

File created: 22-Mar-91 18:37:25 {DSK}<home>crea>mitani>medley>ar>fuji>AR-11348-PATCH.;3

changes to: (FNS \UFSDirectoryNameP \UFSGetPrintFileType \UFS.NEXTFILEFN \UFS.FULLNAME \UFSParseNameString)
(VARS AR-11348-PATCHCOMS)

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

;;
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(RPAQQ AR-11348-PATCHCOMS ((FNS \UFS.REMOVE.HOST.FIELD \UFSDirectoryNameP \UFSGenerateFiles \UFSGetFileInfo
\UFSSetFileInfo \UFSGetPrintFileType \UFS.NEXTFILEFN \UFS.FULLNAME
\UFSParseNameString)))

(DEFINEQ

(\UFS.REMOVE.HOST.FIELD

[LAMBDA (FILE DEV)

; Edited 20-Mar-91 16:52 by nm

;; Accepts a full file representation, and returns the file representaion as a string in which HOST field is removed.

(LET* ((PARSE-LIST (\UFSParseNameString FILE))
(RELATIVEDIRECTORY (MEMB 'RELATIVEDIRECTORY PARSE-LIST))
(DIRECTORY (LISTGET PARSE-LIST 'DIRECTORY))
PACKED-NAME VERSION)
[if (DSKP DEV)
then
;; Check if FILE contains the valid version field or not so that C code can assume that all file names are valid.
(AND (SETQ VERSION (LISTGET PARSE-LIST 'VERSION))
(if (STREQUAL VERSION "")
then
;; Newest version is specified. Just removes it.
(LISTPUT PARSE-LIST 'VERSION NIL)
else (OR (FIXP (MKATOM VERSION))
(CL:ERROR 'XCL:INVALID-PATHNAME :PATHNAME FILE])
(if RELATIVEDIRECTORY
then (RPLACA (CDR RELATIVEDIRECTORY)
(\UFS.HANDLE.RELATIVEDIRECTORY (CADR RELATIVEDIRECTORY)
DEV))
elseif (NOT DIRECTORY)
then (LISTPUT PARSE-LIST 'DIRECTORY (\UFS.DEFAULT.DIR DEV))]
(LISTPUT PARSE-LIST 'HOST NIL)
(SETQ PACKED-NAME (PACKFILENAME.STRING PARSE-LIST))
(if (STREQUAL (LISTGET PARSE-LIST 'DIRECTORY)
"<")
then (if (LISTGET PARSE-LIST 'NAME)
then (SUBSTRING PACKED-NAME 2)
else "<")
else (if (EQ (NTHCHARCODE PACKED-NAME 1)
(CHARCODE <))
then (SUBSTRING PACKED-NAME 2)
else PACKED-NAME])

(\UFSDirectoryNameP

[LAMBDA (DIRSPEC DEV)

; Edited 22-Mar-91 18:22 by nm

;;; DIRECTORYNAMEP FDEV method. Performs a recognition as well and returns the "true" name if it exists.

(LET* ((PARSED-LIST (\UFSParseNameString DIRSPEC 'RETURN))
(DIRECTORY (OR (LISTGET PARSED-LIST 'DIRECTORY)
(\UFS.HANDLE.RELATIVEDIRECTORY (LISTGET PARSED-LIST 'RELATIVEDIRECTORY)
DEV)
(\UFS.DEFAULT.DIR DEV)))
NAMEAREA LEN)
;; HOST field of DIRSPEC has been defaulted by the generic file system code. Thus we don't have to worry about the subdirectory case.
(SETQ NAMEAREA (ALLOCSTRING MAX-PATHNAME-LEN)) ; NAMEAREA will be modified by C code and hold the "true"
; name of DIRECTORY if DIRECTORY is recognized as a valid
; directory name.
(SETQ LEN (\UFS.DIRECTORY.NAME DIRECTORY NAMEAREA DEV))
(COND
((FIXP LEN) ; LEN holds the length of the "true" name of DIRECTORY.
(\UFS.FULLNAME (SUBSTRING NAMEAREA 1 LEN)
DEV NIL))
(T NIL])

(\UFSGenerateFiles

[LAMBDA (FDEV PATTERN DESIREDPROPS OPTIONS)

; Edited 20-Mar-91 17:08 by nm

;;; Returns a file-generator object that will generate exactly those files in the sys-dir of FDEV whose names match PATTERN.

```

(WITH.MONITOR (\UFSGetMonitor FDEV)
  [PROG* ((PARSED (\UFSParseNameString PATTERN))
    (DIRECTORY (OR (LISTGET PARSED 'DIRECTORY)
      (\UFS.HANDLE.RELATIVE DIRECTORY (LISTGET PARSED 'RELATIVE DIRECTORY)
        FDEV)
      (\UFS.DEFAULT.DIR FDEV)))
    (NAMEAREA (ALLOCSTRING MAX-PATHNAME-LEN))
    FILTER LEN)
    (if (STREQUAL DIRECTORY "/" )
      then (SETQ DIRECTORY "<")
    [SETQ FILTER (if (STREQUAL DIRECTORY "<")
      then (CONCAT "{" (LISTGET PARSED 'HOST)
        "}" "<" (PACKFILENAME.STRING 'NAME (OR (LISTGET PARSED 'NAME)
          " "))
          'EXTENSION
          (OR (LISTGET PARSED 'EXTENSION)
            " "))
          'VERSION
          (OR (LISTGET PARSED 'VERSION)
            " "))
        else (PACKFILENAME.STRING 'DIRECTORY DIRECTORY 'HOST (LISTGET PARSED 'HOST)
          'NAME
          (OR (LISTGET PARSED 'NAME)
            " "))
          'EXTENSION
          (OR (LISTGET PARSED 'EXTENSION)
            " "))
          'VERSION
          (OR (LISTGET PARSED 'VERSION)
            " "))
    (SETQ LEN (\UFS.DIRECTORY.NAME DIRECTORY NAMEAREA FDEV))
    (if (NOT (FIXP LEN))
      then
        ; No such directory. We go thru this recognition step so that
        ; \UFSFindFile gives us name in the correct case
        (PRINTOUT PROMPTWINDOW T "Can't enumerate " PATTERN " because no such directory")
        (RETURN (\NULLFILEGENERATOR)))
    (SETQ DIRECTORY (SUBSTRING NAMEAREA 1 LEN))
    ;; The information about enumerated files are cached in the emulator. We receive the ID and the total number of enumerated files. The ID
    ;; is used to identify the object corresponding to the enumerated file.
    (LET ((ID (CREATECELL \FIXP))
      (ERRNO (CREATECELL \FIXP))
      (PROPP (\UFS.VALID.PROPP DESIREDPROPS))
      TOTALNUM)
      (SETQ TOTALNUM (\UFSReadDir-C FILTER PROPP ID ERRNO))
      (if (< TOTALNUM 0)
        then (OR (\UFSerror DIRECTORY ERRNO FDEV)
          (RETURN (\NULLFILEGENERATOR)))
        else (if (ZEROP TOTALNUM)
          then (RETURN (\NULLFILEGENERATOR))
          else [AND (OR (AND (NOT (LISTP OPTIONS))
            (EQ OPTIONS 'RESETLST))
            (FMEMB 'RESETLST OPTIONS))
            (RESETSAVE NIL ' (AND RESETSTATE (\UFSfinishFileInfo-C ID]
            (RETURN (create FILEGENOBJ
              NEXTFILEFN _ (FUNCTION \UFS.NEXTFILEFN)
              FILEINFOFN _ (FUNCTION \UFS.FILEINFOFN)
              GENFILESTATE _
                (\UFS.REGISTER.GFS (create UFSGENFILESTATE
                  FINFOID _ ID
                  FILEID _ 0
                  TOTALNUM _ TOTALNUM
                  DIRECTORY _ DIRECTORY
                  DEV _ FDEV
                  PROPP _ PROPP
                  NAME _ (ALLOCSTRING MAX-PATHNAME-LEN)
                  AUTHOR _ (AND PROPP (ALLOCSTRING
                    MAX-UNAME-LEN
                    ))))

```

(\UFSGetFileInfo

[LAMBDA (STREAM ATTRIBUTE DEVICE)

; Edited 20-Mar-91 20:17 by nm

;;; Get the value of the attribute for a file.

;;; Allocate buffer to store the value.

;;; If attribute is AUTHOR, the type of the buffer is STRING.

;;; Otherwise the type of the buffer is FIXP.

```

(WITH.MONITOR (\UFSGetMonitor DEVICE)
  (LET ((FILENAME (if (type? STREAM STREAM)
    then (fetch (UFSSTREAM UNIXNAME) of STREAM)
    else (\UFS.ADD.HOST.FIELD (\UFS.RECOGNIZE.FILE STREAM 'OLD DEVICE)
      DEVICE)))

```

```

(ERRNO (CREATECELL \FIXP))
BUFFER NAMESIZE)
(if FILENAME
  then (SELECTQ ATTRIBUTE
    (LENGTH (SETQ BUFFER (CREATECELL \FIXP))
      (if (\UFSGetFileInfo-C FILENAME ATTR-LENGTH BUFFER ERRNO)
        then BUFFER
        else (\UFSError FILENAME ERRNO DEVICE)))
    (SIZE (SETQ BUFFER (CREATECELL \FIXP))
      (if (\UFSGetFileInfo-C FILENAME ATTR-LENGTH BUFFER ERRNO)
        then (FOLDHI BUFFER BYTESPERPAGE)
        else (\UFSError FILENAME ERRNO DEVICE)))
    (TYPE (\UFSGetFileType FILENAME))
    ((CREATIONDATE WRITEDATE)
      (SETQ BUFFER (CREATECELL \FIXP))
      (if (\UFSGetFileInfo-C FILENAME ATTR-WDATE BUFFER ERRNO)
        then (GDATE BUFFER)
        else (\UFSError FILENAME ERRNO DEVICE)))
    (READDATE (SETQ BUFFER (CREATECELL \FIXP))
      (if (\UFSGetFileInfo-C FILENAME ATTR-RDATE BUFFER ERRNO)
        then (GDATE BUFFER)
        else (\UFSError FILENAME ERRNO DEVICE)))
    ((ICREATIONDATE IWRTEDATE)
      (SETQ BUFFER (CREATECELL \FIXP))
      (if (\UFSGetFileInfo-C FILENAME ATTR-WDATE BUFFER ERRNO)
        then BUFFER
        else (\UFSError FILENAME ERRNO DEVICE)))
    (IREADDATE (SETQ BUFFER (CREATECELL \FIXP))
      (if (\UFSGetFileInfo-C FILENAME ATTR-RDATE BUFFER ERRNO)
        then BUFFER
        else (\UFSError FILENAME ERRNO DEVICE)))
    (AUTHOR (SETQ BUFFER (ALLOCSTRING MAX-UNAME-LEN))
      (if (SETQ NAMESIZE (\UFSGetFileInfo-C FILENAME ATTR-AUTHOR BUFFER ERRNO))
        then (CL:SUBSEQ BUFFER 0 NAMESIZE)
        else (\UFSError FILENAME ERRNO DEVICE)))
    (PROTECTION (SETQ BUFFER (CREATECELL \FIXP))
      (if (\UFSGetFileInfo-C FILENAME ATTR-PROTECTION BUFFER ERRNO)
        then BUFFER
        else (\UFSError FILENAME ERRNO DEVICE)))
    (ALL (SETQ BUFFER (\UFS.CREATE.PROPS))
      (if (SETQ NAMESIZE (\UFSGetFileInfo-C FILENAME ATTR-ALL BUFFER ERRNO))
        then (LET ((ALIST (ASSOC 'AUTHOR BUFFER))
          ; Copy string out of buffer
          (RPLACD ALIST (CL:SUBSEQ (CDR ALIST)
            0 NAMESIZE))
          BUFFER)
        else (\UFSError FILENAME ERRNO DEVICE)))
      NIL))))))

```

(\UFSSetFileInfo

[LAMBDA (STREAM ATTRIBUTE VALUE DEVICE)

; Edited 20-Mar-91 20:17 by nm

;;; Get the VALUE of the ATTRIBUTE for a file.

;;; Allocate buffer to store the value.

;;; If attribute is AUTOR, the type of the buffer is STRING.

;;; Otherwise the type of the buffer is FIXP.

```

(WITH.MONITOR (\UFSGetMonitor DEVICE)
  (LET ((FILENAME (if (type? STREAM STREAM)
    then (fetch (UFSSTREAM UNIXNAME) of STREAM)
    else (\UFS.ADD.HOST.FIELD (\UFS.RECOGNIZE.FILE STREAM 'OLD DEVICE)
      DEVICE)))
    (ERRNO (CREATECELL \FIXP))
    BUFFER NAMESIZE PATHNAME)
    (if FILENAME
      then (SELECTQ ATTRIBUTE
        (TYPE (\UFSSetFileType FILENAME VALUE))
        ((CREATIONDATE WRITEDATE)
          (if (AND (STRINGP VALUE)
            (SETQ VALUE (IDATE VALUE)))
            then (OR (\UFSSetFileInfo-C FILENAME ATTR-WDATE VALUE ERRNO)
              (\UFSError FILENAME ERRNO DEVICE))
            else (ERROR "Invalid argument" VALUE)))
        ((ICREATIONDATE IWRTEDATE)
          (if (FIXP VALUE)
            then (OR (\UFSSetFileInfo-C FILENAME ATTR-WDATE VALUE ERRNO)
              (\UFSError FILENAME ERRNO DEVICE))
            else (ERROR "Invalid argument" VALUE)))
        (PROTECTION (if (FIXP VALUE)
          then (OR (\UFSSetFileInfo-C FILENAME ATTR-PROTECTION VALUE ERRNO)
            (\UFSError FILENAME ERRNO DEVICE))
          else (ERROR "Invalid argument" VALUE)))
        NIL))))))

```

(\UFSGetPrintFileType

```

[LAMBDA (FILENAME) ; Edited 22-Mar-91 18:30 by nm
  (COND
    ((OR (NOT (STREAMP FILENAME))
      (SETQ FILENAME (fetch (STREAM FULLFILENAME) of FILENAME)))
    (LET [(TYPE (UNPACKFILENAME.STRING FILENAME 'EXTENSION)]
      [SETQ TYPE (COND
        [(AND (EQ (NCHARS TYPE)
          0)
          (CDR (CL:ASSOC NIL DEFAULTFILETYPEELIST)]
        [(CDR (CL:ASSOC TYPE DEFAULTFILETYPEELIST :TEST 'STRING-EQUAL]
        (T (\UFSGetFileTypeConfirm FILENAME)]
      (SELECTQ TYPE
        ((TEXT BINARY)
          TYPE)
        (CL:ERROR "Invalid File Type ~A for ~A" TYPE FILENAME]))

```

(\UFS.NEXTFILEFN

```

[LAMBDA (GENFILESTATE NAMEONLY) ; Edited 22-Mar-91 18:29 by nm
  (LET* ((FINFOID (fetch (UFSGENFILESTATE FINFOID) of GENFILESTATE))
    (FILEID (fetch (UFSGENFILESTATE FILEID) of GENFILESTATE))
    (ERRNO (LOC (fetch (UFSGENFILESTATE ERRNO) of GENFILESTATE)))
    FILENAME NAMELEN NEWNAME)
    (AND (> FINFOID -1)
      (< FILEID (fetch (UFSGENFILESTATE TOTALNUM) of GENFILESTATE))
      (CL:UNWIND-PROTECT
        (if (> (SETQ NAMELEN (\UFSNextFile-C GENFILESTATE))
          0)
          then [replace (UFSGENFILESTATE THISFILE) of GENFILESTATE
            with (SETQ FILENAME (\UFS.FULLNAME (SETQ NEWNAME (CL:SUBSEQ (fetch (UFSGENFILESTATE
              NAME)
              of GENFILESTATE)
              0 NAMELEN))
              (fetch (UFSGENFILESTATE DEV) of GENFILESTATE)
              NIL
              (fetch (UFSGENFILESTATE DIRECTORY) of GENFILESTATE)]
            (if (= (add FILEID 1)
              (fetch (UFSGENFILESTATE TOTALNUM) of GENFILESTATE))
              then ; Generator exhausted.
              (\UFS.UNREGISTER.GFS GENFILESTATE T)
            else (replace (UFSGENFILESTATE FILEID) of GENFILESTATE with FILEID))
            (if NAMEONLY
              then NEWNAME
              else FILENAME))
      (AND RESETSTATE (\UFS.UNREGISTER.GFS GENFILESTATE T))))])

```

(\UFS.FULLNAME

```

[LAMBDA (NAME DEV ATOMP DIRECTORY)
  (DECLARE (GLOBALVARS *DSK-HOST-NAME* *UFS-HOST-NAME*)) ; Edited 22-Mar-91 18:35 by nm
  ;; NAME is a name string returned from UNIX. We turn it into a Lisp "full file name". This function is redefinable by code that hacks ufs names.
  (if NAME
    then ; Pass NIL thru transparently
      (if (DSKP DEV)
        then (SETQ NAME (CL:CONCATENATE 'STRING *DSK-HOST-NAME* DIRECTORY NAME))
        (if *DSK-UPPER-CASE-FILE-NAMES*
          then ;; DSK code uses *DSK-UPPER-CASE-FILE-NAMES* instead of *UPPER-CASE-FILE-NAMES*. I think the
            ;; capability of case insensitive file recognition in Medley-S {DSK} device is essentially optional and implemented
            ;; only to keep the compatibility with D-Machines. Actually the case insensitive file recognition is significantly
            ;; slower than on the correct case (AR 11074). There is no reasonable way to solve this problem because the
            ;; underlying UNIX file ysystem is case sensitive. Thus, I introduced the new parameter
            ;; *DSK-UPPER-CASE-FILE-NAMES* with its default value NIL.
            (if ATOMP
              then (MKATOM (U-CASE NAME))
              else (U-CASE NAME))
            else (if ATOMP
              then (MKATOM NAME)
              else NAME))
        else (SETQ NAME (CL:CONCATENATE 'STRING *UFS-HOST-NAME* DIRECTORY NAME))
        (if ATOMP
          then (MKATOM NAME)
          else NAME]))

```

(\UFS.ParseNameString

```

[LAMBDA (FILE DIRFLG) ; Edited 22-Mar-91 18:19 by nm
  ;; \UFS.ADJUST.HOST is a hook for NFS module
  (\UFS.ADJUST.HOST (UNPACKFILENAME.STRING FILE NIL DIRFLG))
)

```

{MEDLEY}<internal>envos>AR-11348-PATCH.;1

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(PUTPROPS **AR-11348-PATCH COPYRIGHT** ("Fuji Xerox Co., Ltd" 1991))

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