

File created: 12-Jul-2022 14:18:56 {DSK}<Users>kaplan>Local>medley3.5>working-medley>lispusers>EDITFONT.;10

changes to: (FNS READSTRIKEFONTFILE)
(VARS EDITFONTCOMS)

previous date: 27-Jun-2022 10:59:12 {DSK}<users>kaplan>local>medley3.5>working-medley>lispusers>EDITFONT.;5

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

::
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(RPAQQ EDITFONTCOMS

```
(( * EDITFONT -- By Kelly Roach. Need to LOAD EXPORTS.ALL in order to compile this file. *)
  (INITVARS (EF.MENU NIL)
            (EF.TITLEMENU NIL))
  (RECORDS CHARITEM)
  (FNS EF.INIT EF.PROMPT EF.MESSAGE EF.CLOSEFN EF.CHARITEMS EF.BUTTONEVENTFN EF.WHENSELECTEDFN EF.EDITBM
      EF.MIDDLEBUTTONFN EF.CHANGESIZE EF.DELETE EF.ENTER EF.REPLACE EF.SAVE EF.BLANK COPYFONT
      READSTRIKEFONTFILE)
  (FNS BLANKFONTCREATE EDITFONT)
  (DECLARE%: EVAL@COMPILE DONTCOPY (CONSTANTS (BITSPERWORD 16)
                                              (BYTESPERWORD 2)
                                              (MAXCODE 255)
                                              (DUMMYINDEX 256))
          (FILES (LOADCOMP)
                FONT))
  (P (EF.INIT)))
```

```
(* * EDITFONT -- By Kelly Roach. Need to LOAD EXPORTS.ALL in order to compile this file.
*)
```

(RPAQ? EF.MENU NIL)

(RPAQ? EF.TITLEMENU NIL)

(DECLARE%: EVAL@COMPILE

(RECORD CHARITEM (BITMAP (CHARCODE DUMMYFLG)))
)

(DEFINEQ

(EF.INIT

```
[LAMBDA NIL (* kbr%: "21-Oct-85 15:50")
  (PROG NIL
    [SETQ EF.MENU (create MENU
      ITEMS _ ' ((CHANGESIZE 'EF.CHANGESIZE "Change size of character.")
                (DELETE 'EF.DELETE "Delete character.")
                (EDITBM 'EF.EDITBM "Edit character.")
                (REPLACE 'EF.REPLACE "Prompt for bitmap to replace character.")]
    (SETQ EF.TITLEMENU (create MENU
      ITEMS _ ' ((SAVE 'EF.SAVE "Save EDITFONT's work back into font.")]
```

(EF.PROMPT

```
[LAMBDA (STRING WINDOW) (* kbr%: "16-Oct-85 22:48")
  (PROG (PROMPTW ANSWER)
    (SETQ PROMPTW (GETPROMPTWINDOW WINDOW))
    (CLEARW PROMPTW)
    (PRIN1 STRING PROMPTW)
    (PRIN1 " " PROMPTW)
    (SETQ ANSWER (RESETLST
      (RESETSAVE (TTYDISPLAYSTREAM PROMPTW))
      (RESETSAVE (TTY.PROCESS (THIS.PROCESS)))
      (TTYINREAD PROMPTW)))
    (TERPRI PROMPTW)
    (SETQ ANSWER (EVAL ANSWER))
    (RETURN ANSWER])
```

(EF.MESSAGE

```
[LAMBDA (STRING WINDOW) (* kbr%: "16-Oct-85 22:50")
  (PROG (PROMPTW)
    (SETQ PROMPTW (GETPROMPTWINDOW WINDOW))
    (PRIN1 STRING PROMPTW])
```

(EF.CLOSEFN

```
[LAMBDA (WINDOW) (* kbr%: "15-Dec-84 15:20")
```

(* Close EF Window. *)

```
(PROG NIL
 [COND
  ((EQ (ASKUSER "Close Editfont Window?"
    'N)
    (RETURN 'DON'T])
 (CLOSEW WINDOW)
 (WINDOWPROP WINDOW 'MENU NIL])
```

(* Break circularity. *)

(EF.CHARITEMS

```
[LAMBDA (FONT FROMCHAR8CODE TOCHAR8CODE CHARSET)
```

(* kbr%: "16-Oct-85 23:11")
(* Get CHARITEMS for FONT. *)

```
(PROG (FROMCHARCODE TOCHARCODE OFFSETS DUMMYOFFSET DUMMYBITMAP OFFSET BITMAP CHARITEM CHARITEMS)
 (* Get DUMMY CHARITEM *)
```

(* Interlisp assuming 256 is dummy is dumb now because of NS chars.
Maybe Kaplan and Nuyens will fix. *)

```
(SETQ DUMMYBITMAP (GETCHARBITMAP 256 FONT))
(SETQ CHARITEM (create CHARITEM
  BITMAP _ DUMMYBITMAP
  CHARCODE _ DUMMYINDEX
  DUMMYFLG _ T))
```

(* Get ordinary CHARITEMs. *)

```
(push CHARITEMS CHARITEM)
(SETQ FROMCHARCODE (IPLUS (ITIMES 256 CHARSET)
  FROMCHAR8CODE))
(SETQ TOCHARCODE (IPLUS (ITIMES 256 CHARSET)
  TOCHAR8CODE))
(SETQ OFFSETS (fetch (CHARSETINFO OFFSETS) of (\GETCHARSETINFO CHARSET FONT)))
(SETQ DUMMYOFFSET (\FGETOFFSET OFFSETS DUMMYINDEX))
(for I from TOCHARCODE to FROMCHARCODE by -1
 do (SETQ OFFSET (\FGETOFFSET OFFSETS I))
 [COND
  ((EQ OFFSET DUMMYOFFSET)
   (SETQ CHARITEM (create CHARITEM
     BITMAP _ DUMMYBITMAP
     CHARCODE _ I
     DUMMYFLG _ T)))
 (T (SETQ BITMAP (GETCHARBITMAP I FONT))
   (SETQ CHARITEM (create CHARITEM
     BITMAP _ BITMAP
     CHARCODE _ I
     DUMMYFLG _ NIL])
   (push CHARITEMS CHARITEM))
 (RETURN CHARITEMS])
```

(* OKEY DOKEY *)

(EF.BUTTONEVENTFN

```
[LAMBDA (WINDOW)
 (PROG (COMMAND)
 (COND
  ((INSIDEP (DSPCLIPPINGREGION NIL WINDOW)
    (LASTMOUSEX WINDOW)
    (LASTMOUSEY WINDOW))
 (MENUBUTTONFN WINDOW))
 ((SETQ COMMAND (MENU EF.TITLEMENU))
 (APPLY* COMMAND WINDOW])
```

(* kbr%: "16-Oct-85 22:19")

(EF.WHENSELECTEDFN

```
[LAMBDA (CHARITEM MENU KEY)
 (PROG NIL
 (COND
  (CHARITEM (SELECTQ KEY
    (LEFT (EF.EDITBM CHARITEM MENU))
    (MIDDLE (EF.MIDDLEBUTTONFN CHARITEM MENU))
    (* Do nothing. *]))
```

(* kbr%: "16-Oct-85 22:26")

(EF.EDITBM

```
[LAMBDA (CHARITEM MENU)
 (PROG (BITMAP CHARCODE DUMMYFLG)
 (RESETLST
  [RESETSAVE (SHADEITEM CHARITEM MENU BLACKSHADE)
    '(SHADEITEM ,CHARITEM ,MENU ,WHITESHAE)
 (SETQ BITMAP (fetch (CHARITEM BITMAP) of CHARITEM))
 [COND
  ((AND (NOT (IEQP (fetch (CHARITEM CHARCODE) of CHARITEM)
    DUMMYINDEX))
    (fetch (CHARITEM DUMMYFLG) of CHARITEM)) (* Undummify this CHARITEM. *)
 (SETQ BITMAP (COPYALL BITMAP))
 (UNINTERRUPTABLY
  (replace (CHARITEM BITMAP) of CHARITEM with BITMAP)
  (replace (CHARITEM DUMMYFLG) of CHARITEM with NIL))]
 (EDITBM BITMAP))
```

(* kbr%: "15-Dec-84 15:20")

(* Update MENU image. SHADEITEM's side effects above suffice if we only changed one menu item. (i.e. we edited an ordinary CHARITEM.)*

```
(COND
  ((IEQP (fetch (CHARITEM CHARCODE) of CHARITEM)
         DUMMYINDEX)
   (UPDATE/MENU/IMAGE MENU)
   (REDISPLAYW (WFROMMENU MENU))
```

(EF.MIDDLEBUTTONFN

```
[LAMBDA (CHARITEM MENU)
  (PROG (COMMAND)
    (SETQ COMMAND (MENU EF.MENU))
    (COND
      (COMMAND (APPLY* COMMAND CHARITEM MENU))
```

(* kbr%: "15-Dec-84 15:20")

(EF.CHANGESIZE

```
[LAMBDA (CHARITEM MENU)
  (PROG (HEIGHT WIDTH NEWBITMAP WINDOW)
    (SETQ WINDOW (WFROMMENU MENU))
    (SETQ HEIGHT (EF.PROMPT "New height?" WINDOW))
    (COND
      ((NULL HEIGHT)
       (EF.MESSAGE "Aborted." WINDOW)
       (RETURN))
      (SETQ HEIGHT (EVAL HEIGHT))
      (SETQ WIDTH (EF.PROMPT "New width?" WINDOW))
      (COND
        ((NULL WIDTH)
         (EF.MESSAGE "Aborted." WINDOW)
         (RETURN))
        (SETQ WIDTH (EVAL WIDTH))
        (SETQ NEWBITMAP (BITMAPCREATE WIDTH HEIGHT))
        (BITBLT (fetch (CHARITEM BITMAP) of CHARITEM)
                NIL NIL NEWBITMAP)
        (UNINTERRUPTABLY
         (replace (CHARITEM BITMAP) of CHARITEM with NEWBITMAP)
         (replace (CHARITEM DUMMYFLG) of CHARITEM with NIL))
        (UPDATE/MENU/IMAGE MENU)
        (REDISPLAYW (WFROMMENU MENU))
```

(* kbr%: "16-Oct-85 23:03")
(* Change height & width of CHARITEM's BITMAP *)

(EF.DELETE

```
[LAMBDA (CHARITEM MENU)
  (PROG (WINDOW CHARITEMS DUMMYBITMAP)
    (SETQ WINDOW (WFROMMENU MENU))
    (SETQ CHARITEMS (WINDOWPROP WINDOW 'CHARITEMS))
    [SETQ DUMMYBITMAP (fetch (CHARITEM BITMAP) of (CAR (LAST CHARITEMS))
    (UNINTERRUPTABLY
     (replace (CHARITEM BITMAP) of CHARITEM with DUMMYBITMAP)
     (replace (CHARITEM DUMMYFLG) of CHARITEM with T))
    (UPDATE/MENU/IMAGE MENU)
    (REDISPLAYW (WFROMMENU MENU))
```

(* kbr%: "15-Dec-84 15:20")
(* Turn CHARITEM into dummy charitem. *)

(EF.ENTER

```
[LAMBDA (CHARITEM MENU)
  (PROG (NEWBITMAP)
    (SETQ NEWBITMAP (EF.PROMPT "Enter new bitmap (evaluated):"))
    (COND
      ((NULL NEWBITMAP)
       (printout T "Aborted." T))
      ((type? BITMAP NEWBITMAP)
       (UNINTERRUPTABLY
        (replace (CHARITEM BITMAP) of CHARITEM with NEWBITMAP)
        (replace (CHARITEM DUMMYFLG) of CHARITEM with NIL))
       (UPDATE/MENU/IMAGE MENU)
       (REDISPLAYW (WFROMMENU MENU)))
      (T (LISPERROR "ILLEGAL ARG" NEWBITMAP))
```

(* kbr%: "15-Dec-84 15:20")
(* Enter BITMAP of CHARITEM. *)

(EF.REPLACE

```
[LAMBDA (CHARITEM MENU)
  (PROG (BITMAP WINDOW)
    (SETQ WINDOW (WFROMMENU MENU))
    (SETQ BITMAP (EF.PROMPT "New bitmap?" WINDOW))
    (COND
      ((NULL BITMAP)
       (EF.MESSAGE "Aborted." WINDOW))
```

(* kbr%: "16-Oct-85 23:04")
*) Replace BITMAP of CHARITEM.

```

((type? BITMAP BITMAP)
 (UNINTERRUPTABLY
  (replace (CHARITEM BITMAP) of CHARITEM with BITMAP)
  (replace (CHARITEM DUMMYFLG) of CHARITEM with NIL))
 (UPDATE/MENU/IMAGE MENU)
 (REDISPLAYW (WFROMMENU MENU)))
 (T (LISPERROR "ILLEGAL ARG" BITMAP]))

```

(EF.SAVE

```

[LAMBDA (WINDOW)
  (* kbr%: "21-Oct-85 15:39")
  (* Save EDITFONT changes to FONT.
  *)
  (PROG (CHARITEMS FONT CB CBWIDTH CBHEIGHT WIDTHS OFFSETS HEIGHT WIDTH DUMMYOFFSET OFFSET BITMAP FIRSTCHAR
        LASTCHAR CHARSET CSINFO)
    (SETQ CHARITEMS (WINDOWPROP WINDOW 'CHARITEMS))
    (SETQ FONT (WINDOWPROP WINDOW 'FONT))
    (SETQ CBWIDTH 0)
    (SETQ CBHEIGHT 0)
    [for I from 0 to DUMMYINDEX as CHARITEM in CHARITEMS when (OR (NOT (fetch (CHARITEM DUMMYFLG)
                                                                of CHARITEM))
                                                                (IEQP I DUMMYINDEX))
      do (SETQ BITMAP (fetch (CHARITEM BITMAP) of CHARITEM))
        (SETQ CBWIDTH (IPLUS CBWIDTH (fetch (BITMAP BITMAPWIDTH) of BITMAP)))
        (SETQ CBHEIGHT (IMAX CBHEIGHT (fetch (BITMAP BITMAPHEIGHT) of BITMAP)))
        (SETQ CSINFO (create CHARSETINFO
                            CHARSETASCENT _ (fetch (FONTDESCRIPTOR \SFAscent) of FONT)
                            CHARSETDESCENT _ (fetch (FONTDESCRIPTOR \SFDescent) of FONT)))
        (SETQ OFFSETS (fetch (CHARSETINFO OFFSETS) of CSINFO))
        (SETQ WIDTHS (fetch (CHARSETINFO WIDTHS) of CSINFO))
        (* Store new info in allocations. *)
        (SETQ OFFSET 0)
        [SETQ DUMMYOFFSET (IDIFFERENCE CBWIDTH (fetch (BITMAP BITMAPWIDTH) of (fetch (CHARITEM BITMAP)
                                                                                       of (CAR (LAST CHARITEMS))
                                                                                       of CHARITEM))
                            (fetch (CHARITEM BITMAP) of CHARITEM))
          (SETQ CB (BITMAPCREATE CBWIDTH CBHEIGHT))
          [for I from 0 to DUMMYINDEX as CHARITEM in CHARITEMS
            do (SETQ BITMAP (fetch (CHARITEM BITMAP) of CHARITEM))
              (SETQ WIDTH (fetch (BITMAP BITMAPWIDTH) of BITMAP))
              (SETQ HEIGHT (fetch (BITMAP BITMAPHEIGHT) of BITMAP))
              (\FSETWIDTH WIDTHS I WIDTH)
              (COND
                ((AND (fetch (CHARITEM DUMMYFLG) of CHARITEM)
                     (NOT (IEQP I DUMMYINDEX))))
                 (\FSETOFFSET OFFSETS I DUMMYOFFSET))
                (T (\FSETOFFSET OFFSETS I OFFSET)
                  (BITBLT BITMAP 0 0 CB OFFSET 0 WIDTH HEIGHT 'INPUT 'REPLACE)
                  (SETQ OFFSET (IPLUS OFFSET WIDTH))
                  (* FIRSTCHAR & LASTCHAR. (I wonder what you're suppose
                  to do if there aren't any chars?*)
                  [SETQ FIRSTCHAR (\CHAR8CODE (fetch (CHARITEM CHARCODE) of (for CHARITEM in CHARITEMS
                                                                                       thereis (NOT (fetch (CHARITEM DUMMYFLG)
                                                                                       of CHARITEM))
                                                                                       of CHARITEM))
                                      (\CHAR8CODE (fetch (CHARITEM CHARCODE) of (for CHARITEM in (REVERSE CHARITEMS)
                                                                                       thereis (NOT (fetch (CHARITEM DUMMYFLG)
                                                                                       of CHARITEM))
                                                                                       of CHARITEM))
                                      (\CHARSET (fetch (CHARITEM CHARCODE) of (CAR CHARITEMS))
                                                (* Store new info. *)
                                                )
                                      )
                  )
                )
              )
            )
          )
        (UNINTERRUPTABLY
          (replace (CHARSETINFO CHARSETBITMAP) of CSINFO with CB)
          (replace (CHARSETINFO WIDTHS) of CSINFO with WIDTHS)
          (replace (CHARSETINFO OFFSETS) of CSINFO with OFFSETS)
          (\FONTRESETCHARWIDTHS CSINFO FIRSTCHAR LASTCHAR)
          (replace (CHARSETINFO IMAGEWIDTHS) of CSINFO with WIDTHS))
          (* OKEY DOKEY. *)
        )
      ]
  )
]

```

(EF.BLANK

```

[LAMBDA (FAMILY SIZE FACE FIRSTCHAR LASTCHAR ASCENT DESCENT WIDTH)
  (* kbr%: "21-Oct-85 15:25")
  (PROG (FONT CSINFO WIDTHS DUMMYWIDTH OFFSETS DUMMYOFFSET CB CBWIDTH CBHEIGHT)
    (SETQ FAMILY (U-CASE FAMILY))
    (COND
      ((NOT (FIXP SIZE))
       (LISPERROR "ILLEGAL ARG" SIZE)))
    (SETQ FACE (\FONTFACE FACE))
    (COND
      ((NOT (SMALLP FIRSTCHAR))
       (LISPERROR "ILLEGAL ARG" FIRSTCHAR)))
    (COND
      ((NOT (SMALLP LASTCHAR))
       (LISPERROR "ILLEGAL ARG" LASTCHAR)))
    (COND
      ((NOT (SMALLP ASCENT))
       (LISPERROR "ILLEGAL ARG" ASCENT)))
    (COND
      ((NOT (SMALLP DESCENT))
       (LISPERROR "ILLEGAL ARG" DESCENT)))
    (COND
      )
  )
]

```



```
(\BLT (fetch (CHARSETINFO OFFSETS) of NEWCSINFO)
      (fetch (CHARSETINFO OFFSETS) of OLDCSINFO)
      (ADD1 DUMMYINDEX))
(replace (CHARSETINFO IMAGEWIDTHS) of NEWCSINFO
         with (fetch (CHARSETINFO WIDTHS) of NEWCSINFO))
(\RPLPTR NEWCHARSETVECTOR (UNFOLD CHARSET 2)
 NEWCSINFO]
```

(RETURN NEWFONT])

(READSTRIKEFONTFILE

[LAMBDA (FAMILY SIZE FACE FILE FONT CHARSET)

;; Edited 12-Jul-2022 14:16 by rmk: Removed slightly different implementations of \READSTRIKEFONTFILE and charset installation in favor of
;; common code in FONT.

;; Edited 12-Jul-2022 13:33 by rmk

(* kbr%: "14-Oct-85 11:16")
; Returns fontdescriptor FONT. *

```
(CL:UNLESS CHARSET (SETQ CHARSET 0))
(LET (STRM CSINFO)
      (SETQ STRM (OPENSTREAM FILE 'INPUT 'OLD))
      (\WIN STRM)
      (SETQ CSINFO (\READSTRIKEFONTFILE STRM FAMILY SIZE FACE))
      (CLOSEF STRM)
      ; This part imitates \CREATEDISPLAYFONT *
      (CL:UNLESS FONT
        [SETQ FONT
          (create FONTDESCRIPTOR
                 FONTDEVICE _ 'DISPLAY
                 FONTFAMILY _ FAMILY
                 FONTSIZE _ SIZE
                 FONTFACE _ FACE
                 \SFAscent _ 0
                 \SFDescent _ 0
                 \SFHeight _ 0
                 ROTATION _ 0
                 FONTDEVICESPEC _ (LIST FAMILY SIZE FACE 0 'DISPLAY))
          (\INSTALLCHARSETINFO FONT CSINFO CHARSET)
          FONT])
      )
```

(DEFINEQ

(BLANKFONTCREATE

[LAMBDA (FAMILY SIZE FACE FIRSTCHAR LASTCHAR ASCENT DESCENT WIDTH)

(* mjs "27-Mar-85 14:48")

(EF.BLANK FAMILY SIZE FACE FIRSTCHAR LASTCHAR ASCENT DESCENT WIDTH])

(EDITFONT

[LAMBDA (FONT FROMCHARCODE TOCHARCODE CHARSET)

; Edited 27-Jun-2022 10:47 by rmk
(* mjs "27-Mar-85 14:48")
(* kbr%: "21-Oct-85 15:35")

```
(SETQ FONT (FONTCREATE FONT))
(CL:UNLESS FROMCHARCODE (SETQ FROMCHARCODE 0))
(CL:UNLESS TOCHARCODE (SETQ TOCHARCODE 255))
(CL:UNLESS CHARSET (SETQ CHARSET 0))
(PROG (CHARITEMS MENU TITLE HEIGHT WIDTH REGION POS WINDOW)
      (SETQ CHARITEMS (EF.CHARITEMS FONT FROMCHARCODE TOCHARCODE CHARSET))
      (SETQ MENU (create MENU
                        MENUFONT _ FONT
                        CENTERFLG _ T
                        MENCOLUMNS _ 16
                        ITEMS _ CHARITEMS
                        WHENSELECTEDFN _ (FUNCTION EF.WHENSELECTEDFN)))
      [SETQ TITLE (PACK* (FONTPROP FONT 'FAMILY)
                       (FONTPROP FONT 'SIZE)
                       (PACKC (for ATOM in (FONTPROP FONT 'FACE) collect (CHCON1 ATOM)
                              T))
                       )
      (SETQ HEIGHT (HEIGHTIFWINDOW (fetch (MENU IMAGEHEIGHT) of MENU)
                                   T))
      (SETQ WIDTH (WIDTHIFWINDOW (fetch (MENU IMAGEWIDTH) of MENU)))
      (SETQ POS (GETBOXPOSITION WIDTH HEIGHT))
      (SETQ REGION (create REGION
                           LEFT _ (fetch (POSITION XCOORD) of POS)
                           BOTTOM _ (fetch (POSITION YCOORD) of POS)
                           WIDTH _ WIDTH
                           HEIGHT _ HEIGHT))
      (SETQ WINDOW (CREATEW REGION TITLE))
      (WINDOWPROP WINDOW 'CHARITEMS CHARITEMS)
      (ADDMENU MENU WINDOW (create POSITION
                                   XCOORD _ 0
                                   YCOORD _ 0))
      (WINDOWPROP WINDOW 'BUTTONEVENTFN 'EF.BUTTONEVENTFN])
      )
```

(DECLARE%: EVAL@COMPILE DONTCOPY

(DECLARE%: EVAL@COMPILE

{MEDLEY}<lispusers>EDITFONT.;1

Page 7

(RPAQQ **BITSPERWORD** 16)

(RPAQQ **BYTESPERWORD** 2)

(RPAQQ **MAXCODE** 255)

(RPAQQ **DUMMYINDEX** 256)

(CONSTANTS (BITSPERWORD 16)

(BYTESPERWORD 2)

(MAXCODE 255)

(DUMMYINDEX 256))

)

(FILESLOAD (LOADCOMP)

FONT)

)

(EF.INIT)

(PUTPROPS **EDITFONT COPYRIGHT** ("Xerox Corporation" 1985 1986))

FUNCTION INDEX

BLANKFONTCREATE ...6	EF.BUTTONEVENTFN ..2	EF.DELETE3	EF.MESSAGE1	EF.SAVE4
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EDITFONT6	EF.CHARITEMS2	EF.ENTER3	EF.PROMPT1	READSTRIKEFONTFILE 6
EF.BLANK4	EF.CLOSEFN1	EF.INIT1	EF.REPLACE3	

CONSTANT INDEX

BITS PER WORD7	BYTES PER WORD7	DUMMY INDEX7	MAX CODE7
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VARIABLE INDEX

EF.MENU1	EF.TITLEMENU1
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RECORD INDEX

CHARITEM1
