

File created: 6-Jul-2023 16:23:12 {WMEDLEY}<library>KEYBOARDEDITOR.;3

edit by: rmk

changes to: (FNS VKBD.EDIT.CREATE-CHARACTERS-MENU)

previous date: 25-May-95 14:32:35 {WMEDLEY}<library>KEYBOARDEDITOR.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

;;
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(RPAQQ KEYBOARDEDITORCOMS

((FILES VIRTUALKEYBOARDS)

(COMS

;; Editor for Configurations -- the description of the physical key layout, which keys are assignable, etc.

(FNS EDITCONFIGURATION VKBD.CONF.CHANGE-KEY-VALUE VKBD.CONF.DISPLAY-FIELD-VALUE
VKBD.CONF.DISPLAY-INFO-KEYBOARD VKBD.CONF.DISPLAY-KEY-INFO VKBD.CONF.EDIT-DEFAULT-ASSIGNMENTS
VKBD.CONF.ICONFN VKBD.CONF.PARSE-CONFIGURATION)
(BITMAPS VKBD.CONF.ICON))

;; EEditor for keyboard layouts per se:

(FNS EDITKEYBOARD VKBD.EDIT.ADD-SUBITEM-TO-BACKGROUND-MENU VKBD.EDIT.CREATE-COMMAND-MENU
VKBD.EDIT.CREATE-NON-CHAR-ASSIGMENTS-MENU VKBD.EDIT.KEYBOARD-COMMAND VKBD.EDIT.ASSIGN-CHARACTER
VKBD.EDIT.ASSIGN-NON-CHARACTER VKBD.EDIT.CREATE-CHARACTER-SETS-MENU
VKBD.EDIT.CREATE-CHARACTERS-MENU VKBD.EDIT.CREATE-DISPLAY VKBD.EDIT.DEFINE-COMMAND
VKBD.EDIT.DO-MENU-COMMAND VKBD.EDIT.ICONFN VKBD.EDIT.INVERT-IF-LOCKED VKBD.EDIT.KEYBOARD-REPAINTFN
VKBD.EDIT.LARGE-WINDOW-REPAINTFN VKBD.EDIT.MAKE-CURRENT-KEY VKBD.EDIT.QUIT-COMMAND
VKBD.EDIT.STOP-COMMAND VKBD.EDIT.SWITCH-CHAR-SET-COMMAND VKBD.EDIT.SWITCH-CHARACTER-SET
VKBD.EDIT.ROTATED-NUMBER)

(INITVARS (VKBD.EDIT.ALLOW-NON-CHAR-ASSIGNMENTS T)

(VKBD.EDIT.MAX-NUMBER-OF-CASHED-MENUS 15)

(VKBD.EDITOR-WINDOW-HEIGHT 450)

(VKBD.EDITOR-WINDOW-WIDTH 512)

(VKBD.EDIT.DISPLAY-CHAR-SETS-NAMES T))

(VARS VKBD.EDIT.BACKGROUND-MENU-SUBITEMS (VKBD.EDIT.CASH-MENUES NIL)

VKBD.EDIT.CHAR-SET-NAMES VKBD.EDIT.MENU-ITEMS VKBD.EDIT.NON-CHAR-ASSIGNMENTS)

(BITMAPS VKBD.EDIT.ICON VKBD.EDIT.MASK)

(GLOBALVARS VKBD.EDIT.ALLOW-NON-CHAR-ASSIGNMENTS VKBD.EDIT.BACKGROUND-MENU-SUBITEMS

VKBD.EDIT.MAX-NUMBER-OF-CASHED-MENUS VKBD.EDITOR-WINDOW-HEIGHT VKBD.EDITOR-WINDOW-WIDTH

VKBD.EDIT.DISPLAY-CHAR-SETS-NAMES VKBD.EDIT.CASH-MENUES VKBD.EDIT.CHAR-SET-NAMES

VKBD.EDIT.MENU-ITEMS VKBD.EDIT.NON-CHAR-ASSIGNMENTS VKBD.CONF.ICON VKBD.EDIT.ICON VKBD.EDIT.MASK)

(P (VKBD.EDIT.ADD-SUBITEM-TO-BACKGROUND-MENU (LIST "Edit" ' (ADD.PROCESS ' (VKBD.EDIT-KEYBOARD-COMMAND
T))

"Calls the keyboard editor. Will prompt for name for
the new keyboard, and will use the default keyboard
as the initial keyboard"
VKBD.EDIT.BACKGROUND-MENU-SUBITEMS)

"Keyboard"))))

(FILESLOAD VIRTUALKEYBOARDS)

;; Editor for Configurations -- the description of the physical key layout, which keys are assignable, etc.

(DEFINEQ

(EDITCONFIGURATION

[LAMBDA (CONFIGNAME)

; Edited 30-Jun-87 10:03 by jds

;; Edit a keyboard configuration, given the config's name or a handle on the config somehow.

(VKBD.CONF.DISPLAY-INFO-KEYBOARD CONFIGNAME))

(VKBD.CONF.CHANGE-KEY-VALUE

[LAMBDA (ITEM MENU MOUSEKEY)

(* sm "14-Aug-85 18:05")

(PROG (MAINW CONF WINDOW PROMPTW KEY)

(SETQ WINDOW (WFROMMENU MENU))

[SETQ PROMPTW (CAR (WINDOWPROP WINDOW 'PROMPTWINDOW)

(SETQ MAINW (MAINWINDOW WINDOW T))

(SETQ CONF (VKBD.GET-CONFIGURATION MAINW))

(SETQ KEY (WINDOWPROP MAINW 'VKBD.CONF.CURRENT-KEY))

(SELECTQ (CADR ITEM)

(KEYID (PROG (NEW)

(SETQ NEW (CAR (TTYINEDIT (LIST KEY)

PROMPTW NIL "Enter new ID :"))

(DSUBST NEW KEY CONF)

(WINDOWPROP MAINW 'VKBD.CONF.CURRENT-KEY NEW)

(SETQ KEY NEW)))

(REGIONS (PROG (CURRENT-REGIONS NEW-REGIONS)

(SETQ CURRENT-REGIONS (FASSOC KEY (fetch (KEYBOARDCONFIGURATION KEYREGIONS)
of CONF)))

(VKBD.CONF.DISPLAY-FIELD-VALUE

```

[LAMBDA (KEY FIELD CONF WINDOW MENU)
  (PROG (X Y)
    [for ITEM in (fetch ITEMS of MENU) when (EQ (CADR ITEM)
                                                    FIELD)
      do (SETQ Y (fetch (REGION BOTTOM) of (MENUITEMREGION ITEM MENU))
        (SETQ X (IPLUS (fetch MENUREGIONLEFT of MENU)
                        (fetch IMAGEWIDTH of MENU)
                        5))
        (DSPFILL (CREATEREGION X Y (IDIFFERENCE (fetch (REGION WIDTH) of (WINDOWPROP WINDOW 'REGION))
                                                  Y)
                  (fetch ITEMHEIGHT of MENU)))
        (DSPTEXTURE NIL WINDOW)
        'REPLACE WINDOW)
      (MOVETO X Y WINDOW)
      (PRIN1 (SELECTQ FIELD
                        (KEYID KEY)
                        (REGIONS (VKBD.GET-KEY-REGIONS KEY CONF))
                        (DEFAULT (CDR (VKBD.FETCH-KEY-ASSIGNMENT KEY (MAINWINDOW WINDOW))))
                        (NAMES (VKBD.KEY-ID-TO-KEY-NAMES KEY CONF))
                        (LABEL (CADR (FASOC KEY (fetch (KEYBOARDCONFIGURATION KEYLABELS) of CONF))))
                        (ASSIGNABLE (if (FMEMB KEY (fetch (KEYBOARDCONFIGURATION ASSIGNABLEKEYS) of CONF))
                                       then T
                                       else NIL))
                        (PROMPTPRINT "ILLEGAL FIELD VALUE FOR DISPLAY CONFIGURATION FIELD VALUE!")
                        WINDOW))
  )

```

```

[LAMBDA (CONFIGURATION)
  (PROG (WINDOW ATT-WINDOW MENU VALIDATED-CONFIG)
    (COND
      ((NOT (SETQ VALIDATED-CONFIG (VKBD.GET-CONFIGURATION CONFIGURATION))))
      ;; Make sure the configuration name is legit.
      (ERROR CONFIGURATION "is not the name of a known keyboard configuration.)))
    (SETQ WINDOW (VKBD.CREATE-KEYBOARD-DISPLAY (VKBD.CREATE-DEFAULT-KEYBOARD VALIDATED-CONFIG)
      NIL
      'VKBD.CONF.DISPLAY-KEY-INFO NIL T)))

```

```

(SETQ MENU (create MENU
  ITEMS _ ' ("Key ID" KEYID)
            ("Key regions" REGIONS)
            ("Default assignment" DEFAULT)
            ("Key names" NAMES)
            ("Key Label" LABEL)
            ("Assignable?" ASSIGNABLE))
  MENUBORDERSIZE _ 0
  MENUOUTLINESIZE _ 0
  MENUFONT _ BOLDFONT
  WHENSELECTEDFN _ 'VKBD.CONF.CHANGE-KEY-VALUE))
(SETQ ATT-WINDOW (CREATEW (CREATEREGION 0 0 (fetch (REGION WIDTH) of (WINDOWPROP WINDOW 'REGION))
  (IPLUS 10 (fetch IMAGEHEIGHT of MENU)))
  NIL NIL T))
(ATTACHWINDOW ATT-WINDOW WINDOW 'TOP 'JUSTIFY)
(OPENW ATT-WINDOW)
(ADDMENU MENU ATT-WINDOW (create POSITION
  XCOORD _ 0
  YCOORD _ 0))
(GETPROMPTWINDOW ATT-WINDOW 2 BOLDFONT)
(WINDOWPROP WINDOW 'ICONFN 'VKBD.CONF.ICONFN))

```

(VKBD.CONF.DISPLAY-KEY-INFO

(* sm "14-Aug-85 15:38")

```

[LAMBDA (KEY WINDOW MOUSEKEY)
  (PROG (CONFIGURATION OLD-KEY ATT-WINDOW)
    (if (SETQ OLD-KEY (WINDOWPROP WINDOW 'VKBD.CONF.CURRENT-KEY))
      then (VKBD.ERASE-FRAME OLD-KEY WINDOW 2))
    (WINDOWPROP WINDOW 'VKBD.CONF.CURRENT-KEY KEY)
    (VKBD.FRAME-KEY KEY WINDOW BLACKSHADE 2)
    (SETQ CONFIGURATION (VKBD.GET-CONFIGURATION WINDOW))
    (SETQ ATT-WINDOW (CAR (ATTACHEDWINDOWS WINDOW)))
    (for F in ' (KEYID REGIONS DEFAULT NAMES LABEL ASSIGNABLE)
      do (VKBD.CONF.DISPLAY-FIELD-VALUE KEY F CONFIGURATION ATT-WINDOW (CAR (WINDOWPROP ATT-WINDOW
        'MENU))

```

(VKBD.CONF.EDIT-DEFAULT-ASSIGNMENTS

(* sm "15-Aug-85 10:25")

```

[LAMBDA (CONFIGURATION)
  (PROG (DUMMY-CONFIGURATION DUMMY-KEYBOARD)
    (SETQ CONFIGURATION (VKBD.GET-CONFIGURATION CONFIGURATION))
    (SETQ DUMMY-CONFIGURATION (COPY CONFIGURATION))
    (replace (KEYBOARDCONFIGURATION ASSIGNABLEKEYS) of DUMMY-CONFIGURATION with (fetch (KEYBOARDCONFIGURATION
      KEYSIDLIST)
      of DUMMY-CONFIGURATION))
    (replace (KEYBOARDCONFIGURATION KEYLABELS) of DUMMY-CONFIGURATION with NIL)
    (SETQ DUMMY-KEYBOARD (create VIRTUALKEYBOARD
      KEYBOARDNAME _ "DEFAULT ASIGNMENTS"
      KEYASSIGNMENTS _ (fetch (KEYBOARDCONFIGURATION DEFAULTASSIGNMENT)
        of CONFIGURATION)
      KEYBOARDCONFIGURATION _ DUMMY-CONFIGURATION))
    (EDITKEYBOARD DUMMY-KEYBOARD)
    (replace (KEYBOARDCONFIGURATION DEFAULTASSIGNMENT) of CONFIGURATION with (fetch (VIRTUALKEYBOARD
      KEYASSIGNMENTS)
      of DUMMY-KEYBOARD]))

```

(VKBD.CONF.ICONFN

(* sm "15-Aug-85 11:02")

```

[LAMBDA (WINDOW ICON)
  [COND
    ((NULL ICON)
      (SETQ ICON (TITLEDICONW (create TITLEDICON
        ICON _ VKBD.CONF.ICON
        MASK _ VKBD.EDIT.MASK
        TITLEREG _ (CREATEREGION 5 15 80 75))
        (CONCAT "EDIT CONFIGURATION: " (fetch (KEYBOARDCONFIGURATION CONFIGURATIONNAME)
          of (VKBD.GET-CONFIGURATION WINDOW)))
        (FONTCREATE 'GACHA 8]
    (ICON]))

```

(VKBD.CONF.PARSE-CONFIGURATION

(* sm "5-Aug-85 17:05")

```

[LAMBDA (CONFIGURATION)
  (PROG (ERROR-FLAG REGS IDS)
    (SETQ CONFIGURATION (VKBD.GET-CONFIGURATION CONFIGURATION))
    (if (NULL CONFIGURATION)
      then (PRINTOUT T T CONFIGURATION " NOT A CONFIGURATION. ")
      (RETURN NIL))
    (SETQ IDS (fetch (KEYBOARDCONFIGURATION KEYSIDLIST) of CONFIGURATION))
    (SETQ REGS (fetch (KEYBOARDCONFIGURATION KEYREGIONS) of CONFIGURATION))
    (if (NULL IDS)
      then (PRINTOUT T T "Null Id list. ")
      (RETURN NIL))
    (if (LESSP (LENGTH REGS)
      (LENGTH IDS))
      then (PRINTOUT T T "KEYS WITHOUT REGIONS : ")
      (for K in IDS when (NOT (FASSOC K REGS)) do (PRINTOUT T " " K))

```

```

      (SETQ ERROR-FLAG T))
    (for R in REGS do (for R1 in (CDR R) when (NOT (REGIONP R1)) DO (SETQ ERROR-FLAG T)
      (PRINTOUT T T "KEY : " (CAR R)
        " -- " R1 " NOT A REGION"))))
    (for KEY in (fetch (KEYBOARDCONFIGURATION ASSIGNABLEKEYS) of CONFIGURATION)
      when (NOT (FMEMB KEY IDS)) do (SETQ ERROR-FLAG T)
        (PRINTOUT T T "KEY : " KEY " IS IN THE ASSIGNABLE KEYS BUT NOT IN KEY
          IDS"))
    (for ASS in (fetch (KEYBOARDCONFIGURATION DEFAULTASSIGNMENT) of CONFIGURATION)
      when (NOT (FMEMB (CAR ASS)
        IDS))
      do (SETQ ERROR-FLAG T)
        (PRINTOUT T T "KEY : " (CAR ASS)
          " HAS ASSIGNMENT BUT IS NOT IN ID LIST"))
    (for ID in IDS when (NOT (FASSOC ID (fetch (KEYBOARDCONFIGURATION DEFAULTASSIGNMENT) of CONFIGURATION)))
      do (SETQ ERROR-FLAG T)
        (PRINTOUT T T "KEY : " ID " DOES NOT HAVE ASSIGNMENT."))
    (RETURN (NOT ERROR-FLAG))
  )

```

(RPAQQ VKBD.CONF.ICON



;; EEditor for keyboard layouts per se:

(DEFINEQ

(EDITKEYBOARD

```

  [LAMBDA (KEYBOARD SOURCE-KEYBOARD CONFIGURATION-NAME)
    ; Edited 25-May-95 14:22 by rmk:
    ; * sm " 1-Aug-85 17:55"
    (PROG (VKBD.EDIT-WINDOW CURRENT-EVENT KEYBOARD-TO-EDIT COMPLETE-KEYBOARD)
      (COND
        ((NULL KEYBOARD)
          (RETURN NIL)))
      (IF (LITATOM KEYBOARD)
        THEN (SETQ KEYBOARD-TO-EDIT (FINDVIRTUALKEYBOARD KEYBOARD CONFIGURATION-NAME))
        (IF (NULL KEYBOARD-TO-EDIT)
          THEN [IF (AND (NULL SOURCE-KEYBOARD)
            CONFIGURATION-NAME)
            THEN (SETQ KEYBOARD-TO-EDIT (VKBD.CREATE-DEFAULT-KEYBOARD CONFIGURATION-NAME))
            ELSE [SETQ KEYBOARD-TO-EDIT (COPY (IF (AND SOURCE-KEYBOARD (ATOM SOURCE-KEYBOARD)
              )
              THEN (FASSOC SOURCE-KEYBOARD
                VKBD.KNOWN-KEYBOARDS]
            (IF (NULL KEYBOARD-TO-EDIT)
              THEN (SETQ KEYBOARD-TO-EDIT (COPY (FASSOC 'DEFAULT VKBD.KNOWN-KEYBOARDS
                ]
              (REPLACE KEYBOARDNAME OF KEYBOARD-TO-EDIT WITH KEYBOARD))
            ELSE (SETQ KEYBOARD-TO-EDIT KEYBOARD))
        (SETQ VKBD.EDIT-WINDOW (VKBD.EDIT.CREATE-DISPLAY KEYBOARD-TO-EDIT))
        (WINDOWPROP VKBD.EDIT-WINDOW 'VKBD.KEYBOARD (COPY KEYBOARD-TO-EDIT))
        (WINDOWPROP VKBD.EDIT-WINDOW 'VKBD.ORIGINAL-KEYBOARD KEYBOARD-TO-EDIT)
        (WINDOWPROP VKBD.EDIT-WINDOW 'VKBD.EDITOR-RETURN-EVENT (SETQ CURRENT-EVENT (CREATE.EVENT "VKBD.EDIT"))
        )
        (AWAIT.EVENT CURRENT-EVENT)
        (CLOSEW VKBD.EDIT-WINDOW)
        (RETURN (WINDOWPROP VKBD.EDIT-WINDOW 'VKBD.KEYBOARD]))

```

(VKBD.EDIT.ADD-SUBITEM-TO-BACKGROUND-MENU

(* sm "15-Aug-85 14:14")

```

  [LAMBDA (SUBITEM MAINITEMLABEL)
    (PROG (MAINITEM OLD)
      (SETQ MAINITEM (SASSOC MAINITEMLABEL BackgroundMenuCommands))
      [COND
        (MAINITEM (COND
          [(AND (CDDDR MAINITEM)
            (EQ (CAR (CADDR MAINITEM))
              'SUBITEMS))
            (COND
              ((SETQ OLD (SASSOC (CAR SUBITEM)
                (CADDR MAINITEM)))
                (RPLACD OLD (CDR SUBITEM)))
              (T (NCONC1 (CADDR MAINITEM)
                SUBITEM]
            (T (RPLACD (CDDR MAINITEM)
              (LIST (LIST 'SUBITEMS SUBITEM]

```

(SETQ BackgroundMenu NIL)]

(VKBD.EDIT.CREATE-COMMAND-MENU

(* sm "1-Aug-85 17:22")

```
[LAMBDA NIL
  (create MENU
    ITEMS _ VKBD.EDIT.MENU-ITEMS
    MENUFONT _ (FONTCREATE 'HELVETICA 12 'BOLD)
    CENTERFLG _ T
    MENUROWS _ 1
    WHENSELECTEDFN _ 'VKBD.EDIT.DO-MENU-COMMAND])
```

(VKBD.EDIT.CREATE-NON-CHAR-ASSIGMENTS-MENU

(* sm "13-Aug-85 11:09")

```
[LAMBDA NIL
  (create MENU
    ITEMS _ VKBD.EDIT.NON-CHAR-ASSIGNMENTS
    MENUFONT _ (FONTCREATE 'GACHA 8)
    MENUROWS _ (ADD1 (QUOTIENT (SUB1 (LENGTH VKBD.EDIT.NON-CHAR-ASSIGNMENTS))
                               4))
    CENTERFLG _ T
    WHENSELECTEDFN _ 'VKBD.EDIT.ASSIGN-CHARACTER])
```

(VKBD.EDIT-KEYBOARD-COMMAND

(* sm "14-Aug-85 15:11")

```
[LAMBDA (NEW-KEYBOARD? ASK-FOR-INITIAL?)
  (PROG (NEW-NAME KEYBOARD INITIAL-KEYBOARD)
    (if (NOT NEW-KEYBOARD?)
      then (SETQ KEYBOARD (VKBD.POP-UP-KEYBOARDS-MENU "Select the keyboard that you want to edit"))
      (if KEYBOARD
        then (if (EQ KEYBOARD 'DEFAULT)
                  then (PROMPTPRINT "Can not edit the default keyboard.")
                  else (EDITKEYBOARD KEYBOARD)))
        else [SETQ NEW-NAME (MKATOM (PROMPTFORWARD "Enter name for new keyboard : " NIL NIL PROMPTWINDOW NIL
                                                  'TTY])
              (if NEW-NAME
                then (if ASK-FOR-INITIAL?
                        then (SETQ INITIAL-KEYBOARD (VKBD.POP-UP-KEYBOARDS-MENU "Select the keyboard to be
                                                                 used as initial keyboard for the editing"))
                        (if INITIAL-KEYBOARD
                          then (EDITKEYBOARD NEW-NAME INITIAL-KEYBOARD))
                          else (EDITKEYBOARD NEW-NAME 'DEFAULT]))
                else (EDITKEYBOARD NEW-NAME 'DEFAULT]))
```

(VKBD.EDIT.ASSIGN-CHARACTER

(* sm "15-Aug-85 10:02")

```
[LAMBDA (ITEM MENU MOUSE-KEY)
  (PROG (WINDOW KEY SHIFTED CURRENT-KEY-INFO KEY-ASSIGNMENT KEYBOARD)
    (SETQ WINDOW (MAINWINDOW (WFROMMENU MENU)
                              T))
    (SETQ KEYBOARD (WINDOWPROP WINDOW 'VKBD.KEYBOARD))
    (SETQ CURRENT-KEY-INFO (WINDOWPROP WINDOW 'VKBD.CURRENT-KEY))
    (if CURRENT-KEY-INFO
      then (SETQ KEY (CAR CURRENT-KEY-INFO))
            (SETQ SHIFTED (CADR CURRENT-KEY-INFO))
            (SETQ KEY-ASSIGNMENT (VKBD.FETCH-KEY-ASSIGNMENT KEY WINDOW))
            [if (AND VKBD.EDIT.ALLOW-NON-CHAR-ASSIGNMENTS (MEMBER ITEM VKBD.EDIT.NON-CHAR-ASSIGNMENTS))
              then (VKBD.EDIT.ASSIGN-NON-CHARACTER KEY-ASSIGNMENT ITEM)
              else (if (NULL KEY-ASSIGNMENT)
                        then (replace (VIRTUALKEYBOARD KEYASSIGNMENTS) of KEYBOARD
                                      with (CONS (LIST KEY (LIST (CADR ITEM)
                                                                (CADR ITEM)
                                                                'NOLOCKSHIFT)))
                                      (fetch (VIRTUALKEYBOARD KEYASSIGNMENTS) of KEYBOARD)))
                        else (RPLACD (CDR KEY-ASSIGNMENT)
                                      NIL)
                        (if (OR (NULL (CDR KEY-ASSIGNMENT))
                              (ATOM (CADR KEY-ASSIGNMENT)))
                          then [RPLACD KEY-ASSIGNMENT (LIST (LIST (CADR ITEM)
                                                                    (CADR ITEM)
                                                                    'NOLOCKSHIFT))
                        else (if SHIFTED
                              then (RPLACA (CDADR KEY-ASSIGNMENT)
                                             (CADR ITEM))
                              else (RPLACA (CADR KEY-ASSIGNMENT)
                                             (CADR ITEM))
                        (VKBD.DISPLAY-KEY KEY WINDOW)
                        else (FLASHWINDOW PROMPTWINDOW)
                        (PRINTOUT PROMPTWINDOW T "There is no current selected key. Character was not assigned."))
```

(VKBD.EDIT.ASSIGN-NON-CHARACTER

(* sm "13-Aug-85 10:16")

```
[LAMBDA (KEY-ASSIGNMENT NEW-ASSIGNMENT)
  (RPLACD KEY-ASSIGNMENT (SELECTQ NEW-ASSIGNMENT
    (SHIFT ' (1SHIFTDOWN . 1SHIFTUP))
    (CTRL ' (CTRLDOWN . CTRLUP))
    (META ' (METADOWN . METAUP))
    (LOCK ' (LOCKDOWN . LOCKUP))
```

```

(LOCKDOWN ' (LOCKDOWN))
(LOCKUP ' (LOCKUP))
(EVENT ' (EVENT . EVENT))
NIL])

```

(VKBD.EDIT.CREATE-CHARACTER-SETS-MENU

(* sm "15-Aug-85 12:13")

```

[LAMBDA NIL
  (if VKBD.EDIT.DISPLAY-CHAR-SETS-NAMES
    then [create MENU
      ITEMS _ VKBD.EDIT.CHAR-SET-NAMES
      MENUFONT _ BIGFONT
      ITEMWIDTH _ (ITIMES 29 16)
      ITEMHEIGHT _ (ADD1 (IQUOTIENT (ITIMES 25 16)
                                     (LENGTH VKBD.EDIT.CHAR-SET-NAMES)]
    else (create MENU
      ITEMS _ (for I from 1 to 256 bind ROTATED-I collect (PROGN (SETQ ROTATED-I
                                                                    (SUB1 (VKBD.EDIT.ROTATED-NUMBER I 16
                                                                    16)))
                                                                    (LIST (OCTALSTRING ROTATED-I)
                                                                    ROTATED-I)))
      MENUCOLUMNS _ 16
      CENTERFLG _ T
      ITEMHEIGHT _ 25
      ITEMWIDTH _ 29])

```

(VKBD.EDIT.CREATE-CHARACTERS-MENU; Edited 6-Jul-2023 16:23 by rmk
(* sm "15-Aug-85 12:15")

```

[LAMBDA (CHAR-SET-NUMBER FONT)
  (PROG (EXISTING-MENU-INFO NEW-MENU)
    [SETQ EXISTING-MENU-INFO (for CHARSET-FONT-MENU in VKBD.EDIT.CASH-MENUES
      thereis (AND (EQP (CAR CHARSET-FONT-MENU)
                        CHAR-SET-NUMBER)
                    (EQ (CADR CHARSET-FONT-MENU)
                        FONT]
    (if EXISTING-MENU-INFO
      then (RETURN (CADDR EXISTING-MENU-INFO)))
    (PRINTOUT PROMPTWINDOW T "Retrieving bitmaps for character set " (OCTALSTRING CHAR-SET-NUMBER))
    (SETQ NEW-MENU (create MENU
      ITEMS _ (for I from 0 to 255 bind CODE bind ROTATED-I
        collect (SETQ ROTATED-I (SUB1 (VKBD.EDIT.ROTATED-NUMBER (ADD1 I)
                                                                    16 16)))
        (SETQ CODE (LOGOR (LLSH CHAR-SET-NUMBER 8)
                          I))
        (LIST (GETCHARBITMAP CODE FONT)
              CODE))
      MENUCOLUMNS _ 16
      CENTERFLG _ T
      ITEMHEIGHT _ 25
      ITEMWIDTH _ 29
      WHENSELECTEDFN _ 'VKBD.EDIT.ASSIGN-CHARACTER))
    (PROMPTPRINT "... Done. ")
    (push VKBD.EDIT.CASH-MENUES (LIST CHAR-SET-NUMBER FONT NEW-MENU))
    (if (GREATERP (LENGTH VKBD.EDIT.CASH-MENUES)
                  VKBD.EDIT.MAX-NUMBER-OF-CASHED-MENUES)
      then (RPLACD (LAST VKBD.EDIT.CASH-MENUES)
                   NIL))
    (RETURN NEW-MENU])

```

(VKBD.EDIT.CREATE-DISPLAY; Edited 25-May-95 14:07 by rmk:
(* sm "13-Aug-85 12:37")

```

[LAMBDA (KEYBOARD)
  (PROG (WINDOW LARGE-WINDOW BM WPOS REGION-WIDTH REGION-HEIGHT NON-CHAR-WINDOW COMMAND-MENU NON-CHAR-MENU)
    (SETQ BM (VKBD.CREATE-KEYBOARD-BITMAP (fetch (VIRTUALKEYBOARD KEYBOARDCONFIGURATION) of KEYBOARD)))
    (if VKBD.EDIT.ALLOW-NON-CHAR-ASSIGNMENTS
      then (SETQ NON-CHAR-MENU (VKBD.EDIT.CREATE-NON-CHAR-ASSIGMENTS-MENU)))
    (SETQ COMMAND-MENU (VKBD.EDIT.CREATE-COMMAND-MENU))
    [SETQ REGION-WIDTH (MAX VKBD.EDITOR-WINDOW-WIDTH (IPLUS 8 (BITMAPWIDTH BM)
    (SETQ REGION-HEIGHT (MIN SCREENHEIGHT (IPLUS (fetch IMAGEHEIGHT of COMMAND-MENU)
    (if VKBD.EDIT.ALLOW-NON-CHAR-ASSIGNMENTS
      then (fetch IMAGEHEIGHT of NON-CHAR-MENU)
      else 0)
    (BITMAPHEIGHT BM)
    VKBD.EDITOR-WINDOW-HEIGHT 20)))
    (SETQ WPOS (GETBOXPOSITION REGION-WIDTH REGION-HEIGHT NIL NIL NIL "Specify region for Keyboard Editor
    window"))
    (SETQ WINDOW (VKBD.CREATE-KEYBOARD-DISPLAY KEYBOARD WPOS 'VKBD.EDIT.MAKE-CURRENT-KEY BM T))
    (WINDOWPROP WINDOW 'REPAINTFN 'VKBD.EDIT.KEYBOARD-REPAINTFN)
    (WINDOWPROP WINDOW 'ICONFN 'VKBD.EDIT.ICONFN)
    (SETQ LARGE-WINDOW (CREATEW (CREATEREGION 0 0 VKBD.EDITOR-WINDOW-WIDTH VKBD.EDITOR-WINDOW-HEIGHT)
    (CONCAT "Edit of Keyboard : " (fetch (VIRTUALKEYBOARD KEYBOARDNAME)
    of KEYBOARD)
    " for "
    (fetch (VIRTUALKEYBOARD KEYBOARDCONFIGURATION) of KEYBOARD))
    NIL T))

```

```

(WINDOWPROP LARGE-WINDOW 'CLOSEFN 'VKBD.EDIT.STOP-COMMAND)
(ATTACHWINDOW LARGE-WINDOW WINDOW 'TOP 'CENTER)
(if VKBD.EDIT.ALLOW-NON-CHAR-ASSIGNMENTS
  then (ATTACHMENU NON-CHAR-MENU LARGE-WINDOW 'TOP 'JUSTIFY))
(OPENW LARGE-WINDOW)
(WINDOWPROP LARGE-WINDOW 'RESHAPEFN 'DON'T)
(ATTACHMENU COMMAND-MENU LARGE-WINDOW 'TOP 'JUSTIFY)
(WINDOWPROP WINDOW 'VKBD.CHAR-SET-MENU (VKBD.EDIT.CREATE-CHARACTER-SETS-MENU))
(VKBD.EDIT.LARGE-WINDOW-REPAINTFN LARGE-WINDOW)
(VKBD.EDIT.SWITCH-CHARACTER-SET 0 LARGE-WINDOW)
(WINDOWADDPROP LARGE-WINDOW 'REPAINTFN 'VKBD.EDIT.LARGE-WINDOW-REPAINTFN)
(RETURN WINDOW])

```

(VKBD.EDIT.DEFINE-COMMAND

```

[LAMBDA (WINDOW) (* sm "5-Aug-85 09:26")
  (DEFINEKEYBOARD (WINDOWPROP WINDOW 'VKBD.KEYBOARD))
  (PRINTOUT PROMPTWINDOW "Keyboard " (fetch (VIRTUALKEYBOARD KEYBOARDNAME) of (WINDOWPROP WINDOW
                                                                                   'VKBD.KEYBOARD))
    " was added to the set of known keyboards."])

```

(VKBD.EDIT.DO-MENU-COMMAND

```

[LAMBDA (ITEM MENU KEY) (* sm "1-Aug-85 17:34")
  (APPLY* (CADR ITEM)
    (MAINWINDOW (WFROMMENU MENU)
      T])

```

(VKBD.EDIT.ICONFN

```

[LAMBDA (WINDOW ICON) (* sm "15-Aug-85 11:10")
  [COND
    ((NULL ICON)
      (SETQ ICON (TITLEDICONW (create TITLEDICON
                                      ICON _ VKBD.EDIT.ICON
                                      MASK _ VKBD.EDIT.MASK
                                      TITLEREG _ (CREATEREGION 5 25 80 65))
        [CONCAT "EDIT KEYBOARD: " (fetch (VIRTUALKEYBOARD KEYBOARDNAME)
                                          of (WINDOWPROP WINDOW 'VKBD.KEYBOARD)
        (FONTCREATE 'GACHA 8]
      ICON])

```

(VKBD.EDIT.INVERT-IF-LOCKED

```

[LAMBDA (KEY WINDOW) (* sm "13-Aug-85 10:01")
  (PROG (KEY-ASSIGNMENT)
    (SETQ KEY-ASSIGNMENT (VKBD.FETCH-KEY-ASSIGNMENT KEY WINDOW))
    (if (AND (VKBD.CHAR-ASSIGNMENTP KEY-ASSIGNMENT)
      (EQ (VKBD.LOCK/NOLOCK KEY-ASSIGNMENT)
        'LOCKSHIFT))
      then (VKBD.INVERT-LOCK-KEYS WINDOW]))

```

(VKBD.EDIT.KEYBOARD-REPAINTFN

```

[LAMBDA (W) (* sm "5-Aug-85 16:12")
  (PROG (CURRENT-KEY)
    (VKBD.KEYBOARD-WINDOW-REPAINTFN W)
    (if (SETQ CURRENT-KEY (WINDOWPROP W 'VKBD.CURRENT-KEY))
      then (VKBD.FRAME-KEY (CAR CURRENT-KEY)
        W BLACKSHADE 2)
      (if (CADR CURRENT-KEY)
        then (VKBD.INVERT-SHIFT-KEYS W))
      (VKBD.EDIT.INVERT-IF-LOCKED (CAR CURRENT-KEY)
        W]))

```

(VKBD.EDIT.LARGE-WINDOW-REPAINTFN

```

[LAMBDA (W) (* sm "13-Aug-85 12:43")
  (for I from 0 to 20 as Y from 390 by -25 do (MOVETO 10 Y W)
    (PRIN1 (OCTALSTRING I)
      W))
  (for I from 0 by 16 to 255 as X from 40 by 29 do (MOVETO X 420 W)
    (PRIN1 (OCTALSTRING I)
      W))

```

(VKBD.EDIT.MAKE-CURRENT-KEY

```

[LAMBDA (KEY WINDOW MOUSEKEY) (* sm "7-Aug-85 17:51")
  (PROG (CURRENT-KEY SHIFTED CURRENT-KEY-ASSIGNMENT CURRENT-KEY-INFO LOCKED)
    (SETQ SHIFTED (WINDOWPROP WINDOW 'VKBD.SHIFT-DOWN))
    (SETQ CURRENT-KEY-INFO (WINDOWPROP WINDOW 'VKBD.CURRENT-KEY))
    (if (VKBD.LOCK-KEYP KEY WINDOW)
      then (if (CADR CURRENT-KEY-INFO)
        then (SETQ CURRENT-KEY-ASSIGNMENT (VKBD.FETCH-KEY-ASSIGNMENT (CAR CURRENT-KEY-INFO)
                                                                                   WINDOW))
        (SETQ LOCKED (EQ (VKBD.LOCK/NOLOCK CURRENT-KEY-ASSIGNMENT)
          'LOCKSHIFT))

```

```

(RPLACA (CDDADR CURRENT-KEY-ASSIGNMENT)
  (if LOCKED
    then 'NOLOCKSHIFT
    else 'LOCKSHIFT))
(VKBD.INVERT-LOCK-KEYS WINDOW))
elseif (VKBD.ASSIGNABLE-KEYP KEY WINDOW)
  then (if CURRENT-KEY-INFO
    then (VKBD.ERASE-FRAME (CAR CURRENT-KEY-INFO)
      WINDOW 2)
    (if (CADR CURRENT-KEY-INFO)
      then (VKBD.INVERT-SHIFT-KEYS WINDOW)
        (VKBD.EDIT.INVERT-IF-LOCKED (CAR CURRENT-KEY-INFO)
          WINDOW)))
    (VKBD.FRAME-KEY KEY WINDOW BLACKSHADE 2)
    (if SHIFTED
      then (VKBD.INVERT-SHIFT-KEYS WINDOW)
        (VKBD.EDIT.INVERT-IF-LOCKED KEY WINDOW))
      (WINDOWPROP WINDOW 'VKBD.CURRENT-KEY (LIST KEY SHIFTED)))

```

(VKBD.EDIT.QUIT-COMMAND

```

[LAMBDA (WINDOW) (* sm " 2-Aug-85 15:12")
  [REPLACE KEYASSIGNMENTS OF (WINDOWPROP WINDOW 'VKBD.ORIGINAL-KEYBOARD) WITH (FETCH KEYASSIGNMENTS
    OF (WINDOWPROP WINDOW 'VKBD.KEYBOARD]
  (NOTIFY.EVENT (WINDOWPROP WINDOW 'VKBD.EDITOR-RETURN-EVENT))

```

(VKBD.EDIT.STOP-COMMAND

```

[LAMBDA (WINDOW) (* sm " 2-Aug-85 13:04")
  (NOTIFY.EVENT (WINDOWPROP (MAINWINDOW WINDOW T)
    'VKBD.EDITOR-RETURN-EVENT))

```

(VKBD.EDIT.SWITCH-CHAR-SET-COMMAND

```

[LAMBDA (MAIN-WINDOW) (* sm " 5-Aug-85 09:28")
  (PROG (LARGE-WINDOW NEW-NUMBER)
    (SETQ LARGE-WINDOW (CAR (ATTACHEDWINDOWS MAIN-WINDOW)))
    [SETQ NEW-NUMBER (MENU (WINDOWPROP MAIN-WINDOW 'VKBD.CHAR-SET-MENU)
      (create POSITION
        XCOORD _ [IPLUS 34 (fetch (REGION LEFT) of (WINDOWPROP LARGE-WINDOW
          'REGION]
        YCOORD _ (IPLUS 9 (fetch (REGION BOTTOM) of (WINDOWPROP LARGE-WINDOW
          'REGION]
      (if NEW-NUMBER
        then (VKBD.EDIT.SWITCH-CHARACTER-SET NEW-NUMBER LARGE-WINDOW))

```

(VKBD.EDIT.SWITCH-CHARACTER-SET

```

[LAMBDA (SET-NUMBER WINDOW) (* sm " 6-Aug-85 14:08")
  (PROG (MENU OLDCURSOR FONT)
    (if (WINDOWPROP WINDOW 'MENU)
      then (DELETEMENU (CAR (WINDOWPROP WINDOW 'MENU))
        NIL WINDOW))
    (WINDOWPROP WINDOW 'TITLE (CONCAT "Character set " (OCTALSTRING SET-NUMBER)))
    [SETQ FONT (FONTCREATE (fetch (KEYBOARDCONFIGURATION KEYBOARDDISPLAYFONT) of (VKBD.GET-CONFIGURATION
      (MAINWINDOW WINDOW]
    (ADDMENU (VKBD.EDIT.CREATE-CHARACTERS-MENU SET-NUMBER FONT)
      WINDOW
      (create POSITION
        XCOORD _ 30
        YCOORD _ 5])

```

(VKBD.EDIT.ROTATED-NUMBER

```

[LAMBDA (NUM ROW-NUM COL-NUM) (* edited%: " 3-Jun-85 12:47")
  (IPLUS (ITIMES (IMOD (SUB1 NUM)
    COL-NUM)
    ROW-NUM)
  (ADD1 (IQUOTIENT (SUB1 NUM)
    COL-NUM]))

```

)

(RPAQ? VKBD.EDIT.ALLOW-NON-CHAR-ASSIGNMENTS T)

(RPAQ? VKBD.EDIT.MAX-NUMBER-OF-CASHED-MENUS 15)

(RPAQ? VKBD.EDITOR-WINDOW-HEIGHT 450)

(RPAQ? VKBD.EDITOR-WINDOW-WIDTH 512)

(RPAQ? VKBD.EDIT.DISPLAY-CHAR-SETS-NAMES T)

(RPAQ? VKBD.EDIT.BACKGROUND-MENU-SUBITEMS

```

(SUBITEMS ("New Keyboard, default initial" ' (ADD.PROCESS ' (VKBD.EDIT-KEYBOARD-COMMAND T))
  "Calls the keyboard editor. Will prompt for name for the new keyboard, and will use the

```



```

        default keyboard as the initial keyboard")
("New keyboard, other initial" '(ADD.PROCESS '(VKBD.EDIT-KEYBOARD-COMMAND T)))
    "Calls the keyboard editor. Will prompt for name for the new keyboard, and will pop up a
    menu of the current known keyboards. The selected one will be used as the initial
    keyboard")
("Existing keyboard" '(ADD.PROCESS '(VKBD.EDIT-KEYBOARD-COMMAND)))
    "Will let you select a keyboard from list of the known keyboards, and will calls the
    keyboard editor on the selected keyboard."))

```

(RPAQQ VKBD.EDIT.CASH-MENUES NIL)

(RPAQQ VKBD.EDIT.CHAR-SET-NAMES

```

(("ASCII/ISO/CCITT Roman Alphabet and Punctuation" 0)
("JIS Symbols 1 - Punctuation and Symbols not in Char set 0" 33)
("JIS Symbols 2 - Punctuation and Symbols not in Char set 0" 34)
("Extended Latin" 35)
("JIS Hiragana" 36)
("JIS Katakana" 37)
("Greek" 38)
("Cyrillic" 39)
("Symbols 3 - Miscellaneous Japanese Symbols" 116)
("General and Technical Symbols 2" 238)
("General and Technical Symbols 1" 239)
("Ligatures, Graphical Entities, and Field Format Symbols" 240)
("Accented Characters" 241)))

```

(RPAQQ VKBD.EDIT.MENU-ITEMS (("CharSet" VKBD.EDIT.SWITCH-CHAR-SET-COMMAND "Pops up a menu of all possible character set number. Selecting one will switch the displayed character set.")

```

    ("Stop" VKBD.EDIT.STOP-COMMAND "Exit from the keyboard editor. Returns the new
    keyboard, but does not modify the original one.")
    ("Quit" VKBD.EDIT.QUIT-COMMAND "Exit from the keyboard editor. Modifies the
    roriginal keyboard and returns it .")
    ("Define" VKBD.EDIT.DEFINE-COMMAND "Adds the edited keyboard in its current state
    to the set of known keyboards."))

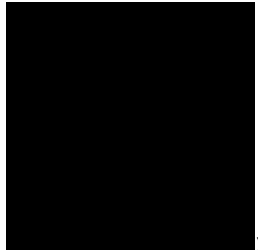
```

(RPAQQ VKBD.EDIT.NON-CHAR-ASSIGNMENTS (SHIFT CTRL META LOCK LOCKDOWN LOCKUP EVENT))

(RPAQQ VKBD.EDIT.ICON



(RPAQQ VKBD.EDIT.MASK



(DECLARE%: DOEVAL@COMPILE DONTCOPY

```

(GLOBALVARS VKBD.EDIT.ALLOW-NON-CHAR-ASSIGNMENTS VKBD.EDIT.BACKGROUND-MENU-SUBITEMS
VKBD.EDIT.MAX-NUMBER-OF-CASHED-MENUS VKBD.EDITOR-WINDOW-HEIGHT VKBD.EDITOR-WINDOW-WIDTH
VKBD.EDIT.DISPLAY-CHAR-SETS-NAMES VKBD.EDIT.CASH-MENUES VKBD.EDIT.CHAR-SET-NAMES VKBD.EDIT.MENU-ITEMS
VKBD.EDIT.NON-CHAR-ASSIGNMENTS VKBD.CONF.ICON VKBD.EDIT.ICON VKBD.EDIT.MASK)

```

(VKBD.EDIT.ADD-SUBITEM-TO-BACKGROUND-MENU (LIST "Edit" '(ADD.PROCESS '(VKBD.EDIT-KEYBOARD-COMMAND T))

```

    "Calls the keyboard editor. Will prompt for name for the new
    keyboard, and will use the default keyboard as the initial
    keyboard" VKBD.EDIT.BACKGROUND-MENU-SUBITEMS)

    "Keyboard")

```

(PUTPROPS KEYBOARDEDITOR COPYRIGHT ("Venue & Xerox Corporation" 1985 1987 1990 1995))

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