```
(RPAQQ WINDOWICONCOMS
       ((FNS SHRINKW ICONBUTTONEVENTFN ICONPOSITION.FROM.WINDOW MAKETITLEBARICON \TITLEICONMINSIZE
             \NOTENEWICONPOSITION EXPANDW DOICONWINDOWCOM CLOSEMAINWINDOW CLOSEICONWINDOW)
        (INITVARS (IconWindowMenu)
              (DEFAULTICONFN 'MAKETITLEBARICON))
        (ADDVARS (IconWindowMenuCommands (Close 'CLOSEW "Closes the icon and its associated window")
                          (Snap 'SNAPW "Saves a snapshot of a region of the screen.")
                          (Paint 'PAINTW "Starts a painting mode in which the mouse can
                                  be used to draw pictures or make notes on the icon.")
                          (Bury 'BURYW "Puts the icon on the bottom.")
                          (Move 'MOVEW "Moves the icon by a corner.")
                          (Shape 'SHAPEW "Gets a new region for the icon.")
                          (Expand 'EXPANDW "Expands the window for which this is the ICON.")))
        (GLOBALVARS DEFAULTICONFN IconWindowMenu IconWindowMenuCommands)))

(DEFINEQ
```

(SHRINKW
```
  [LAMBDA (WINDOW TOWHAT ICONPOSITION EXPANDFN)                      ; Edited  2-Feb-94 13:10 by sybalsky:mv:envos
    (WINDOWOP 'SHRINKWFN (fetch (WINDOW SCREEN) of (SETQ WINDOW (\INSUREWINDOW WINDOW)))
          WINDOW TOWHAT ICONPOSITION EXPANDFN])
```

(ICONBUTTONEVENTFN
```
  [LAMBDA (ICONW)                                                   (* bvm%: "25-Mar-86 17:23")

          (* * Default icon BUTTONEVENTFN -- middle button expands it, left button moves it)

    (COND
      [(LASTMOUSESTATE MIDDLE)
       (CURSOR (PROG1 (CURSOR WAITINGCURSOR)
                      (EXPANDW ICONW]
      (T (MOVEW ICONW])
```

(ICONPOSITION.FROM.WINDOW
```
  [LAMBDA (WINDOW ICONREGION)                                       (* bvm%: "18-Mar-86 14:03")
    (OR (POSITIONP (WINDOWPROP WINDOW 'ICONPOSITION))
        (LET ((WREG (WINDOWPROP WINDOW 'REGION))
              SCREEN)
             (SETQ SCREEN (fetch (WINDOW SCREEN) of WINDOW))
             (create POSITION
                     XCOORD _ [COND
                                ((ILESSP (fetch (REGION LEFT) of WREG)
                                         (IDIFFERENCE (fetch (SCREEN SCWIDTH) of SCREEN)
                                                 (fetch (REGION PRIGHT) of WREG)))
                                 (IMAX 0 (fetch (REGION LEFT) of WREG)))
                                (T (IDIFFERENCE (IMIN (fetch (SCREEN SCWIDTH) of SCREEN)
                                                      (fetch (REGION PRIGHT) of WREG))
                                         (fetch (REGION WIDTH) of ICONREGION]
                     YCOORD _ (COND
                                ((ILESSP (fetch (REGION BOTTOM) of WREG)
                                         (IDIFFERENCE (fetch (SCREEN SCHEIGHT) of SCREEN)
                                                 (fetch (REGION PTOP) of WREG)))
                                 (IMAX 0 (fetch (REGION BOTTOM) of WREG)))
                                (T (IDIFFERENCE (IMIN (fetch (SCREEN SCHEIGHT) of SCREEN)
                                                      (fetch (REGION PTOP) of WREG))
                                         (fetch (REGION HEIGHT) of ICONREGION])
```

(MAKETITLEBARICON
```
  [LAMBDA (WINDOW TEXT)                                             (* bvm%: "18-Mar-86 14:04")

          (* * Make a "title bar" icon consisting of TEXT or WINDOW's TITLE if TEXT is NIL)

    (PROG ((SCREEN (fetch (WINDOW SCREEN) of WINDOW))
           W REG POS)
          [COND
            ((AND (NULL TEXT)
                  (OR [NULL (SETQ TEXT (WINDOWPROP WINDOW 'TITLE]
                      (EQ (NCHARS TEXT)
```

```
                                        0)))
                    (SETQ TEXT (CONCAT "Icon made " (DATE]
              [SETQ POS (ICONPOSITION.FROM.WINDOW WINDOW (SETQ REG
                                                       (create REGION
                                                              LEFT _ 0
                                                              BOTTOM _ 0
                                                              HEIGHT _ (IMINUS (DSPLINEFEED NIL
                                                                                   (fetch (SCREEN SCTITLEDS)
                                                                                     of SCREEN)))
                                                              WIDTH _ (IMAX MinWindowWidth
                                                                           (IPLUS 8 (STRINGWIDTH
                                                                                       TEXT
                                                                                       (fetch (SCREEN SCTITLEDS)
                                                                                         of SCREEN]
                                                                    (* Position the icon near the current location of the window)
              (replace (REGION LEFT) of REG with (fetch (POSITION XCOORD) of POS))
              (replace (REGION BOTTOM) of REG with (fetch (POSITION YCOORD) of POS))
              (SETQ W (CREATEW REG TEXT NIL T))
              (WINDOWPROP W 'MINSIZE (FUNCTION \TITLEICONMINSIZE))
              (RETURN W])
```

(\TITLEICONMINSIZE
```
  [LAMBDA (WINDOW)                                            (* kbr%: "29-Mar-85 14:14")
                                                              (* returns the minimum size the default icon can be.)
     (CONS MinWindowWidth (IMINUS (DSPLINEFEED NIL (fetch (SCREEN SCTITLEDS) of (fetch (WINDOW SCREEN) of WINDOW]
```

(\NOTENEWICONPOSITION
```
  [LAMBDA (ICONW NEWPOS)                                      (* rrb "13-Jan-84 10:39")

          (* saves the new position of the icon on the property list so that the icon will come up there again.)

     (AND (SETQ ICONW (WINDOWPROP ICONW 'ICONFOR))
          (WINDOWPROP ICONW 'ICONPOSITION NEWPOS))
     NEWPOS])
```

(EXPANDW
```
  [LAMBDA (ICONW)                                             ; Edited  2-Feb-94 13:10 by sybalsky:mv:envos
     (WINDOWOP 'EXPANDWFN (fetch (WINDOW SCREEN) of (SETQ ICONW (\INSUREWINDOW ICONW)))
            ICONW])
```

(DOICONWINDOWCOM
```
  [LAMBDA (WINDOW)                                            (* rrb " 7-AUG-83 18:52")

          (* the button handler for an ICON window Test for non-NIL WINDOW means that caller needn't worry about whether the
          mouse is pointing at a window.)

     (AND (type? WINDOW WINDOW)
          (PROG (COM)
                (TOTOPW WINDOW)
                (RETURN (COND
                          ((SETQ COM (MENU [COND
                                             ((TYPENAMEP IconWindowMenu 'MENU)
                                              IconWindowMenu)
                                             ((SETQ IconWindowMenu
                                               (create MENU
                                                      ITEMS _ IconWindowMenuCommands
                                                      CHANGEOFFSETFLG _ 'Y
                                                      MENUOFFSET _ (create POSITION
                                                                          XCOORD _ -1
                                                                          YCOORD _ 0)
                                                      WHENHELDFN _ (FUNCTION PPROMPT3)
                                                      WHENUNHELDFN _ (FUNCTION CLRPROMPT)
                                                      CENTERFLG _ T]
                                              IconWindowMenu))
                                 (APPLY* COM WINDOW)
                                 T])
```

(CLOSEMAINWINDOW
```
  [LAMBDA (ICONWIN)                                           (* rrb "28-JUN-83 11:58")
                                                              (* the closefn for an icon window that closes the main window as
     well.)
     (PROG [[MAINWIN (WINDOWPROP ICONWIN 'ICONFOR]
            [COND
               (MAINWIN (COND
                          ((NULL (\OKTOCLOSEW MAINWIN))

          (* Call the main windows closefns. If main window won't close, don't close the icon.
          The main window has already been removed from the window stack but its closefns haven't been executed.)

                           (RETURN 'DON'T))
                          (T
```

(* closefns for main window may have opened it for example by printing to it.
Close it if it is open.)

```
                    (AND (OPENWP MAINWIN)
                         (\CLOSEW1 MAINWIN]
```

(* break link between the icon and the main window. This may give problems if someone holds onto the icon window and
explicitly reopens it and expects it to still be an icon.)

```
(WINDOWPROP ICONWIN 'ICONFOR NIL)
(RETURN NIL])
```

(**CLOSEICONWINDOW**

```
  [LAMBDA (MAINWIN)                                      (* rrb " 1-May-85 15:55")
                                                         (* the open function for a window which has an icon.
                                                         It closes the (icon and does the expandfns))

    (PROG ((ICONW (WINDOWPROP MAINWIN 'ICONWINDOW))
           USEREXPANDFN)

        (* this code duplicates much of EXPANDW but I couldn't quite get it to be a call because EXPANDW opens the main
        window which in this case is already open.)

        (COND
            (ICONW                                       (* Don't die if user removed the ICONWINDOW prop)
                (WINDOWDELPROP ICONW 'CLOSEFN 'CLOSEMAINWINDOW)
                                                         (* remove the mainwindowclosing function first.)
                (CLOSEW ICONW)
                (DOUSERFNS (WINDOWPROP MAINWIN 'EXPANDFN)
                        MAINWIN)                         (* break link from icon to main window.)
                (WINDOWPROP ICONW 'ICONFOR NIL)))        (* remove icon closing function.)
        (WINDOWDELPROP MAINWIN 'OPENFN 'CLOSEICONWINDOW])
)
```

(RPAQ? **IconWindowMenu**)

(RPAQ? **DEFAULTICONFN** 'MAKETITLEBARICON)

```
(ADDTOVAR IconWindowMenuCommands
        (Close 'CLOSEW "Closes the icon and its associated window")
        (Snap 'SNAPW "Saves a snapshot of a region of the screen.")
        (Paint 'PAINTW "Starts a painting mode in which the mouse can
                be used to draw pictures or make notes on the icon.")
        (Bury 'BURYW "Puts the icon on the bottom.")
        (Move 'MOVEW "Moves the icon by a corner.")
        (Shape 'SHAPEW "Gets a new region for the icon.")
        (Expand 'EXPANDW "Expands the window for which this is the ICON."))
```

(DECLARE%: DOEVAL@COMPILE DONTCOPY

```
(GLOBALVARS DEFAULTICONFN IconWindowMenu IconWindowMenuCommands)
)
```

FUNCTION INDEX

VARIABLE INDEX