

File created: 26-Mar-2022 11:43:49 {DSK}<Users>kaplan>Local>medley3.5>my-medley>library>COPYFILES.;3

changes to: (FNS MAPFILES)

previous date: 6-Apr-2018 21:14:29 {DSK}<Users>kaplan>Local>medley3.5>my-medley>library>COPYFILES.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

::
:: Copyright (c) 1989-1991, 1993, 2018 by Venue & Xerox Corporation.

(RPAQQ COPYFILESCOMS

```
((FNS COPYFILES MAPFILES MAPFILES1 COPIEDFILENAME COPIEDFILEPATTERN COPIEDFILEMATCH COPIEDFROMSPEC  
COPIEDTOSPEC ESPATTERN NOHOST COMPAREFILES)
```

```
(COMS ;; For concatenating a list of files into one file.
```

```
(FNS CONCATFILES))
```

```
(COMS ;; For splitting a big file into several files.
```

```
(FNS SPLITFILE))
```

```
(COMS ;; For making DOS file systems
```

```
(FNS DOSLINKER SHORTEN))
```

```
(I.S.OPRS INFILES)))
```

(DEFINEQ

(COPYFILES

```
[LAMBDA (FROMSPEC TOSPEC OPTIONS)
```

```
(DECLARE (SPECVARS FROMSPEC TOSPEC))
```

; Edited 27-Sep-89 15:07 by bvm

```
;; Copies the files specified in FROMSPEC to the destination in TOSPEC. Which versions get copied, whether to copy old files, etc. is controlled  
;; by OPTIONS.
```

```
(SETQ TOSPEC (\ADD.CONNECTED.DIR TOSPEC))
```

```
(SETQ FROMSPEC (\ADD.CONNECTED.DIR FROMSPEC))
```

```
(LET
```

```
(((*UPPER-CASE-FILE-NAMES* NIL)
```

```
(COPYFILESOUTPUT T)
```

```
(COPYFILES.WHENTOSKIP (FUNCTION ILEQ))
```

```
(COPYFILESALWAYS T)
```

```
(COPYFILESVERSIONS NIL)
```

```
(COPYFILESASK NIL)
```

```
(COPYFILESASKDEFAULT)
```

```
(COPYFILESREPLACE NIL)
```

```
(COPYFILESPURGESOURCE NIL)
```

```
(COPYFILESPURGE NIL)
```

```
(COPYFILESTERSE)
```

```
(COPYFILESTOSPEC (COPIEDTOSPEC TOSPEC))
```

```
(SECONDARYSPEC)
```

```
(COPYFILESFN 'COPYFILE)
```

```
(COPYFILESSKIPFN 'NIL)
```

```
(DONTCOPY)
```

```
COPYFILESFROMSPEC)
```

```
(DECLARE (SPECVARS . T))
```

```
[for X inside OPTIONS
```

```
do ;; Run thru the options, turning them into internal flag settings and functional specifications.
```

```
(SELECTQ X
```

```
((QUIET :QUIET)
```

; Don't want to hear about files as they're copied. Set the output
; file to NIL to suppress printing.

```
(SETQ COPYFILESOUTPUT NIL))
```

```
((TERSE :TERSE)
```

; Only print a . per file copied. Set the TERSE flag.

```
(SETQ COPYFILESOUTPUT NIL)
```

```
(SETQ COPYFILESTERSE T))
```

```
((RENAME MOVE :RENAME :MOVE)
```

; He wants the files moved, not copied.

```
(SETQ COPYFILESFN 'RENAMEFILE))
```

```
((ALWAYS :ALWAYS)
```

; ALWAYS copy the files specified.

```
(SETQ COPYFILESALWAYS T)
```

; Tell it so

```
(SETQ COPYFILES.WHENTOSKIP (FUNCTION NIL)) ; And say never to skip a potential file
```

```
)
```

; Only copy if the source has a newer version than the
; destination.

```
(SETQ COPYFILES.WHENTOSKIP (FUNCTION ILEQ))
```

```
(SETQ COPYFILESALWAYS NIL))
```

```
((= =A)
```

; = without ALWAYS doesn't make a lot of sense

```
(SETQ COPYFILES.WHENTOSKIP (FUNCTION TRUE))
```

```
(SETQ COPYFILESALWAYS T))
```

```
((%# /=)
```

; Skip files that are the same on the destination

```
(SETQ COPYFILES.WHENTOSKIP (FUNCTION EQUAL))
```

```
(SETQ COPYFILESALWAYS NIL))
```

```
(ALLVERSIONS (SETQ COPYFILESVERSIONS T))
```



```

(NEQ COPYFILES.WHENTOSKIP 'NIL))
then ; We aren't ALWAYS copying. So have to check this file to see if
; it meets the copy criteria.
(COND
  [(SETQ NF (INFILEP NEWFILENAME))
   ; There is a file of the same name at the destination. CHeck it
   ; out.
   (SETQ DT2 (GETFILEINFO NF 'ICREATIONDATE))
   ; The destination file's create date
   (AND COPYFILESOUTPUT (printout COPYFILESOUTPUT " ["
                                (GDATE DT1)
                                "]" " vs. " NF "["
                                (if DT2
                                  then (GDATE DT2)
                                  else "no date?")
                                "]""))
   ; Tell the user we're comparing dates
  (COND
    ((AND DT2 (CL:FUNCALL COPYFILES.WHENTOSKIP DT1 DT2))
     ; If the file has a create date, and it meets the SKIP criteria, then
     ; skip over this file
     (CL:FUNCALL COPYFILESSKIPFN FILENAME)
     (AND COPYFILESOUTPUT (printout COPYFILESOUTPUT "
                                skipped."))
     (RETURN))
    (COPYFILESPURGESOURCE
     ; We're to purge the source directory of non-corresponding files
     (AND COPYFILESOUTPUT (printout COPYFILESOUTPUT "
                                (no corresponding "
                                NEWFILENAME "), ")))
    [COND
      ((OR (NOT COPYFILESASK)
           (EQ 'Y (ASKUSER DWIMWAIT
                        COPYFILESASKDEFAULT
                        "delete? " NIL T)))
       ([LAMBDA (STR)
        (AND COPYFILESOUTPUT (printout
                              COPYFILESOUTPUT
                              STR)
         (if (DELFILE FILENAME)
             then " deleted."
             else " couldn't delete."])
        (RETURN))
       ((NOT COPYFILESALWAYS)
        ; file doesn't exist on destination
        (CL:FUNCALL COPYFILESSKIPFN FILENAME)
        (AND COPYFILESOUTPUT (printout COPYFILESOUTPUT " does not
                                exist on destination --
                                skipped")))
       (RETURN))
      (if (AND COPYFILESREPLACE NF)
          then (SETQ NEWFILENAME NF))
      (if COPYFILESOUTPUT
          then ; Write out the file's new name, and tell him we're copying or
                ; moving it.
                (printout COPYFILESOUTPUT (SELECTQ COPYFILESFN
                                                  (COPYFILE " copy")
                                                  (RENAMEFILE " rename")
                                                  " process"))
          (if (NOT NF)
              then (printout COPYFILESOUTPUT " to (new file) "
                                             NEWFILENAME)))
      (COND
        ((AND COPYFILESASK (NEQ (ASKUSER DWIMWAIT COPYFILESASKDEFAULT "? "
                                             NIL T)
                                'Y))
         (RETURN)))
      [OR (ERSETQ (SETQ CF (CL:FUNCALL COPYFILESFN FILENAME NEWFILENAME)))
          (RETURN (AND COPYFILESOUTPUT (printout COPYFILESOUTPUT " failed."))
          (if COPYFILESOUTPUT
              then (if (AND (NOT COPYFILESASK)
                            (NOT NF)
                            (STRPOS NEWFILENAME CF 1 NIL 1 NIL (UPPERCASEARRAY)))
                     then (printout COPYFILESOUTPUT
                                (OR (SUBSTRING CF (ADD1 (NCHARS NEWFILENAME)))
                                    "."))
                     else (printout COPYFILESOUTPUT " => " CF)
                            (AND COPYFILESTERSE (PRIN1 "." COPYFILESTERSE)
          ' (ICREATIONDATE)
          "*"
          (if COPYFILESVERSIONS
              then "*"
              else "")
          NIL
          (SELECTQ (fetch (FDEV GENERATEFILES) of (\GETDEVICEFROMNAME FROMSPEC))
                  ((\FTP.GENERATEFILES \LEAF.GENERATEFILES \NSFILING.GENERATEFILES \TCPFTP.GENERATEFILES)
                   ; If source is PupFtp, TCP, or NS, enumerate the whole directory
                   ; first, lest some awkward copy cause the source enumeration

```

```

; stream to die.
T)
NIL))
[if COPYFILESPURGE
  then
    ; delete from source if doesn't exist on destination
    (AND COPYFILESOUTPUT (printout COPYFILESOUTPUT T "Deleting files on destination but not on
      source" T))
    (COPYFILES TOSPEC FROMSPEC (APPEND (if COPYFILESOUTPUT
      then (LIST (LIST 'OUTPUT COPYFILESOUTPUT)))
      (if COPYFILESASK
        then (LIST (LIST 'ASK COPYFILESASKDEFAULT)))
      ' (= PURGESOURCE]
    (COND
      (COPYFILESOUTPUT (TAB 0 0 COPYFILESOUTPUT)
        (NEQ COPYFILESOUTPUT T)
        (CLOSEF COPYFILESOUTPUT])

```

(MAPFILES

```

[LAMBDA (FILESPEC FN ATTRIBUTES DEFAULTTEXT DEFAULTVERS INCLUDE-DIRECTORIES ENUMERATE-FIRST)
  ;; Edited 26-Mar-2022 11:43 by rmk: Respect DEFAULTTEXT/VERS in singleton no-stars case
  ;; Edited 6-Apr-2018 21:14 by rmk:
  ;; Run thru all the files that match FILESPEC, calling FN on each such file name, with remaining args being the value of each of the ATTRIBUTES
  ;; of the file
  (if (LISTP FILESPEC)
    then (for X in FILESPEC do (MAPFILES X FN DEFAULTTEXT DEFAULTVERS ATTRIBUTES INCLUDE-DIRECTORIES
      ENUMERATE-FIRST))
    elseif [OR (STRPOS "*" FILESPEC)
      (FMEMB (NTHCHARCODE FILESPEC -1)
        (CHARCODE (/ > %) %]) } %:]
      then
        ; Pattern or directory spec
        (SETQ FILESPEC (DIRECTORY.FILL.PATTERN FILESPEC DEFAULTTEXT DEFAULTVERS))
        (if ENUMERATE-FIRST
          then
            ; Generate all the files first, then apply fn
            (for PAIR in [XCL:WITH-COLLECTION (MAPFILES1 FILESPEC ATTRIBUTES INCLUDE-DIRECTORIES
              (FUNCTION (CL:LAMBDA (NAME &REST ATTRS)
                (XCL:COLLECT (CONS NAME ATTRS))
              )
            )
          do (CL:APPLY FN (CAR PAIR)
            (CDR PAIR)))
          else
            ; Call on each one as we go
            (MAPFILES1 FILESPEC ATTRIBUTES INCLUDE-DIRECTORIES FN))
        elseif (SETQ FILESPEC (INFILEP (PACKFILENAME.STRING 'BODY FILESPEC 'EXTENSION DEFAULTTEXT 'VERSION
          DEFAULTVERS)))
          then
            ;; rmk: Singleton, no stars. We don't want to coerce NIL DEFAULTVERS/EXT to *, but still we want to pay attention to them. Hence,
            ;; do the packfilename
            (CL:APPLY FN FILESPEC (for ATTR inside ATTRIBUTES collect (GETFILEINFO FILESPEC ATTR]))

```

(MAPFILES1

```

[LAMBDA (FILESPEC ATTRIBUTES INCLUDE-DIRECTORIES FN)
  ; Edited 27-Sep-89 14:49 by bvm
  ;; Enumerate FILESPEC (pattern must already be filled) and apply FN to each file and its ATTRIBUTES
  (RESETLST
    [LET ((FILEGROUP (\GENERATEFILES FILESPEC (SETQ ATTRIBUTES (MKLIST ATTRIBUTES))
      ' (SORT RESETLST)
      NAME LEN)
      (while (SETQ NAME (\GENERATENEXTFILE FILEGROUP))
        unless [PROGN
          ; Skip IFS's <dir>;1 file. Also other dir files unless
          ; INCLUDE-DIRECTORIES is true.
          (OR (AND (>= (SETQ LEN (NCHARS NAME))
            4)
            (STRING-EQUAL NAME ".;1" :START1 (- LEN 4)))
            (AND (NOT INCLUDE-DIRECTORIES)
              (FMEMB (NTHCHARCODE NAME LEN)
                (CHARCODE (/ >])
            )
          do (if (NULL (CDR ATTRIBUTES))
            then
              ; Optimize slightly for the case of one attribute
              (CL:FUNCALL FN NAME (\GENERATEFILEINFO FILEGROUP (CAR ATTRIBUTES)))
            else (CL:APPLY FN NAME (for ATTR in ATTRIBUTES collect (\GENERATEFILEINFO FILEGROUP ATTR]))])

```

(COPIEDFILENAME

```

[LAMBDA (FILENAME COPIEDFROMSPEC COPIEDTOSPEC PRESERVEVERSION) ; Edited 27-Sep-89 15:03 by bvm
  ;; FILENAME is the file produced by the directory enumeration. COPIEDFROMSPEC is the parsed 'FROM' specification, and COPIEDTOSPEC is
  ;; either a directory specification (string) or else a list, CDR of which is a list of character atoms.
  [SETQ FILENAME (COND
    [(LISTP COPIEDTOSPEC)
      ; destination is a pattern, so have to be fancy. NOHOST strips
      ; off the HOST field
      (CONCATLIST (LET [(FROMCHARS (NOHOST (UNPACK FILENAME)
        [if (NOT PRESERVEVERSION)
          then
            ; Discard the version
            (RPLACD (NLEFT FROMCHARS 1 (FMEMB ' ; FROMCHARS]
          (COPIEDFILEPATTERN COPIEDFROMSPEC (CDR COPIEDTOSPEC)

```

```

FROMCHARS]
(T (CL:APPLY (FUNCTION PACKFILENAME.STRING)
'DIRECTORY COPIEDTOSPEC 'HOST NIL 'DEVICE NIL 'DIRECTORY NIL
',,@(AND (NOT PRESERVEVERSION)
' (VERSION NIL))
BODY
,FILENAME]
(COND
((EQ (NTHCHARCODE FILENAME -1)
(CHARCODE %.)
;; this is a terrible kludge, to get around the problem that for some devices, (INFILEP 'FOO.) fails while (INFILEP 'FOO) doesn't. This
;; stripping off of a terminal '.' doesn't hurt, but doesn't belong here. Necessary for getting a working version for the harmony release.
(SUBSTRING FILENAME 1 -2 FILENAME))
(T FILENAME]))

```

(COPIEDFILEPATTERN

```

[LAMBDA (FRPAT TOPAT CHARS) ; Edited 27-Sep-89 15:58 by bvm
(while [AND FRPAT CHARS (EQ (U-CASE (CAR FRPAT))
(U-CASE (CAR CHARS))
do ; Skip to the first place where pattern and actual name differ
(pop FRPAT)
(pop CHARS))
(NCONC (on old TOPAT while (NEQ (CAR TOPAT)
'*)
collect (CAR TOPAT))
(COND
((AND FRPAT (NEQ (CAR FRPAT)
'*)
; Ran out of pattern before getting to a *
(if [AND (NULL CHARS)
[OR [if (AND (EQ (CAR FRPAT)
'%. )
(EQ (CADR FRPAT)
'*) )
then (NULL (SETQ FRPAT (CDDR FRPAT))
(EQUAL FRPAT ' (; *)
(OR (NULL TOPAT)
(EQUAL TOPAT '
(*])
then NIL
else (ERROR "--From Spec doesn't match generated file"))
(TOPAT ; both TOPAT and FRPAT start with *
(NCONC [LDIFF CHARS (SETQ CHARS (for x on CHARS when (COPIEDFILEMATCH X (CDDR FRPAT))
do ; Find the last tail of CHARS that matches the pattern
(SETQ $$VAL X)
(COPIEDFILEPATTERN (CDDR FRPAT)
(CDDR TOPAT)
CHARS)))
(T (OR (COPIEDFILEMATCH CHARS FRPAT)
(ERROR "file pattern doesn't match"))
NIL]))

```

(COPIEDFILEMATCH

```

[LAMBDA (CHARS FRPAT) ; Edited 27-Sep-89 15:44 by bvm
(PROG [(SEMI* ' (; *)
LP (if (NULL FRPAT)
then (RETURN (NULL CHARS))
elseif (EQ (CAR FRPAT)
'*)
then ; Match arbitrarily many CHARS
[RETURN (OR (NULL (SETQ FRPAT (CDDR FRPAT)))
(EQUAL FRPAT SEMI*)
(find X on CHARS suchthat (COPIEDFILEMATCH X FRPAT))
elseif (NULL CHARS)
then (RETURN (EQUAL FRPAT SEMI*))
elseif (EQ (U-CASE (pop FRPAT))
(U-CASE (pop CHARS)))
then (GO LP)
else (RETURN)])

```

(COPIEDFROMSPEC

```

[LAMBDA (FROMSPEC) ; Edited 27-Sep-89 15:52 by bvm
;; Return something for copiedfilepattern to work on
(SETQ FROMSPEC (MKSTRING FROMSPEC))
[SETQ FROMSPEC (NOHOST (ESPATTERN (LET ([DIREND (for I from (SUB1 (OR (CL:POSITION #\* FROMSPEC)
(NCHARS FROMSPEC)))
to 0 by -1 do (CASE (CL:CHAR FROMSPEC I)
((#\ / #\ > #\}) (RETURN I))))]
CAN)
(if [AND DIREND (SETQ CAN (DIRECTORYNAME (CL:SUBSEQ FROMSPEC 0
(ADD1 DIREND))
then ; Canonicalize the directory before we proceed, so that files
; coming back have a hope of matching
(CONCAT CAN (CL:SUBSEQ FROMSPEC (ADD1 DIREND)))

```

```

else FROMSPEC]
(if (NOT (FMEMB ' ; FROMSPEC))
  then
    (NCONC FROMSPEC (LIST ' ; '*))
  else FROMSPEC])
; Add ;* to match gracefully against real file names like foo.baz;3

```

(COPIEDTOSPEC

```

[LAMBDA (SPEC)
  ;; Create the spec for what file(s) are to be copied TO: If there's a * in the spec or there's more than just directory specified, then return the pattern
  ;; for filename matching; if a directory got specified, return that.
(COND
  ((STRPOS "*" SPEC)
   (CONS 'PATTERN (ESPATTERN SPEC)))
  ((UNPACKFILENAME.STRING SPEC 'NAME)
   (CONS 'PATTERN (ESPATTERN SPEC)))
  (T
   (OR (DIRECTORYNAME SPEC NIL T)
        (ERROR SPEC "not a valid directory"))))
; Edited 29-Oct-87 16:23 by jds
; There are wildcards in the name.
; There's more than just a directory spec.
; It's a directory (or had better be!)

```

(ESPATTERN

```

[LAMBDA (X)
  (SETQ X (UNPACK X))
  (for Y on X do (SELECTQ (CAR Y)
    ((*
      (if [AND (EQ (CADR Y)
                  '%.)
              (EQ (CADDR Y)
                  '*)
          (FMEMB (CADDR Y)
                  '(NIL ;]
              then (RPLACD Y (CADDR Y))))
      NIL))
    X))
; Edited 27-Sep-89 15:50 by bvm
; Turn *.*; into *;

```

(NOHOST

```

[LAMBDA (UP)
  (SELECTQ (CAR UP)
    (({ % ( %[]
      (do (pop UP)
        (SELECTQ (CAR UP)
          (NIL (RETURN))
          ({} % %])
          (RETURN (pop UP)))
        (%' (pop UP))
        NIL)))
    NIL)
  UP])

```

(COMPAREFILES

```

[LAMBDA (OLDFILE NEWFILE OSTART OEND)
  ;; If OSTART & OEND are specified, they are as for COPYBYTES--I.E., fileptrs into the OLD file to compare the new file to.
[CL:WITH-OPEN-STREAM [OSTREAM (OPENSTREAM OLDFILE 'INPUT 'OLD '(SEQUENTIAL T)
  (CL:WITH-OPEN-STREAM [NSTREAM (OPENSTREAM NEWFILE 'INPUT 'OLD '(SEQUENTIAL T)
    (LET (OLEN NLEN NBYTES OBYTE NBYTE)
      (SETQ OLEN (GETFILEINFO OSTREAM 'LENGTH))
      (SETQ NLEN (GETFILEINFO NSTREAM 'LENGTH))
      [COND
        [OSTART
          (COND
            ((NOT OEND)
             (SETQ NBYTES OSTART)
             (SETQ OSTART 0))
            (T
             (SETFILEPTR OSTREAM OSTART)
             (SETQ NBYTES (IDIFFERENCE OEND OSTART))
             (SETQ OSTART 0))
          ]
          (T
           (SETQ OSTART 0)
           (SETQ NBYTES OLEN)
           [COND
             ((NOT (EQ OLEN NLEN))
              (ERROR "File lengths differ: " (CONCAT OLEN " vs " NLEN))
             ]
           ]
          [COND
            (OLEN
             (for BYTEPOS from OSTART to (SUB1 NBYTES)
              do (COND
                ((NEQ (SETQ OBYTE (BIN OSTREAM))
                     (SETQ NBYTE (BIN NSTREAM)))
                 (PRINTOUT T "Files differ at byte " BYTEPOS ", old-file has " OBYTE
                             " but new file has " NBYTE "." T)
                ]
              ]
            ]
          ]
        ]
      ]
    ]
  ]
; Edited 9-Apr-91 16:42 by jds
; Compare two files to see if their contents are the same.
; He specified a starting fileptr or a char count.
; It was a char count (no ending point specified)
; He specified an ending point.
; Nothing specified; run thru the whole file.
; If they files are of different lengths, they aren't the same.
; FTP returns NIL for the length of an empty file!

```

(OR (ASKUSER NIL NIL "Continue comparing?")
(RETURN])

(CLOSEF? OSTREAM)
(CLOSEF? NSTREAM]

T])

)

:: For concatenating a list of files into one file.

(DEFINEQ

(CONCATFILES

[LAMBDA (INPUT-FILES OUTPUT-FILE)
(CL:WITH-OPEN-STREAM [OUT (OPENSTREAM OUTPUT-FILE 'OUTPUT 'NEW ' (SEQUENTIAL T]
(for FILE in INPUT-FILES do (CL:WITH-OPEN-STREAM [IN (OPENSTREAM FILE 'INPUT 'OLD ' (SEQUENTIAL T]
(COPYBYTES IN OUT])

)

:: For splitting a big file into several files.

(DEFINEQ

(SPLITFILE

[LAMBDA (FILE SPLIT-SIZE) ; Edited 26-Jan-93 20:46 by jds
(CL:WITH-OPEN-STREAM (INSTR (OPENSTREAM FILE 'INPUT 'OLD))
(for I from 1 as START from 0 by SPLIT-SIZE while (ILESSP START (GETEOFPTR INSTR))
do (CL:WITH-OPEN-STREAM (OUTSTR (OPENSTREAM (PACKFILENAME 'VERSION NIL 'NAME
(CONCAT (UNPACKFILENAME.STRING FILE
'NAME)
I)
'BODY FILE)
'OUTPUT
'NEW))
(COPYBYTES INSTR OUTSTR START (IMIN (GETEOFPTR INSTR)
(+ START SPLIT-SIZE])

)

:: For making DOS file systems

(DEFINEQ

(DOSLINKER

[LAMBDA (FILES OLDDIR STREAM) ; Edited 23-Mar-93 02:38 by jds
(for FILE in FILES do (PRINTOUT STREAM "ln -s " OLDDIR FILE " " (L-CASE (SHORTEN (UNPACKFILENAME.STRING
FILE
'NAME)
8))
". "
(L-CASE (SHORTEN (UNPACKFILENAME.STRING FILE 'EXTENSION)
3))
T])

(SHORTEN

[LAMBDA (STRING LEN)
(SUBSTRING STRING 1 (IMIN LEN (NCHARS STRING))

)

(DECLARE%: EVAL@COMPILE

(I.S.OPR 'INFILES NIL '[SUBST (GENSYM)
'GENVAR
'(BIND GENVAR _ (\GENERATEFILES BODY NIL '(SORT))
EACHTIME (PROGN (OR (SETQ I.V. (\GENERATENEXTFILE GENVAR))
(GO \$\$OUT))
(IF (LISTP I.V.)
THEN (SETQ I.V. (CONCATCODES I.V.]

T)

)

(PUTPROPS COPYFILES COPYRIGHT ("Venue & Xerox Corporation" 1989 1990 1991 1993 2018))

FUNCTION INDEX

COMPAREFILES6	COPIEDFILENAME4	COPIEDTOSPEC6	ESPATTERN6	NOHOST6
CONCATFILES7	COPIEDFILEPATTERN .5	COPYFILES1	MAPFILES4	SHORTEN7
COPIEDFILEMATCH ...5	COPIEDFROMSPEC5	DOSLINKER7	MAPFILES14	SPLITFILE7

I.S.OPR INDEX

INFILES7
