

File created: 13-Nov-2023 12:57:10 {DSK}<home>frank<il>medley>gmedley>library>UNIXUTILS.;26

changes to: (FNS ShellBrowser)

previous date: 11-Nov-2023 09:06:39 {DSK}<home>frank<il>medley>gmedley>library>UNIXUTILS.;25

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

```
(RPAQQ UNIXUTILSCOMS
  ((DECLARE%: EVAL@COMPILE DONTCOPY ; For PROCESS-COMMAND
    (FILES (FROM LOADUPS)
      EXPORTS.ALL)
    (GLOBALVARS ShellBrowser ShellOpener)
    (INITVARS (ShellBrowser)
      (ShellOpener))
    (FUNCTIONS ShellCommand ShellWhich)
    (ADDVARS (MEDLEY-INIT-VARS (ShellBrowser)
      (ShellOpener)))
    (FNS ShellBrowser ShellBrowse ShellOpener ShellOpen PROCESS-COMMAND SLASHIT UNIX-FILE-NAME)
    (PROPS (UNIXUTILS FILETYPE))))

(DECLARE%: EVAL@COMPILE DONTCOPY

(FILESLoad (FROM LOADUPS)
  EXPORTS.ALL)
)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS ShellBrowser ShellOpener)
)

(RPAQ? ShellBrowser )

(RPAQ? ShellOpener )

(CL:DEFUN ShellCommand (Cmd &OPTIONAL (Output T))
  (CL:WITH-OPEN-STREAM (S (CREATE-PROCESS-STREAM Cmd))
    (CL:TAGBODY [SETFILEINFO S 'ENDOFSTREAMOP #' (CL:LAMBDA (S)
      (GO OUT]
      (CL:LOOP (PRINTCCODE (READCCODE S)
        Output))
      OUT))
    NIL)

(CL:DEFUN ShellWhich (Cmd) ; Edited 18-Jan-2023 13:19 by FGH
  [CL:WITH-OPEN-STREAM (S (OPENSTREAM '{NODIRCORE}' 'BOTH))
    (ShellCommand (CONCAT "command -v " Cmd)
      S)
  (COND
    ((EQ (GETEOFPTR S)
      0)
      NIL)
    (T (SETFILEPTR S 0)
      (RSTRING S]))

(ADDTOVAR MEDLEY-INIT-VARS (ShellBrowser)
  (ShellOpener))

(DEFINEQ

(ShellBrowser
  [LAMBDA NIL ; Edited 18-Jan-2023 20:30 by FGH
    ;; Figure out the browser to use for the ShellOpen/ShellBrowse functions.
    ;; Ordinarily, this would be the same as the generic ShellOpener.
    ;; But if a generic ShellOpener is not found, then there are some additional
    ;; possibilities that will work for http/https URLs. If one of these exists return it.
    (OR ShellBrowser (SETQ ShellBrowser
      (if (NOT (STREQUAL (ShellOpener
        "true")))
        then ShellOpener
        else (LET (CMDPATH)
          (if (SETQ CMDPATH (ShellWhich "git"))
            then ;; Systems with git installed
              (CONCAT CMDPATH " web--browse")
            elseif (SETQ CMDPATH (ShellWhich "lynx"))
            then ;; Systems with lynx installed
```

```

      (LET (CMDPATH2)
        (if (SETQ CMDPATH2 (ShellWhich "xterm"))
            then (CONCAT CMDPATH2 " -e " CMDPATH)
            else (LIST CMDPATH)))
    else ;; Out of ideas - just return a dummy function
      "true"))

```

(ShellBrowse

[LAMBDA (URL) ; Edited 18-Jan-2023 20:32 by FGH

;; Open the web page specified by URL using an external browser via shell call
;; URL must start with http:// or https:// or file:/// (case irrelevant) or this function will just return NIL.
;; Returns T otherwise.

```

(SETQ URL (MKSTRING URL))
(if (OR (EQ (STRPOS "http://" (L-CASE URL))
            1)
        (EQ (STRPOS "https://" (L-CASE URL))
            1)
        (EQ (STRPOS "file://" (L-CASE URL))
            1))
    then (ShellOpen URL)
    else NIL))

```

(ShellOpener

[LAMBDA NIL

;; Find an "opener" that will open files (and URLs) using the appropriate/default app on this machine

```

(OR ShellOpener (SETQ ShellOpener (LET (CMDPATH)
  (if (SETQ CMDPATH (ShellWhich "wslview"))
      then ;; windows with WSL
        CMDPATH
      elseif (SETQ CMDPATH (ShellWhich "cygstart"))
      then ;; windows with cygwin
        CMDPATH
      elseif (SETQ CMDPATH (ShellWhich "xdg-open"))
      then ;; Linux systems with xdg-utils installed
        CMDPATH
      elseif (SETQ CMDPATH (ShellWhich "open"))
      then ;; MacOS open
        CMDPATH
      else ;; Out of ideas - just return a dummy function
        "true")))

```

(ShellOpen

[LAMBDA (FilenameOrURL)

;; Open the file or URL using the generic "opener" for this machine via a shell call.
;; If FilenameOrURL starts with "http://" or "https://" or "file://", then we use (ShellBrowser) as
;; the "opener" (which includes some browsers on a machine without a generic opener).
;; Otherwise FilenameOrURL is assumed to be a filename and will be opened using (ShellOpener).
;; Returns T is all goes well; returns an error string if all does not go well

```

(RANDSET T)
(SETQ FilenameOrURL (MKSTRING FilenameOrURL))
(if (OR (EQ (STRPOS "http://" (L-CASE FilenameOrURL))
            1)
        (EQ (STRPOS "https://" (L-CASE FilenameOrURL))
            1)
        (EQ (STRPOS "file://" (L-CASE FilenameOrURL))
            1))
    then (LET ((BROWSER (ShellBrowser))
              (if (NOT (STREQUAL BROWSER "true"))
                  then (if (LISTP BROWSER)
                          then (CHAT 'SHELL NIL (CONCAT (CAR BROWSER)
                                                           " " FilenameOrURL "' '))
                          else (ShellCommand (CONCAT BROWSER " ' " FilenameOrURL "' "
                                                       ">>/tmp/ShellBrowser-warnings-$$ .txt")))
                  T)
        (CONCAT "Unable to find a browser to open: " FilenameOrURL))
    else (LET* ((OPENER (ShellOpener))
              (FULLNAME (FULLNAME FilenameOrURL))
              (if (NOT FULLNAME)
                  then (CONCAT "File not found: " FilenameOrURL)
                  elseif (STREQUAL OPENER "true")
                  then (CONCAT "Unable to find a file opener to open: " FilenameOrURL)
                  else (LET* ((VERSION.SPECIFIED (FILENAMEFIELD FilenameOrURL 'VERSION))

```


(CONCAT (SUBSTRING X 1 (SUB1 DIRPOS))
SLASHED))])

(UNIX-FILE-NAME

[LAMBDA (FILE ACCESS COPY)

; Edited 1-Oct-2023 20:52 by rmk

;; Tries to return the string that would reference FILE in a Unix shell, for the use of PROCESS-COMMAND and ShellCommand. If VERSION is 1, it
;; assumes that the Unix file is doesn't have the Medley version convention. If FILE does not have a corresponding Unix name, COPY is non-NIL,
;; and ACCESS is INPUT, FILE will be copied to a unix tmp file (with COPY in its name) and that name will be returned.

(CL:WHEN (\GETSTREAM FILE ACCESS T)
(SETQ FILE (OR (FULLNAME FILE)
FILE)))

; Might catch NODIRCORE

(CL:WHEN FILE
(SETQ FILE (TRUEFILENAME FILE))
(CL:UNLESS (STREAMP FILE)

[SETQ FILE (\GETFILENAME FILE (SELECTQ ACCESS
(OUTPUT 'NEW)
(INPUT 'OLD)
(NIL (SETQ ACCESS 'INPUT)
'OLD)
(\ILLEGAL.ARG ACCESS])

[SELECTQ (FILENAMEFIELD FILE 'HOST)
(UNIX [SUBSTRING FILE (ADD1 (CONSTANT (NCHARS "{UNIX}"))]
(DSK (LET [(VERSION (FILENAMEFIELD FILE 'VERSION)
(SETQ FILE (SLASHIT (PACKFILENAME 'HOST NIL 'VERSION NIL 'BODY FILE)))
(CL:IF (AND VERSION (IGREATERP VERSION 1))
(CONCAT FILE (CL:IF (FILENAMEFIELD FILE 'EXTENSION)
"."
"")
"~" VERSION "~")
FILE))])

(CL:WHEN (AND COPY (EQ ACCESS 'INPUT)
FILE)

(RESETLST

(CL:WHEN (\GETSTREAM FILE 'INPUT T) ; Hope is randaccess

[RESETSAVE (GETFILEPTR FILE)
(PROGN (SETFILEPTR ,FILE OLDVALUE])

(COPYFILE FILE (CONCAT "{UNIX}/tmp/medley-" (L-CASE COPY)

"_"

(IDATE)

"_"

(RAND)

(CL:IF (FILENAMEFIELD FILE 'EXTENSION)

(CONCAT "." (FILENAMEFIELD FILE 'EXTENSION))

"")))))]])

)

(PUTPROPS UNIXUTILS FILETYPE CL:COMPILE-FILE)

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