDMESSAGE of MAILFOLDER))
    (LAST# (fetch LASTSELECTEDMESSAGE of MAILFOLDER))
    (MESSAGES (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of MAILFOLDER))
    (%OFMESSAGES (fetch (MAILFOLDER %OFMESSAGES) of MAILFOLDER))
    SEL)
    (COND
      [(IGREATERP FIRST# LAST#)
        (COND
          [(SETQ SEL (for I from 1 to %OFMESSAGES collect I when (fetch SELECTED? of (NTHMESSAGE MESSAGES I)
            (HELP "First > Last, but these msgs selected" SEL)
          (T [for I from 1 to %OFMESSAGES do (COND
            ((fetch SELECTED? of (NTHMESSAGE MESSAGES I))
              (COND
                ((< I FIRST#)
                  (HELP "First is too high" FIRST#))
                ((> I LAST#)
                  (HELP "Last is too low" LAST#])
            )
          )
        )
        ((AND (EQ FIRST# 1)
          (EQ LAST# 1))
          ; The only time it is okay for them not to be selected
        )
        ((NOT (fetch SELECTED? of (NTHMESSAGE MESSAGES FIRST#)))
          (HELP "First not selected" FIRST#))
        ((NOT (fetch SELECTED? of (NTHMESSAGE MESSAGES LAST#)))
          (HELP "Last not selected" LAST#])
      )
    )

```

(DEFINEQ

(LAB.COPYBUTTONEVENTFN

```

[LAMBDA (WINDOW) ; Edited 11-Dec-87 17:17 by bvm:

```

::: copy select an item from the window.

```

(PROG ((FOLDER (WINDOWPROP WINDOW 'MAILFOLDER))
  SELECTIONREGION CURRENTITEM CURRENTMSG CURRENTFIELD NEWITEM NEWFIELD LASTX LASTY DATEX FROMX SUBJECTX
  MSGS)
  [COND
    ((EQ (fetch (MAILFOLDER %OFMESSAGES) of FOLDER)
      0)
      ; Nothing to select
      (RETURN (TOTOPW WINDOW)
        (SETQ SELECTIONREGION (DSPCLIPPINGREGION NIL WINDOW))
        (SETQ DATEX (fetch (MAILFOLDER DATEXPOS) of FOLDER))

```



```

(SETQ FROMX (fetch (MAILFOLDER FROMXPOS) of FOLDER))
(SETQ SUBJECTX (fetch (MAILFOLDER SUBJECTXPOS) of FOLDER))
(SETQ MSGS (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of FOLDER))
LP (TOTOPW WINDOW)
(SETQ NEWITEM (AND (INSIDEP SELECTIONREGION (SETQ LASTX (LASTMOUSEX WINDOW))
                  (SETQ LASTY (LASTMOUSEY WINDOW)))
                  (YPOS.TO.MESSAGE# LASTY FOLDER)))
(SETQ NEWFIELD (if (< LASTX DATEX)
                   then T
                   elseif (< LASTX FROMX)
                   then 'DATE
                   elseif (< LASTX SUBJECTX)
                   then 'FROM
                   else 'SUBJECT)) ; Figure out which field of the message is being pointed at by the
                                   ; xpos.
[COND
 ((OR (NEQ CURRENTITEM NEWITEM)
      (NEQ CURRENTFIELD NEWFIELD)) ; Something changed
 (COND
  (CURRENTITEM ; turn off old selection.
   (LAB.SHOW.COPY.SELECTION WINDOW FOLDER CURRENTMSG CURRENTFIELD)))
 (COND
  ((SETQ CURRENTITEM NEWITEM) ; turn on new selection
   (LAB.SHOW.COPY.SELECTION WINDOW FOLDER (SETQ CURRENTMSG (NTHMESSAGE MSGS CURRENTITEM))
    (SETQ CURRENTFIELD NEWFIELD]))
LP2
;; wait for a button up or move out of region
(BLOCK)
(COND
 ((NOT (.COPYKEYDOWNP.)) ; Finished, copy selected item
 [COND
  (CURRENTITEM ; If something is selected, bksysbuf the selected field
   (LAB.SHOW.COPY.SELECTION WINDOW FOLDER CURRENTMSG CURRENTFIELD)
   (BKSYSBUF (OR (SELECTQ CURRENTFIELD
                  (T (CONCAT "#" (fetch (LAFITEMSG %#) of CURRENTMSG)
                                     " "
                                     (fetch (LAFITEMSG DATE) of CURRENTMSG)
                                     " "
                                     [COND
                                      ((fetch (LAFITEMSG MSGFROMPEP) of CURRENTMSG)
                                       (CONCAT "To: " (fetch (LAFITEMSG TO) of CURRENTMSG)))
                                      (T (CONCAT "From: " (OR (fetch (LAFITEMSG FROM)
                                                                of CURRENTMSG)
                                                                UNSUPPLIEDFIELDSTR)
                                       " -- "
                                       (OR (fetch (LAFITEMSG SUBJECT) of CURRENTMSG)
                                           UNSUPPLIEDFIELDSTR)))
                                      (DATE (fetch (LAFITEMSG DATE) of CURRENTMSG))
                                      (FROM (COND
                                             ((fetch (LAFITEMSG MSGFROMPEP) of CURRENTMSG)
                                              (CONCAT "To: " (fetch (LAFITEMSG TO) of CURRENTMSG)))
                                             (T (fetch (LAFITEMSG FROM) of CURRENTMSG))))
                                      (fetch (LAFITEMSG SUBJECT) of CURRENTMSG))
                                       UNSUPPLIEDFIELDSTR]
                   (RETURN))
  ((MOUSESTATE UP) ; button up, but shift still down, no action
   (GO LP2))
  (T (GO LP]))

```

(LAB.SHOW.COPY.SELECTION

[LAMBDA (WINDOW FOLDER MSG FIELD)

; Edited 11-Dec-87 17:16 by bvm:

;;; underline FIELD of MSG in FOLDER's window

```

(LET ((BOTTOM (- (MESSAGE#.TO.YPOS MSG FOLDER)
                 (fetch (MAILFOLDER BROWSERFONTDESCENT) of FOLDER)))
      LEFT STR)
 [SELECTQ FIELD
  (T ; Whole line
   )
  (DATE (SETQ LEFT (fetch (MAILFOLDER DATEXPOS) of FOLDER))
   (SETQ STR (fetch (LAFITEMSG DATE) of MSG)))
  (FROM (SETQ LEFT (fetch (MAILFOLDER FROMXPOS) of FOLDER))
   [SETQ STR (COND
              ((fetch (LAFITEMSG MSGFROMPEP) of MSG)
               (CONCAT "To: " (fetch (LAFITEMSG TO) of MSG)))
              (T (fetch (LAFITEMSG FROM) of MSG)))
          (PROGN (SETQ LEFT (fetch (MAILFOLDER SUBJECTXPOS) of FOLDER))
                 (SETQ STR (fetch (LAFITEMSG SUBJECT) of MSG)
                 (BLTSHADE GRAYSHADE WINDOW LEFT BOTTOM (if (EQ FIELD T)
                                                             then ; whole line
                                                             NIL
                                                             else ; width of just this field
                                                             (STRINGWIDTH (OR STR UNSUPPLIEDFIELDSTR)

```

```

                                WINDOW))
                                2
                                'INVERT])
)
(DECLARE%: EVAL@COMPILE DONTCOPY
(CL:PROCLAIM '(CL:SPECIAL *MAILFOLDER* *MESSAGES* *FIRST-VISIBLE* *LAST-VISIBLE* *TOC-STATE*))
(CL:PROCLAIM '(GLOBAL LASTMOUSEBUTTONS))
)
;; Browser display
(DEFINEQ
(LAB.PROMPTPRINT
  (CL:LAMBDA (FOLDER &REST ARGS) ; Edited 14-Oct-87 15:36 by bvm:
    (LAB.PRINT.TO.PROMPTWINDOW FOLDER ARGS)))
(LAB.FORMAT
  (CL:LAMBDA (FOLDER &REST ARGS) ; Edited 14-Oct-87 15:53 by bvm:
    ;; Outputs to FOLDER's prompt window using FORMAT. If first format arg is T, then we clear the window first, and consider then next
    ;; format arg to be the format string. All this is done in a way that lets the window expand if it needs to.
    (LAB.PRINT.TO.PROMPTWINDOW FOLDER ARGS T)))
(LAB.MOUSECONFIRM
  [CL:LAMBDA (FOLDER &REST ARGS) ; Edited 11-Dec-87 17:33 by bvm:
    ;; Version of MOUSECONFIRM using FOLDER's prompt window. ARGS are args to FORMAT.
    (LAB.PRINT.TO.PROMPTWINDOW FOLDER ARGS T)
    (PROG1 (MOUSECONFIRM T T)
      (if FOLDER
        then (\LAFITE.MAYBE.CLEAR.PROMPT FOLDER)
        else (CLEARW PROMPTWINDOW)))]])
(LAB.PRINT.TO.PROMPTWINDOW
  [LAMBDA (FOLDER ARGS FORMAT-P) ; Edited 14-Oct-87 19:01 by bvm:
    ;; Outputs to FOLDER's prompt window the text in ARGS. If FORMAT-P is NIL, ARGS is a list of items to print, with T meaning clear the window.
    ;; If FORMAT-P is true, ARGS is considered a format string and format args, except that ARGS may be prefixed with T to indicate clearing the
    ;; window. All this is done in a way that lets the window expand if it needs to. If FOLDER is NIL, or its browser is not open, prints to global
    ;; PROMPTWINDOW. Returns NIL.
    (LET ((*PRINT-CASE* :UPCASE)
          (*PRINT-BASE* 10)
          [WINDOW (AND FOLDER (OPENWP (ffetch (MAILFOLDER BROWSERPROMPTWINDOW) of (\DTEST FOLDER 'MAILFOLDER]
          \CURRENTDISPLAYLINE OLDTTY)
    ;; *PRINT-CASE* is bound so symbols get printed in "expected" case. *PRINT-BASE* is 10 for benefit of printing numbers in the non-format
    ;; case. \currentdisplayline changes with TTYDISPLAYSTREAM
    (CL:UNWIND-PROTECT
      [LET ((ACTUALWINDOW (OR WINDOW PROMPTWINDOW))
            (if WINDOW
              then (SETQ OLDTTY (TTYDISPLAYSTREAM WINDOW))
                   (SETQ \CURRENTDISPLAYLINE (fetch (MAILFOLDER CURRENTPROMPTLINE) of FOLDER))
                   ; Do this second because TTYDISPLAYSTREAM smashes it.
              )
            (if FORMAT-P
              then (if (EQ (CAR ARGS)
                          T)
                     then
                       (CLEARW ACTUALWINDOW) ; First arg of T means clear window first.
                       (SETQ ARGS (CDR ARGS)))
                     (CL:APPLY (FUNCTION CL:FORMAT)
                               ACTUALWINDOW ARGS)
              else (for ARG in ARGS do (COND
                                     ((EQ ARG T)
                                      (CLEARW ACTUALWINDOW))
                                     (T (PRIN3 ARG ACTUALWINDOW]
            (if WINDOW
              then ;; Now clean up the mess. Note position for next time.
                 (replace (MAILFOLDER CURRENTPROMPTLINE) of FOLDER with \CURRENTDISPLAYLINE)
                 (TTYDISPLAYSTREAM OLDTTY)
                 (WINDOWPROP WINDOW 'PROCESS NIL) ; Get rid of process handle
                 (replace (MAILFOLDER BROWSERPROMPTDIRTY) of FOLDER with T)))
      NIL])
)
(LAB.PAGEFULLFN
  [LAMBDA (PW) ; Edited 14-Oct-87 16:54 by bvm:

```

;; PAGEFULLFN for prompt window--makes the window a line bigger and allows output to proceed

```
(SETQ \CURRENTDISPLAYLINE (PROG1 \#DISPLAYLINES ; \Currentdisplayline is the line we're on when window fills, origin
; zero
(LET ((MAIN (MAINWINDOW PW))
      FOLDER)
  (GETPROMPTWINDOW MAIN (+ 1 \#DISPLAYLINES))
  (if (SETQ FOLDER (WINDOWPROP MAIN 'MAILFOLDER))
      then ; Note that we expanded window so that we can shrink it back
; later
(replace (MAILFOLDER BROWSERPROMPTGREW) of FOLDER with T))))))
```

(\LAFITE.MAYBE.CLEAR.PROMPT

[LAMBDA (FOLDER) ; Edited 14-Oct-87 15:35 by bvm:

;; Clear's FOLDER's prompt window, and shrinks it back to a single line if it has grown

```
(LET (PW)
  (COND
    ([AND (fetch (MAILFOLDER BROWSERPROMPTDIRTY) of FOLDER)
          (OPENWP (SETQ PW (fetch (MAILFOLDER BROWSERPROMPTWINDOW) of FOLDER)
          (CLEARW PW)
          (if (fetch (MAILFOLDER BROWSERPROMPTGREW) of FOLDER) ; Window grew
              then
                (LET (PROP HEIGHT)
                  [SETQ HEIGHT (HEIGHTIFWINDOW (FONTPROP LAFITEBROWSERFONT 'HEIGHT)
          (WINDOWPROP PW 'MINSIZE (CONS 0 HEIGHT))
          ; have to adjust the fixed size of the window before shaping.
          ; since SHAPEW obeys the minimum.
          (WINDOWPROP PW 'MAXSIZE (CONS 64000 HEIGHT))
          (SHAPEW PW (create REGION using (WINDOWPROP PW 'REGION)
          HEIGHT _ HEIGHT))
          (CLEARW PW) ; Clear it again to get coordinates right.
          (if (SETQ PROP (WINDOWPROP (fetch (MAILFOLDER BROWSERWINDOW) of FOLDER)
          'PROMPTWINDOW))
              then ; Main window thinks it knows how tall the prompt window is.
                (RPLACD PROP 1))
                (replace (MAILFOLDER BROWSERPROMPTGREW) of FOLDER with NIL)
                (replace (MAILFOLDER CURRENTPROMPTLINE) of FOLDER with 0)))
          (replace (MAILFOLDER BROWSERPROMPTDIRTY) of FOLDER with NIL])
    ]))
  )
```

(PUTPROPS LAB.PROMPTPRINT ARGUMENTS (NIL (FOLDER &REST ARGS)))

(PUTPROPS LAB.FORMAT ARGUMENTS (NIL (FOLDER &REST ARGS)))

(PUTPROPS LAB.MOUSECONFIRM ARGUMENTS (NIL (FOLDER FORMAT-STRING &REST ARGS)))

(DEFINEQ

(PRINTMESSAGE SUMMARY

[LAMBDA (MSG FOLDER WINDOW) ; Edited 5-May-89 12:15 by bvm

```
(PROG ((*PRINT-BASE* 10)
  (DIGITWIDTH (fetch (MAILFOLDER BROWSERDIGITWIDTH) of FOLDER))
  FROMSTR HERE THERE EXTENT MSG#)
  (OR (fetch (LAFITEMSG PARSED?) of MSG)
      (LAFITE.PARSE.MSG.FOR.TOC MSG FOLDER))
  (MOVETO 0 (MESSAGE#.TO.YPOS MSG FOLDER)
  WINDOW)
  (POSITION WINDOW 0)
  (LA.SHOW.MARK MSG FOLDER)
  (DSPXPOSITION [+ (fetch (MAILFOLDER ORDINALXPOS) of FOLDER)
  (TIMES DIGITWIDTH (COND
    (( (< (SETQ MSG# (fetch (LAFITEMSG %#) of MSG))
    10)
    3)
    (( < MSG# 100)
    2)
    (( < MSG# 1000)
    1)
    (T 0]
  WINDOW) ; Ugh. Manually right-justify message # given that font may be
; variable width
  (PRIN3 MSG# WINDOW)
  (LET ((DATE (OR (fetch (LAFITEMSG DATE) of MSG)
    (if (fetch (LAFITEMSG DATEKNOWN?) of MSG) ; Convert idate to date
        then
          (replace (LAFITEMSG DATE) of MSG with (GDATE1-6 (fetch (LAFITEMSG IDATE)
          of MSG]
    UNSUPPLIEDFIELDSTR)))
  (DSPXPOSITION (+ (fetch (MAILFOLDER DATEXPOS) of FOLDER)
    (if (DIGITCHARP (NTHCHARCODE DATE 2))
        then 0
        else ; for 1-digit day, try to get the digits to line up
          DIGITWIDTH)))
  WINDOW)
  (PRIN3 DATE WINDOW))
```

```
(DSPXPOSITION (fetch (MAILFOLDER FROMXPOS) of FOLDER)
WINDOW)
[COND
[(fetch (LAFITEMSG MSGFROMMEP) of MSG)
(PRN3 "To: " WINDOW)
(SETQ FROMSTR (OR (fetch (LAFITEMSG TO) of MSG)
(LAFITE.FETCH.TO.FIELD MSG FOLDER)
(T (SETQ FROMSTR (OR (fetch (LAFITEMSG FROM) of MSG)
UNSUPPLIEDFIELDSTR)
```

:: PRINTMESSAGESUMMARY.STRING defaults to PRN3, redefined to deal with multiple character sets if MIME is loaded.

```
(PRINTMESSAGESUMMARY.STRING FROMSTR WINDOW)
(COND
((> (SETQ HERE (DSPXPOSITION NIL WINDOW))
(SETQ THERE (fetch (MAILFOLDER FROMMAXXPOS) of FOLDER)))
; Erase the overflow
(DSPBACKUP (- HERE THERE)
WINDOW)))
(DSPXPOSITION (fetch (MAILFOLDER SUBJECTXPOS) of FOLDER)
WINDOW)
(PRINTMESSAGESUMMARY.STRING (OR (fetch (LAFITEMSG SUBJECT) of MSG)
UNSUPPLIEDFIELDSTR)
WINDOW)
(PRN3 " [" WINDOW)
(PRN3 (fetch (LAFITEMSG MESSAGELENGTH) of MSG)
WINDOW)
(PRN3 " chars]" WINDOW)
```

:: keep track of maximum width printed to. If header is allowed to print on two lines, \$\$MAXWIDTH\$\$ was set to right margin by
:: BUILDBROWSERMAP so this should not reset it.

```
(COND
((< (fetch (MAILFOLDER BROWSERMAXXPOS) of FOLDER)
(SETQ HERE (DSPXPOSITION NIL WINDOW)))
(replace (MAILFOLDER BROWSERMAXXPOS) of FOLDER with HERE)
(replace (REGION WIDTH) of (SETQ EXTENT (fetch (MAILFOLDER BROWSEREXTENT) of FOLDER)) with HERE)
(WINDOWPROP WINDOW 'EXTENT EXTENT)))
[COND
((fetch (LAFITEMSG SELECTED?) of MSG)
(LA.SHOW.SELECTION FOLDER MSG 'REPLACE])
(COND
((fetch (LAFITEMSG DELETED?) of MSG)
(LA.SHOW.DELETION FOLDER MSG WINDOW 'REPLACE])
```

(FIRSTVISIBLEMESSAGE

```
[LAMBDA (MAILFOLDER REGION) (* bvm%: "25-Feb-86 12:22")
; Computes number of the first message in MAILFOLDER that is visible in REGION
(IMAX 1 (IQUOTIENT (- (fetch (MAILFOLDER BROWSERORIGIN) of MAILFOLDER)
(+ [fetch (REGION TOP) of (OR REGION (DSPCLIPPINGREGION NIL (fetch (MAILFOLDER
BROWSERWINDOW)
of MAILFOLDER])
(fetch (MAILFOLDER BROWSERFONTDESCENT) of MAILFOLDER)))
(fetch (MAILFOLDER BROWSERFONTHEIGHT) of MAILFOLDER])
```

(LASTVISIBLEMESSAGE

```
[LAMBDA (MAILFOLDER REGION) (* bvm%: "25-Feb-86 11:33")
; Computes number of the last message in MAILFOLDER that is visible in REGION
(IMIN (fetch (MAILFOLDER %OFMESSAGES) of MAILFOLDER)
(IQUOTIENT (+ (- (fetch (MAILFOLDER BROWSERORIGIN) of MAILFOLDER)
(- [fetch (REGION BOTTOM) of (OR REGION (DSPCLIPPINGREGION NIL (fetch (MAILFOLDER
BROWSERWINDOW)
of MAILFOLDER])
(fetch (MAILFOLDER BROWSERFONTASCENT) of MAILFOLDER)))
(SUB1 (fetch (MAILFOLDER BROWSERFONTHEIGHT) of MAILFOLDER)))
(fetch (MAILFOLDER BROWSERFONTHEIGHT) of MAILFOLDER])
```

(LAB.DISPLAYLINES

```
[LAMBDA (FOLDER FIRST# LAST# REGION CLEAR) ; Edited 28-Apr-89 18:48 by bvm
; Display toc line for messages FIRST# thru LAST# (default to extreme). If REGION is given, only display messages visible in the region (default
; is the browser window's clipping region). If CLEAR is true, clear the region first (otherwise, caller has cleared it).
(LET* ((WINDOW (fetch (MAILFOLDER BROWSERWINDOW) of FOLDER))
(REG (OR REGION (DSPCLIPPINGREGION NIL WINDOW)))
(MIN# (FIRSTVISIBLEMESSAGE FOLDER REGION))
(MAX# (LASTVISIBLEMESSAGE FOLDER REGION))
(MESSAGES (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of FOLDER)))
(if (AND FIRST# (> FIRST# MIN#))
then (SETQ MIN# FIRST#))
(if (AND LAST# (< LAST# MAX#))
then (SETQ MAX# LAST#))
(if CLEAR
then (DSPFILL [LET ((LINEHEIGHT (fetch (MAILFOLDER BROWSERFONTHEIGHT) of FOLDER)))
```

```

      (create REGION
        LEFT _ 0
        BOTTOM _ (- (fetch (MAILFOLDER BROWSERORIGIN) of FOLDER)
                  (fetch (MAILFOLDER BROWSERFONTDESCENT) of FOLDER)
                  (TIMES LINEHEIGHT MAX#))
        WIDTH _ MAX.SMALLP
        HEIGHT _ (TIMES LINEHEIGHT (ADD1 (- MAX# MIN#)
        WHITESHADE
        'REPLACE WINDOW))
      (for MSG# from MIN# to MAX# do (PRINTMESSAGESUMMARY (NTHMESSAGE MESSAGES MSG#)
        FOLDER WINDOW])

```

(LAB.EXPOSEMESSAGE

```

[LAMBDA (MAILFOLDER MSGDESCRIPTOR) (* bvm%: "24-Dec-83 19:00")
  (PROG ((WINDOW (fetch (MAILFOLDER BROWSERWINDOW) of MAILFOLDER))
    (YPOS (MESSAGE#.TO.YPOS MSGDESCRIPTOR MAILFOLDER))
    CLIPREGION)
  (COND
    ((OR (IGREATERP (fetch (REGION BOTTOM) of (SETQ CLIPREGION (DSPCLIPPINGREGION NIL WINDOW)))
      YPOS)
      (ILESSP (fetch (REGION TOP) of CLIPREGION)
      YPOS))
      (SCROLLBYREPAINTFN WINDOW 0 (IPLUS (fetch (REGION BOTTOM) of CLIPREGION)
        (IQUOTIENT (fetch (REGION HEIGHT) of CLIPREGION)
          2)
        (IMINUS YPOS]))

```

(LAB.SELECTED.MESSAGES

```

[LAMBDA (FOLDER) ; Edited 14-Oct-87 16:15 by bvm:
  ;; Return a list of message descriptors currently selected
  (for MSG selectedin FOLDER collect MSG])

```

(UNSELECTALLMESSAGES

```

[LAMBDA (MAILFOLDER) (* bvm%: "15-Feb-84 16:21")
  (for N from (fetch FIRSTSELECTEDMESSAGE of MAILFOLDER) to (fetch LASTSELECTEDMESSAGE of MAILFOLDER)
    bind (MESSAGES _ (fetch MESSAGEDESCRIPTORS of MAILFOLDER)) do (LA.DESELECTRANGE MAILFOLDER N N)
    (LA.SHOW.SELECTION MAILFOLDER
      (NTHMESSAGE MESSAGES N)
      'ERASE])

```

(SELECTMESSAGE

```

[LAMBDA (MSGDESCRIPTOR MAILFOLDER) (* bvm%: "15-Feb-84 12:34")
  (PROG ((N (fetch (LAFITEMSG %#) of MSGDESCRIPTOR)))
    (LA.SELECTRANGE MAILFOLDER N N T)
    (LA.SHOW.SELECTION MAILFOLDER MSGDESCRIPTOR 'REPLACE])

```

(LAB.GO.TO.MESSAGE

```

[LAMBDA (FOLDER N) ; Edited 23-Aug-88 18:14 by bvm
  ;; Jump to nth message in folder. N must be in range, or be a msg object in the folder. Returns the message object
  (LET [(MSG (if (type? LAFITEMSG N)
    then N
    else (\DTEST (NTHMESSAGE (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of FOLDER)
      N)
      'LAFITEMSG]
    (UNSELECTALLMESSAGES FOLDER)
    (LAB.EXPOSEMESSAGE FOLDER MSG)
    (LA.SHOW.SELECTION FOLDER MSG 'REPLACE)
    (replace (LAFITEMSG SELECTED?) of MSG with T)
    (replace FIRSTSELECTEDMESSAGE of FOLDER with (replace LASTSELECTEDMESSAGE of FOLDER
      with (fetch (LAFITEMSG %#) of MSG)))
    MSG])

```

(MARKMESSAGE

```

[LAMBDA (MSG FOLDER MARK) ; Edited 25-Apr-89 17:54 by bvm

```

;;; Changes the mark byte of MSGDESCRIPTOR to be MARK. This may also imply something about SEEN?

```

(replace (LAFITEMSG MARKCHAR) of MSG with MARK)
(replace (LAFITEMSG SEEN?) of MSG with (NOT (UNSEENMARKP MARK)))
(LAB.MARKS.CHANGED MSG FOLDER)
(COND
  ((OPENWP (fetch (MAILFOLDER BROWSERWINDOW) of FOLDER))
    (LA.SHOW.MARK MSG FOLDER))
  (T
    (PROG ((N (fetch (LAFITEMSG %#) of MSG))
      (OLDU (fetch (MAILFOLDER BROWSERUPDATEFROMHERE) of FOLDER)))
      (COND
        ((OR (NULL OLDU)
          (> OLDU N))

```

; Wait until browser expanded before showing mark update

(replace (MAILFOLDER BROWSERUPDATEFROMHERE) of FOLDER with N])

(LAB.MARKS.CHANGED

[LAMBDA (MSG FOLDER) ; Edited 21-Jun-99 22:42 by rmk:

:: Call this whenever you change one of the 3 mark bytes (seen, deleted, mark) of a message.

```
(LET ((N (fetch (LAFITEMSG %#) of MSG)))
      (if (< N (fetch (MAILFOLDER FIRSTCHANGEDMESSAGE) of FOLDER))
          then (replace (MAILFOLDER FIRSTCHANGEDMESSAGE) of FOLDER with N)))
(replace (LAFITEMSG MARKSCHANGED?) of MSG with T)
```

:: rmk: MARKSCHANGEDINTOC? wasn't being set, and changes only to marks weren't being written out.

```
(replace (LAFITEMSG MARKSCHANGEDINTOC?) of MSG with T)
(replace (MAILFOLDER FOLDERNEEDSUPDATE) of FOLDER with T])
```

(LA.SHOW.MARK

[LAMBDA (MSGDESCRIPTOR MAILFOLDER) (* bvm%: "17-Feb-84 15:34")

```
(PROG ((WINDOW (fetch (MAILFOLDER BROWSERWINDOW) of MAILFOLDER))
        (YPOS (MESSAGE#.TO.YPOS MSGDESCRIPTOR MAILFOLDER))
        (MARK (fetch (LAFITEMSG MARKCHAR) of MSGDESCRIPTOR)))
      (LA.BLT.MARK.BOX MAILFOLDER WINDOW YPOS 'REPLACE WHITESHADE)
```

; Erase whatever's there

```
(COND
  ((NEQ MARK (CHARCODE SPACE))
   (MOVETO BROWSERMARKXPOSITION YPOS WINDOW)
   (BOUT WINDOW MARK]))
```

(LA.INVERT.MARK.BOX

[LAMBDA (MAILFOLDER MSG#) (* bvm%: "17-Feb-84 14:44")

```
(LA.BLT.MARK.BOX MAILFOLDER (fetch (MAILFOLDER BROWSERWINDOW) of MAILFOLDER)
  (MESSAGE#.TO.YPOS (NTHMESSAGE (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of MAILFOLDER)
    MSG#)
    MAILFOLDER)
  'INVERT BLACKSHADE])
```

(LA.BLT.MARK.BOX

[LAMBDA (MAILFOLDER WINDOW YPOS OPERATION TEXTURE) ; Edited 3-Sep-87 18:02 by bvm:

```
(BLTSHADE TEXTURE WINDOW BROWSERMARKXPOSITION (- YPOS (fetch (MAILFOLDER BROWSERFONTDESCENT) of MAILFOLDER))
  (- (fetch (MAILFOLDER ORDINALXPOS) of MAILFOLDER)
     BROWSERMARKXPOSITION)
  (fetch (MAILFOLDER BROWSERFONTHEIGHT) of MAILFOLDER)
  OPERATION])
```

(LA.SHOW.DELETION

[LAMBDA (MAILFOLDER MSGDESCRIPTOR WINDOW OPERATION) ; Edited 3-Sep-87 16:23 by bvm:

::: Draws or erases, for OPERATION = REPLACE or ERASE, the line indicating that MSGDESCRIPTOR is deleted

```
(BLTSHADE BLACKSHADE WINDOW BROWSERMARKXPOSITION (- (+ (MESSAGE#.TO.YPOS MSGDESCRIPTOR MAILFOLDER)
  (LRSH (fetch (MAILFOLDER BROWSERFONTASCENT) of MAILFOLDER)
    1))
  (LRSH LAFITEDELETEDLINEHEIGHT 1))
NIL LAFITEDELETEDLINEHEIGHT OPERATION])
```

(LA.SHOW.SELECTION

[LAMBDA (MAILFOLDER MSGDESCRIPTOR OPERATION) (* bvm%: " 2-Feb-84 12:37")

::: Displays or erases, per OPERATION = REPLACE or ERASE, the mark indicating that MSGDESCRIPTOR is selected

```
(BITBLT LA.SELECTION.BITMAP 0 0 (fetch (MAILFOLDER BROWSERWINDOW) of MAILFOLDER)
  0
  (+ (MESSAGE#.TO.YPOS MSGDESCRIPTOR MAILFOLDER)
     (LRSH (fetch (MAILFOLDER BROWSERFONTASCENT) of MAILFOLDER)
       1)
     -5)
  NIL NIL 'INPUT OPERATION])
```

(SEENMESSAGE

[LAMBDA (MSG FOLDER) ; Edited 25-Apr-89 17:52 by bvm

::: causes the 'seen character' -- as opposed to the 'seen mark' -- to be changed to 'S' on the file

```
(LET ((OLDMARK (fetch (LAFITEMSG MARKCHAR) of MSG)))
  (COND
    ((OR (NULL (fetch (LAFITEMSG SEEN?) of MSG))
         (UNSEENMARKP OLDMARK))
     (replace (LAFITEMSG SEEN?) of MSG with T)
     (LAB.MARKS.CHANGED MSG FOLDER)
     (COND
```

```

((UNSEENMARKP OLDMARK)
;; only change the mark if it was ? -- it might already be something more meaningful like an answer mark
(MARKMESSAGE MSG FOLDER SEENMARK])

```

(DELETMESSAGE

```

[LAMBDA (MSG FOLDER) ; Edited 25-Apr-89 17:53 by bvm
  (replace (LAFITEMSG DELETED?) of MSG with T)
  (LAB.MARKS.CHANGED MSG FOLDER)
  (replace (MAILFOLDER FOLDERNEEDSEXPUNGE) of FOLDER with T)
  (LA.SHOW.DELETION FOLDER MSG (fetch (MAILFOLDER BROWSERWINDOW) of FOLDER)
    'REPLACE])

```

(UNDELETMESSAGE

```

[LAMBDA (MSG FOLDER) ; Edited 25-Apr-89 17:52 by bvm
  (if (fetch (LAFITEMSG DELETED?) of MSG)
    then (LET ((WINDOW (fetch (MAILFOLDER BROWSERWINDOW) of FOLDER)))
      (replace (LAFITEMSG DELETED?) of MSG with NIL)
      (LAB.MARKS.CHANGED MSG FOLDER)
      (LA.SHOW.DELETION FOLDER MSG WINDOW 'ERASE) ; undeleted; reprint the header.
      (PRINTMESSAGESUMMARY MSG FOLDER WINDOW) ; Finally, maybe clear the expungeable flag if this was the last
      ; deleted message
      (LAB.SET.EXPUNGEABILITY FOLDER]))

```

(LAB.SET.EXPUNGEABILITY

```

[LAMBDA (FOLDER) ; Edited 25-Apr-89 17:46 by bvm
;; Sets the FOLDERNEEDSEXPUNGE flag according to whether any messages are marked deleted, and returns the number of the first deleted
;; message (or NIL if none).
(LET [(FIRSTDELETED (for I from 1 to (fetch (MAILFOLDER %#OFMESSAGES) of FOLDER)
  bind (MESSAGES _ (fetch (MAILFOLDER MESSAGEDESCRIPTORS) of FOLDER))
  thereis (fetch (LAFITEMSG DELETED?) of (NTHMESSAGE MESSAGES I)
    (replace (MAILFOLDER FOLDERNEEDSEXPUNGE) of FOLDER with FIRSTDELETED)
    FIRSTDELETED])

```

)

;; PRINTMESSAGESUMMARY.STRING prints From and Subject. Redefined when MIME is loaded to deal with different character encodings.

```

(MOVD? 'PRIN3 'PRINTMESSAGESUMMARY.STRING)

```

;; ICON stuff

```

(FILESLOAD ICONW)

```

```

(DEFINEQ

```

(LAB.ICONFN

```

[LAMBDA (WINDOW OLDICON) ; Edited 20-Apr-89 19:38 by bvm

```

;;; the holding place for all the fancy stuff for making an icon for a mail browser window

```

(OR (WINDOWP (WINDOWPROP WINDOW 'ICONWINDOW))
  (LET ((MAILFOLDER (WINDOWPROP WINDOW 'MAILFOLDER))
    ICON)
    (SETQ ICON (TITLEDICONW LAFITE.FOLDER.ICON (COND
      (MAILFOLDER (LA.SHORTFILENAME (fetch (MAILFOLDER
        FULLFOLDERNAME
        )
        of MAILFOLDER)
        LAFITEMAIL.EXT))
      (T "??"))
      NIL
      (OR (WINDOWPROP WINDOW 'ICONPOSITION)
        (SELECTQ LAFITE.BROWSER.ICON.PREFERENCE
          ((:ASK ASK) ; force prompt
            NIL)
          (NIL (LA.POSITION.FROM.REGION (WINDOWPROP WINDOW 'REGION)))
            (CL:FUNCALL LAFITE.BROWSER.ICON.PREFERENCE WINDOW)))
      T NIL 'FILE))
    (WINDOWPROP ICON 'BUTTONEVENTFN (FUNCTION LAB.ICON.BUTTONEVENTFN))
    ICON])

```

(LAB.ICON.BUTTONEVENTFN

```

[LAMBDA (ICONW) ; Edited 23-Aug-88 18:30 by bvm

```

;; BUTTONEVENTFN for browser windows. This one is like the default, except that middle button offers choices

```

(COND
  [(LASTMOUSESTATE MIDDLE)
    (LET (HOW)
      (if [AND (fetch (MAILFOLDER FOLDERGETSMail) of (WINDOWPROP (WINDOWPROP ICONW 'ICONFOR)
        'MAILFOLDER))

```

(SETQ HOW (MENU (OR LAFITEBROWSERICONMENU (SETQ LAFITEBROWSERICONMENU (\LAFITE.CREATE.MENU LAFITEBROWSERICONMENUITEMS NIL T)

then ; Folder accepts new mail, and offer was accepted
(CL:FUNCALL HOW ICONW)
else ; No menu selection, just expand as you otherwise would
(EXPANDW ICONW)
(T (MOVEW ICONW))

(RPAQQ LAFITE.FOLDER.ICON (



(8 4 88 51))

(RPAQQ? LAFITEFROMFRACTION 0.3)

(RPAQQ? LAFITEMINFROMCHARS 15)

(RPAQQ? LAFITEVERIFYFLG T)

(RPAQQ? LAFITEDELETEDLINEHEIGHT 1)

(RPAQQ? LAFITE.BROWSER.ICON.PREFERENCE)

(RPAQQ LAFITEBROWSERMENUITEMS

(("Display" '\LAFITE.DISPLAY "Displays the selected message in the display window.")
("Delete" '\LAFITE.DELETE "Deletes the selected messages.")
("Undel" '\LAFITE.UNDELETE "Undeletes the selected messages.")
("Answer" '\LAFITE.ANSWER "Prepares a delivery form to reply to the selected message.")
("Forward" '\LAFITE.FORWARD "Prepares a delivery form to forward the selected message(s).")
(HCopy '\LAFITE.HARDCOPY "Sends hardcopy of the selected message(s) to the default printer")
("Move To" '\LAFITE.MOVETO "Moves the selected message(s) to another mail folder.")
("Update" '\LAFITE.UPDATE "Write out browser changes to the physical mail file.
Option to expunge all
deleted messages.")
("Get Mail" '\LAFITE.GETMAIL "Retrieves new messages and puts them into this mail folder.))

(RPAQQ LAFITESUBBROWSEMENUITEMS

(("Browse" '\LAFITE.BROWSE.PROC "Browse a mail file")
("Browse & Forget" '\LAFITE.BROWSE.FORGET "Browse a mail file, but don't add it to the menu of known folders")
("Forget Folders" '\LAFITE.UNCACHE.FOLDER "Remove one or more folders from list of known folders")
("Forget Message Form" '\LAFITE.UNCACHE.MESSAGEFORM "Remove a form from list of known message forms,
but
do not delete the file containing it.")
and
("Delete Message Form" '\LAFITE.DELETE.MESSAGEFORM "Remove a form from list of known message forms
delete the file(s) containing it.")
("Notice Folders" '\LAFITE.NOTICE.FOLDERS "Scan specified directory and add any folders found to the list of known folders")
("Clean up Folders" '\LAFITE.GC.FOLDERS "Check that all known folders correspond to actual files; remove those that no longer exist")
("Rename Folder" '\LAFITE.RENAME.FOLDER "Change the name of a folder")
("Edit Folder Hierarchy" '\LAFITE.EDIT.HIERARCHY "Add, delete, or change membership of a folder group"
(SUBITEMS ("Edit a Group" '\LAFITE.EDIT.HIERARCHY "Modify an existing group")
("Add New Group" '[LAMBDA (ITEM MENU)
(\LAFITE.ADD.NEW.GROUP)
"Define a new top-level group")
("Change Top-Level Groups" '\LAFITE.CHANGE.TOP.GROUPS "Specify which subgroups should also appear at top level.'])

(RPAQQ LAFITEBROWSERICONMENUITEMS (("Get Mail" '\LAFITE.GETMAIL.FROM.ICON "Open this window and retrieve new mail into it"))

(RPAQQ? LAFITESUBBROWSEMENU)

(RPAQQ? LAFITEBROWSERICONMENU)

(RPAQQ? LAFITEEXTRAMENU)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS LAFITESUBBROWSEMENU LAFITEBROWSERICONMENU LAFITEEXTRAMENU)
)

(ADDTOVAR **LAFITEMENUVARS** LAFITESUBBROWSEMENU LAFITEBROWSERICONMENU LAFITEEXTRAMENU)

(ADDTOVAR **LAFITEEXTRAMENUITEMS** ("Describe Folder" '\LAFITE.DESCRIBE.FOLDER "Display some relevant info about
this folder" (SUBITEMS ("Inspect Folder" 'INSPECT "Inspect the MAILFOLDER
data structure associated with this
browser"))))

(RPAQQ **BROWSERMARKXPOSITION** 8)

(RPAQQ **LA.SELECTION.BITMAP** )

:: Obsolete

(RPAQ? **LAFITEBROWSERREGION** (CREATEREGION 30 30 575 210))

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(RPAQQ **TOCSTATES** ((TS.IDLE 0)
(TS.REPLACING 1)
(TS.ADDING 2)
(TS.REMOVING 3)
(TS.EXTENDING.HI 4)
(TS.EXTENDING.LO 5)
(TS.SHRINKING.HI 6)
(TS.SHRINKING.LO 7)))

(DECLARE%: EVAL@COMPILE

(RPAQQ **TS.IDLE** 0)

(RPAQQ **TS.REPLACING** 1)

(RPAQQ **TS.ADDING** 2)

(RPAQQ **TS.REMOVING** 3)

(RPAQQ **TS.EXTENDING.HI** 4)

(RPAQQ **TS.EXTENDING.LO** 5)

(RPAQQ **TS.SHRINKING.HI** 6)

(RPAQQ **TS.SHRINKING.LO** 7)

(CONSTANTS (TS.IDLE 0)
(TS.REPLACING 1)
(TS.ADDING 2)
(TS.REMOVING 3)
(TS.EXTENDING.HI 4)
(TS.EXTENDING.LO 5)
(TS.SHRINKING.HI 6)
(TS.SHRINKING.LO 7))
)

(CL:PROCLAIM ' (CL:SPECIAL \CURRENTDISPLAYLINE))

(FILESLOAD (SOURCE)
LAFITE-DECLS)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(LOCALVARS . T)
)
)

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

(ADDTOVAR **NLAMA**)

(ADDTOVAR **NLAML**)

(ADDTOVAR **LAMA** LAB.MOUSECONFIRM LAB.FORMAT LAB.PROMPTPRINT)
)

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