

File created: 14-Jun-2024 12:40:01 {WMEDLEY}<lispusers>FILEWATCH.;10

edit by: rmk

changes to: (FNS FW-INTERACT)

previous date: 14-Jun-2024 12:25:49 {WMEDLEY}<lispusers>FILEWATCH.;9

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

(RPAQQ **FILEWATCHCOMS**

[(PROP MAKEFILE-ENVIRONMENT FILEWATCH)

::: FILEWATCH is a facility for keeping an eye on the status of open files. It maintains a display containing the names of open files and their file pointer
::: positions including a percentage bar.

::: Interface

(FNS FILEWATCH FILEWATCHPROP)

::: Implementation

```
(COMS (DECLARE%: DONTCOPY (RECORDS FW-OFD))
      (INITRECORDS FW-OFD))
(FNS FW-FORGET-STREAM)
(FNS FW-ADJUST-PLACEMENT FW-ADJUST-REGION FW-AFTERMOVEFN FW-BUTTONEVENTFN FW-COPY-FILENAME
  FW-CHANGE-ANCHOR FW-CHANGE-JUSTIFICATION FW-CHANGE-POSITION FW-CLOSE-CMD FW-CLOSE-OLD-OFD-WINDOWS
  FW-CLOSEFN FW-CREATE-OFD FW-CREATE-OFD-LIST FW-CREATE-OFD-WINDOWS FW-CREATEW FW-FILTERED-FILE?
  FW-FORGET-CMD FW-INIT FW-INIT-MENUS FW-INIT-PROPS FW-INTERACT FW-LOOP FW-MOVE-OFD-WINDOWS FW-MOVEW
  FW-OFD-EXISTS? FW-OPENP FW-PERCENTAGE FW-RE-INIT FW-RECALL-CMD FW-REPAINTFN FW-RESET FW-RESIZE-OFD
  FW-SHAPEW FW-SORT-FN FW-UPDATE-OFD-WINDOW FW-UPDATE-OFD-WINDOWS FW-WIPE)
(DECLARE%: DONTCOPY DONTEVAL@LOAD EVAL@COMPILE (FILES (SOURCE FROM LISPUSERS)
  SYSEDT))

[INITVARS (FW-OFDList NIL)
  (FW-OpenP-ScratchList (CONS))
  (FW-Commands ' (FORGET FORGET-MANY RECALL RECALL-MANY CLOSE CLOSE-MANY MOVE SET-ANCHOR
    SET-POSITION SET-JUSTIFICATION QUIT))
  (FW-Properties `(FONT (GACHA 8)
    ALL-FILES? NIL POSITION ,(CREATEPOSITION SCREENWIDTH 0)
    ANCHOR BOTTOM-RIGHT SHADE ,GRAYSHADE INTERVAL 1000)]

(P (FW-INIT-MENUS)
  (MOVD? 'CL:IDENTITY 'PSEUDOFILENAME))
(DECLARE%: DONTEVAL@LOAD DOEVAL@COMPILE DONTCOPY COMPILERVERS (ADDVARS (NLAMA)
  (NLAML)
  (LAMA FILEWATCHPROP]))
```

(PUTPROPS **FILEWATCH MAKEFILE-ENVIRONMENT** (:READTABLE "INTERLISP" :PACKAGE "INTERLISP" :BASE 10))

::: FILEWATCH is a facility for keeping an eye on the status of open files. It maintains a display containing the names of open files and their file pointer
::: positions including a percentage bar.

::: Interface

(DEFINEQ

(FILEWATCH

```
[LAMBDA (COMMAND)
  (DECLARE (GLOBALVARS FW-Running?))
  (PROG [(FW-PROC (FIND.PROCESS 'FileWatcher)
    (SELECTQ (SELECTQ [if (OR (LITATOM COMMAND)
      (STRINGP COMMAND))
      then (SETQ COMMAND (MKATOM (U-CASE COMMAND))
    (ON (if (NULL FW-PROC)
      then 'ON))
    ((OFF QUIT)
      (if FW-PROC
        then (SETQ COMMAND 'OFF)))
    (MENU (SETQ COMMAND NIL)
      'MENU)
    (if (OR COMMAND FW-PROC)
      then 'MENU
      else 'ON))
    (ON (SETQ FW-PROC (ADD.PROCESS (LIST (FUNCTION FW-LOOP))
      'NAME
      'FileWatcher
      'RESTARTABLE
      'HARDRESET)))
    (OFF (SETQ FW-PROC (SETQ FW-Running? NIL)))
    (MENU (if (NULL FW-PROC)
```



```

        (NEQ (fetch (FW-OFD OFDHEIGHT) of OFD)
             (fetch (FW-OFD FWHEIGHT) of OFD)))
    then (FW-SHAPEW OFD)
        (replace (FW-OFD OFDSTATUS) of OFD with 'NEW)
    elseif (OR (NEQ (fetch (FW-OFD FWLEFT) of OFD)
                    (fetch (FW-OFD OFDLEFT) of OFD))
             (NEQ (fetch (FW-OFD FWBOTTOM) of OFD)
                  (fetch (FW-OFD OFDBOTTOM) of OFD)))
    then (FW-MOVEW OFD)
        (SETQ FW-WindowBottom (IPLUS FW-WindowBottom FW-WindowBottomDelta)))
    (FORGOTTEN)
    (SHOULDNT (CONS "Unexpected OFDSTATUS : " (fetch (FW-OFD OFDSTATUS) of OFD)))

```

(FW-ADJUST-REGION

```

[LAMBDA NIL
  (* Koomen "12-Jan-87 21:29")
  (DECLARE (GLOBALVARS FW-Anchor FW-Justified? FW-OFDList FW-Position FW-WindowBottom FW-WindowBottomDelta
                     FW-WindowHeight WBorder))
  [if FW-Justified?
    then
      (* Recompute maximum name field width)
      (PROG (NAMEWIDTH (MAXNAMEWIDTH 0))
        [for OFD in FW-OFDList do (SELECTQ (fetch (FW-OFD OFDSTATUS) of OFD)
                                           ((NEW CURRENT)
                                            (SETQ NAMEWIDTH (fetch (FW-OFD NAMEWIDTH) of OFD))
                                             (if (IGREATERP NAMEWIDTH MAXNAMEWIDTH)
                                                 then (SETQ MAXNAMEWIDTH NAMEWIDTH)))
                                           (FORGOTTEN)
                                           (SHOULDNT (CONS "Unexpected OFDSTATUS : " (fetch (FW-OFD
                                                                                               OFDSTATUS)
                                                                                               of OFD))
                                                     )
                                           )
          (for OFD in FW-OFDList do (FW-RESIZE-OFD OFD MAXNAMEWIDTH)
            (SETQ FW-WindowBottom (fetch (POSITION YCOORD) of FW-Position))
            (SETQ FW-WindowBottomDelta (IDIFFERENCE FW-WindowHeight (IQUOTIENT WBorder 2)))
            (SELECTQ FW-Anchor
              ((TOP-LEFT TOP-RIGHT)
               (SETQ FW-WindowBottom (IDIFFERENCE FW-WindowBottom FW-WindowHeight))
                (SETQ FW-WindowBottomDelta (IMINUS FW-WindowBottomDelta)))
              ((BOTTOM-LEFT BOTTOM-RIGHT))
              (ERROR "Unsupported anchor spec: " FW-Anchor))

```

(FW-AFTERMOVEFN

```

[LAMBDA (W)
  ; Edited 30-Sep-87 11:53 by Koomen
  ;; [30-Sep-87] Added FW-Dormant? flag: If moving a FileWatch window causes the FileWatch anchor position to move off the screen, then go to
  ;; sleep. This is to accommodate the Rooms package.
  (DECLARE (GLOBALVARS FW-Dormant? FW-OFDList SCREENHEIGHT SCREENWIDTH))
  (SETQ FW-Dormant? NIL)
  (if (NEQ 'FileWatcher (PROCESS.NAME (THIS.PROCESS)))
    then (for OFD in FW-OFDList when (EQ W (fetch (FW-OFD OFDWINDOW) of OFD))
      bind REGION DELTAX DELTAY OLDPOS NEWX NEWY
      do (SETQ OLDPOS (FILEWATCHPROP 'POSITION))
         (SETQ REGION (WINDOWREGION W))
         (SETQ DELTAX (IDIFFERENCE (fetch (REGION LEFT) of REGION)
                                   (fetch (FW-OFD OFDLEFT) of OFD)))
         (SETQ NEWX (IPLUS DELTAX (fetch (POSITION XCOORD) of OLDPOS)))
         (SETQ DELTAY (IDIFFERENCE (fetch (REGION BOTTOM) of REGION)
                                   (fetch (FW-OFD OFDBOTTOM) of OFD)))
         (SETQ NEWY (IPLUS DELTAY (fetch (POSITION YCOORD) of OLDPOS)))
         (if (OR (ILESSP NEWX 0)
                 (IGREATERP NEWX SCREENWIDTH)
                 (ILESSP NEWY 0)
                 (IGREATERP NEWY SCREENHEIGHT))
           then (SETQ FW-Dormant? T)
           else (FILEWATCHPROP 'POSITION (create POSITION
                                                  XCOORD _ NEWX
                                                  YCOORD _ NEWY)))
      (RETURN))

```

(FW-BUTTONEVENTFN

```

[LAMBDA (W)
  ; Edited 18-Jul-2023 19:00 by rmk
  (* Koomen "16-Apr-87 15:28")
  (DECLARE (GLOBALVARS LASTMOUSEBUTTONS))
  (if (MOUSESTATE (ONLY RIGHT))
    then (FW-INTERACT W)
    elseif (MOUSESTATE (ONLY MIDDLE))
    then (FW-MOVE-OFD-WINDOWS 'POSITION)
    elseif (MOUSESTATE (ONLY LEFT))
    then (IF (OR (SHIFTDOWNP 'SHIFT)
                (KEYDOWNP 'COPY))
            then (FW-COPY-FILENAME W)
            else (FW-REPAINTFN W)))
  NIL])

```

(FW-COPY-FILENAME

```

[LAMBDA (W) ; Edited 18-Jul-2023 22:14 by rmk
  (bind (REG _ (DSPCLIPPINGREGION NIL W)) unless (OR (SHIFTDOWNP 'SHIFT)
                                                    (KEYDOWNP 'COPY))
    do (GETMOUSESTATE)
      (CL:WHEN (INSIDEP REG (LASTMOUSEX W)
                        (LASTMOUSEY W))
        [COPYINSERT (MKSTRING (PSEUDOFILENAME (fetch (FW-OFD FULLNAME)
                                                    of (OR (find OFD in FW-OFDList
                                                            suchthat (EQ (fetch (FW-OFD OFDWINDOW)
                                                                of OFD)
                                                                W)))
                                                    (RETURN]
          (RETURN))])

```

(FW-CHANGE-ANCHOR

```

[LAMBDA NIL (* Koomen "16-Apr-87 15:55")
  (DECLARE (GLOBALVARS PROMPTWINDOW))
  (PROG [NEWANCHOR (OLDANCHOR (FILEWATCHPROP 'ANCHOR))
        (CLRSPROMPT)
        (printout PROMPTWINDOW "Current anchor is " OLDANCHOR T T)
        (printout PROMPTWINDOW "Indicate new anchor: ")
        [SETQ NEWANCHOR (MENU (create MENU
                                CENTERFLG _ T
                                TITLE _ "Anchor: "
                                ITEMS _ ' ("Top Left" 'TOP-LEFT)
                                           ("Top Right" 'TOP-RIGHT)
                                           ("Bottom Left" 'BOTTOM-LEFT)
                                           ("Bottom Right" 'BOTTOM-RIGHT]
          (if (AND NEWANCHOR (NEQ NEWANCHOR OLDANCHOR))
            then (FILEWATCHPROP 'ANCHOR NEWANCHOR])

```

(FW-CHANGE-JUSTIFICATION

```

[LAMBDA NIL (* Koomen "16-Apr-87 15:55")
  (DECLARE (GLOBALVARS PROMPTWINDOW))
  (PROG [NEWJUST? (OLDJUST? (FILEWATCHPROP 'JUSTIFIED?))
        (CLRSPROMPT)
        (printout PROMPTWINDOW "Window justification is " OLDJUST? T T)
        (SETQ NEWJUST? (MOUSECONFIRM "Turn justification on?"))
        (if (NEQ NEWJUST? OLDJUST?)
          then (FILEWATCHPROP 'JUSTIFIED? NEWJUST?])

```

(FW-CHANGE-POSITION

```

[LAMBDA NIL (* Koomen "16-Apr-87 15:48")
  (DECLARE (GLOBALVARS FW-OFDList PROMPTWINDOW))
  (PROG ((OLDPOS (FILEWATCHPROP 'POSITION))
        NEWPOS BOX R)
    (for OFD in FW-OFDList when (EQ (fetch (FW-OFD OFDSTATUS) of OFD)
                                   'CURRENT)
      do (SETQ R (WINDOWREGION (fetch (FW-OFD OFDWINDOW) of OFD)))
        (SETQ BOX (if BOX
                     then (UNIONREGIONS BOX R)
                     else R)))
    (if BOX
      then (SETQ NEWPOS (GETBOXPOSITION (fetch (REGION WIDTH) of BOX)
                                       (fetch (REGION HEIGHT) of BOX)
                                       (fetch (REGION LEFT) of BOX)
                                       (fetch (REGION BOTTOM) of BOX)))
        ;; Now translate since anchor may not have been bottom-left
        [SETQ NEWPOS (create POSITION
                            XCOORD _ (IPLUS (fetch (POSITION XCOORD) of OLDPOS)
                                             (IDIFFERENCE (fetch (POSITION XCOORD) of NEWPOS)
                                                           (fetch (REGION LEFT) of BOX)))
                            YCOORD _ (IPLUS (fetch (POSITION YCOORD) of OLDPOS)
                                             (IDIFFERENCE (fetch (POSITION YCOORD) of NEWPOS)
                                                           (fetch (REGION BOTTOM) of BOX]
          else (CLRSPROMPT)
            (printout PROMPTWINDOW "Current position is " OLDPOS T T)
            (printout PROMPTWINDOW "Indicate new position: ")
            (SETQ NEWPOS (GETPOSITION))
            (if (NOT (EQUAL NEWPOS OLDPOS))
              then (FILEWATCHPROP 'POSITION NEWPOS])

```

(FW-CLOSE-CMD

```

[LAMBDA (W MANY?) ; Edited 22-Sep-87 11:50 by Koomen
  (DECLARE (GLOBALVARS FW-OFDList))
  (if (AND W (NOT MANY?))
    then (for OFD in FW-OFDList do (if (EQ (fetch (FW-OFD OFDWINDOW) of OFD)
                                             W)
      then (if (MOUSECONFIRM (CONCAT "Closing " (fetch (FW-OFD FILESTREAM)
                                                         of OFD)))
              then (CLOSEF? (fetch (FW-OFD FILESTREAM) of OFD)))

```

```

                                (RETURN)))
  else (PROG (OPEN-STREAMS STREAM-TO-CLOSE)
            (SETQ OPEN-STREAMS (FW-OPENP))
            (if (NULL OPEN-STREAMS)
                then (PROMPTPRINT "FileWatch: no open files.")
                (RETURN))
        CLOSE-ANOTHER
        (SETQ STREAM-TO-CLOSE (MENU (create MENU
                                     TITLE _ "Select stream to close: "
                                     ITEMS _ OPEN-STREAMS)))

        (if (NULL STREAM-TO-CLOSE)
            then (RETURN))
        (CLOSEF? STREAM-TO-CLOSE)
        (BLOCK) ; Give FileWatch a chance
        (if (AND MANY? (SETQ OPEN-STREAMS (FW-OPENP)))
            then (GO CLOSE-ANOTHER}))

```

(FW-CLOSE-OLD-OFD-WINDOWS

```

[LAMBDA NIL ; (* Koomen " 1-Oct-86 23:48")
  (DECLARE (GLOBALVARS FW-OFDList))
  (for OFD in FW-OFDList do (SELECTQ (fetch (FW-OFD OFDSTATUS) of OFD)
                                     (OLD (CLOSEW (fetch (FW-OFD OFDWINDOW) of OFD))
                                           ((NEW CURRENT FORGOTTEN)
                                           (SHOULDNT (CONS "Unexpected OFDSTATUS : " (fetch (FW-OFD OFDSTATUS) of OFD))

```

(FW-CLOSEFN

```

[LAMBDA (W) ; (* Koomen " 2-Oct-86 00:17")
  (DECLARE (GLOBALVARS FW-OFDList FW-OpenFiles FW-Reset?))
  (if (NEQ (PROCESS.NAME (THIS.PROCESS))
        'FileWatcher)
      then (for OFD in FW-OFDList when (EQ W (fetch (FW-OFD OFDWINDOW) of OFD))
          do (replace (FW-OFD OFDSTATUS) of OFD with 'FORGOTTEN)
              (RETURN)) ; (* Force recomputing OFDList)
          (push FW-OpenFiles T)
          (SETQ FW-Reset? T))

```

(FW-CREATE-OFD

```

[LAMBDA (FULLNAME FILESTREAM) ; Edited 18-Jul-2023 19:15 by rmk
                                ; Edited 22-Sep-87 13:04 by Koomen
  (DECLARE (GLOBALVARS FW-Font))
  (SETQ FULLNAME (PSEUDOFILNAME FULLNAME))
  (FW-RESIZE-OFD (create FW-OFD
                        FILESTREAM _ FILESTREAM
                        FULLNAME _ FULLNAME
                        NAMEWIDTH _ (STRINGWIDTH FULLNAME FW-Font)
                        EOFPOS _ (if (RANDACCESSP FILESTREAM)
                                    then (GETEOFPTR FILESTREAM)
                                    else (GETFILEINFO FILESTREAM 'LENGTH))
                        READING? _ (if (OPENP FILESTREAM 'INPUT)
                                       then T)
                        WRITING? _ (if (OPENP FILESTREAM 'OUTPUT)
                                       then T)
                        RANDOM? _ (if (RANDACCESSP FILESTREAM)
                                       then T)
                        OFDSTATUS _ 'NEW))

```

(FW-CREATE-OFD-LIST

```

[LAMBDA NIL ; Edited 22-Sep-87 13:34 by Koomen
  (DECLARE (GLOBALVARS FW-OFDList FW-OpenFiles FW-SortFn))
  (for FILESTREAM in FW-OpenFiles bind FULLNAME eachtime (SETQ FULLNAME (FULLNAME FILESTREAM))
    unless (OR (FW-FILTERED-FILE? FULLNAME)
              (FW-OFD-EXISTS? FULLNAME FILESTREAM))
      do (push FW-OFDList (FW-CREATE-OFD FULLNAME FILESTREAM)))
  [SETQ FW-OFDList (for OFD in FW-OFDList join (SELECTQ (fetch (FW-OFD OFDSTATUS) of OFD)
                                                       ((NEW CURRENT FORGOTTEN)
                                                       (LIST OFD))
                                                       (OLD (CLOSEW (fetch (FW-OFD OFDWINDOW) of OFD))
                                                           NIL)
                                                       (SHOULDNT (CONS "Unexpected OFDSTATUS : " (fetch (FW-OFD
                                                                                                     OFDSTATUS
                                                                                                     )
                                                                                                     of OFD]
    (if (AND FW-OFDList FW-SortFn)
        then (SETQ FW-OFDList (SORT FW-OFDList (FUNCTION FW-SORT-FN)))

```

(FW-CREATE-OFD-WINDOWS

```

[LAMBDA NIL ; (* Koomen "16-Apr-87 15:29")
  (DECLARE (GLOBALVARS FW-Font FW-OFDList))
  (FW-ADJUST-REGION)
  (for OFD in FW-OFDList bind OFDWINDOW OFDSTREAM unless (fetch (FW-OFD OFDWINDOW) of OFD)
    do (SETQ OFDWINDOW (FW-CREATEW OFD))
        (SETQ OFDSTREAM (WINDOWPROP OFDWINDOW 'DSP))

```

```

(replace (FW-OFD OFDSTREAM) of OFD with OFDSTREAM)
(DSPFONT FW-Font OFDSTREAM)
(WINDOWPROP OFDWINDOW 'RIGHTBUTTONFN (FUNCTION FW-BUTTONEVENTFN))
(WINDOWPROP OFDWINDOW 'BUTTONEVENTFN (FUNCTION FW-BUTTONEVENTFN))
(WINDOWPROP OFDWINDOW 'REPAINTFN (FUNCTION FW-REPAINTFN))
(WINDOWPROP OFDWINDOW 'RESHAPEFN (FUNCTION NIL))
(WINDOWPROP OFDWINDOW 'CLOSEFN (FUNCTION FW-CLOSEFN))
(WINDOWPROP OFDWINDOW 'AFTERMOVEFN (FUNCTION FW-AFTERMOVEFN))
(FW-ADJUST-PLACEMENT FW-OFDList])

```

(FW-CREATEW

[LAMBDA (OFD)

; Edited 14-Jun-2024 12:18 by rmk
(* Koomen "29-Sep-86 23:16")

```

(replace (FW-OFD OFDWINDOW) of OFD with (CREATEW (create REGION
LEFT _ (replace (FW-OFD OFDLEFT) of OFD
with (fetch (FW-OFD FWLEFT) of OFD))
BOTTOM _ (replace (FW-OFD OFDBOTTOM) of OFD
with (fetch (FW-OFD FWBOTTOM) of OFD))
WIDTH _ (replace (FW-OFD OFDWIDTH) of OFD
with (fetch (FW-OFD FWWIDTH) of OFD))
HEIGHT _ (replace (FW-OFD OFDHEIGHT) of OFD
with (fetch (FW-OFD FWHEIGHT) of OFD)))
NIL NIL T])

```

(FW-FILTERED-FILE?

[LAMBDA (FULLNAME)

; Edited 22-Sep-87 13:31 by Koomen

```

(DECLARE (GLOBALVARS FW-Filters))
;; filters are precompiled for matching. Note that the system function DIRECTORY.MATCH.SETUP has stripped off the host, so we have to match
;; it seperately.
(for FILTER in FW-Filters thereis (AND (DIRECTORY.MATCH (CDR FILTER)
FULLNAME)
(DIRECTORY.MATCH (CAR FILTER)
(FILENAMEFIELD FULLNAME 'HOST]))

```

(FW-FORGET-CMD

[LAMBDA (W MANY?)

(* Koomen "27-May-87 15:27")

```

(DECLARE (GLOBALVARS FW-OFDList))
(if (AND W (NOT MANY?))
then (CLOSEW W)
else (PROG (CURRENT-OFDS FORGET-OFD)
(SETQ CURRENT-OFDS (for OFD in FW-OFDList when (EQ (fetch (FW-OFD OFDSTATUS) of OFD)
'CURRENT)
collect OFD))
(if (NULL CURRENT-OFDS)
then (PROMPTPRINT "FileWatch: no current files.")
(RETURN))
FORGET-ANOTHER
[SETQ FORGET-OFD (MENU (create MENU
TITLE _ "Select file to forget: "
ITEMS _ (for OFD in CURRENT-OFDS
collect (LIST (fetch (FW-OFD FULLNAME) of OFD)
(KWOTE OFD)
(if (NULL FORGET-OFD)
then (RETURN))
(CLOSEW (fetch (FW-OFD OFDWINDOW) of FORGET-OFD))
(if (AND MANY? (SETQ CURRENT-OFDS (REMOVE FORGET-OFD CURRENT-OFDS)))
then (GO FORGET-ANOTHER])

```

(FW-INIT

[LAMBDA NIL

; Edited 30-Sep-87 11:53 by Koomen

```

(DECLARE (GLOBALVARS FW-Dormant? FW-Running?))
(** Clean up possible left-overs from a previously killed FileWatch process, then initialize the world)
(FW-WIPE)
(FW-RE-INIT)
(FW-RESET)
(SETQ FW-Dormant? NIL)
(SETQ FW-Running? T])

```

(FW-INIT-MENUS

[LAMBDA NIL

(* Koomen "15-May-87 01:50")

```

(DECLARE (GLOBALVARS BackgroundMenu BackgroundMenuCommands FW-Commands FW-InteractMenu))
(** When changing the list of control menu items, do (SETQ FW-InteractMenu))
(PROG [(ITEMS ' ("Forget File" 'FORGET "Stop watching this file" (SUBITEMS ("Forget Many Files"
'FORGET-MANY "Stop
watching several files")))
("Recall File" 'RECALL "Start watching a forgotten file again" (SUBITEMS ("Recall Many
Files"

```

```

' RECALL-MANY
"Start watching
several forgotten
files again")))

("" NIL "No-op")
("Close File" 'CLOSE "Close this file (user beware!)" (SUBITEMS ("Close Many Files"
'CLOSE-MANY "Close several
files"))))

("" NIL "No-op")
("Move Display" 'MOVE "Change the display orientation specs" (SUBITEMS ("Set Anchor"
' SET-ANCHOR
"Corner of the
display to be
anchored")
("Set Position"
' SET-POSITION
"Position of display
(relative to anchor)")
("Set Justification"
' SET-JUSTIFICATION
"Windows to be shrunk
or grown depending on
maximum filename
width"))))

("Quit File Watcher" 'QUIT "")
(if (NOT (type? MENU FW-InteractMenu))
then (SETQ FW-InteractMenu (create MENU
TITLE _ "FileWatch:"
CENTERFLG _ T
MENUOFFSET _ ' (-1 . 58)
CHANGEOFFSETFLG _ 'Y
ITEMS _ ITEMS)))
(if (NULL (CDDDR (FASSOC 'FileWatch BackgroundMenuCommands)))
then ;; Not there, or no subitems (older version)
(for C in FW-Commands do (SETQ ITEMS (SUBST ` (FILEWATCH ' ,C)
` ,C ITEMS)))
[push BackgroundMenuCommands ` (FileWatch ' (FILEWATCH 'ON)
"Display and continuously update list of open files and
and the location of their file pointers"
(SUBITEMS ,ITEMS)
(SETQ BackgroundMenu])

```

(FW-INIT-PROPS

; Edited 22-Sep-87 14:30 by Koomen

```

[LAMBDA NIL
(DECLARE (GLOBALVARS FW-AllFiles? FW-Anchor FW-Filters FW-Font FW-Interval FW-Justified? FW-Position
FW-Properties FW-Shade FW-SortFn)
[SETQ FW-AllFiles? (NOT (NULL (LISTGET FW-Properties 'ALL-FILES?))
[SETQ FW-Anchor (OR [CAR (MEMB (LISTGET FW-Properties 'ANCHOR)
'(TOP-LEFT TOP-RIGHT BOTTOM-LEFT BOTTOM-RIGHT)
' BOTTOM-LEFT))
;; precompile filters for matching. Note that the system function DIRECTORY.MATCH.SETUP strips off the host, so we have to match it
;; seperately.
(SETQ FW-Filters (for FILTER inside (LISTGET FW-Properties 'FILTERS)
join (if (OR (STRINGP FILTER)
(LITATOM FILTER))
then (SETQ FILTER (DIRECTORY.FILL.PATTERN FILTER))
(LIST (CONS (DIRECTORY.MATCH.SETUP (OR (FILENAMEFIELD FILTER 'HOST)
"*))
(DIRECTORY.MATCH.SETUP FILTER))))
else (printout PROMPTWINDOW 0 "Filewatch: filter not a string or symbol: " T
FILTER " ignored." T)
NIL)))
[SETQ FW-Font (FONTCREATE (LISTGET FW-Properties 'FONT)
[SETQ FW-Interval (FIXP (LISTGET FW-Properties 'INTERVAL)
[SETQ FW-Justified? (NOT (NULL (LISTGET FW-Properties 'JUSTIFIED?))
[SETQ FW-Position (OR (POSITIONP (LISTGET FW-Properties 'POSITION))
(create POSITION
XCOORD _ 0
YCOORD _ 0)))
(LET ((X (fetch (POSITION XCOORD) of FW-Position))
(Y (fetch (POSITION YCOORD) of FW-Position))
(W SCREENWIDTH)
(H SCREENHEIGHT)
(XMIN 100)
(XMAX (IDIFFERENCE SCREENWIDTH 100))
(YMIN 100)
(YMAX (IDIFFERENCE SCREENHEIGHT 100)))
(SELECTQ FW-Anchor
(TOP-LEFT (if (IGEQ X XMAX)
then (SETQ X XMAX))
(if (ILEQ Y YMIN)
then (SETQ Y YMIN)))
(TOP-RIGHT (if (ILEQ X XMIN)
then (SETQ X XMIN))

```

```

      (if (ILEQ Y YMIN)
          then (SETQ Y YMIN)))
(BOTTOM-LEFT (if (IGEQ X XMAX)
                 then (SETQ X XMAX))
              (if (IGEQ Y YMAX)
                  then (SETQ Y YMAX)))
(BOTTOM-RIGHT (if (ILEQ X XMIN)
                  then (SETQ X XMIN))
               (if (IGEQ Y YMAX)
                   then (SETQ Y YMAX)))

(SHOULDNT)
(SETQ FW-Position (create POSITION
                          XCOORD _ X
                          YCOORD _ Y))
[SETQ FW-Shade (SMALLP (LISTGET FW-Properties 'SHADE)
                     (SETQ FW-SortFn (LET [(FN (LISTGET FW-Properties 'SORTFN)
                                         (if (AND (LITATOM FN)
                                                  (GETD FN))
                                             then FN]))

```

(FW-INTERACT

[LAMBDA (W MENUCMD)

; Edited 14-Jun-2024 12:39 by rmk
; Edited 18-Jul-2023 18:54 by rmk
(* Koomen "15-May-87 01:03")

```

(DECLARE (GLOBALVARS FW-InteractMenu FW-Running?))
(SELECTQ (OR MENUCMD (SETQ MENUCMD (MENU FW-InteractMenu)))
(NIL NIL)
(FORGET (FW-FORGET-CMD W))
(FORGET-MANY (FW-FORGET-CMD W T))
(RECALL (FW-RECALL-CMD))
(RECALL-MANY (FW-RECALL-CMD T))
(CLOSE (FW-CLOSE-CMD W))
(CLOSE-MANY (FW-CLOSE-CMD W T))
(MOVE (FW-MOVE-OFD-WINDOWS))
(SET-ANCHOR (FW-MOVE-OFD-WINDOWS 'ANCHOR))
(SET-POSITION (FW-MOVE-OFD-WINDOWS 'POSITION))
(SET-JUSTIFICATION
 (FW-MOVE-OFD-WINDOWS 'JUSTIFIED?))
(QUIT (SETQ FW-Running? NIL))
(PROMPTPRINT "Unrecognized FileWatch Control Menu command: " MENUCMD])

```

(FW-LOOP

[LAMBDA NIL

; Edited 30-Sep-87 11:53 by Koomen

```

(DECLARE (GLOBALVARS FW-Dormant? FW-Interval FW-OpenFiles FW-ReInit? FW-Reset? FW-Running?))
(bind OPENFILES first (FW-INIT) while FW-Running?
 do (if (NOT FW-Dormant?)
        then (SETQ OPENFILES (FW-OPENP))
             (if (OR FW-Reset? FW-ReInit? (NOT (EQUAL OPENFILES FW-OpenFiles)))
                 then (if FW-ReInit?
                        then (FW-RE-INIT))
                        (FW-RESET))
                 (if (SETQ FW-OpenFiles (APPEND OPENFILES))
                     then (FW-CREATE-OFD-LIST)
                        (FW-CREATE-OFD-WINDOWS)
                     else (FW-CLOSE-OLD-OFD-WINDOWS))
                 (SETQ FW-ReInit?))
        (FW-UPDATE-OFD-WINDOWS))
      (BLOCK FW-Interval)
      finally (FW-WIPE])

```

(FW-MOVE-OFD-WINDOWS

[LAMBDA (WHAT)

(* Koomen "16-Apr-87 15:55")

```

(if (OR (NULL WHAT)
        (EQ WHAT 'ANCHOR))
    then (FW-CHANGE-ANCHOR))
(if (OR (NULL WHAT)
        (EQ WHAT 'POSITION))
    then (FW-CHANGE-POSITION))
(if (OR (NULL WHAT)
        (EQ WHAT 'JUSTIFIED?))
    then (FW-CHANGE-JUSTIFICATION])

```

(FW-MOVEW

[LAMBDA (OFD)

; Edited 14-Jun-2024 12:24 by rmk
(* Koomen "29-Sep-86 23:10")

```

(MOVEW (fetch (FW-OFD OFDWINDOW) of OFD)
       (replace (FW-OFD OFDLEFT) of OFD with (fetch (FW-OFD FWLEFT) of OFD))
       (replace (FW-OFD OFDBOTTOM) of OFD with (fetch (FW-OFD FWBOTTOM) of OFD]))

```

(FW-OFD-EXISTS?

[LAMBDA (FULLNAME FILESTREAM)

; Edited 22-Sep-87 13:27 by Koomen

(DECLARE (GLOBALVARS FW-OFDList FW-ReInit?))


```

collect OFD))
(if (NULL FORGOTTEN-OFDS)
  then (PROMPTPRINT "FileWatch: no forgotten files.")
      (RETURN))
RECALL-ANOTHER
[SETQ RECALL-OFD (MENU (create MENU
  TITLE _ "Select file to recall: "
  CENTERFLG _ T
  ITEMS _ (for OFD in FORGOTTEN-OFDS
    collect (LIST (fetch (FW-OFD FULLNAME) of OFD)
                  (KWOTE OFD))
  (if (NULL RECALL-OFD)
    then (RETURN))
  (replace (FW-OFD OFDSTATUS) of RECALL-OFD with (if (OPENP (fetch (FW-OFD FULLNAME) of RECALL-OFD))
    then (FW-UPDATE-OFD-WINDOW RECALL-OFD T)
    'CURRENT
    else (PROMPTPRINT "FileWatch: file has been closed.")
    'OLD))
  (SETQ FW-Reset? T)
  (if (AND MANY? (SETQ FORGOTTEN-OFDS (REMOVE RECALL-OFD FORGOTTEN-OFDS)))
    then (GO RECALL-ANOTHER])

```

(FW-REPAINTFN

```

[LAMBDA (W) ; (* Koomen "25-Sep-86 00:44")
(DECLARE (GLOBALVARS FW-OFDList))
(for OFD in FW-OFDList when (EQ W (fetch (FW-OFD OFDWINDOW) of OFD))
  do (if (OPENP (fetch (FW-OFD OFDSTREAM) of OFD))
    then (FW-UPDATE-OFD-WINDOW OFD T))
    (RETURN))

```

(FW-RESET

```

[LAMBDA NIL ; (* Koomen "29-Sep-86 23:20")
(DECLARE (GLOBALVARS FW-OFDList))
(for OFD in FW-OFDList do (SELECTQ (fetch (FW-OFD OFDSTATUS) of OFD)
  (CURRENT (replace (FW-OFD OFDSTATUS) of OFD with 'OLD))
  ((OLD FORGOTTEN))
  (SHOULDNT (CONS "Unexpected OFDSTATUS : " (fetch (FW-OFD OFDSTATUS) of OFD))

```

(FW-RESIZE-OFD

```

[LAMBDA (OFD MAXNAMEWIDTH) ; Edited 14-Jun-2024 12:25 by rmk
; Edited 22-Sep-87 12:56 by Koomen

(* * If MAXNAMEWIDTH=NIL, uses OFD's own NAMEWIDTH)

(DECLARE (GLOBALVARS FW-AccessTab FW-Anchor FW-CurPosTab FW-EofPosTab FW-PercentHeight FW-PercentTab
  FW-PercentWidth FW-Position FW-WindowBottom FW-WindowHeight FW-WindowNoNameWidth))
(PROG [(NAMEWIDTH (OR MAXNAMEWIDTH (fetch (FW-OFD NAMEWIDTH) of OFD)
  (replace (FW-OFD FWWIDTH) of OFD with (IPLUS FW-WindowNoNameWidth NAMEWIDTH))
  (replace (FW-OFD FWHEIGHT) of OFD with FW-WindowHeight)
  (replace (FW-OFD FWLEFT) of OFD with (SELECTQ FW-Anchor
    ((TOP-LEFT BOTTOM-LEFT)
    (fetch (POSITION XCOORD) of FW-Position))
    ((TOP-RIGHT BOTTOM-RIGHT)
    (IDIFFERENCE (fetch (POSITION XCOORD) of FW-Position)
    (fetch (FW-OFD FWWIDTH) of OFD)))
    (ERROR "Unsupported anchor spec: " FW-Anchor)))
  (replace (FW-OFD FWBOTTOM) of OFD with FW-WindowBottom)
  (replace (FW-OFD CURPOSXOFFSET) of OFD with (IPLUS FW-CurPosTab NAMEWIDTH))
  (replace (FW-OFD EOFPOSXOFFSET) of OFD with (IPLUS FW-EofPosTab NAMEWIDTH))
  (replace (FW-OFD PCTPOSXOFFSET) of OFD with (IPLUS FW-PercentTab NAMEWIDTH))
  (replace (FW-OFD ACCESSXOFFSET) of OFD with (IPLUS FW-AccessTab NAMEWIDTH))
  (replace (FW-OFD PCTREGION) of OFD
    with (create REGION
      LEFT _ NIL
      BOTTOM _ NIL
      WIDTH _ FW-PercentWidth
      HEIGHT _ FW-PercentHeight))
  (RETURN OFD)]

```

(FW-SHAPEW

```

[LAMBDA (OFD) ; Edited 14-Jun-2024 12:19 by rmk
; (* Koomen "29-Sep-86 23:09")

(SHAPEW (fetch (FW-OFD OFDWINDOW) of OFD)
  (create REGION
    LEFT _ (replace (FW-OFD OFDLEFT) of OFD with (fetch (FW-OFD FWLEFT) of OFD))
    BOTTOM _ (replace (FW-OFD OFDBOTTOM) of OFD with (fetch (FW-OFD FWBOTTOM) of OFD))
    WIDTH _ (replace (FW-OFD OFDWIDTH) of OFD with (fetch (FW-OFD FWWIDTH) of OFD))
    HEIGHT _ (replace (FW-OFD OFDHEIGHT) of OFD with (fetch (FW-OFD FWHEIGHT) of OFD)]

```

(FW-SORT-FN

```

[LAMBDA (OFD1 OFD2) ; (* Koomen "24-Sep-86 23:24")
(DECLARE (GLOBALVARS FW-Anchor FW-SortFn))

```

```
(SELECTQ FW-Anchor
  ((TOP-LEFT TOP-RIGHT)
   (APPLY* FW-SortFn (fetch (FW-OFD FULLNAME) of OFD2)
                    (fetch (FW-OFD FULLNAME) of OFD1)))
  ((BOTTOM-LEFT BOTTOM-RIGHT)
   (APPLY* FW-SortFn (fetch (FW-OFD FULLNAME) of OFD1)
                    (fetch (FW-OFD FULLNAME) of OFD2)))
  (ERROR "Unsupported anchor spec: " FW-Anchor])
(* growing downwards *)
(* growing upwards *)
```

(FW-UPDATE-OFD-WINDOW

; Edited 22-Sep-87 12:43 by Koomen

```
[LAMBDA (OFD NEW?)
  (DECLARE (GLOBALVARS FW-PercentHeight FW-PercentWidth FW-Shade))
  (PROG ((OFDSTREAM (fetch (FW-OFD OFDSTREAM) of OFD))
        (FILESTREAM (fetch (FW-OFD FILESTREAM) of OFD))
        (OLDCURPOS (fetch (FW-OFD CURPOS) of OFD))
        (OLDEOFPOS (fetch (FW-OFD EOFPOS) of OFD))
        (OLDPCTPOS (fetch (FW-OFD PCTPOS) of OFD))
        (PCTREGION (fetch (FW-OFD PCTREGION) of OFD))
        (BOXBORDER 1)
        NEWCURPOS NEWEOFPOS NEWPCTPOS X Y)
    (if (NOT (OPENP FILESTREAM))
        then
          (* * May just have created some windows, in which case there may have been a BLOCK underneath during which this file
            was closed, so make sure file is still open)

          (RETURN))
      (SETQ NEWCURPOS (GETFILEPTR FILESTREAM))
      (SETQ NEWEOFPOS (if (NOT (fetch (FW-OFD WRITING?) of OFD))
                          then OLDEOFPOS
                          elseif (NOT (fetch (FW-OFD RANDOM?) of OFD))
                          then NEWCURPOS
                          else (GETEOFPTR FILESTREAM)))
      (if (AND (FIXP NEWCURPOS)
              (FIXP NEWEOFPOS))
          then (if (ILESSP NEWEOFPOS NEWCURPOS)
                  then (SETQ NEWEOFPOS NEWCURPOS))
          elseif (FIXP NEWCURPOS)
          then (SETQ NEWEOFPOS NEWCURPOS)
          elseif (FIXP NEWEOFPOS)
          then (SETQ NEWCURPOS NEWEOFPOS)
          else (SETQ NEWCURPOS (SETQ NEWEOFPOS 0)))
      (SETQ NEWPCTPOS (FW-PERCENTAGE NEWCURPOS NEWEOFPOS))
      (if NEW?
          then (DSPRESET OFDSTREAM)
              (printout OFDSTREAM (fetch (FW-OFD FULLNAME) of OFD))
              (DSPXPOSITION (fetch (FW-OFD ACCESSXOFFSET) of OFD)
                           OFDSTREAM)
              (printout OFDSTREAM (LET ((R (fetch (FW-OFD READING?) of OFD))
                                         (W (fetch (FW-OFD WRITING?) of OFD)))
                                      (if (AND R W)
                                          then "b"
                                          elseif R
                                          then "r"
                                          elseif W
                                          then "w"
                                          else "*")))
              (replace (FW-OFD OFDSTATUS) of OFD with 'CURRENT))
          (if (OR NEW? (NOT (EQUAL NEWCURPOS OLDCURPOS)))
              then (DSPXPOSITION (fetch (FW-OFD CURPOSXOFFSET) of OFD)
                                 OFDSTREAM)
                  (printout OFDSTREAM .I8 NEWCURPOS)
                  (replace (FW-OFD CURPOS) of OFD with NEWCURPOS))
              (if (OR NEW? (NOT (EQUAL NEWEOFPOS OLDEOFPOS)))
                  then (DSPXPOSITION (fetch (FW-OFD EOFPOSXOFFSET) of OFD)
                                     OFDSTREAM)
                      (printout OFDSTREAM .I8 NEWEOFPOS)
                      (replace (FW-OFD EOFPOS) of OFD with NEWEOFPOS))
                  (if (OR NEW? (NOT (EQUAL NEWPCTPOS OLDPCTPOS)))
                      then (DSPXPOSITION (fetch (FW-OFD PCTPOSXOFFSET) of OFD)
                                         OFDSTREAM)
                          (printout OFDSTREAM .I5 NEWPCTPOS)
                          (printout OFDSTREAM " %% ")
                          [SETQ X (OR (fetch (REGION LEFT) of PCTREGION)
                                       (replace (REGION LEFT) of PCTREGION with (IPLUS BOXBORDER (DSPXPOSITION NIL
                                                                                               OFDSTREAM)
                                                                                               OFDSTREAM))]
                          [SETQ Y (OR (fetch (REGION BOTTOM) of PCTREGION)
                                       (replace (REGION BOTTOM) of PCTREGION with (ADD1 (DSPYPOSITION NIL OFDSTREAM)
                                                                                               OFDSTREAM))]
                          (if (OR NEW? (ILESSP NEWPCTPOS (OR OLDPCTPOS 100)))
                              then (GRAYBOXAREA X Y FW-PercentWidth FW-PercentHeight BOXBORDER BLACKSHADE OFDSTREAM))
                          (replace (REGION WIDTH) of PCTREGION with (IQUOTIENT (ITIMES NEWPCTPOS FW-PercentWidth)
                                                                              100))
                          (DSPFILL PCTREGION FW-Shade NIL OFDSTREAM)
                          (replace (FW-OFD PCTPOS) of OFD with NEWPCTPOS])
```

(FW-UPDATE-OFD-WINDOWS

```
[LAMBDA NIL (* Koomen "9-Oct-86 17:18")
(DECLARE (GLOBALVARS FW-OFDList)
(for OFD in FW-OFDList do (SELECTQ (fetch (FW-OFD OFDSTATUS) of OFD)
(New (FW-UPDATE-OFD-WINDOW OFD T))
(CURRENT (FW-UPDATE-OFD-WINDOW OFD))
(OLD FORGOTTEN))
(SHOULDNT (CONS "Unexpected OFDSTATUS : " (fetch (FW-OFD OFDSTATUS) of OFD]))
```

(FW-WIPE

```
[LAMBDA NIL (* Koomen "15-May-87 01:49")
(DECLARE (GLOBALVARS FW-AllFiles? FW-Anchor FW-CurPosTab FW-EofPosTab FW-FieldWidth FW-Filters FW-Font
FW-FullNameWidth FW-Interval FW-Justified? FW-OFDList FW-OpenFiles FW-PercentHeight
FW-PercentTab FW-PercentWidth FW-Position FW-ReInit? FW-Reset? FW-Running? FW-SeprWidth
FW-Shade FW-SortFn FW-WindowBottom FW-WindowBottomDelta FW-WindowHeight
FW-WindowNoNameWidth))
```

(* * Clean up possible left-overs, then set all private vars to NIL)

```
(for OFD in FW-OFDList do (CLOSEW (fetch (FW-OFD OFDWINDOW) of OFD)))
(SETQ FW-AllFiles?)
(SETQ FW-Anchor)
(SETQ FW-CurPosTab)
(SETQ FW-EofPosTab)
(SETQ FW-FieldWidth)
(SETQ FW-Filters)
(SETQ FW-Font)
(SETQ FW-FullNameWidth)
(SETQ FW-Interval)
(SETQ FW-Justified?)
(SETQ FW-OFDList)
(SETQ FW-OpenFiles)
(SETQ FW-PercentHeight)
(SETQ FW-PercentWidth)
(SETQ FW-PercentTab)
(SETQ FW-Position)
(SETQ FW-ReInit?)
(SETQ FW-Reset?)
(SETQ FW-Running?)
(SETQ FW-SeprWidth)
(SETQ FW-Shade)
(SETQ FW-SortFn)
(SETQ FW-WindowBottom)
(SETQ FW-WindowBottomDelta)
(SETQ FW-WindowHeight)
(SETQ FW-WindowNoNameWidth])
```

)

```
(DECLARE%: DONTCOPY DONTEVAL@LOAD EVAL@COMPILE
```

```
(FILESLOAD (SOURCE FROM LISPUSERS)
SYSEdit)
)
```

```
(RPAQ? FW-OFDList NIL)
```

```
(RPAQ? FW-OpenP-ScratchList (CONS))
```

```
(RPAQ? FW-Commands '(FORGET FORGET-MANY RECALL RECALL-MANY CLOSE CLOSE-MANY MOVE SET-ANCHOR SET-POSITION
SET-JUSTIFICATION QUIT))
```

```
(RPAQ? FW-Properties `(FONT (GACHA 8)
ALL-FILES? NIL POSITION ,(CREATEPOSITION SCREENWIDTH 0)
ANCHOR BOTTOM-RIGHT SHADE ,GRAYSHADE INTERVAL 1000))
```

(FW-INIT-MENUS)

```
(MOVD? 'CL:IDENTITY 'PSEUDOFILNAME)
```

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

```
(ADDTOVAR NLAMA )
```

```
(ADDTOVAR NLAML )
```

```
(ADDTOVAR LAMA FILEWATCHPROP)
```

)

FUNCTION INDEX

FILEWATCH	1	FW-CREATE-OFD-LIST	5	FW-OPENP	9
FILEWATCHPROP	2	FW-CREATE-OFD-WINDOWS	5	FW-PERCENTAGE	9
FW-ADJUST-PLACEMENT	2	FW-CREATEW	6	FW-RE-INIT	9
FW-ADJUST-REGION	3	FW-FILTERED-FILE?	6	FW-RECALL-CMD	9
FW-AFTERMOVEFN	3	FW-FORGET-CMD	6	FW-REPAINTFN	10
FW-BUTTONEVENTFN	3	FW-FORGET-STREAM	2	FW-RESET	10
FW-CHANGE-ANCHOR	4	FW-INIT	6	FW-RESIZE-OFD	10
FW-CHANGE-JUSTIFICATION	4	FW-INIT-MENUS	6	FW-SHAPEW	10
FW-CHANGE-POSITION	4	FW-INIT-PROPS	7	FW-SORT-FN	10
FW-CLOSE-CMD	4	FW-INTERACT	8	FW-UPDATE-OFD-WINDOW	11
FW-CLOSE-OLD-OFD-WINDOWS	5	FW-LOOP	8	FW-UPDATE-OFD-WINDOWS	12
FW-CLOSEFN	5	FW-MOVE-OFD-WINDOWS	8	FW-WIPE	12
FW-COPY-FILENAME	4	FW-MOVEW	8		
FW-CREATE-OFD	5	FW-OFD-EXISTS?	8		

VARIABLE INDEX

FW-Commands	12	FW-OFDList	12	FW-OpenP-ScratchList	12	FW-Properties	12
-------------------	----	------------------	----	----------------------------	----	---------------------	----

RECORD INDEX

FW-OFD	2
--------------	---

PROPERTY INDEX

FILEWATCH	1
-----------------	---
