

File created: 5-Dec-2020 16:35:15 {DSK}<Users>arunwelch>SKYDRIVE>DOCUMENTS>UNIX>LISP>LDE>ROOM
S>MEDLEY-35>ROOMS-BIOS.;2

previous date: 17-Aug-90 12:31:56 {DSK}<Users>arunwelch>SKYDRIVE>DOCUMENTS>UNIX>LISP>LDE>ROOMS>MEDLEY-35>ROOMS-B
IOS.;1

Read Table: XCL

Package: ROOMS

Format: XCCS

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```
(IL:RPAQQ IL:ROOMS-BIOSCOMS
  ( ;; button image objects
    (IL:FILES (IL:SYSLOAD)
      IL:ROOMS-BUTTONS)
    (FILE-ENVIRONMENTS IL:ROOMS-BIOS)
    (IL:P (EXPORT ' (MAKE-BIO *BIO-SELECTION-BORDER*)
      "ROOMS"))
    (IL:VARIABLES *BIO-SELECTION-BORDER*)
    (IL:FUNCTIONS MAKE-BIO BIO-BUTTON BIO-COPYFN BIO-IMAGEBOXFN BIO-PUTFN IL:BIO-GETFN BIO-DISPLAYFN
      BIO-BUTTONEVENTINFN BIO-BUTTONEVENTINFN-INTERNAL)
    (IL:VARIABLES *BIO-IMAGEFN*))
  ;; button image objects

  (IL:FILESLOAD (IL:SYSLOAD)
    IL:ROOMS-BUTTONS)

  (DEFINE-FILE-ENVIRONMENT IL:ROOMS-BIOS :COMPILER :COMPILE-FILE
    :PACKAGE "ROOMS"
    :READTABLE "XCL")

  (EXPORT ' (MAKE-BIO *BIO-SELECTION-BORDER*)
    "ROOMS")

  (DEFGLOBALVAR *BIO-SELECTION-BORDER* 4
    "Width of mouse-insensitive strip around outside edge of button image objects")

  (DEFUN MAKE-BIO (BUTTON)
    (CHECK-TYPE BUTTON BUTTON)
    (IL:IMAGEOBJCREATE BUTTON *BIO-IMAGEFN*))

  (DEFMACRO BIO-BUTTON (BIO)
    `(IL:IMAGEOBJPROP ,BIO 'IL:OBJECTDATUM))

  (DEFUN BIO-COPYFN (BIO SOURCE DESTINATION)
    (MAKE-BIO (COPY-BUTTON (BIO-BUTTON BIO))))

  (DEFUN BIO-IMAGEBOXFN (BIO IMAGE-STREAM CURRENT-X RIGHT-MARGIN)
    (LET ((BUTTON (BIO-BUTTON BIO))
      (SCALE (IL:DSPSCALE NIL IMAGE-STREAM)))
      (UPDATE-BUTTON BUTTON)
      (IL:create IL:IMAGEBOX
        IL:XSIZE IL:_ (* (BUTTON-WIDTH BUTTON)
          SCALE)
        IL:YSIZE IL:_ (* (BUTTON-HEIGHT BUTTON)
          SCALE)
        IL:YDESC IL:_ (* (IL:FONTDESCENT (TEXT-FONT (BUTTON-TEXT BUTTON)))
          SCALE)
        IL:XKERN IL:_ 0)))

  (DEFUN BIO-PUTFN (BIO FILE-STREAM)
    (LET ((*PRINT-PRETTY* NIL)
      (*PRINT-ARRAY* T)
      (*PRINT-STRUCTURE* T)
      (*PACKAGE* (FIND-PACKAGE "USER"))
      (*PRINT-BASE* 10)
      (*READTABLE* (IL:FIND-READTABLE "LISP")))
      (PRINT (EXTERNALIZE-BUTTON (BIO-BUTTON BIO))
        FILE-STREAM)))

  (DEFUN IL:BIO-GETFN (FILE-STREAM)
    ;; TEdit presumes GETFNs are in package IL. sigh.
    (MAKE-BIO (APPLY #'MAKE-BUTTON (LET ((*PACKAGE* (FIND-PACKAGE "USER"))
```

```

(*READ-BASE* 10)
(*READTABLE* (IL:FIND-READTABLE "LISP"))
(READ FILE-STREAM)))

```

```

(DEFUN BIO-DISPLAYFN (BIO IMAGE-STREAM IMAGE-STREAM-TYPE HOST-STREAM)
  (LET ((BUTTON (BIO-BUTTON BIO)))
    (UPDATE-BUTTON BUTTON)
    (LET* ((WIDTH (BUTTON-WIDTH BUTTON))
           (HEIGHT (BUTTON-HEIGHT BUTTON))
           (SCRATCH (IL:DSPCREATE (IL:BITMAPCREATE WIDTH HEIGHT))))
      ;; this rather crude approach solves lots of scaling & offset problems
      (DISPLAY-BUTTON BUTTON SCRATCH :NO-UPDATE T :WIDTH WIDTH :HEIGHT HEIGHT)
      (IL:BITBLT SCRATCH 0 0 IMAGE-STREAM (IL:DSPXPOSITION NIL IMAGE-STREAM)
        ;; adjust for descent
        (- (IL:DSPYPOSITION NIL IMAGE-STREAM)
          (* (IL:FONTDESCENT (TEXT-FONT (BUTTON-TEXT BUTTON)))
            (IL:DSPSCALE NIL IMAGE-STREAM)))))))

```

```

(DEFUN BIO-BUTTONEVENTINFN (BIO DSP)
  (LET ((BUTTON (BIO-BUTTON BIO)))
    (IF (UPDATE-BUTTON BUTTON)
      'IL:CHANGED
      (LET ((X-OFFSET (IL:DSPXOFFSET NIL DSP))
            (Y-OFFSET (IL:DSPYOFFSET NIL DSP))
            (CLIPPING-REGION (IL:DSPCLIPPINGREGION NIL DSP)))
        ;; applications don't always adjust coordinates so we're at 0,0 but they are good about setting the clipping region. we move 0,0 to
        ;; the bottom-left of the clipping region.
        (UNWIND-PROTECT
          (PROGN (IL:DSPXOFFSET (+ X-OFFSET (REGION-LEFT CLIPPING-REGION))
                                DSP)
                 (IL:DSPYOFFSET (+ Y-OFFSET (REGION-BOTTOM CLIPPING-REGION))
                                DSP)
                 (IL:DSPCLIPPINGREGION (IL:CREATEREGION 0 0 (REGION-WIDTH CLIPPING-REGION)
                                                    (REGION-HEIGHT CLIPPING-REGION))
                                       DSP)
                 (WHEN (AND (IL:LASTMOUSESTATE (OR IL:LEFT IL:MIDDLE))
                             (IL:INSIDEP (MAKE-REGION :LEFT *BIO-SELECTION-BORDER* :BOTTOM
                                                       *BIO-SELECTION-BORDER* :WIDTH (- (BUTTON-WIDTH BUTTON)
                                                                 (*
                                                                 *BIO-SELECTION-BORDER*
                                                                 2))
                                                       :HEIGHT
                                                       (- (BUTTON-HEIGHT BUTTON)
                                                         (* *BIO-SELECTION-BORDER* 2))))
                               (IL:LASTMOUSEX DSP)
                               (IL:LASTMOUSEY DSP)))
                   (BIO-BUTTONEVENTINFN-INTERNAL BIO DSP)))
          (IL:DSPXOFFSET X-OFFSET DSP)
          (IL:DSPYOFFSET Y-OFFSET DSP)
          (IL:DSPCLIPPINGREGION CLIPPING-REGION DSP))))))

```

```

(DEFUN BIO-BUTTONEVENTINFN-INTERNAL (BIO DSP)
  (LET ((BUTTON (BIO-BUTTON BIO)))
    (IF (AND (IL:LASTMOUSESTATE (IL:ONLY IL:MIDDLE))
            (NOT (BUTTON-PROP BUTTON :PROTECTED?)))
      (CASE (MENU '("Edit Button" :EDIT "Edit this button")
                 ("Copy to Screen" :COPY "Copy this button to the screen "))
        (:EDIT (LET ((NEW-BUTTON (EDIT-BUTTON BUTTON)))
                  (UNLESS (EQ NEW-BUTTON BUTTON)
                    (IL:IMAGEOBJPROP BIO 'IL:OBJECTDATUM NEW-BUTTON)
                    'IL:CHANGED)))
        (:COPY
          (MAKE-BUTTON-WINDOW (COPY-BUTTON BUTTON)
                               NIL))
        (WHEN (AND (BUTTON-TRACK-MOUSE BUTTON DSP)
                  (UPDATE-BUTTON BUTTON))
          ;; button's action caused it to need redisplay
          'IL:CHANGED))))

```

```

(DEFGLOBALPARAMETER *BIO-IMAGEFN* (IL:IMAGEFNCREATE 'BIO-DISPLAYFN 'BIO-IMAGEBOXFN 'BIO-PUTFN
  'IL: BIO-GETFN 'BIO-COPYFN 'BIO-BUTTONEVENTINFN))

```

```

(IL:PUTPROPS IL:ROOMS-BIOS IL:COPYRIGHT ("Venue & Xerox Corporation" 1988 1990 2020))

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