

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-IMAGEFNS*)) )
```

;; 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-IMAGEFNS*))
```

```
(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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