

File created: 19-Nov-85 12:22:23 {ERIS}<IRIS>GREGCO>KEYOBJ.;3

changes to: (FNS KEYOBJ.BUTTONEVENTINFN KEYOBJ.CREATE)

previous date: 28-Jan-85 01:34:31 {ERIS}<LISP>KOTO>LISPUSERS>KEYOBJ.;1

Read Table: OLD-INTERLISP-FILE

Package: INTERLISP

Format: XCCS

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(RPAQQ **KEYOBJCOMS**

```
((FNS KEYOBJ.BUTTONEVENTINFN KEYOBJ.COPYFN KEYOBJ.CREATE KEYOBJ.DISPLAYFN KEYOBJ.GETFN KEYOBJ.IMAGEBOXFN
 KEYOBJ.IMAGESTREAMTYPE KEYOBJ.INSTALL.BITMAP KEYOBJ.PUTFN KEYOBJ.WHENOPERATEDONFN TYPEA)
 [VARS (KEYOBJ.IMAGEFNS (IMAGEFNSCREATE (FUNCTION KEYOBJ.DISPLAYFN)
 (FUNCTION KEYOBJ.IMAGEBOXFN)
 (FUNCTION KEYOBJ.PUTFN)
 (FUNCTION KEYOBJ.GETFN)
 (FUNCTION KEYOBJ.COPYFN)
 (FUNCTION KEYOBJ.BUTTONEVENTINFN)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (FUNCTION NIL)
 (INITVARS (KEYOBJ.FONT (FONTCREATE (QUOTE HELVETICA)
 10)))
 (BITMAPS KEYOBJ.TEMPLATE))
```

(DEFINEQ

(**KEYOBJ.BUTTONEVENTINFN**

```
[LAMBDA (KEYOBJ WINDOWSTREAM SEL RELX RELY WINDOW TEXTSTREAM BUTTON)
 (* gbn "19-Nov-85 12:21")
```

(* * gets called when the "key" goes down. sends the down transition, inverts the bitmap of the key, when the mouse comes up, uninverts the picture and sends the up transition)

(* * NOTE: inside buttoneventinfns the origin is the left bottom of the imageobj)

```
(PROG ((KEYNUMBER (IMAGEOBJPROP KEYOBJ (QUOTE KEYNUMBER)))
 (ABORTABLE (IMAGEOBJPROP KEYOBJ (QUOTE ABORTABLE)))
 (IMAGEBOX (IMAGEOBJPROP KEYOBJ (QUOTE IMAGEBOX)))
 X Y)
 (IMAGEOBJPROP KEYOBJ (QUOTE STATE)
 (QUOTE DOWN))
 (IMAGEOBJPROP KEYOBJ (QUOTE WINDOW)
 (fetch \WINDOW of (TEXTOBJ TEXTSTREAM)))
 (KEYOBJ.DISPLAYFN KEYOBJ WINDOWSTREAM NIL NIL T)
 (if ABORTABLE
 then
```

(* since this is an abortable key don't send any transitions until the key comes up)

```

    NIL
 else
    (\DECODETRANSITION KEYNUMBER T)
 (while (MOUSESTATE (OR LEFT MIDDLE RIGHT)) do NIL)
 (IMAGEOBJPROP KEYOBJ (QUOTE STATE)
 (QUOTE UP))
 (KEYOBJ.DISPLAYFN KEYOBJ WINDOWSTREAM NIL NIL T)
 (SETQ X (LASTMOUSEX WINDOW))
 (SETQ Y (LASTMOUSEY WINDOW))
 (if (AND (ILEQ X (fetch XSIZE of IMAGEBOX))
 (IGEQ X 0)
 (ILEQ Y (fetch YSIZE of IMAGEBOX))
 (IGEQ Y 0))
 then
```

(* only send the transition if the mouse is still in the region. This is not consistent with the key metaphor, however, the menu functionality is useful)

```
(if ABORTABLE
 then
    (\DECODETRANSITION KEYNUMBER T)
 (\DECODETRANSITION KEYNUMBER))
 (RETURN (QUOTE DON'T))
```

(**KEYOBJ.COPYFN**

```
[LAMBDA (IMAGEOBJ FROMSTREAM TOSTREAM)
 (* jds "10-Jan-85 01:03")
```

(* * shouldn't be called)

(* (SHOULDNT "why are you copying a keyobj?"))

(KEYOBJ.CREATE (IMAGEOBJPROP IMAGEOBJ (QUOTE KEYNAME))
TOSTREAM])

(KEYOBJ.CREATE

(* gbn "19-Nov-85 12:05")

[LAMBDA (KEYNAME KEYLABEL ABORTABLE)
(PROG ((KEYOBJ (IMAGEOBJCREATE NIL KEYOBJ.IMAGEFNS))
BITMAP
(KEYLABEL (OR KEYLABEL KEYNAME))
DS)
(IMAGEOBJPROP KEYOBJ (QUOTE STATE)
(QUOTE UP))
(IMAGEOBJPROP KEYOBJ (QUOTE KEYNUMBER)
(\KEYNAMETONUMBER KEYNAME))
(IMAGEOBJPROP KEYOBJ (QUOTE KEYNAME)
KEYNAME)
(IMAGEOBJPROP KEYOBJ (QUOTE KEYLABEL)
KEYLABEL)
(IMAGEOBJPROP KEYOBJ (QUOTE ABORTABLE)
ABORTABLE)
(KEYOBJ.INSTALL.BITMAP KEYOBJ)
(SETQ BITMAP (IMAGEOBJPROP KEYOBJ (QUOTE BITMAP)))
(IMAGEOBJPROP KEYOBJ (QUOTE IMAGEBOX)
(create IMAGEBOX
XSIZE _ (BITMAPWIDTH BITMAP)
YSIZE _ (BITMAPHEIGHT BITMAP)
YDESC _ 0
XKERN _ 0))
(RETURN KEYOBJ])

(KEYOBJ.DISPLAYFN

(* jds "10-Jan-85 01:02")

[LAMBDA (KEYOBJ IMAGE.STREAM MODE TEXTSTREAM OFFSETS0?)

(* function which displays the bitmap of the hrule on the display or calls an {inter}press function to draw the rule on a file)

(PROG [[SOURCETYPE (SELECTQ (IMAGEOBJPROP KEYOBJ (QUOTE STATE))
(UP (QUOTE INPUT))
(DOWN (QUOTE INVERT))
(ERROR "Illegal state in KEYOBJ" (IMAGEOBJPROP KEYOBJ (QUOTE STATE))
(BITMAP (IMAGEOBJPROP KEYOBJ (QUOTE BITMAP)) (* (IMAGE.STREAM (IMAGEOBJPROP KEYOBJ
(QUOTE WINDOW))))))
(SELECTQ (IMAGESTREAMTYPE IMAGE.STREAM)
(DISPLAY (* (PROMPTPRINT (CONCAT (IMAGEOBJPROP KEYOBJ
(QUOTE STATE)) "CLIP " (DSPCLIPPINGREGION NIL
IMAGE.STREAM) " OFFSETS" (DSPXOFFSET NIL
IMAGE.STREAM) " " (DSPYOFFSET NIL IMAGE.STREAM) " X
AND Y POS " (DSPXPOSITION NIL IMAGE.STREAM) " "
(DSPYPOSITION NIL IMAGE.STREAM)))
(INVERTW IMAGE.STREAM))
(if OFFSETS0?
then (BITBLT BITMAP NIL NIL IMAGE.STREAM 0 0 NIL NIL SOURCETYPE (QUOTE REPLACE))
else (BITBLT BITMAP NIL NIL IMAGE.STREAM (DSPXPOSITION NIL IMAGE.STREAM)
(DSPYPOSITION NIL IMAGE.STREAM)
NIL NIL SOURCETYPE (QUOTE REPLACE))))))
(ERROR "NO OTHER STREAMS DEFINED FOR KEYOBJ.DISPLAYFN"]])

(KEYOBJ.GETFN

(* gbn "27-Jan-85 23:36")

[LAMBDA (INPUT.STREAM TEXTSTREAM)

(* * just reads the keyname and calls keyobj.create)

(KEYOBJ.CREATE (READ INPUT.STREAM)
(READ INPUT.STREAM])

(KEYOBJ.IMAGEBOXFN

(* gbn "9-Jan-85 21:35")

[LAMBDA (KEYOBJ IMAGE.STREAM CURRENT.X RIGHT.MARGIN)

(* * since all keyobjs have constant dimensions, they are cached as the imagebox prop)

(IMAGEOBJPROP KEYOBJ (QUOTE IMAGEBOX])

(KEYOBJ.IMAGESTREAMTYPE

(* gbn "13-May-84 12:38")

(* hack until imagestreamtype works)

[LAMBDA (STREAM)

(if (STKPOS (QUOTE TEDIT.HARDCOPY))
then (QUOTE INTERPRESS)
else (QUOTE DISPLAY])

(KEYOBJ.INSTALL.BITMAP

(* edited: "18-Jan-85 18:52")

[LAMBDA (KEYOBJ)

{MEDLEY}<lispusers>KEYOBJ.;1

```
"MF@@@@@@@@@@@@@@@@@DC" "NJ@@@@@@@@@@@@@@@@@DC" "MF@@@@@@@@@@@@@@@@@DC" "NK@@@@@@@@@@@@@@@@@LC"
"ME@@@@@@@@@@@@@@@@@HC" "NKH@@@@@@@@@@@@@@@@@AC" "OBN@@@@@@@@@@@@@@@@@GHG" "NDKOOOOOOOOOOONLG"
"OIAEEEEEEEEEEEEEEFG" "OBBJJJJJJJJJJJKO" "OLEEEEEEEEEEEEEEEEO" "ONBJJJJJJJJJJJOO"
"OOOOOOOOOOOOOOOOO" "OOOOOOOOOOOOOOOOO")
```

(PUTPROPS **KEYOBJ COPYRIGHT** ("Xerox Corporation" 1985))

FUNCTION INDEX

KEYOBJ.BUTTONEVENTINFN ..1	KEYOBJ.DISPLAYFN2	KEYOBJ.IMAGESTREAMTYPE ..2	KEYOBJ.WHENOPERATEDONFN .3
KEYOBJ.COPYFN1	KEYOBJ.GETFN2	KEYOBJ.INSTALL.BITMAP ...2	TYPEA3
KEYOBJ.CREATE2	KEYOBJ.IMAGEBOXFN2	KEYOBJ.PUTFN3	

VARIABLE INDEX

KEYOBJ.FONT3	KEYOBJ.IMAGEFNS3	KEYOBJ.TEMPLATE3
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