```
(RPAQQ VSTATSCOMS
       [(* * User interface * *)
        (FNS VSTATS)
        (INITVARS (VSTATS.ALWAYS? NIL)
                (VSTATS.BLACK? NIL)
                (VSTATS.CLOCK.INTERVAL 1)
                (VSTATS.MUTIL.HYSTERESIS 20)
                (VSTATS.MUTIL.INTERVAL 1)
                (VSTATS.POSITION (create POSITION XCOORD _ SCREENWIDTH YCOORD _ SCREENHEIGHT))
                (VSTATS.SPACE.INTERVAL 300)
                (VSTATS.SPACE.PANIC.LEVEL 95)
                (VSTATS.SPACE.SHOW.DISK? T))
        (* * VSTATS support stuff * *)
        (LOCALVARS . T)
        (FILES (SYSLOAD FROM LISPUSERS)
               READNUMBER SYSTATS)
        [DECLARE%: EVAL@COMPILE DONTEVAL@LOAD DONTCOPY (GLOBALVARS \TimeZoneComp \BeginDST \EndDST
                                                                 \DayLightSavings TIME.ZONES)
                (CONSTANTS (\4YearsDays (ADD1 (ITIMES 365 4))
        (COMS (DECLARE%: DONTCOPY (RECORDS VSTATSPCTINFO VSTATSTIMERINFO SPACEDATA)
                    (PROP (FILETYPE MAKEFILE-ENVIRONMENT)
                          VSTATS))
              (INITRECORDS VSTATSPCTINFO VSTATSTIMERINFO SPACEDATA))
        [INITVARS (VStatsOff? T)
              (VStatsWindow)
              (VStatsDsp)
              (VStatsCurrentTime (SETUPTIMER 0 NIL 'TICKS]
        (FNS VStats-CenterRegion VStats-CreatePCTs VStats-Display VStats-DisplayPct VStats-DrawLine
             VStats-GetPCTsRegion VStats-Init VStats-InitInterval VStats-MouseWait VStats-Percentage
             VStats-ReDisplay? VStats-SetDisplayColor VStats-SetUpTimer VStats-TimerExpired?)
        (* * option support stuff * *)
        (INITVARS (VStatsOptionsWindow))
        (FNS VStatsOptions-Inspect VStatsOptions-FetchFn VStatsOptions-PropCommandFn VStatsOptions-PropPrintFn
             VStatsOptions-PropertiesFn VStatsOptions-RNumber VStatsOptions-SelectionFn VStatsOptions-StoreFn
             VStatsOptions-ValueCommandFn)
        (* * clock support stuff * *)
        (INITVARS (VStatsClockFont)
              (VStatsClockReset?)
              (VStatsClockTimer))
        (FNS VStatsClock-Display VStatsClock-DisplayDigits VStatsClock-DisplayMonth VStatsClock-Init
             VStatsClock-ReDisplay VStatsClock-Read VStatsClock-Ticks? VStatsClock-UnpackDate)
        (* * space support stuff * *)
        (INITVARS (VStatsSpaceDiskPages)
              (VStatsSpaceFont)
              (VStatsSpacePCTs)
              (VStatsSpaceTimer))
        (INITVARS (\LASTVMEMFILEPAGE 16383))
        (FNS VStatsSpace-Display VStatsSpace-Init VStatsSpace-InitDisk VStatsSpace-InitPanicLevel
             VStatsSpace-ReDisplay VStatsSpace-Read VStatsSpace-ShrinkInterval VStatsSpace-Ticks?)
        (* * machine utilization support stuff * *)
        (INITVARS (VStatsMUtilFont)
              (VStatsMUtilOrigState)
              (VStatsMUtilPCTs)
              (VStatsMUtilTimer))
        (FNS VStatsMUtil-Display VStatsMUtil-Init VStatsMUtil-InitState VStatsMUtil-ReDisplay VStatsMUtil-Read
             VStatsMUtil-Ticks?)
        (* * These ought to be system functions!!! * *)
        (FNS ALTOPARTITIONP ALTOPARTITIONS DISKUSEDPAGES DISKTOTALPAGES COVEREDWP)
        (* * Initialize on LOAD * *)
        (VARS (BackgroundMenu))
        (ADDVARS (BackgroundMenuCommands ("VStats" '(VSTATS 'On)
                                                    "Running display of clock and/or space utilization")))
        (DECLARE%: DONTEVAL@LOAD DOCOPY (P (COND ((OR VSTATS.CLOCK.INTERVAL VSTATS.SPACE.INTERVAL
                                                      VSTATS.MUTIL.INTERVAL)
                                                  (VSTATS 'ON])


        (* * User interface * *)

(DEFINEQ
```

```
(VSTATS
  [LAMBDA (on/off)                                                    ; Edited 13-Nov-87 01:43 by Koomen
    (DECLARE (GLOBALVARS VStatsDsp VStatsOff? VStatsOptionsWindow VStatsWindow))
    (if (WINDOWP VStatsWindow)
        then (CLOSEW VStatsWindow))
    (if (WINDOWP VStatsOptionsWindow)
        then (CLOSEW VStatsOptionsWindow))
    (SETQ on/off (AND (LITATOM on/off)
                      (U-CASE on/off)))
    [SETQ VStatsOff? (OR (NULL on/off)
                         (EQ on/off 'OFF)
                         (EQ on/off 'SUSPEND]
    (if (NOT VStatsOff?)
        then (if (NOT (VStats-Init))
                 then (VStatsOptions-Inspect)
                      (SETQ VStatsOff? T)))
    (LET [(ResetForms '((BEFORELOGOUTFORMS (VSTATS 'SUSPEND))
                        (BEFORESYSOUTFORMS (VSTATS 'SUSPEND))
                        (BEFOREMAKESYSFORMS (VSTATS 'SUSPEND))
                        (AFTERLOGOUTFORMS (VSTATS 'ON))
                        (AFTERSYSOUTFORMS (VSTATS 'ON))
                        (AFTERMAKESYSFORMS (VSTATS 'ON))
                        (BACKGROUNDFNS VStats-ReDisplay? T]
        (if VStatsOff?
            then (SETQ VStatsOptionsWindow)
                 (SETQ VStatsWindow (SETQ VStatsDsp))
                 [for RF in ResetForms when (OR (CADDR RF)
                                                (NEQ on/off 'SUSPEND))
                     do (SETTOPVAL (CAR RF)
                             (REMOVE (CADR RF)
                                     (GETTOPVAL (CAR RF]
                 'Off
            else (VStats-Display)
                 [for RF in ResetForms unless (MEMBER (CADR RF)
                                                      (GETTOPVAL (CAR RF)))
                     do (SETTOPVAL (CAR RF)
                             (CONS (CADR RF)
                                   (GETTOPVAL (CAR RF]
                 'On])
)

(RPAQ? VSTATS.ALWAYS? NIL)

(RPAQ? VSTATS.BLACK? NIL)

(RPAQ? VSTATS.CLOCK.INTERVAL 1)

(RPAQ? VSTATS.MUTIL.HYSTERESIS 20)

(RPAQ? VSTATS.MUTIL.INTERVAL 1)

(RPAQ? VSTATS.POSITION (create POSITION XCOORD _ SCREENWIDTH YCOORD _ SCREENHEIGHT))

(RPAQ? VSTATS.SPACE.INTERVAL 300)

(RPAQ? VSTATS.SPACE.PANIC.LEVEL 95)

(RPAQ? VSTATS.SPACE.SHOW.DISK? T)


          (* * VSTATS support stuff * *)

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(LOCALVARS . T)
)

(FILESLOAD (SYSLOAD FROM LISPUSERS)
      READNUMBER SYSTATS)

(DECLARE%: EVAL@COMPILE DONTEVAL@LOAD DONTCOPY

(DECLARE%: DOEVAL@COMPILE DONTCOPY

(GLOBALVARS \TimeZoneComp \BeginDST \EndDST \DayLightSavings TIME.ZONES)
)

(DECLARE%: EVAL@COMPILE

(RPAQ \4YearsDays (ADD1 (ITIMES 365 4)))

[CONSTANTS (\4YearsDays (ADD1 (ITIMES 365 4]
)
)

(DECLARE%: DONTCOPY
```

```
(DECLARE%: EVAL@COMPILE

(RECORD VSTATSPCTINFO (NAME LABEL NEWPCT OLDPCT LBLREGION BARREGION MAXBARHEIGHT))

(RECORD VSTATSTIMERINFO (INTERVAL TIMER LASTSETUP)
        INTERVAL _ 0 TIMER _ (SETUPTIMER 0 NIL 'TICKS)
        LASTSETUP _ (SETUPTIMER 0 NIL 'TICKS))

(RECORD SPACEDATA (MDSFREE MDSFRAC 8MBFRAC ATOMSFREE ATOMFRAC))
)

(PUTPROPS VSTATS FILETYPE :TCOMPL)

(PUTPROPS VSTATS MAKEFILE-ENVIRONMENT (:READTABLE "INTERLISP" :PACKAGE "INTERLISP" :BASE 10))
)

(RPAQ? VStatsOff? T)

(RPAQ? VStatsWindow )

(RPAQ? VStatsDsp )

(RPAQ? VStatsCurrentTime (SETUPTIMER 0 NIL 'TICKS))

(DEFINEQ

(VStats-CenterRegion
  [LAMBDA (region width bottom pctlist)                              (* Koomen "12-Jan-87 17:37")
    (PROG [(delta (HALF (IDIFFERENCE width (fetch (REGION WIDTH) of region]
          (replace (REGION LEFT) of region with delta)
          (replace (REGION BOTTOM) of region with bottom)
          (for pct in pctlist bind (r) do (SETQ r (fetch (VSTATSPCTINFO BARREGION) of pct))
                                          (replace (REGION LEFT) of r with (IPLUS delta (fetch (REGION LEFT)
                                                                                            of r)))
                                          (replace (REGION BOTTOM) of r with bottom)
                                          (SETQ r (fetch (VSTATSPCTINFO LBLREGION) of pct))
                                          (replace (REGION LEFT) of r with (IPLUS delta (fetch (REGION LEFT)
                                                                                            of r)))
                                          (replace (REGION BOTTOM) of r with bottom])


(VStats-CreatePCTs
  [LAMBDA (font names&labels)                                        (* Koomen "12-Jan-87 17:38")
    (PROG [pctlist (lblwidths 0)
                   (lblheight (ITIMES 2 (FONTHEIGHT font)))
                   (barwidth (STRINGWIDTH "A" font))
                   (barheight (IPLUS (FONTHEIGHT font)
                                     (FONTPROP font 'ASCENT]
          (SETQ pctlist
           (for name&lbl in names&labels bind (name lbl lblwidth)
              collect (SETQ name (CAR name&lbl))
                      (SETQ lbl (CDR name&lbl))
                      (SETQ lblwidth (STRINGWIDTH lbl font))
                      (SETQ lblwidths (IPLUS lblwidths lblwidth))
                      (create VSTATSPCTINFO
                              NAME _ name
                              LABEL _ lbl
                              NEWPCT _ 0
                              OLDPCT _ 0
                              LBLREGION _ (create REGION
                                                  LEFT _ 0
                                                  BOTTOM _ 0
                                                  WIDTH _ lblwidth
                                                  HEIGHT _ lblheight)
                              BARREGION _ (create REGION
                                                  LEFT _ 0
                                                  BOTTOM _ 0
                                                  WIDTH _ 0
                                                  HEIGHT _ barheight)
                              MAXBARHEIGHT _ barheight)))
          [for pct in pctlist bind (r w x) first (SETQ w (HALF (ITIMES 3 barwidth)))
                                                 (SETQ x (IDIFFERENCE w barwidth))
             do (SETQ r (fetch (VSTATSPCTINFO BARREGION) of pct))
                (replace (REGION LEFT) of r with x)
                (replace (REGION WIDTH) of r with barwidth)
                (SETQ r (fetch (VSTATSPCTINFO LBLREGION) of pct))
                (replace (REGION LEFT) of r with (IPLUS x w))
                (SETQ x (IPLUS w (fetch (REGION RIGHT) of r]
          (RETURN pctlist])


(VStats-Display
  [LAMBDA (ThruMouse?)                                          ; Edited 22-Sep-87 14:59 by Koomen
    (DECLARE (GLOBALVARS VStatsClockRegion VStatsClockTimer VStatsDsp VStatsMUtilRegion VStatsMUtilTimer
                   VStatsSpaceRegion VStatsSpaceTimer VStatsWindow))
    (PROG (r1 r2 r3)
```

```
                    (if ThruMouse?
                        then (if (NOT (VStats-MouseWait VStatsWindow))
                                  then (RETURN)))
                    (DSPFILL NIL NIL NIL VStatsDsp)
                    (if (SETQ r1 VStatsClockRegion)
                        then (VStats-SetUpTimer VStatsClockTimer)
                             (VStatsClock-Display))
                    (if (SETQ r2 VStatsSpaceRegion)
                        then (VStats-SetUpTimer VStatsSpaceTimer)
                             (VStatsSpace-Display))
                    (if (SETQ r3 VStatsMUtilRegion)
                        then (VStats-SetUpTimer VStatsMUtilTimer)
                             (VStatsMUtil-Display))
                    (if (AND r1 r2 r3)
                        then (VStats-DrawLine r1 r2)
                             (VStats-DrawLine r2 r3)
                      elseif (AND r1 r2)
                        then (VStats-DrawLine r1 r2)
                      elseif (AND r1 r3)
                        then (VStats-DrawLine r1 r3)
                      elseif (AND r2 r3)
                        then (VStats-DrawLine r2 r3])
```

(VStats-DisplayPct
```
  [LAMBDA (PCT BOX.ALWAYS?)                                      (* Koomen "12-Jan-87 17:24")
    (DECLARE (GLOBALVARS BLACKSHADE VSTATS.BLACK? VStatsDsp WHITESHADE))
    (PROG ((shade (if VSTATS.BLACK?
                      then WHITESHADE
                      else BLACKSHADE))
           (oldpct (fetch (VSTATSPCTINFO OLDPCT) of PCT))
           (newpct (fetch (VSTATSPCTINFO NEWPCT) of PCT))
           (lblregion (fetch (VSTATSPCTINFO LBLREGION) of PCT))
           (barregion (fetch (VSTATSPCTINFO BARREGION) of PCT))
           (maxbarheight (fetch (VSTATSPCTINFO MAXBARHEIGHT) of PCT)))

          (* * Print percentage as d.dd * *)

          (MOVETO (fetch (REGION LEFT) of lblregion)
                  (fetch (REGION BOTTOM) of lblregion)
                  VStatsDsp)
          (BOUT VStatsDsp (IPLUS (IQUOTIENT newpct 100)
                                 (CHARCODE "0")))
          (BOUT VStatsDsp (CHARCODE "."))
          (BOUT VStatsDsp (IPLUS (IQUOTIENT (IREMAINDER newpct 100)
                                           10)
                                 (CHARCODE "0")))
          (BOUT VStatsDsp (IPLUS (IREMAINDER newpct 10)
                                 (CHARCODE "0")))

          (* * Display percentage graphically in box * *)

          (replace (REGION HEIGHT) of barregion with (IQUOTIENT (ITIMES newpct maxbarheight)
                                                                100))
          (if (OR BOX.ALWAYS? (ILESSP newpct oldpct))
              then (GRAYBOXAREA (fetch (REGION LEFT) of barregion)
                                (fetch (REGION BOTTOM) of barregion)
                                (fetch (REGION WIDTH) of barregion)
                                maxbarheight 1 shade VStatsDsp))
          (DSPFILL barregion shade NIL VStatsDsp])
```

(VStats-DrawLine
```
  [LAMBDA (hiregion loregion)                                    (* Koomen "12-Jan-87 17:38")
    (DECLARE (GLOBALVARS VStatsDsp))
    (PROG [(x1 (DSPLEFTMARGIN NIL VStatsDsp))
           (x2 (DSPRIGHTMARGIN NIL VStatsDsp))
           (y (SUB1 (HALF (IPLUS (fetch (REGION BOTTOM) of hiregion)
                                 (fetch (REGION TOP) of loregion]
          (DRAWLINE x1 y x2 y 2 'INVERT VStatsDsp])
```

(VStats-GetPCTsRegion
```
  [LAMBDA (pctlist)                                              (* Koomen "12-Jan-87 17:34")
    (DECLARE (GLOBALVARS SCREENWIDTH))
    (for pct in pctlist bind barregion lblregion (minleft _ SCREENWIDTH)
                                                 (maxright _ 0)
                                                 (maxheight _ 0)
       do (SETQ barregion (fetch (VSTATSPCTINFO BARREGION) of pct))
          (SETQ lblregion (fetch (VSTATSPCTINFO LBLREGION) of pct))
          [SETQ minleft (IMIN minleft (IMIN (fetch (REGION LEFT) of barregion)
                                            (fetch (REGION LEFT) of lblregion]
          [SETQ maxright (IMAX maxright (IMAX (fetch (REGION RIGHT) of barregion)
                                             (fetch (REGION RIGHT) of lblregion]
          [SETQ maxheight (IMAX maxheight (IMAX (fetch (REGION HEIGHT) of barregion)
                                               (fetch (REGION HEIGHT) of lblregion]
       finally (RETURN (create REGION
```

```
                                    LEFT _ 0
                                    BOTTOM _ 0
                                    WIDTH _ (ADD1 (IDIFFERENCE maxright minleft))
                                    HEIGHT _ maxheight])
```

(**VStats-Init**
  [LAMBDA NIL   (* Koomen "19-Jun-87 00:58")
    (**DECLARE** (GLOBALVARS LASTMOUSEBUTTONS SCREENHEIGHT SCREENWIDTH VSTATS.POSITION VStatsClockRegion VStatsDsp
                    VStatsMUtilPCTs VStatsMUtilRegion VStatsOff? VStatsSpacePCTs VStatsSpaceRegion VStatsWindow
                    WBorder))
    (PROG [clockwidth clockheight spacewidth spaceheight mutilwidth mutilheight wleft wbottom wwidth wheight
            wposition wregion (width 0)
            (height 0)
            (bottom 0)
            (border WBorder)
            (spacing (HALF (ITIMES 3 WBorder]
      (**if** (**VStatsClock-Init**)
          then (SETQ clockwidth (**fetch** (REGION WIDTH) **of** VStatsClockRegion))
                (SETQ width (IMAX width clockwidth))
                (SETQ clockheight (**fetch** (REGION HEIGHT) **of** VStatsClockRegion))
                (SETQ height (IPLUS height clockheight spacing)))
      (**if** (**VStatsSpace-Init**)
          then (SETQ spacewidth (**fetch** (REGION WIDTH) **of** VStatsSpaceRegion))
                (SETQ width (IMAX width spacewidth))
                (SETQ spaceheight (**fetch** (REGION HEIGHT) **of** VStatsSpaceRegion))
                (SETQ height (IPLUS height spaceheight spacing)))
      (**if** (**VStatsMUtil-Init**)
          then (SETQ mutilwidth (**fetch** (REGION WIDTH) **of** VStatsMUtilRegion))
                (SETQ width (IMAX width mutilwidth))
                (SETQ mutilheight (**fetch** (REGION HEIGHT) **of** VStatsMUtilRegion))
                (SETQ height (IPLUS height mutilheight spacing)))
      (**if** (ZEROP width)
          then (RETURN))
      (SETQ width (IPLUS width spacing))
      (SETQ wwidth (WIDTHIFWINDOW width border))
      (SETQ wheight (HEIGHTIFWINDOW height NIL border))
      (SETQ wposition (OR (POSITIONP VSTATS.POSITION)
                          (GETBOXPOSITION wwidth wheight NIL NIL NIL "Indicate placement of VSTATS window:")
                          ))
      [SETQ wleft (IMAX 0 (IMIN (**fetch** (POSITION XCOORD) **of** wposition)
                                (IDIFFERENCE SCREENWIDTH (ADD1 wwidth]
      [SETQ wbottom (IMAX 0 (IMIN (**fetch** (POSITION YCOORD) **of** wposition)
                                  (IDIFFERENCE SCREENHEIGHT (ADD1 wheight]
      (**if** (NOT (POSITIONP VSTATS.POSITION))
          then (SETQ VSTATS.POSITION (**create** POSITION
                                            XCOORD _ wleft
                                            YCOORD _ wbottom)))
      (SETQ wregion (**create** REGION
                          LEFT _ wleft
                          BOTTOM _ wbottom
                          WIDTH _ wwidth
                          HEIGHT _ wheight))
      (SETQ VStatsWindow (CREATEW wregion NIL border))
      (SETQ VStatsDsp (WINDOWPROP VStatsWindow 'DSP))
      (**VStats-SetDisplayColor**)
      (SETQ bottom (IQUOTIENT spacing 4))
      (**if** VStatsMUtilRegion
          then (**VStats-CenterRegion** VStatsMUtilRegion width bottom VStatsMUtilPCTs)
                (SETQ bottom (IPLUS bottom mutilheight spacing)))
      (**if** VStatsSpaceRegion
          then (**VStats-CenterRegion** VStatsSpaceRegion width bottom VStatsSpacePCTs)
                (SETQ bottom (IPLUS bottom spaceheight spacing)))
      (**if** VStatsClockRegion
          then (**VStats-CenterRegion** VStatsClockRegion width bottom)
                (SETQ bottom (IPLUS bottom clockheight spacing)))
      [WINDOWPROP VStatsWindow 'REPAINTFN (FUNCTION (LAMBDA (w)
                                                      (**VStats-Display**]
      [WINDOWPROP VStatsWindow 'CLOSEFN (FUNCTION (LAMBDA (w)
                                                    (**DECLARE** (GLOBALVARS VStatsOff?))
                                                    (SETQ VStatsOff? T]
      [WINDOWPROP VStatsWindow 'AFTERMOVEFN (FUNCTION (LAMBDA (w)
                                                        (**DECLARE** (GLOBALVARS VSTATS.POSITION))
                                                        (PROG ((r (WINDOWREGION w)))
                                                          (SETQ VSTATS.POSITION
                                                            (**create** POSITION
                                                                XCOORD _ (**fetch** (REGION LEFT)
                                                                            of r)
                                                                YCOORD _ (**fetch** (REGION BOTTOM)
                                                                            of r]
      [WINDOWPROP VStatsWindow 'BUTTONEVENTFN (FUNCTION (LAMBDA (w)
                                                          (**if** (LASTMOUSESTATE (ONLY LEFT))
                                                              then (**VStats-Display** T)
                                                            elseif (LASTMOUSESTATE (ONLY MIDDLE))
                                                              then (**VStatsOptions-Inspect** T]
      (WINDOWPROP VStatsWindow 'SHRINKFN 'DON'T)
      (WINDOWPROP VStatsWindow 'RESHAPEFN 'DON'T)
```

```
        (RETURN T])
```

⟨**VStats-InitInterval**
```
  [LAMBDA (VSTATSTIMER INTERVAL MAXINTERVAL)                        (* HaKo "12-Jun-86 22:45")

            (* * If Interval is a positive number, initialize the timer with the corresponding number of clock ticks and return it, otherwise
            return NIL)

    (if (AND (NUMBERP INTERVAL)
             (GREATERP INTERVAL 0))
        then (replace (VSTATSTIMERINFO INTERVAL) of VSTATSTIMER with (CLOCKTICKS (MAX 1 (MIN INTERVAL MAXINTERVAL))
                                                                                'SECONDS])
```

⟨**VStats-MouseWait**
```
  [LAMBDA (WINDOW)                                                  (* Koomen "16-Apr-87 16:59")
    ;; Wait until the mouse buttons are up or mouse out of the window.  Return T if mouse is still in the window
    ;; DISABLED!!!
    (OR T (bind (REGION _ (WINDOWREGION WINDOW)) do (if (NOT (INSIDEP REGION LASTMOUSEX LASTMOUSEY))
                                                        then (RETURN)
                                                      elseif (MOUSESTATE UP)
                                                        then (RETURN T])
```

⟨**VStats-Percentage**
```
  [LAMBDA (X Y)                                                     (* Koomen "24-Mar-87 15:45")
    ;; Desperately tries to use SMALLP's and avoid doing IQUOTIENT's or creating FIXP's or FLOATP's.

    (if (ILEQ X 0)
        then 0
      elseif (IGEQ X Y)
        then 100
      else (PROG (Z)
                 (if (IGREATERP Y (CONSTANT (LRSH MAX.SMALLP 1)))
                     then (SETQ Y (IQUOTIENT Y 100))
                   elseif (ILEQ X (CONSTANT (IQUOTIENT MAX.SMALLP 200)))
                     then (RETURN (IQUOTIENT (IPLUS (ITIMES X 200)
                                                    Y)
                                             (LLSH Y 1)))
                   elseif [AND (IGREATERP X (LRSH Y 1))
                               (ILEQ (SETQ Z (IDIFFERENCE Y X))
                                     (CONSTANT (IQUOTIENT MAX.SMALLP 200]
                     then [RETURN (IDIFFERENCE 100 (IQUOTIENT (IPLUS (ITIMES Z 200)
                                                                     Y)
                                                              (LLSH Y 1]
                   else (SETQ Z (IQUOTIENT MAX.SMALLP Y))
                        (SETQ X (ITIMES Z X))
                        (SETQ Y (IQUOTIENT (ITIMES Z Y)
                                           100)))
                 (RETURN (IQUOTIENT (IPLUS X (LRSH Y 1))
                                    Y])
```

⟨**VStats-ReDisplay?**
```
  [LAMBDA NIL                                                       ; Edited 18-Sep-87 00:56 by Koomen
    (DECLARE (GLOBALVARS VSTATS.ALWAYS? VStatsClockRegion VStatsClockTimer VStatsMUtilRegion VStatsMUtilTimer
                    VStatsOff? VStatsSpaceLevel VStatsSpacePanicLevel VStatsSpaceRegion VStatsSpaceTimer
                    VStatsWindow))
    (if VStatsOff?
        then (VSTATS 'Off)
      else (LET [(DoDisp (OR VSTATS.ALWAYS? (AND VStatsSpaceRegion VStatsSpacePanicLevel (IGREATERP
                                                                                         VStatsSpaceLevel

                                                                                         VStatsSpacePanicLevel
                                                                                         ))
                            (NOT (COVEREDWP VStatsWindow]
                [if VStatsClockRegion
                    then (if (VStats-TimerExpired? VStatsClockTimer)
                             then (if DoDisp
                                      then (VStatsClock-ReDisplay]
                [if VStatsSpaceRegion
                    then (if (VStats-TimerExpired? VStatsSpaceTimer)
                             then (if DoDisp
                                      then (VStatsSpace-ReDisplay]
                (if VStatsMUtilRegion
                    then (if (VStats-TimerExpired? VStatsMUtilTimer)
                             then (if DoDisp
                                      then (VStatsMUtil-ReDisplay])
```

⟨**VStats-SetDisplayColor**
```
  [LAMBDA NIL                                                       (* HaKo " 2-Jul-86 16:01")
    (DECLARE (GLOBALVARS BLACKSHADE VSTATS.BLACK? VStatsDsp WHITESHADE))
    (if VStatsDsp
        then (if VSTATS.BLACK?
```

```
                    then (DSPTEXTURE BLACKSHADE VStatsDsp)
                         (DSPSOURCETYPE 'INVERT VStatsDsp)
                    else (DSPTEXTURE WHITESHADE VStatsDsp)
                         (DSPSOURCETYPE 'INPUT VStatsDsp])
```

(VStats-SetUpTimer
```
  [LAMBDA (TIMERINFO)                                              ; Edited 23-Sep-87 11:19 by Koomen
    (PROG ((CLK (fetch (VSTATSTIMERINFO LASTSETUP) of TIMERINFO))
           (INT (fetch (VSTATSTIMERINFO INTERVAL) of TIMERINFO))
           REM)
          (\RCLK CLK)
          (SETQ REM (IREMAINDER CLK INT))
          (RETURN (SETUPTIMER (if (ILESSP REM 0)
                                  then (IDIFFERENCE 0 REM)
                                  else (IDIFFERENCE INT REM))
                      (fetch (VSTATSTIMERINFO TIMER) of TIMERINFO)
                      'TICKS])
```

(VStats-TimerExpired?
```
  [LAMBDA (TIMERINFO)                                              ; Edited 18-Sep-87 00:56 by Koomen
```
```
    ;; Knowing the last time the timer was set allows us to test for wrap around.  Using the standard TIMEREXPIRED?  the timer could be set at some
    ;; big positive number (say MAX.FIXP --- 100), If we don't get to check the machine clock between the timer's value and the largest positive number
    ;; the machine clock will wrap around to some big negative number (say MAX.FIXP + 100) and it will be quite a while before the machine clock is
    ;; again GREATERP than our timer!
```
```
    (DECLARE (GLOBALVARS VStatsCurrentTime))
    (\RCLK VStatsCurrentTime)
    (if (OR (IGREATERP VStatsCurrentTime (fetch (VSTATSTIMERINFO TIMER) of TIMERINFO))
            (ILESSP VStatsCurrentTime (fetch (VSTATSTIMERINFO LASTSETUP) of TIMERINFO)))
        then (VStats-SetUpTimer TIMERINFO])
```
)

```
              (* * option support stuff * *)
```

(RPAQ? **VStatsOptionsWindow**)

(DEFINEQ

(VStatsOptions-Inspect
```
  [LAMBDA (ThruMouse?)                                             (* Koomen " 2-Jul-87 00:43")
    (DECLARE (GLOBALVARS LASTMOUSEBUTTONS LASTMOUSEX LASTMOUSEY VStatsOptionsWindow VStatsWindow))
    (PROG [[OPTIONS '(VSTATS.BLACK? VSTATS.ALWAYS? VSTATS.SPACE.SHOW.DISK? VSTATS.MUTIL.HYSTERESIS
                      VSTATS.SPACE.PANIC.LEVEL VSTATS.CLOCK.INTERVAL VSTATS.SPACE.INTERVAL
                      VSTATS.MUTIL.INTERVAL]
          (if ThruMouse?
              then (if (NOT (VStats-MouseWait VStatsWindow))
                       then (RETURN)))
          (if (WINDOWP VStatsOptionsWindow)
              then (MOVEW VStatsOptionsWindow LASTMOUSEX LASTMOUSEY)
                   (MOVEW VStatsOptionsWindow)
                   (INSPECTW.REDISPLAY VStatsOptionsWindow OPTIONS)
              else (SETQ VStatsOptionsWindow (INSPECTW.CREATE OPTIONS (FUNCTION VStatsOptions-PropertiesFn)
                                                 (FUNCTION VStatsOptions-FetchFn)
                                                 (FUNCTION VStatsOptions-StoreFn)
                                                 (FUNCTION VStatsOptions-PropCommandFn)
                                                 (FUNCTION VStatsOptions-ValueCommandFn)
                                                 (AND NIL (FUNCTION TitleCommandFn))
                                                 "VStats Options"
                                                 (FUNCTION VStatsOptions-SelectionFn)
                                                 (AND NIL 'Where)
                                                 (FUNCTION VStatsOptions-PropPrintFn])
```

(VStatsOptions-FetchFn
```
  [LAMBDA (OPTIONS OPTION)                                         ; Edited 22-Sep-87 15:00 by Koomen
    (DECLARE (GLOBALVARS VSTATS.ALWAYS? VSTATS.BLACK? VSTATS.CLOCK.INTERVAL VSTATS.MUTIL.HYSTERESIS
                  VSTATS.MUTIL.INTERVAL VSTATS.SPACE.INTERVAL VSTATS.SPACE.SHOW.DISK? VStatsWindow))
    (SELECTQ OPTION
        (VSTATS.POSITION
            [if (WINDOWP VStatsWindow)
                then (LET ((R (WINDOWREGION VStatsWindow)))
                         (create POSITION
                                 XCOORD _ (fetch (REGION LEFT) of R)
                                 YCOORD _ (fetch (REGION BOTTOM) of R])
        (VSTATS.ALWAYS?
            (if VSTATS.ALWAYS?
                then 'Yes
                else 'No))
        (VSTATS.BLACK?
            (if VSTATS.BLACK?
                then 'Inverted
                else 'Normal))
        (VSTATS.CLOCK.INTERVAL
```

```
                        (if (VStatsClock-Ticks?)
                            then VSTATS.CLOCK.INTERVAL
                          else 'Disabled))
                  (VSTATS.SPACE.INTERVAL
                        (if (VStatsSpace-Ticks?)
                            then VSTATS.SPACE.INTERVAL
                          else 'Disabled))
                  (VSTATS.SPACE.SHOW.DISK?
                        [if (NULL VStatsSpaceDisk)
                            then 'Disabled
                          else (OR (FILENAMEFIELD VStatsSpaceDisk 'DIRECTORY)
                                   (FILENAMEFIELD VStatsSpaceDisk 'HOST])
                  (VSTATS.SPACE.PANIC.LEVEL
                        (LET ((pct (VStatsSpace-InitPanicLevel)))
                             (if pct
                                 then pct
                               else 'Disabled)))
                  (VSTATS.MUTIL.INTERVAL
                        (if (VStatsMUtil-Ticks?)
                            then VSTATS.MUTIL.INTERVAL
                          else 'Disabled))
                  (VSTATS.MUTIL.HYSTERESIS
                        (if (AND (NUMBERP VSTATS.MUTIL.HYSTERESIS)
                                 (GREATERP VSTATS.MUTIL.HYSTERESIS 0))
                            then VSTATS.MUTIL.HYSTERESIS
                          else 'Cumulative))
                  (ERROR "Unknown VStats option: " OPTION])
```

⟨**VStatsOptions-PropCommandFn**
```
  [LAMBDA (OPTION OPTIONS WINDOW)                                    (* HaKo " 2-Jul-86 14:00")
    (PROMPTPRINT (SELECTQ OPTION
                        (VSTATS.ALWAYS?
                            "Update VStats window even if partially or completely occluded.")
                        (VSTATS.BLACK?
                            "Display VStats window in inverse video.")
                        (VSTATS.CLOCK.INTERVAL
                            "Number of seconds between clock updates. Disabled if <= 0.")
                        (VSTATS.SPACE.INTERVAL
                            "Number of seconds between space utilization updates. Disabled if <= 0.")
                        (VSTATS.SPACE.SHOW.DISK?
                            "Display percentage of local disk space used.")
                        (VSTATS.SPACE.PANIC.LEVEL
                            "Percentage at which VStats window will start flashing 'out of space soon' warnings.")
                        (VSTATS.MUTIL.INTERVAL
                            "Number of seconds between machine utilization updates. Disabled if <= 0.")
                        (VSTATS.MUTIL.HYSTERESIS
                            "Number of intervals over which machine utilization will be averaged.  Cumulative
                            average used if <= 0.")
                        (VSTATS.POSITION
                            "Position of VStats window.")
                        (ERROR "Unknown VStats option: " OPTION])
```

⟨**VStatsOptions-PropPrintFn**
```
  [LAMBDA (OPTION OPTIONS)                                           (* HaKo " 3-Jul-86 08:45")
    (SELECTQ OPTION
        (VSTATS.ALWAYS?
            'Update.Always?)
        (VSTATS.BLACK?
            'Display.Color)
        (VSTATS.CLOCK.INTERVAL
            'Clock.Update.Interval)
        (VSTATS.SPACE.INTERVAL
            'Space.Update.Interval)
        (VSTATS.SPACE.SHOW.DISK?
            'Show.Disk.Space?)
        (VSTATS.SPACE.PANIC.LEVEL
            'Space.Panic.Level)
        (VSTATS.MUTIL.INTERVAL
            'MUtil.Update.Interval)
        (VSTATS.MUTIL.HYSTERESIS
            'MUtil.Hysteresis)
        (VSTATS.POSITION
            'Window.Position)
        (ERROR "Unknown VSTATS option: " OPTION])
```

⟨**VStatsOptions-PropertiesFn**
```
  [LAMBDA (OPTIONS)                                                 (* HaKo "25-Jun-86 17:30")
    OPTIONS])
```

⟨**VStatsOptions-RNumber**
```
  [LAMBDA (LABEL FLOAT? NOTNUMVAL NOTPOSVAL)                         (* HaKo " 2-Jul-86 15:33")
    (LET ((N (RNUMBER LABEL NIL NIL NIL T FLOAT?)))
         (if (NOT (NUMBERP N))
```

```
                then NOTNUMVAL
            elseif (GREATERP N 0)
                then N
            else NOTPOSVAL])
```

⟨**VStatsOptions-SelectionFn**
```
  [LAMBDA (OPTION VALUE? WINDOW)                                    (* HaKo " 2-Jul-86 14:10")
    (if (NOT VALUE?)
        then (VStatsOptions-PropCommandFn OPTION NIL WINDOW])
```

⟨**VStatsOptions-StoreFn**
```
  [LAMBDA (OPTIONS OPTION NEWVALUE)                                 (* Koomen "18-Jun-87 22:54")
    (DECLARE (GLOBALVARS VSTATS.ALWAYS? VSTATS.BLACK? VSTATS.CLOCK.INTERVAL VSTATS.MUTIL.HYSTERESIS
                    VSTATS.MUTIL.INTERVAL VSTATS.POSITION VSTATS.SPACE.INTERVAL VSTATS.SPACE.PANIC.LEVEL
                    VSTATS.SPACE.SHOW.DISK? VStatsWindow))
    (LET (INIT?)
        (SELECTQ OPTION
            (VSTATS.ALWAYS?
                (SETQ VSTATS.ALWAYS? (EQ NEWVALUE 'Yes)))
            (VSTATS.BLACK?
                (SETQ VSTATS.BLACK? (EQ NEWVALUE 'Inverted))
                (if VStatsWindow
                    then (VStats-SetDisplayColor)
                         (VStats-Display)))
            (VSTATS.CLOCK.INTERVAL
                [LET [(OLDOFF (NULL (VStatsClock-Ticks?]
                    (SETQ VSTATS.CLOCK.INTERVAL (NUMBERP NEWVALUE))
                    (SETQ INIT? (NEQ OLDOFF (NULL (VStatsClock-Ticks?]))
            (VSTATS.SPACE.INTERVAL
                [LET [(OLDOFF (NULL (VStatsSpace-Ticks?]
                    (SETQ VSTATS.SPACE.INTERVAL (NUMBERP NEWVALUE))
                    (SETQ INIT? (NEQ OLDOFF (NULL (VStatsSpace-Ticks?]))
            (VSTATS.MUTIL.INTERVAL
                [LET [(OLDOFF (NULL (VStatsMUtil-Ticks?]
                    (SETQ VSTATS.MUTIL.INTERVAL (NUMBERP NEWVALUE))
                    (SETQ INIT? (NEQ OLDOFF (NULL (VStatsMUtil-Ticks?]))
            (VSTATS.SPACE.PANIC.LEVEL
                (SETQ VSTATS.SPACE.PANIC.LEVEL NEWVALUE)
                (VStatsSpace-InitPanicLevel))
            (VSTATS.SPACE.SHOW.DISK?
                (SETQ VSTATS.SPACE.SHOW.DISK? NEWVALUE)
                (SETQ INIT? T))
            (VSTATS.MUTIL.HYSTERESIS
                (SETQ VSTATS.MUTIL.HYSTERESIS NEWVALUE)
                (SETQ INIT? T))
            (VSTATS.POSITION
                (SETQ VSTATS.POSITION NEWVALUE)
                (if VStatsWindow
                    then (MOVEW VStatsWindow NEWVALUE)))
            (ERROR "Unknown VSTATS option: " OPTION))
        (if (AND VStatsWindow INIT?)
            then (VSTATS 'On])
```

⟨**VStatsOptions-ValueCommandFn**
```
  [LAMBDA (OLDVALUE OPTION OPTIONS WINDOW)                          ; Edited 27-Oct-87 16:18 by Koomen
    (DECLARE (GLOBALVARS VStatsOptionsWindow VStatsWindow))
    (PROG (NEWVALUE)
        (if (NOT (VStats-MouseWait VStatsOptionsWindow))
            then (RETURN))
        (SETQ NEWVALUE (SELECTQ OPTION
                            (VSTATS.ALWAYS?
                                (OR (MENU (create MENU
                                                ITEMS _ '(Yes No)
                                                CENTERFLG _ T))
                                    OLDVALUE))
                            (VSTATS.BLACK?
                                (OR (MENU (create MENU
                                                ITEMS _ '(Normal Inverted)
                                                CENTERFLG _ T))
                                    OLDVALUE))
                            ((VSTATS.CLOCK.INTERVAL VSTATS.SPACE.INTERVAL VSTATS.MUTIL.INTERVAL)
                                (VStatsOptions-RNumber "New interval: " T OLDVALUE 'Disabled))
                            (VSTATS.SPACE.SHOW.DISK?
                                (SETQ OLDVALUE VStatsSpaceDisk)
                                (VStatsSpace-InitDisk T))
                            (VSTATS.SPACE.PANIC.LEVEL
                                (VStatsOptions-RNumber "New panic level: " NIL OLDVALUE 'Disabled))
                            (VSTATS.MUTIL.HYSTERESIS
                                (VStatsOptions-RNumber "MUtil hysteresis: " NIL OLDVALUE 'Cumulative))
                            (VSTATS.POSITION
                                (if VStatsWindow
                                    then (LET ((R (WINDOWREGION VStatsWindow)))
                                            (GETBOXPOSITION (fetch (REGION WIDTH) of R)
                                                    (fetch (REGION HEIGHT) of R)
```

```
                                                   (fetch (REGION LEFT) of R)
                                                   (fetch (REGION BOTTOM) of R)))
                                      else (GETPOSITION)))
                           (ERROR "Unknown VSTATS option: " OPTION)))
              (if (NOT (EQUAL NEWVALUE OLDVALUE))
                 then (INSPECTW.REPLACE WINDOW OPTION NEWVALUE])

)


            (* * clock support stuff * *)

(RPAQ? VStatsClockFont )

(RPAQ? VStatsClockReset? )

(RPAQ? VStatsClockTimer )

(DEFINEQ
```

(**VStatsClock-Display**
```
  [LAMBDA NIL                                                    (* Koomen "12-Jan-87 16:37")
    (DECLARE (GLOBALVARS VStatsClockDay VStatsClockDayPos VStatsClockDisplaySeconds? VStatsClockFont
                    VStatsClockHr VStatsClockHrPos VStatsClockMin VStatsClockMinPos VStatsClockMon
                    VStatsClockMonPos VStatsClockRegion VStatsClockSec VStatsClockSecPos VStatsClockXPos
                    VStatsClockYPos VStatsClockYr VStatsClockYrPos VStatsDsp))
    (VStatsClock-Read)
    (SETQ VStatsClockXPos (fetch (REGION LEFT) of VStatsClockRegion))
    [SETQ VStatsClockYPos (IPLUS (fetch (REGION BOTTOM) of VStatsClockRegion)
                                 (FONTPROP VStatsClockFont 'DESCENT]
    (MOVETO VStatsClockXPos VStatsClockYPos VStatsDsp)
    (DSPFONT VStatsClockFont VStatsDsp)
    (SETQ VStatsClockDayPos (DSPXPOSITION NIL VStatsDsp))
    (VStatsClock-DisplayDigits VStatsClockDayPos VStatsClockDay)
    (BOUT VStatsDsp (CHARCODE "-"))
    (SETQ VStatsClockMonPos (DSPXPOSITION NIL VStatsDsp))
    (VStatsClock-DisplayMonth VStatsClockMonPos VStatsClockMon)
    (BOUT VStatsDsp (CHARCODE "-"))
    (SETQ VStatsClockYrPos (DSPXPOSITION NIL VStatsDsp))
    (VStatsClock-DisplayDigits VStatsClockYrPos VStatsClockYr)
    (BOUT VStatsDsp (CHARCODE " "))
    (SETQ VStatsClockHrPos (DSPXPOSITION NIL VStatsDsp))
    (VStatsClock-DisplayDigits VStatsClockHrPos VStatsClockHr)
    (BOUT VStatsDsp (CHARCODE ":"))
    (SETQ VStatsClockMinPos (DSPXPOSITION NIL VStatsDsp))
    (VStatsClock-DisplayDigits VStatsClockMinPos VStatsClockMin)
    (if VStatsClockDisplaySeconds?
        then (BOUT VStatsDsp (CHARCODE ":"))
             (SETQ VStatsClockSecPos (DSPXPOSITION NIL VStatsDsp))
             (VStatsClock-DisplayDigits VStatsClockSecPos VStatsClockSec])
```

(**VStatsClock-DisplayDigits**
```
  [LAMBDA (dspxpos n)                                            (* HaKo " 1-Aug-85 10:10")
    (DECLARE (GLOBALVARS VStatsDsp))
    (DSPXPOSITION dspxpos VStatsDsp)
    (BOUT VStatsDsp (IPLUS (IQUOTIENT (IREMAINDER n 100)
                                      10)
                    (CHARCODE "0")))
    (BOUT VStatsDsp (IPLUS (IREMAINDER n 10)
                    (CHARCODE "0"])
```

(**VStatsClock-DisplayMonth**
```
  [LAMBDA (dspxpos m)                                            (* HaKo " 1-Aug-85 10:13")
    (DECLARE (GLOBALVARS VStatsDsp))
    (PROG ((i (ADD1 (ITIMES 3 m)))
           (lbl "JanFebMarAprMayJunJulAugSepOctNovDec"))
          (DSPXPOSITION dspxpos VStatsDsp)
          (BOUT VStatsDsp (OR (NTHCHARCODE lbl i)
                              (CHARCODE "?")))
          (BOUT VStatsDsp (OR (NTHCHARCODE lbl (IPLUS i 1))
                              (CHARCODE "?")))
          (BOUT VStatsDsp (OR (NTHCHARCODE lbl (IPLUS i 2))
                              (CHARCODE "?"])
```

(**VStatsClock-Init**
```
  [LAMBDA NIL                                                    (* HaKo "13-Jun-86 00:44")

        (* * If the clock interval is not a FIXP or not positive, the clock display is disabled.
        (MENU VStatsOptionsMenu))

    (DECLARE (GLOBALVARS VStatsClockDisplaySeconds? VStatsClockFont VStatsClockRegion))
    (if (VStatsClock-Ticks?)
        then [LET ((datestr (DATE)))
                [if (NOT (FONTP VStatsClockFont))
```

```
                              then (SETQ VStatsClockFont (FONTCREATE '(GACHA 12 BOLD]
                       (if (NOT VStatsClockDisplaySeconds?)
                           then (SETQ datestr (SUBSTRING datestr 1 −4)))
                       (SETQ VStatsClockRegion (create REGION
                                                     LEFT _ 0
                                                     BOTTOM _ 0
                                                     WIDTH _ (STRINGWIDTH datestr VStatsClockFont)
                                                     HEIGHT _ (FONTHEIGHT VStatsClockFont]
         else (SETQ VStatsClockRegion NIL])
```

(**VStatsClock-ReDisplay**
```
   [LAMBDA NIL                                                        ; Edited 18-Sep-87 00:40 by Koomen
     (DECLARE (GLOBALVARS VStatsClockDay VStatsClockDayPos VStatsClockDisplaySeconds? VStatsClockFont
                      VStatsClockHr VStatsClockHrPos VStatsClockMin VStatsClockMinPos VStatsClockMon
                      VStatsClockMonPos VStatsClockReset? VStatsClockSec VStatsClockSecPos VStatsClockYPos
                      VStatsClockYr VStatsClockYrPos VStatsDsp))
     (PROG ((oldday VStatsClockDay)
            (oldmon VStatsClockMon)
            (oldyr VStatsClockYr)
            (oldhr VStatsClockHr)
            (oldmin VStatsClockMin)
            (oldsec VStatsClockSec))
           (DSPFONT VStatsClockFont VStatsDsp)
           (DSPYPOSITION VStatsClockYPos VStatsDsp)
           (VStatsClock-Read)
           (if (NEQ VStatsClockDay oldday)
               then (SETQ VStatsClockReset? T))
           (if (AND VStatsClockReset? (NEQ VStatsClockHr oldhr)
                    (\NET.SETTIME))
               then (SETQ VStatsClockReset? NIL)
                    (VStatsClock-Read))
           (if (NEQ VStatsClockDay oldday)
               then (VStatsClock-DisplayDigits VStatsClockDayPos VStatsClockDay))
           (if (NEQ VStatsClockMon oldmon)
               then (VStatsClock-DisplayMonth VStatsClockMonPos VStatsClockMon))
           (if (NEQ VStatsClockYr oldyr)
               then (VStatsClock-DisplayDigits VStatsClockYrPos VStatsClockYr))
           (if (NEQ VStatsClockHr oldhr)
               then (VStatsClock-DisplayDigits VStatsClockHrPos VStatsClockHr))
           (if (NEQ VStatsClockMin oldmin)
               then (VStatsClock-DisplayDigits VStatsClockMinPos VStatsClockMin))
           (if (AND VStatsClockDisplaySeconds? (NEQ VStatsClockSec oldsec))
               then (VStatsClock-DisplayDigits VStatsClockSecPos VStatsClockSec])
```

(**VStatsClock-Read**
```
   [LAMBDA NIL                                           (* Koomen "26-Mar-87 15:13")
     (DECLARE (GLOBALVARS VStatsClockDay VStatsClockHr VStatsClockMin VStatsClockMon VStatsClockSec
                      VStatsClockYr))                    (* APPLY (FUNCTION (LAMBDA
                                                         (yr mon day hr min sec dst) (SETQ VStatsClockDay day)
                                                         (SETQ VStatsClockMon mon) (SETQ VStatsClockYr yr)
                                                         (SETQ VStatsClockHr hr) (SETQ VStatsClockMin min)
                                                         (SETQ VStatsClockSec sec))) (\UNPACKDATE))

     (VStatsClock-UnpackDate])
```

(**VStatsClock-Ticks?**
```
   [LAMBDA NIL                                           (* Koomen "12-Jan-87 17:20")
     (DECLARE (GLOBALVARS VSTATS.CLOCK.INTERVAL VStatsClockDisplaySeconds? VStatsClockTimer))
     (LET [(NTICKS (VStats-InitInterval (OR VStatsClockTimer (SETQ VStatsClockTimer (create VSTATSTIMERINFO)))
                          VSTATS.CLOCK.INTERVAL
                          (CONSTANT (TIMES 5 60]
        [SETQ VStatsClockDisplaySeconds? (AND NTICKS (ILESSP NTICKS (CLOCKTICKS 1 'MINUTE]
        NTICKS])
```

(**VStatsClock-UnpackDate**
```
   [LAMBDA (D)                                           (* Koomen "26-Mar-87 15:11")
                                                         (* Adapted from \UNPACKDATE on
                                                         <Lisp>Koto>Sources>IOCHAR dated "28-Jun-85 18:07:58")
     (DECLARE (GLOBALVARS VStatsClockDay VStatsClockHr VStatsClockMin VStatsClockMon VStatsClockSec
                      VStatsClockYr))                    (* bvm%: "28-Jun-85 18:07")

          (* Converts an internal Lisp date D into a list of integers (Year Month Day Hours Minutes Seconds daylightp DayOfWeek)%.
          D defaults to current date. -
          DayOfWeek is zero for Monday -
          -
          D is first converted to the alto standard, a 32-bit unsigned integer, representing the number of seconds since jan 1,
          1901-Gmt. We have to be a little tricky in our computations to avoid the sign bit.)

     (SETQ D (OR D (DAYTIME)))
     (PROG ((CHECKDLS \DayLightSavings)
            (DQ (IQUOTIENT (LOGAND MAX.FIXP (LRSH (LISP.TO.ALTO.DATE D)
                                                        1))
                      30))
            MONTH SEC HR DAY4 YDAY WDAY YEAR4 TOTALDAYS MIN DLS)
```

(* DQ is number of minutes since day 0, getting us past the sign bit problem.)

```
(SETQ SEC (IMOD [IPLUS D (CONSTANT (IDIFFERENCE 60 (IMOD MIN.FIXP 60]
                 60))
(SETQ MIN (IREMAINDER DQ 60))
```

(* No we can adjust to the current time zone. Since this might cause DQ to go negative, first add in 4 years worth of hours, making the base date be Jan 1, 1897)

```
(SETQ HR (IREMAINDER (SETQ DQ (IDIFFERENCE (IPLUS (IQUOTIENT DQ 60)
                                                  (CONSTANT (ITIMES 24 \4YearsDays)))
                                           \TimeZoneComp))
             24))
(SETQ TOTALDAYS (IQUOTIENT DQ 24))
DTLOOP
(SETQ DAY4 (IREMAINDER TOTALDAYS \4YearsDays))              (* DAY4 = number of days since last leap year day 0)
[SETQ DAY4 (IPLUS DAY4 (CDR (\DTSCAN DAY4 '((789 . 3)
                                           (424 . 2)
                                           (59 . 1)
                                           (0 . 0]              (* pretend every year is a leap year, adding one for days after
                                                                Feb 28)
(SETQ YEAR4 (IQUOTIENT TOTALDAYS \4YearsDays))              (* YEAR4 = number of years til that last leap year / 4)
(SETQ YDAY (IREMAINDER DAY4 366))                           (* YDAY is the ordinal day in the year
                                                           (jan 1 = zero))
(SETQ WDAY (IREMAINDER (IPLUS TOTALDAYS 3)
             7))
[COND
   ((AND CHECKDLS (SETQ DLS (\ISDST? YDAY HR WDAY)))
```

(* This date is during daylight savings, so add 1 hour. Third arg is day of the week, which we determine by taking days mod 7 plus offset. Monday = zero in this scheme. Jan 1 1897 was actually a Friday (not Thursday=3)%, but we're cheating--1900 was not a leap year)

```
     (COND
        ((IGREATERP (SETQ HR (ADD1 HR))
                 23)
```

(* overflowed into the next day. This case is too hard (we might have overflowed the month, for example)%, so just go back and recompute)

```
           (SETQ TOTALDAYS (ADD1 TOTALDAYS))
           (SETQ HR 0)
           (SETQ CHECKDLS NIL)
           (GO DTLOOP]
[SETQ MONTH (\DTSCAN YDAY '((335 . 11)
                           (305 . 10)
                           (274 . 9)
                           (244 . 8)
                           (213 . 7)
                           (182 . 6)
                           (152 . 5)
                           (121 . 4)
                           (91 . 3)
                           (60 . 2)
                           (31 . 1)
                           (0 . 0]                    (* Now return year, month, day, hr, min, sec)
                                                      (* RETURN (LIST (IPLUS 1897 (ITIMES YEAR4 4)
                                                      (IQUOTIENT DAY4 366)) (CDR MONTH)
                                                      (ADD1 (IDIFFERENCE YDAY (CAR MONTH))) HR MIN SEC
                                                      DLS WDAY))
(SETQ VStatsClockYr (IPLUS 1897 (ITIMES YEAR4 4)
                           (IQUOTIENT DAY4 366)))
(SETQ VStatsClockMon (CDR MONTH))
[SETQ VStatsClockDay (ADD1 (IDIFFERENCE YDAY (CAR MONTH]
(SETQ VStatsClockHr HR)
(SETQ VStatsClockMin MIN)
(SETQ VStatsClockSec SEC])
```

)

(* * space support stuff * *)

(RPAQ? **VStatsSpaceDiskPages**)

(RPAQ? **VStatsSpaceFont**)

(RPAQ? **VStatsSpacePCTs**)

(RPAQ? **VStatsSpaceTimer**)

(RPAQ? **\LASTVMEMFILEPAGE** 16383)

(DEFINEQ

(**VStatsSpace-Display**

```
  [LAMBDA NIL                                                               (* Koomen "12-Jan-87 16:37")
    (DECLARE (GLOBALVARS VStatsDsp VStatsSpaceFont VStatsSpacePCTs VStatsSpaceRegion))
    (PROG [x (xoffset (fetch (REGION LEFT) of VStatsSpaceRegion))
             (yoffset (IPLUS (fetch (REGION BOTTOM) of VStatsSpaceRegion)
                             (FONTPROP VStatsSpaceFont 'HEIGHT]
          (DSPFONT VStatsSpaceFont VStatsDsp)
          (MOVETO xoffset yoffset VStatsDsp)
          (for PCT in VStatsSpacePCTs do (DSPXPOSITION (fetch (REGION LEFT) of (fetch (VSTATSPCTINFO LBLREGION)
                                                                                    of PCT))
                                                       VStatsDsp)
                                         (printout VStatsDsp (fetch (VSTATSPCTINFO LABEL) of PCT)))
          (TERPRI VStatsDsp)
          (SETQ yoffset (DSPYPOSITION NIL VStatsDsp))
          (VStatsSpace-Read)
          (for PCT in VStatsSpacePCTs do (replace (REGION BOTTOM) of (fetch (VSTATSPCTINFO LBLREGION) of PCT)
                                                  with yoffset)
                                         (replace (REGION BOTTOM) of (fetch (VSTATSPCTINFO BARREGION) of PCT)
                                                  with yoffset)
                                         (VStats-DisplayPct PCT T])
```

(**VStatsSpace-Init**
```
  [LAMBDA NIL                                                               ; Edited 22-Sep-87 16:22 by Koomen

         (* * If the space interval is not a FIXP or not positive, the space display is disabled, and this function returns NIL.
         Otherwise it returns the region required for the space display.)

    (DECLARE (GLOBALVARS VSTATS.SPACE.SHOW.DISK? VStatsSpaceDisk VStatsSpaceDiskPages VStatsSpaceFont
                   VStatsSpaceLevel VStatsSpacePCTs VStatsSpaceRegion))
    (SETQ VStatsSpaceLevel 0)
    (if (VStatsSpace-Ticks?)
        then [if (NOT (FONTP VStatsSpaceFont))
                 then (SETQ VStatsSpaceFont (FONTCREATE '(GACHA 10]
             (VStatsSpace-InitDisk)
             (VStatsSpace-InitPanicLevel)
             [SETQ VStatsSpacePCTs (VStats-CreatePCTs VStatsSpaceFont (if VStatsSpaceDisk
                                                                         then '((DATA . "Data")
                                                                                (ATOM . "Atom")
                                                                                (VMEM . "VMem")
                                                                                (DISK . "Disk"))
                                                                         else '((DATA . "Data")
                                                                                (ATOM . "Atom")
                                                                                (VMEM . "VMem"]
             (SETQ VStatsSpaceRegion (VStats-GetPCTsRegion VStatsSpacePCTs))
        else (SETQ VStatsSpaceRegion NIL])
```

(**VStatsSpace-InitDisk**
```
  [LAMBDA (ASK?)                                                            ; Edited 22-Sep-87 16:30 by Koomen
    (DECLARE (GLOBALVARS VSTATS.SPACE.PANIC.LEVEL VSTATS.SPACE.SHOW.DISK? VStatsSpaceDisk VStatsSpaceDiskPages
                   VStatsSpacePanicLevel))
    [if ASK?
        then (LET [(DISK (MENU (create MENU
                                       ITEMS _ (APPEND '(*OFF* *DEFAULT* (""))
                                                       (SELECTQ (MACHINETYPE)
                                                           ((DANDELION DAYBREAK DOVE)
                                                             (for V in (VOLUMES) when (LISPDIRECTORYP V)
                                                                collect V))
                                                           (DORADO (PROMPTPRINT "This takes a little while; hang
                                                                                 on...")
                                                                   (ALTOPARTITIONS))
                                                           NIL))
                                       CENTERFLG _ T]
                   (if DISK
                       then (SETQ VSTATS.SPACE.SHOW.DISK? (if (EQ DISK '*OFF*)
                                                              then NIL
                                                            elseif (EQ DISK '*DEFAULT*)
                                                              then T
                                                            else (SELECTQ (MACHINETYPE)
                                                                     ((DANDELION DAYBREAK DOVE)
                                                                       (PACKFILENAME 'HOST 'DSK 'DIRECTORY DISK)
)
                                                                     (DORADO (PACKFILENAME 'HOST DISK))
                                                                     NIL]
    [SETQ VStatsSpaceDisk (if VSTATS.SPACE.SHOW.DISK?
                              then (CAR (NLSETQ (DIRECTORYNAME (if (EQ VSTATS.SPACE.SHOW.DISK? T)
                                                                  then "{DSK}"
                                                                else VSTATS.SPACE.SHOW.DISK?]
    (SETQ VStatsSpaceDiskPages (if VStatsSpaceDisk
                                   then (DISKTOTALPAGES VStatsSpaceDisk)))
    (if (FIXP VStatsSpaceDiskPages)
        then VStatsSpaceDisk
      else (SETQ VStatsSpaceDisk NIL])
```

(**VStatsSpace-InitPanicLevel**
```
  [LAMBDA (ASK?)                                                            (* Koomen "12-Jan-87 17:21")
```

```
      (DECLARE (GLOBALVARS VSTATS.SPACE.PANIC.LEVEL VStatsSpacePanicLevel))
      (if ASK?
          then (SETQ VSTATS.SPACE.PANIC.LEVEL (RNUMBER "Panic level (): ")))
      (SETQ VStatsSpacePanicLevel (if (AND (BOUNDP 'VSTATS.SPACE.PANIC.LEVEL)
                                           (NUMBERP VSTATS.SPACE.PANIC.LEVEL)
                                           (LESSP VSTATS.SPACE.PANIC.LEVEL 100)
                                           (GREATERP VSTATS.SPACE.PANIC.LEVEL 0))
                                      then (FIX (if (LESSP VSTATS.SPACE.PANIC.LEVEL 1)
                                                    then (TIMES VSTATS.SPACE.PANIC.LEVEL 100)
                                                    else VSTATS.SPACE.PANIC.LEVEL])
```

(**VStatsSpace-ReDisplay**
```
   [LAMBDA NIL                                                ; Edited 18-Sep-87 00:51 by Koomen
     (DECLARE (GLOBALVARS VSTATS.ALWAYS? VStatsDsp VStatsSpaceFont VStatsSpacePCTs VStatsSpacePanicLevel
                    VStatsWindow))
     (for pct in VStatsSpacePCTs bind NEWPCT first (VStatsSpace-Read)
                                                   (SETQ VStatsSpaceLevel 0)
                                                   (DSPFONT VStatsSpaceFont VStatsDsp)
         eachtime [SETQ VStatsSpaceLevel (IMAX VStatsSpaceLevel (SETQ NEWPCT (fetch (VSTATSPCTINFO NEWPCT)
                                                                                of pct]
         when (NEQ NEWPCT (fetch (VSTATSPCTINFO OLDPCT) of pct)) do (VStats-DisplayPct pct)
         finally (if (AND VStatsSpacePanicLevel (ILESSP VStatsSpacePanicLevel VStatsSpaceLevel))
                     then (FLASHWINDOW VStatsWindow (IDIFFERENCE VStatsSpaceLevel VStatsSpacePanicLevel))
                          (VStatsSpace-ShrinkInterval 5])
```

(**VStatsSpace-Read**
```
   [LAMBDA NIL                                                ; Edited 18-Sep-87 00:53 by Koomen
     (DECLARE (GLOBALVARS VStatsSpaceDiskPages VStatsSpacePCTs \LASTVMEMFILEPAGE))
     (for PCT in VStatsSpacePCTs bind (heap _ (STORAGE.LEFT))
         do (replace (VSTATSPCTINFO OLDPCT) of PCT with (fetch (VSTATSPCTINFO NEWPCT) of PCT))
            (replace (VSTATSPCTINFO NEWPCT) of PCT with (SELECTQ (fetch (VSTATSPCTINFO NAME) of PCT)
                                                          (DATA [FIX (FDIFFERENCE 100.5 (FTIMES
                                                                                          100.0
                                                                                          (fetch (SPACEDATA MDSFRAC)
                                                                                             of heap])
                                                          (ATOM [FIX (FDIFFERENCE 100.5 (FTIMES
                                                                                          100.0
                                                                                          (fetch (SPACEDATA ATOMFRAC
                                                                                                    )
                                                                                             of heap])
                                                          (VMEM (VStats-Percentage (VMEMSIZE)
                                                                       \LASTVMEMFILEPAGE))
                                                          (DISK (VStats-Percentage (IDIFFERENCE VStatsSpaceDiskPages
                                                                                          (DISKFREEPAGES
                                                                                             VStatsSpaceDisk))
                                                                       VStatsSpaceDiskPages))
                                                          (SHOULDNT])
```

(**VStatsSpace-ShrinkInterval**
```
   [LAMBDA (shrinkpct)                                        (* Koomen "12-Jan-87 17:25")
     (DECLARE (GLOBALVARS VStatsSpaceTimer))
     (PROG ([delta (IMAX 50 (IDIFFERENCE 100 (OR shrinkpct 25]
            (oldint (fetch (VSTATSTIMERINFO INTERVAL) of VStatsSpaceTimer))
            newint)
           [SETQ newint (IMAX (IQUOTIENT (ITIMES oldint delta)
                                    100)
                              (CLOCKTICKS 30 'SECONDS]
           (if (ILESSP newint oldint)
               then (replace (VSTATSTIMERINFO INTERVAL) of VStatsSpaceTimer with newint)
                    (VStats-SetUpTimer VStatsSpaceTimer])
```

(**VStatsSpace-Ticks?**
```
   [LAMBDA NIL                                                (* Koomen "12-Jan-87 15:49")
     (DECLARE (GLOBALVARS VSTATS.SPACE.INTERVAL VStatsSpaceTimer))
     (VStats-InitInterval (OR VStatsSpaceTimer (SETQ VStatsSpaceTimer (create VSTATSTIMERINFO)))
            VSTATS.SPACE.INTERVAL
            (CONSTANT (TIMES 15 60])
```

```
)
```

```
           (* * machine utilization support stuff * *)
```

```
(RPAQ? VStatsMUtilFont )
```

```
(RPAQ? VStatsMUtilOrigState )
```

```
(RPAQ? VStatsMUtilPCTs )
```

```
(RPAQ? VStatsMUtilTimer )
```

```
(DEFINEQ
```

⟨**VStatsMUtil-Display**
```
  [LAMBDA NIL                                                   (* Koomen "12-Jan-87 16:46")
    (DECLARE (GLOBALVARS VStatsDsp VStatsMUtilFont VStatsMUtilPCTs VStatsMUtilRegion))
    (PROG [x (xoffset (fetch (REGION LEFT) of VStatsMUtilRegion))
             (yoffset (IPLUS (fetch (REGION BOTTOM) of VStatsMUtilRegion)
                             (FONTPROP VStatsMUtilFont 'HEIGHT]
          (DSPFONT VStatsMUtilFont VStatsDsp)
          (MOVETO xoffset yoffset VStatsDsp)
          (for PCT in VStatsMUtilPCTs do (DSPXPOSITION (fetch (REGION LEFT) of (fetch (VSTATSPCTINFO LBLREGION)
                                                                                   of PCT))
                                                        VStatsDsp)
                                         (printout VStatsDsp (fetch (VSTATSPCTINFO LABEL) of PCT)))
          (TERPRI VStatsDsp)
          (SETQ yoffset (DSPYPOSITION NIL VStatsDsp))
          (VStatsMUtil-Read)
          (for PCT in VStatsMUtilPCTs do (replace (REGION BOTTOM) of (fetch (VSTATSPCTINFO LBLREGION) of PCT)
                                             with yoffset)
                                         (replace (REGION BOTTOM) of (fetch (VSTATSPCTINFO BARREGION) of PCT)
                                             with yoffset)
                                         (VStats-DisplayPct PCT T])
```

⟨**VStatsMUtil-Init**
```
  [LAMBDA NIL                                                   ; Edited 27-Oct-87 16:47 by Koomen
```
(* * If the machine utilization interval is not a FIXP or not positive, the machine utilization display is disabled, and this function returns NIL. Otherwise it returns the region required for the machine utilization display.)
```
    (DECLARE (GLOBALVARS VStatsMUtilFont VStatsMUtilPCTs VStatsMUtilRegion))
    (if (VStatsMUtil-Ticks?)
        then (VStatsMUtil-InitState)
             [if (NOT (FONTP VStatsMUtilFont))
                 then (SETQ VStatsMUtilFont (FONTCREATE '(GACHA 10]
             [SETQ VStatsMUtilPCTs (VStats-CreatePCTs VStatsMUtilFont '((CPU . " CPU")
                                                                        (IO . " I/O")
                                                                        (GC . "  GC")
                                                                        (SWAP . "Swap"]
             (SETQ VStatsMUtilRegion (VStats-GetPCTsRegion VStatsMUtilPCTs))
        else (SETQ VStatsMUtilRegion NIL])
```

⟨**VStatsMUtil-InitState**
```
  [LAMBDA (DONT.SET.ORIG?)                                      ; Edited 30-Oct-87 01:07 by Koomen
    (DECLARE (GLOBALVARS VSTATS.MUTIL.HYSTERESIS VStatsMUtilDiffState VStatsMUtilNextState VStatsMUtilOrigState
                     VStatsMUtilStateRing))
    (if (NULL VStatsMUtilOrigState)
        then (SETQ VStatsMUtilOrigState (SYSTATSREAD))
             (SETQ VStatsMUtilDiffState (SYSTATSREAD))
             (SETQ VStatsMUtilNextState)
             (SETQ VStatsMUtilStateRing))
    (if VStatsMUtilStateRing
        then                                                    (* Break the old ring so it can be GC'd)
             (RPLACD VStatsMUtilStateRing))
    (OR DONT.SET.ORIG? (SYSTATSREAD VStatsMUtilOrigState))
    (if (AND (NUMBERP VSTATS.MUTIL.HYSTERESIS)
             (GREATERP VSTATS.MUTIL.HYSTERESIS 0))
        then                                                    (* Build a ring of SYSTATS records)
             (SETQ VStatsMUtilStateRing (for i from 0 to VSTATS.MUTIL.HYSTERESIS collect (SYSTATSREAD)))
                                                                (* Complete the circle)
             (RPLACD (LAST VStatsMUtilStateRing)
                     VStatsMUtilStateRing)
             (SETQ VStatsMUtilNextState)
        else (SETQ VStatsMUtilNextState (SYSTATSREAD))
             (SETQ VStatsMUtilStateRing])
```

⟨**VStatsMUtil-ReDisplay**
```
  [LAMBDA NIL                                                   ; Edited 18-Sep-87 00:50 by Koomen
    (DECLARE (GLOBALVARS VSTATS.ALWAYS? VStatsDsp VStatsMUtilFont VStatsMUtilPCTs VStatsWindow))
    (VStatsMUtil-Read)
    (DSPFONT VStatsMUtilFont VStatsDsp)
    (for pct in VStatsMUtilPCTs when (NEQ (fetch (VSTATSPCTINFO NEWPCT) of pct)
                                          (fetch (VSTATSPCTINFO OLDPCT) of pct))
       do (VStats-DisplayPct pct])
```

⟨**VStatsMUtil-Read**
```
  [LAMBDA NIL                                                   ; Edited 30-Oct-87 01:09 by Koomen
```
(* * (To reinitialize, execute (SETQ VStatsMUtilOrigState)))
```
    (DECLARE (GLOBALVARS VStatsMUtilDiffState VStatsMUtilNextState VStatsMUtilOrigState VStatsMUtilPCTs
                     VStatsMUtilStateRing))
    (PROG (oldstate newstate stats io gc swap elapsed cpu)
          (if VStatsMUtilStateRing
              then (SETQ newstate (pop VStatsMUtilStateRing))
                   (SETQ oldstate (CAR VStatsMUtilStateRing))
```

```
                 else (SETQ newstate VStatsMUtilNextState)
                      (SETQ oldstate VStatsMUtilOrigState))
              (SYSTATSREAD newstate)
              (SETQ stats (SYSTATSDIFF oldstate newstate VStatsMUtilDiffState))
              [SETQ io (IPLUS (IMAX 0 (SYSTATSPROP 'NETIOTIME stats))
                             (IMAX 0 (SYSTATSPROP 'DISKIOTIME stats]
              (SETQ gc (IMAX 0 (SYSTATSPROP 'GCTIME stats)))
              (SETQ swap (IMAX 0 (SYSTATSPROP 'SWAPWAITTIME stats)))
              (SETQ elapsed (IMAX (SYSTATSPROP 'ELAPSEDTIME stats)
                                  (IPLUS io gc swap)))
              [SETQ cpu (IMAX 0 (IDIFFERENCE 100 (IPLUS (SETQ io (VStats-Percentage io elapsed))
                                                       (SETQ gc (VStats-Percentage gc elapsed))
                                                       (SETQ swap (VStats-Percentage swap elapsed]
              (for PCT in VStatsMUtilPCTs do (replace (VSTATSPCTINFO OLDPCT) of PCT with (fetch (VSTATSPCTINFO NEWPCT)
                                                                                             of PCT))
                                            (replace (VSTATSPCTINFO NEWPCT) of PCT with (SELECTQ (fetch (VSTATSPCTINFO
                                                                                                            NAME)
                                                                                                      of PCT)
                                                                                           (CPU cpu)
                                                                                           (IO io)
                                                                                           (GC gc)
                                                                                           (SWAP swap)
                                                                                           (SHOULDNT])
```

(VStatsMUtil-Ticks?
```
  [LAMBDA NIL                                                          (* Koomen "12-Jan-87 15:49")
     (DECLARE (GLOBALVARS VSTATS.MUTIL.INTERVAL VStatsMUtilTimer))
     (VStats-InitInterval (OR VStatsMUtilTimer (SETQ VStatsMUtilTimer (create VSTATSTIMERINFO))))
          VSTATS.MUTIL.INTERVAL
           (CONSTANT (TIMES 5 60])

)
```

                    (* * These ought to be system functions!!! * *)

```
(DEFINEQ
```

(ALTOPARTITIONP
```
  [LAMBDA (I)                                                          ; Edited 19-Oct-87 12:20 by Koomen
     (CONDITION-CASE (if (INFILEP (PACK* "{DSK" I "}SYS.BOOT;1"))
                         then I)
          ((XCL:DEVICE-ERROR XCL:PATHNAME-ERROR XCL:FS-ERROR)
           NIL
            (RETFROM 'ALTOPARTITIONP NIL])
```

(ALTOPARTITIONS
```
  [LAMBDA NIL                                                          ; Edited 19-Oct-87 11:34 by Koomen
```

;;; NASTY!!! Bypassing partition passwords

```
     (SELECTQ (MACHINETYPE)
          (DORADO (RESETLST
                       [RESETSAVE NIL '(PUTD \M44CHECKPASSWORD ,(GETD '\M44CHECKPASSWORD]
                       (PUTD '\M44CHECKPASSWORD (GETD 'TRUE))
                        (for I from 1 while (\TESTPARTITION I) when (ALTOPARTITIONP I) collect (PACK* "DSK" I))))
          NIL])
```

(DISKUSEDPAGES
```
  [LAMBDA (DSK RECOMPUTE)                                              (* Koomen "19-Jun-87 01:46")
```

   ;; Hard-wired constant for Dorado partition size. Probably wrong, but adding up file sizes is way too slow (~ 8 secs)

```
     (SELECTQ (MACHINETYPE)
          ((DANDELION DAYBREAK DOVE)
              (if (EQ 'DSK (FILENAMEFIELD (DIRECTORYNAME "{DSK}")
                                         'HOST))
                  then ;; Local disk directory has been created

                        (IDIFFERENCE (VOLUMESIZE DSK RECOMPUTE)
                            (DISKFREEPAGES DSK RECOMPUTE))))
          (DORADO [if [SETQ DSK (CAR (NLSETQ (DIRECTORYNAME (OR DSK "{DSK}"]
                      then (if RECOMPUTE
                               then (for F in (FILDIR DSK) sum (GETFILEINFO F 'SIZE))
                             else (IMAX 0 (IDIFFERENCE 22750 (DISKFREEPAGES DSK RECOMPUTE]
          NIL])
```

(DISKTOTALPAGES
```
  [LAMBDA (DSK RECOMPUTE)                                              (* Koomen "19-Jun-87 01:46")
     (SELECTQ (MACHINETYPE)
          ((DANDELION DAYBREAK DOVE)
              (if (EQ 'DSK (FILENAMEFIELD (DIRECTORYNAME "{DSK}")
                                         'HOST))
                  then ;; Local disk directory has been created
```

```
                        (VOLUMESIZE DSK RECOMPUTE)))
          (DORADO (if [SETQ DSK (CAR (NLSETQ (DIRECTORYNAME (OR DSK "{DSK}"]
                    then (IPLUS (DISKFREEPAGES DSK RECOMPUTE)
                                (DISKUSEDPAGES DSK RECOMPUTE))))
          NIL])
```

(**COVEREDWP**
```
  [LAMBDA (WINDOW)                                          ; Edited 18-Sep-87 00:54 by Koomen
    (if (OPENWP WINDOW)
        then (PROG [(R (fetch (WINDOW REG) of WINDOW))
                    (W (fetch (SCREEN SCTOPW) of (fetch (WINDOW SCREEN) of WINDOW]
               LP   (COND
                        ((EQ W WINDOW)
                         (RETURN NIL))
                        ((REGIONSINTERSECTP R (fetch (WINDOW REG) of W))
                         (RETURN T))
                        ((SETQ W (fetch (WINDOW NEXTW) of W))
                         (GO LP])
)
```

(* * Initialize on LOAD * *)

(RPAQQ **BackgroundMenu** NIL)

(ADDTOVAR **BackgroundMenuCommands** ("VStats" '(VSTATS 'On)
                                                 "Running display of clock and/or space utilization"))

(DECLARE%: DONTEVAL@LOAD DOCOPY

```
[COND
    ((OR VSTATS.CLOCK.INTERVAL VSTATS.SPACE.INTERVAL VSTATS.MUTIL.INTERVAL)
     (VSTATS 'ON]
)
```

(PUTPROPS **VSTATS COPYRIGHT** ("Xerox Corporation" 1985 1986 1987))

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