

File created: 8-Aug-2021 13:22:31 {DSK}<Users>kaplan>Local>medley3.5>git-medley>lispusers>ISO8859IO.;18

changes to: (FNS \8859OUTCHARFN \IBMOUTCHARFN \MACOUTCHARFN)

previous date: 6-Aug-2021 16:12:42 {DSK}<Users>kaplan>Local>medley3.5>git-medley>lispusers>ISO8859IO.;17

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

::
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(RPAQQ ISO8859IOCOMS

(
;; This package defines EXTERNALFORMATS for files that are encoded in either ISO8859/1, the standard IBM extended ascii, or the usual
;; MAC encoding.

(COMS ; ISO8859/1
(FNS \8859OUTCHARFN \8859INCCODEFN \8859PEEKCCODEFN)
(GLOBALVARS *XEROXTOISO8859MAP* *ISO8859TOXEROXMAP*)
(FNS MAKEISOFORMAT)
(P (MAKEISOFORMAT)))
(COMS ; IBM-PC Extended Ascii
(FNS \IBMOUTCHARFN \IBMINCCODEFN \IBMPEEKCCODEFN)
(GLOBALVARS *XEROXTOIBMMAP* *IBMTOXEROXMAP*)
(FNS MAKEIBMFORMAT)
(P (MAKEIBMFORMAT)))
(COMS ; Macintosh
(FNS \MACOUTCHARFN \MACINCCODEFN \MACPEEKCCODEFN)
(GLOBALVARS *XEROXTOMACMAP* *MACTOXEROXMAP*)
(FNS MAKEMACFORMAT)
(P (MAKEMACFORMAT)))
(COMS ; Independent of char encoding
(FNS \COMMONBACKCCODEFN \MAKERECEDEMAP \RECODECCODE)))

:: This package defines EXTERNALFORMATS for files that are encoded in either ISO8859/1, the standard IBM extended ascii, or the usual MAC
;; encoding.

:: ISO8859/1

(DEFINEQ

(\8859OUTCHARFN

[LAMBDA (STREAM CHARCODE)
(**DECLARE** (GLOBALVARS *XEROXTOISO8859MAP*)) ; Edited 8-Aug-2021 13:21 by rmk:
; Edited 7-Dec-95 14:34 by
; Edited 7-Dec-95 14:32 by

:: Converts CHARCODE from internal encoding to ISO8859 before printing.

:: Unconverted codes are left unchanged (no error).

:: If any remaining codes are out of charset 0, the streams external format will be used.

(**IF** (EQ CHARCODE (CHARCODE EOL))
 THEN (**FREPLACE** (STREAM CHARPOSITION) **OF** STREAM **WITH** 0)
 (\BOUTEOL STREAM)
 ELSE (**CHANGE** (**FFETCH** (STREAM CHARPOSITION) **OF** STREAM)
 (IPLUS16 1 DATUM)
 (\BOUT STREAM (**IF** (IGREATERP CHARCODE 127)
 THEN ; We know that ISO doesn't have floating accents, so only singletons are returned. We also know that it
 ; agrees with Xerox on first 128
 (\RECODECCODE CHARCODE *XEROXTOISO8859MAP*)
 ELSE CHARCODE])

(\8859INCCODEFN

[LAMBDA (STRM COUNTP) ; Edited 6-Aug-2021 16:10 by rmk:
; Edited 7-Dec-95 15:24 by
; Edited 7-Dec-95 15:19 by

(**DECLARE** (USEDFREE *BYTECOUNTER*))
(CL:WHEN COUNTP (SETQ *BYTECOUNTER* 1))
(**RECODECCODE** (\BIN STRM
 ISO8859TOXEROXMAP))

(\8859PEEKCCODEFN

[LAMBDA (STRM NOERROR) ; Edited 5-May-2021 17:44 by rmk:
; Edited 3-Jan-96 14:21 by
; Edited 7-Dec-95 15:51 by
; Edited 7-Dec-95 15:19 by

(**RECODECCODE** (\PEEKCCODE STRM NOERROR)
 ISO8859TOXEROXMAP))

)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS *XEROXTOISO8859MAP* *ISO8859TOXEROXMAP*)
)

(DEFINEQ

(MAKEISOFORMAT

[LAMBDA NIL

; Edited 5-Aug-2021 22:15 by rmk:
; Edited 9-Mar-99 17:19 by rmk:
; Edited 7-Dec-95 16:24 by
; Edited 7-Dec-95 16:20 by

(LET [(XEROXTOISO ' ((61217 160)
(61291 166)
(8994 168)
(211 169)
(227 170)
(61290 172)
(61219 173)
(210 174)
(9086 175)
(8999 180)
(203 184)
(209 185)
(235 186)
(61729 192)
(61730 193)
(61731 194)
(61732 195)
(61735 196)
(61736 197)
(225 198)
(61741 199)
(61744 200)
(61745 201)
(61746 202)
(61749 203)
(61758 204)
(61759 205)
(61760 206)
(61764 207)
(226 208)
(61772 209)
(61775 210)
(61776 211)
(61777 212)
(61778 213)
(61780 214)
(180 215)
(233 216)
(61791 217)
(61792 218)
(61793 219)
(61797 220)
(61803 221)
(236 222)
(251 223)
(61857 224)
(61858 225)
(61859 226)
(61860 227)
(61863 228)
(61864 229)
(241 230)
(61869 231)
(61872 232)
(61873 233)
(61874 234)
(61877 235)
(61886 236)
(61887 237)
(61888 238)
(61892 239)
(243 240)
(61900 241)
(61903 242)
(61904 243)
(61905 244)
(61906 245)
(61908 246)
(184 247)
(249 248)
(61919 249)
(61920 250)
(61921 251)
(61925 252)

```

(61931 253)
(252 254)
(61933 255)
(61805 376]
(SETQ *XEROXTOISO8859MAP* (\MAKERECODEMAP XEROXTOISO))
(SETQ *ISO8859TOXEROXMAP* (\MAKERECODEMAP XEROXTOISO T))
(MAKE-EXTERNALFORMAT :ISO8859/1 (FUNCTION \8859INCCODEFN)
(FUNCTION \8859PEEKCCODEFN)
(FUNCTION \COMMONBACKCCODEFN)
(FUNCTION \8859OUTCHARFN])

```

)

(MAKEISOFORMAT)

:: IBM-PC Extended Ascii

(DEFINEQ

(\IBMOUTCHARFN

```

[LAMBDA (STREAM CHARCODE) ; Edited 8-Aug-2021 13:21 by rmk:
(IF (EQ CHARCODE (CHARCODE EOL))
THEN (FREPLACE (STREAM CHARPOSITION) OF STREAM WITH 0)
ELSE (CHANGE (FFETCH (STREAM CHARPOSITION) OF STREAM)
(IPLUS16 1 DATUM))
(\BOUT STREAM (IF (IGREATERP CHARCODE 127)
THEN
;; We know that IBM doesn't have floating accents, so only singletons are returned. We also know that it
;; agrees with Xerox on first 128
(\RECODECCODE CHARCODE *XEROXTOIBMMAP*)
ELSEIF CHARCODE]))

```

(\IBMINCCODEFN

```

[LAMBDA (STRM COUNTP) ; Edited 6-Aug-2021 16:10 by rmk:
; Edited 8-Dec-95 13:23 by
; Edited 7-Dec-95 15:19 by
(DECLARE (USEDFREE *BYTECOUNTER*))
(CL:WHEN COUNTP (SETQ *BYTECOUNTER* 1))
(\RECODECCODE (\BIN STRM)
*IBMTXEROXMAP*))

```

(\IBMPEEKCCODEFN

```

[LAMBDA (STRM NOERROR) ; Edited 5-Aug-2021 22:28 by rmk:
; Edited 3-Jan-96 14:23 by
; Edited 8-Dec-95 13:24 by
; Edited 7-Dec-95 15:51 by
; Edited 7-Dec-95 15:19 by
(\RECODECCODE (\PEEKCCODE STRM NOERROR)
*IBMTXEROXMAP*))

```

)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS *XEROXTOIBM* *IBMTXEROXMAP*)

)

(DEFINEQ

(MAKEIBMFORMAT

```

[LAMBDA NIL ; Edited 5-Aug-2021 22:17 by rmk:
(LET [(XEROXTOIBM ' ((61217 255)
(61291 166)
(8994 168)
(211 169)
(227 166)
(61290 170)
(61219 173)
(210 174)
(9086 175)
(8999 180)
(203 184)
(235 167)
(61729 183)
(61730 181)
(61731 182)
(61732 199)
(61735 142)
(61736 143)
(225 146)
(61741 128)
(61744 212)
(61745 144)
(61746 210)

```

(61749 211)
(61758 222)
(61759 214)
(61760 215)
(61764 216)
(61772 165)
(61775 227)
(61776 224)
(61777 226)
(61778 229)
(61780 153)
(233 157)
(61791 235)
(61792 233)
(61793 234)
(61797 154)
(61803 194)
(251 225)
(61857 133)
(61858 160)
(61859 131)
(61860 198)
(61863 132)
(61864 134)
(241 145)
(61869 135)
(61872 138)
(61873 130)
(61874 136)
(61877 137)
(61886 141)
(61887 161)
(61888 140)
(61892 139)
(61900 164)
(61903 149)
(61904 162)
(61905 147)
(61906 228)
(61908 148)
(249 155)
(61919 151)
(61920 163)
(61921 150)
(61925 129)
(61931 194)
(61933 152)
(61805 376)
(161 173)
(162 155)
(163 156)
(165 157)
(167 21)
(171 174)
(176 248)
(177 241)
(178 253)
(181 230)
(182 20)
(183 250)
(187 175)
(188 172)
(189 171)
(191 168)

(SETQ *XEROXTOIBMMAP* (\MAKERECODEMAP XEROXTOIBM))
(SETQ *IBMTOXEROXMAP* (\MAKERECODEMAP XEROXTOIBM T))
(MAKE-EXTERNALFORMAT :IBM (FUNCTION \IBMINCCODEFN)
(FUNCTION \IBMPEEKCCODEFN)
(FUNCTION \COMMONBACKCCODEFN)
(FUNCTION \IBMOUTCHARFN])

)

(MAKEIBMFORMAT)

:: Macintosh

(DEFINEQ

(\MACOUTCHARFN

[LAMBDA (STREAM CHARCODE)

; Edited 8-Aug-2021 13:22 by rmk:

:: Converts CHARCODE from internal encoding to MAC before printing.

:: Unconverted codes are left unchanged (no error).

:: If any remaining codes are out of charset 0, the streams external format will be used.

(IF (EQ CHARCODE (CHARCODE EOL))

```

THEN (FREPLACE (STREAM CHARPOSITION) OF STREAM WITH 0)
      (\BOUTEOL STREAM)
ELSE (CHANGE (FFETCH (STREAM CHARPOSITION) OF STREAM)
        (IPLUS16 1 DATUM))
      (\BOUT STREAM (IF (IGREATERP CHARCODE 127)
        THEN

```

;; We know that MAC doesn't have floating accents, so only singletons are returned. We also know that
;; it agrees with Xerox on first 128

```

      (\RECODECCODE CHARCODE *XEROXTOMACMAP*)
      ELSE CHARCODE])

```

(\MACINCCODEFN

```

[LAMBDA (STRM BYTECOUNTVAR BYTECOUNTVAL)
  (CL:WHEN BYTECOUNTVAR
    (SET BYTECOUNTVAR (SUB1 BYTECOUNTVAL)))
  (\RECODECCODE (\BIN STRM)
    *MACTOXEROXMAP*])

```

; Edited 15-Jun-2021 13:50 by rmk:
; Edited 8-Dec-95 13:29 by

(\MACPEEKCCODEFN

```

[LAMBDA (STRM NOERROR)
  (\RECODECCODE (\PEEKCCODE STRM NOERROR)
    *MACTOXEROXMAP*])

```

; Edited 5-Aug-2021 22:29 by rmk:
; Edited 3-Jan-96 14:23 by
; Edited 8-Dec-95 13:29 by

)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS *XEROXTOMACMAP* *MACTOXEROXMAP*
)

(DEFINEQ

(\MAKEMACFORMAT

[LAMBDA NIL

; Edited 5-Aug-2021 22:25 by rmk:
; Edited 7-Dec-95 16:24 by
; Edited 7-Dec-95 16:20 by

;; Note: This maps some characters into sequences--only the first in the sequence will appear. Sigh.

```

(LET [(XEROXTOMAC ' ( (211 212)
  (227 187)
  (61290 194)
  (210 168)
  (203 252)
  (209 213)
  (235 188)
  (61729 203)
  (61730 231)
  (61731 171)
  (61732 204)
  (61735 128)
  (61736 129)
  (225 174)
  (61741 130)
  (61744 172)
  (61745 131)
  (61746 230)
  (61749 232)
  (61758 237)
  (61759 234)
  (61760 235)
  (61764 236)
  (61772 132)
  (61775 241)
  (61776 238)
  (61777 170)
  (61778 205)
  (61780 133)
  (233 175)
  (61791 244)
  (61792 242)
  (61793 243)
  (61797 134)
  (61803 194 89)
  (251 167)
  (61857 136)
  (61858 135)
  (61859 137)
  (61860 139)
  (61863 138)
  (61864 140)
  (241 190)
  (61869 141)

```

```

(61872 143)
(61873 142)
(61874 144)
(61877 145)
(61886 147)
(61887 146)
(61888 148)
(61892 149)
(61900 150)
(61903 152)
(61904 151)
(61905 153)
(61906 155)
(61908 154)
(184 214)
(249 191)
(61919 157)
(61920 156)
(61921 158)
(61925 159)
(61931 194 121)
(61933 216)
(61805 217)
(61232 160)
(176 161)
(167 164)
(61286 165)
(182 166)
(8546 173)
(8551 176)
(8549 178)
(8550 179)
(165 180)
(61370 182)
(61306 183)
(61307 184)
(9843 185)
(61301 186)
(191 192)
(161 193)
(61308 195)
(61346 196)
(61305 197)
(9797 198)
(171 199)
(187 200)
(8516 201)
(32 202)
(61220 208)
(61221 209)
(8574 215)
(47 218)
(164 219)
(61226 220)
(61227 221)
(61476 222)
(61477 223)
(61233 224)
(183 225)
(9138 226)
(61224 227)
(61249 228]

```

```

(SETQ *XEROXTOMACMAP* (\MAKERECODEMAP XEROXTOMAC))
(SETQ *MACTOXEROXMAP* (\MAKERECODEMAP XEROXTOMAC T))
(MAKE-EXTERNALFORMAT :MACINTOSH (FUNCTION \MACINCCODEFN)
  (FUNCTION \MACPEKCCODEFN)
  (FUNCTION \COMMONBACKCCODEFN)
  (FUNCTION \MACOUTCHARFN])
)

```

(MAKEMACFORMAT)

:: Independent of char encoding

(DEFINEQ

(COMMONBACKCCODEFN

[LAMBDA (STRM COUNTP)

(DECLARE (USEDFREE *BYTECOUNTER*))

(CL:WHEN (\BACKFILEPTR STRM)

(CL:WHEN COUNTP (SETQ *BYTECOUNTER* -1))

T)])

; Edited 6-Aug-2021 16:12 by rmk:

; Edited 8-Dec-95 13:26 by

(MAKERECODEMAP

```

[LAMBDA (CODEMAP INVERTED) ; Edited 9-Mar-99 17:23 by rmk:
  ;; Produces a map array for use by \RECODECCODE. The map array is a 256-array of either NIL or 256-arrays, so that space isn't allocated for
  ;; widely separated codes.
  (DECLARE (USEDFREE FASTRECODEMAPCACHE))
  (CL:WHEN INVERTED
    [SETQ CODEMAP (FOR C IN CODEMAP COLLECT (LIST (CADR C)
                                                       (CAR C))
    (FOR M (MAPARRAY _ (CL:MAKE-ARRAY 256 :INITIAL-ELEMENT NIL))
      CSMAP IN CODEMAP UNLESS (EQ (CAR M)
                                     (CADR M))
      DO (CL:UNLESS (SETQ CSMAP (CL:SVREF MAPARRAY (LRSH (CAR M)
                                                           8)))
                    (SETQ CSMAP (CL:MAKE-ARRAY 256 :INITIAL-ELEMENT NIL))
          (CL:SETF (CL:SVREF MAPARRAY (LRSH (CAR M)
                                             8))
                   CSMAP))
          (CL:SETF (CL:SVREF CSMAP (LOGAND (CAR M)
                                           255))
                   (CADR M))
      FINALLY (RETURN MAPARRAY])

```

(**\RECODECCODE**

```

[LAMBDA (CODE MAPARRAY) ; Edited 9-Mar-99 17:28 by rmk:
  ; Edited 21-Jun-95 10:18 by rmk:

```

```

  ;; Recodes a singleton charcode. Leaves everything else unchanged.
  (LET [(CSMAP (CL:SVREF MAPARRAY (LRSH CODE 8)
    (OR (AND CSMAP (CL:SVREF CSMAP (LOGAND CODE 255)))
        CODE])

```

```

)
(PUTPROPS ISO8859IO COPYRIGHT ("Xerox Corporation" 1995 1996 1997 1999 2021))

```

FUNCTION INDEX

MAKEIBMFORMAT3	\8859INCCODEFN1	\COMMONBACKCCODEFN 6	\IBMPEEKCCODEFN . . .3	\MACPEEKCCODEFN . . .5
MAKEISOFORMAT2	\8859OUTCHARFN1	\IBMINCCODEFN3	\MACINCCODEFN5	\MAKERECODEMAP6
MAKEMACFORMAT5	\8859PEEKCCODEFN . .1	\IBMOUTCHARFN3	\MACOUTCHARFN4	\RECODECCODE7
