

File created: 15-Mar-89 16:24:43 {ERIS}<NOTECARDS>DOC>HACKS>DIGI-CLOCK.;5

changes to: (VARS DIGI-CLOCKCOMS)
(FNS DC-DELETE-ALARM-SETTING DIGI-CLOCK DC-KILL-PROCESS DC-PROMPT-FOR-ALARM-MESSAGE
DC-START-PROCESS DC-ADD-AUXW DC-SHAPE-TO-FIT DC-SET-ALARM)

previous date: 22-Feb-89 16:50:15 {ERIS}<NOTECARDS>DOC>HACKS>DIGI-CLOCK.;4

Read Table: XCL

Package: INTERLISP

Format: XCCS

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(RPAQQ DIGI-CLOCKCOMS

:: Top level functions

(FNS DIGI-CLOCK DC-START-PROCESS DC-KILL-PROCESS DC-BUTTONEVENTFN DC-AUXW-BUTTONEVENTFN
DC-SET-TIME-BUTTONEVENTFN ST)

:: Dc-buttoneventfns

(FNS DC-PROCESS DC-UPDATE DC-GET-OPERATION)

:: Auxw functions

(FNS DC-AUXW-GET-OPERATION DC-ADD-AUXW DC-DELETE-AUXW DC-AUXW-UPDATE)

:: Set time functions

(FNS DC-WARNING-TIME-NOT-SET)
(FNS DC-SET-TIME DC-UPDATE-TIME-ITEM DC-VALID-DATE-P DC-SET-LAST-DAY-FOR-MONTH)
(FNS DC-INITIALIZE-SET-TIME-MENU DC-MAKE-NEW-SET-TIME-MENU DC-OPEN-SET-TIME-MENUW)
(FNS DC-EXTRACT-STARTING-SET-TIME-DATE DC-SET-TIME-MAKE-DATE-STRING)
(FNS DC-SET-TIME-ZONE-HEADING DC-SET-TIME-ZONE DC-GET-TIME-ZONE)

:: Alarm functions

(FNS DC-SET-ALARM DC-ADD-ALARM-SETTING DC-DELETE-ALARM-SETTING)
(FNS DC-ALARM-DUE-TO-RING? DC-RING-ALARM DC-TURN-ALARM-OFF)
(FNS DC-PROMPT-FOR-ALARM-MESSAGE DC-GET-MESSAGE-WINDOW DC-CLOSE-MESSAGE-WINDOW)

:: Display & Misc functions

(FNS DC-DISPLAY-TIME DC-MAKE-DISPLAY-TIME-STRING DC-PRINT-JUSTIFIED-STRING DC-CONVERT-DATE-FORMAT
DC-SHAPE-TO-FIT DC-GET-DATE DC-MENU-POSITION)

:: Font functions

(FNS DC-SET-FONT DC-FONT-FAMILY-MENU DC-FONT-SIZE-MENU DC-FONT-FACE-MENU)

:: List of the world's time zones

(VARS *DC-TIME-ZONE-LIST*)

:: Call digi-clock

))

:: Top level functions

(DEFINEQ

(DIGI-CLOCK

(LAMBDA (RESTART-FROM-SCRATCH) ; Edited 22-Feb-89 16:21 by Mountford

(|if| (FIND.PROCESS "DIGITAL CLOCK")
|then| (DEL.PROCESS "DIGITAL CLOCK"))
(|if| (NOT (MEMBER "DIGITAL CLOCK" IDLE.SUSPEND.PROCESS.NAMES))
|then| (|push| IDLE.SUSPEND.PROCESS.NAMES "DIGITAL CLOCK"))
(BLOCK)
(ADD.PROCESS (LIST 'DC-START-PROCESS RESTART-FROM-SCRATCH)
'NAME "DIGITAL CLOCK" 'RESTARTABLE T)))

(DC-START-PROCESS

(LAMBDA (RESTART-FROM-SCRATCH) ; Edited 17-Feb-89 16:04 by Mountford

(|if| (GREATERP (IDATE)
0)
|then| (SETQ *DC-OLD-DATE* (DATE))
|else| (SETQ *DC-OLD-DATE* " 1-Jan-88 08:00:00"))
(|if| (BOUNDP '*DC-WINDOW*')
|then| (WINDOWPROP *DC-WINDOW* 'CLOSEFN (REMOVE 'DC-KILL-PROCESS (WINDOWPROP *DC-WINDOW* 'CLOSEFN))
(CLOSEW *DC-WINDOW*
(WINDOWPROP *DC-WINDOW* 'CLOSEFN 'DC-KILL-PROCESS))
(|if| (OR RESTART-FROM-SCRATCH (NOT (BOUNDP '*DC-WINDOW*'))
(NULL *DC-WINDOW*))
|then| (SETQ *DC-WINDOW* (CREATEW (CREATEREGION 1 (IDIFFERENCE SCREENHEIGHT 46)
430 46)))
(WINDOWPROP *DC-WINDOW* 'RESHAPEFN 'DON\T)
(SETQ *DC-DATEFORMAT* (DATEFORMAT SPACES NO.SECONDS DAY.OF.WEEK DAY.SHORT))
(WINDOWPROP *DC-WINDOW* 'BUTTONEVENTFN 'DC-BUTTONEVENTFN)
(WINDOWPROP *DC-WINDOW* 'CLOSEFN 'DC-KILL-PROCESS)
(SETQ *DC-AUXW-FONT* (FONTCREATE 'HELVETICA 18))
(SETQ *DC-FONT* (FONTCREATE 'HELVETICA 36))

```
(WINDOWPROP *DC-WINDOW* 'ALARM-MODE 'LOUD)
(WINDOWPROP *DC-WINDOW* 'CAN-UPDATE T)
(DSPFONT *DC-FONT* *DC-WINDOW*)
(DC-ADD-AUXW)
(DC-PROCESS))
```

(DC-KILL-PROCESS

```
(LAMBDA NIL
  (|if| (FIND.PROCESS "DIGITAL CLOCK")
    |then| (DEL.PROCESS "DIGITAL CLOCK"))))
```

; Edited 22-Feb-89 16:16 by Mountford

(DC-BUTTONEVENTFN

```
(LAMBDA (WINDOW)
  (|if| (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE)
    |then| (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE NIL)
    (TOTOPW WINDOW)
    (|if| (MOUSESTATE MIDDLE)
      |then| (SELECTQ (DC-GET-OPERATION)
        (* \; "")
        (|Set Font| (|if| (DC-SET-FONT)
          |then| (DC-UPDATE (IDATE))))
        (|Set Time| (DC-SET-TIME))
        (|Set Alarm| (DC-SET-ALARM))
        (|Turn Alarm Off|
          (DC-TURN-ALARM-OFF)
          (DC-UPDATE (IDATE)))
        (|Delete Alarm Setting|
          (DC-DELETE-ALARM-SETTING))
        (|Quiet Alarm|
          (WINDOWPROP *DC-WINDOW* 'ALARM-MODE 'QUIET))
        (|Loud Alarm| (WINDOWPROP *DC-WINDOW* 'ALARM-MODE 'LOUD))
        (|12-Hour Clock|
          (WINDOWPROP *DC-WINDOW* '12-HOUR-MODE T)
          (DC-UPDATE (IDATE)))
        (|24-Hour Clock|
          (WINDOWPROP *DC-WINDOW* '12-HOUR-MODE NIL)
          (DC-UPDATE (IDATE)))
        (|Set Local Time Zone|
          (DC-PRINT-JUSTIFIED-STRING *DC-WINDOW* "Select Local Time Zone" 'CENTER
            'CLEARW)
          (DC-SET-TIME-ZONE WINDOW)
          (DC-UPDATE (IDATE)))
        (|Add New Regional Time Zone|
          (DC-ADD-AUXW))
        (|Shape to Fit|
          (DC-SHAPE-TO-FIT *DC-WINDOW* (DC-MAKE-DISPLAY-TIME-STRING (DATE *DC-DATEFORMAT*
            (WINDOWPROP *DC-WINDOW* '12-HOUR-MODE)))
          (DC-UPDATE (IDATE)))
        NIL))
    (|if| (MOUSESTATE LEFT)
      |then| (DC-UPDATE (IDATE)))
    (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE T)))
```

; Edited 15-Aug-88 07:01 by Mountford

(DC-AUXW-BUTTONEVENTFN

```
(LAMBDA (WINDOW)
  (|if| (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE)
    |then| (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE NIL)
    (TOTOPW WINDOW)
    (|if| (MOUSESTATE MIDDLE)
      |then| (SELECTQ (DC-AUXW-GET-OPERATION)
        (* \; "")
        (|Set Font for Aux Clocks|
          (|if| (DC-SET-FONT WINDOW 'ALL-AUXW)
            |then| (DC-UPDATE (IDATE))))
        (|Set Aux Clock Font In Just This Window|
          (|if| (DC-SET-FONT WINDOW)
            |then| (DC-UPDATE (IDATE))))
        (|Delete This Window|
          (DC-DELETE-AUXW WINDOW))
        (|Set Time-Zone Heading|
          (DC-SET-TIME-ZONE-HEADING WINDOW)
          (DC-UPDATE (IDATE)))
        (|Set Regional Time Zone|
          (DC-SET-TIME-ZONE WINDOW)
          (DC-UPDATE (IDATE)))
        NIL))
    (|if| (MOUSESTATE LEFT)
      |then| (DC-UPDATE (IDATE)))
    (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE T)))
```

; Edited 2-Sep-88 15:45 by Mountford

(DC-SET-TIME-BUTTONEVENTFN

```
(LAMBDA (ITEM MENU BUTTON)
  (LET (DISPLAY-TIME)
```

; Edited 15-Aug-88 07:16 by Mountford

```
(COND
  ((EQ ITEM '|Set|)
    (CLOSEW *DC-SET-TIME-MENU*)
    (|if| (WINDOWPROP *DC-SET-TIME-WINDOW* 'SETTING-ALARM)
      |then| (DC-ADD-ALARM-SETTING (DC-SET-TIME-MAKE-DATE-STRING))
      |else| (SETTIME (DC-SET-TIME-MAKE-DATE-STRING)
        (SETQ *DC-OLD-DATE* (DATE))
        (|until| (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE) |do| (BLOCK 1000))
        (DC-UPDATE (IDATE))))
    ((EQ ITEM '|Esc|)
      (CLOSEW *DC-SET-TIME-MENU*)
      (T (DC-UPDATE-TIME-ITEM ITEM)
        (SETQ DISPLAY-TIME (DC-CONVERT-DATE-FORMAT (DC-SET-TIME-MAKE-DATE-STRING)
          ' (DATEFORMAT NO.SECONDS)))
        (SETQ DISPLAY-TIME (DC-MAKE-DISPLAY-TIME-STRING DISPLAY-TIME (WINDOWPROP *DC-WINDOW*
          '12-HOUR-MODE)))
        (DC-PRINT-JUSTIFIED-STRING *DC-SET-TIME-WINDOW* DISPLAY-TIME 'CENTERED 'CLEARW))))))
```

(ST

```
(LAMBDA (HOUR MINUTE DATE MONTH YEAR) ; Edited 25-Jul-88 11:45 by Mountford
  (|if| (NOT (BOUNDP '*DC-OLD-DATE*))
    |then| (SETQ *DC-OLD-DATE* " 1-Jan-88 08:00:00"))
  (|if| (NOT HOUR)
    |then| (SETTIME *DC-OLD-DATE*)
    |else| (|if| (NOT MINUTE)
      |then| (SETQ MINUTE 0)
      (|if| (NOT DATE)
        |then| (SETQ DATE (SUBSTRING *DC-OLD-DATE* 1 2)))
      (|if| (NOT MONTH)
        |then| (SETQ MONTH (SUBSTRING *DC-OLD-DATE* 4 6)))
      (|if| (NOT YEAR)
        |then| (SETQ YEAR (SUBSTRING *DC-OLD-DATE* 8 9)))
      (SETTIME (CONCAT MONTH "-" DATE "-" YEAR " " HOUR ":" MINUTE)))
    (CLRPRMPT)
    (SETQ *DC-OLD-DATE* (DATE))))
```

)

:: Dc-buttoneventfns

(DEFINEQ

(DC-PROCESS

```
(LAMBDA NIL ; Edited 15-Aug-88 06:52 by Mountford
  (PROG NIL
    TOP (|if| (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE)
      |then| (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE NIL)
        (DC-UPDATE (IDATE))
        (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE T))
      (BLOCK 60000) ; BLOCK FOR A MINUTE
      (GO TOP))))
```

(DC-UPDATE

```
(LAMBDA (ITIME) ; Edited 15-Aug-88 08:13 by Mountford
  (LET ((MERIDIAN (WINDOWPROP *DC-WINDOW* '12-HOUR-MODE))
    (AUX-CLOCKS (WINDOWPROP *DC-WINDOW* 'ATTACHEDWINDOWS)))
    (|if| (IGREATERP ITIME 0)
      |then| (DC-DISPLAY-TIME ITIME MERIDIAN)
        (|if| (DC-ALARM-DUE-TO-RING? ITIME)
          |then| (DC-RING-ALARM)
            (SETQ AUX-CLOCKS (CDR AUX-CLOCKS)))
        (|for| WINDOW |in| AUX-CLOCKS |do| (DC-AUXW-UPDATE ITIME MERIDIAN WINDOW))
      |else| (DC-WARNING-TIME-NOT-SET))))
```

(DC-GET-OPERATION

```
(LAMBDA NIL ; Edited 13-Aug-88 10:40 by Mountford
  (LET ((MENU-LIST (LIST '|Set Font| '|Set Time| '|Set Alarm| (|if| (EQ (WINDOWPROP *DC-WINDOW* 'ALARM-MODE)
    'QUIET)
    |then| '|Loud Alarm|
    |else| '|Quiet Alarm|)
    (COND
      ((WINDOWPROP *DC-WINDOW* 'ALARM-RINGING)
        '|Turn Alarm Off|)
      ((WINDOWPROP *DC-WINDOW* 'ALARM-LIST)
        '|Delete Alarm Setting|)
      (T '|))
      '|Shape to Fit|
      (|if| (WINDOWPROP *DC-WINDOW* '12-HOUR-MODE)
        |then| '|24-Hour Clock|
        |else| '|12-Hour Clock|)
      '|Set Local Time Zone|
      '|Add New Regional Time Zone|)))
    (MENU (|create| MENU
      ITEMS _ MENU-LIST
```

CENTERFLG _ T))))

)

:: Auxw functions

(DEFINEQ

(DC-AUXW-GET-OPERATION

; Edited 2-Sep-88 13:53 by Mountford

```
(LAMBDA NIL
  (MENU (|create| MENU
    ITEMS _ '(|Delete This Window| (|Set Font for Aux Clocks| ' |Set Font for Aux Clocks| NIL
      (SUBITEMS |Set Aux Clock Font In Just This Window|)
      |Set Time-Zone Heading| |Set Regional Time Zone|)
    CENTERFLG _ T))))
```

(DC-ADD-AUXW

; Edited 17-Feb-89 16:08 by Mountford

```
(LAMBDA NIL
  (LET ((AUXW)
    (ITIME (IDATE))
    (MERIDIAN (WINDOWPROP *DC-WINDOW* '12-HOUR-MODE))
    (WINDOW-HEIGHT (HEIGHTIFWINDOW (FONTPROP *DC-AUXW-FONT* 'HEIGHT))))
    (SETQ AUXW (CREATEW (CREATEREGION 1 (IDIFFERENCE SCREENHEIGHT WINDOW-HEIGHT)
      430 WINDOW-HEIGHT)
      NIL NIL T))
    (ATTACHWINDOW AUXW *DC-WINDOW* 'BOTTOM 'JUSTIFY)
    (DSPFONT *DC-AUXW-FONT* AUXW)
    (DC-PRINT-JUSTIFIED-STRING AUXW "Select Time Zone for this Window" 'CENTER 'CLEARW)
    (|if| (DC-SET-TIME-ZONE AUXW)
      |then| (WINDOWPROP AUXW 'BUTTONEVENTFN 'DC-AUXW-BUTTONEVENTFN)
      (DC-SHAPE-TO-FIT *DC-WINDOW* (DC-MAKE-DISPLAY-TIME-STRING (GDATE ITIME *DC-DATEFORMAT*
        MERIDIAN))
      (|if| (IGREATERP ITIME 0)
        |then| (DC-AUXW-UPDATE ITIME MERIDIAN AUXW)
        |else| (DC-AUXW-UPDATE (IDATE *DC-OLD-DATE*)
          MERIDIAN AUXW))
      |else| (DETACHWINDOW AUXW)
      (CLOSEW AUXW))))))
```

(DC-DELETE-AUXW

; Edited 25-Jul-88 06:59 by Mountford

```
(LAMBDA (WINDOW)
  (DETACHWINDOW WINDOW)
  (CLOSEW WINDOW)
  (LET ((WINDOW-LIST (WINDOWPROP *DC-WINDOW* 'ATTACHEDWINDOWS)))
    (|for| W |in| WINDOW-LIST |do| (DETACHWINDOW W))
    (|for| W |in| WINDOW-LIST |do| (ATTACHWINDOW W *DC-WINDOW* 'BOTTOM 'JUSTIFY))))))
```

(DC-AUXW-UPDATE

; Edited 13-Aug-88 11:20 by Mountford

```
(LAMBDA (ITIME MERIDIAN WINDOW)
  (LET ((LOCATION (WINDOWPROP WINDOW 'LOCATION))
    (TIME-OFFSET (WINDOWPROP WINDOW 'TIME-ZONE-OFFSET))
    REGIONAL-TIME DISPLAY-TIME)
    (SETQ REGIONAL-TIME (DC-GET-DATE *DC-DATEFORMAT* ITIME TIME-OFFSET))
    (SETQ DISPLAY-TIME (DC-MAKE-DISPLAY-TIME-STRING REGIONAL-TIME MERIDIAN))
    (DC-PRINT-JUSTIFIED-STRING WINDOW LOCATION 'LEFT 'CLEARW)
    (DC-PRINT-JUSTIFIED-STRING WINDOW DISPLAY-TIME 'RIGHT)
    DISPLAY-TIME)))
```

)

:: Set time functions

(DEFINEQ

(DC-WARNING-TIME-NOT-SET

; Edited 15-Aug-88 06:42 by Mountford

```
(LAMBDA NIL
  (LET ((WINDOWS (CONS *DC-WINDOW* (WINDOWPROP *DC-WINDOW* 'ATTACHEDWINDOWS)))
    (DC-PRINT-JUSTIFIED-STRING *DC-WINDOW* "Time not set." 'CENTER 'CLEARW)
    (|for| I |to| 10 |do| (|for| W |in| WINDOWS |do| (BLOCK 100)
      (INVERTW W)
      (BLOCK 100)
      (INVERTW W))))))
```

)

(DEFINEQ

(DC-SET-TIME

; Edited 25-Jul-88 07:25 by Mountford

```
(LAMBDA NIL
  (DC-INITIALIZE-SET-TIME-MENU)
  (WINDOWPROP *DC-SET-TIME-WINDOW* 'SETTING-ALARM NIL)))
```

(DC-UPDATE-TIME-ITEM

; Edited 1-Aug-88 06:23 by Mountford

```
(LAMBDA (ITEM)
  (LET ((CHANGE (CAR ITEM))
        (ITEM (CADR ITEM)))
    (|if| (EQ CHANGE '+)
      |then| (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM (ADD1 (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM)))
      (|if| (NOT (DC-VALID-DATE-P (DC-SET-TIME-MAKE-DATE-STRING)))
        |then| (COND
          ((EQ ITEM 'DY)
            (WINDOWPROP *DC-SET-TIME-WINDOW* 'DY 1))
          ((EQ ITEM 'MO)
            (|if| (IGREATERP (WINDOWPROP *DC-SET-TIME-WINDOW* 'MO)
              12)
              |then| (WINDOWPROP *DC-SET-TIME-WINDOW* 'MO 1)
              |else| (DC-SET-LAST-DAY-FOR-MONTH)))
          ((EQ ITEM 'YR)
            (WINDOWPROP *DC-SET-TIME-WINDOW* 'YR 1))
          ((OR (EQ ITEM 'HR)
              (EQ ITEM 'MIN))
            (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM 0))
          (T (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM (SUB1 (WINDOWPROP *DC-SET-TIME-WINDOW*
            ITEM))))))
        |else| (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM (SUB1 (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM)))
        (|if| (NOT (DC-VALID-DATE-P (DC-SET-TIME-MAKE-DATE-STRING)))
          |then| (COND
            ((EQ ITEM 'DY)
              (DC-SET-LAST-DAY-FOR-MONTH))
            ((EQ ITEM 'MO)
              (|if| (ILESSP (WINDOWPROP *DC-SET-TIME-WINDOW* 'MO)
                1)
                |then| (WINDOWPROP *DC-SET-TIME-WINDOW* 'MO 12)
                |else| (DC-SET-LAST-DAY-FOR-MONTH)))
            ((EQ ITEM 'YR)
              (WINDOWPROP *DC-SET-TIME-WINDOW* 'YR 99))
            ((EQ ITEM 'HR)
              (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM 23))
            ((EQ ITEM 'MIN)
              (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM 59))
            (T (WINDOWPROP *DC-SET-TIME-WINDOW* ITEM (ADD1 (WINDOWPROP *DC-SET-TIME-WINDOW*
              ITEM))))))))))
```

(DC-VALID-DATE-P

; Edited 23-Jul-88 10:56 by Mountford

```
(LAMBDA (DATE-STRING)
  (|if| (IDATE DATE-STRING)
    |then| DATE-STRING))
```

(DC-SET-LAST-DAY-FOR-MONTH

; Edited 31-Jul-88 14:54 by Mountford

```
(LAMBDA NIL
  (SELECTQ (WINDOWPROP *DC-SET-TIME-WINDOW* 'MO)
    (2 (|if| (ZEROP (IREMAINDER (WINDOWPROP *DC-SET-TIME-WINDOW* 'YR)
      4))
      |then| (WINDOWPROP *DC-SET-TIME-WINDOW* 'DY 29)
      |else| (WINDOWPROP *DC-SET-TIME-WINDOW* 'DY 28)))
    ((4 6 9 11)
      (WINDOWPROP *DC-SET-TIME-WINDOW* 'DY 30))
    ((1 3 5 7 8 10 12)
      (WINDOWPROP *DC-SET-TIME-WINDOW* 'DY 31))
    NIL))
```

)

(DEFINEQ

(DC-INITIALIZE-SET-TIME-MENU

; Edited 14-Aug-88 21:35 by Mountford

```
(LAMBDA NIL
  (|if| (OR (NOT (BOUNDP '*DC-SET-TIME-MENUW*))
    (NULL *DC-SET-TIME-MENUW*))
    |then| (DC-MAKE-NEW-SET-TIME-MENU))
  (LET ((MERIDIAN (WINDOWPROP *DC-WINDOW* '12-HOUR-MODE))
        DATE-STRING DISPLAY-TIME)
    (|if| (IGREATERP (IDATE *DC-OLD-DATE*)
      (IDATE))
      |then| (SETQ DATE-STRING (DC-CONVERT-DATE-FORMAT *DC-OLD-DATE* '(NUMBER.OF.MONTH NO.SECONDS)))
        (SETQ DISPLAY-TIME (DC-CONVERT-DATE-FORMAT *DC-OLD-DATE* '(NO.SECONDS)))
      |else| (SETQ DATE-STRING (DATE (DATEFORMAT NUMBER.OF.MONTH NO.SECONDS)))
        (SETQ DISPLAY-TIME (DATE (DATEFORMAT NO.SECONDS))))
    (SETQ DISPLAY-TIME (DC-MAKE-DISPLAY-TIME-STRING DISPLAY-TIME MERIDIAN))
    (DC-OPEN-SET-TIME-MENUW)
    (DC-PRINT-JUSTIFIED-STRING *DC-SET-TIME-WINDOW* DISPLAY-TIME 'CENTERED 'CLEARW)
    (DC-EXTRACT-STARTING-SET-TIME-DATE DATE-STRING)))
```

(DC-MAKE-NEW-SET-TIME-MENU

; Edited 31-Dec-00 16:10 by Mountford

```
(LAMBDA NIL
  (LET ((TITLE-FONT (FONTCREATE 'HELVETICA 12))
```

```

(MENU-FONT (FONTCREATE 'HELVETICA 18)))
(SETQ *DC-SET-TIME-MENU*
  (ADDMENU (|create| MENU
    ITEMS _ ' ((+ DY)
              (\ - DY)
              (+ MO)
              (\ - MO)
              (+ YR)
              (\ - YR)
              (+ HR)
              (\ - HR)
              (+ MIN)
              (\ - MIN)
              |Set| |Esc|)
    MENUROWS _ 2
    MENUFONT _ MENU-FONT
    MENUTITLEFONT _ TITLE-FONT
    TITLE _ "DY MO YR HR MIN SET "
    WHENSELECTEDFN _ 'DC-SET-TIME-BUTTONEVENTFN)))
(SETQ *DC-SET-TIME-WINDOW* (CREATEW (CREATEREGION LASTMOUSEX LASTMOUSEY 120 27)
  NIL NIL T))
(ATTACHWINDOW *DC-SET-TIME-WINDOW* *DC-SET-TIME-MENU* 'TOP 'JUSTIFY)
(DSPFONT MENU-FONT *DC-SET-TIME-WINDOW*))

```

(DC-OPEN-SET-TIME-MENUW

; Edited 25-Jul-88 07:33 by Mountford

```

(LAMBDA NIL
  (LET ((CLOCK-REGION (WINDOWPROP *DC-WINDOW* 'REGION)))
    (|if| (IGREATERP (IPLUS (CAR CLOCK-REGION)
                          (CADDR CLOCK-REGION)
                          215)
          SCREENWIDTH)
      |then| (ATTACHWINDOW *DC-SET-TIME-MENU* *DC-WINDOW* 'LEFT 'TOP)
      |else| (ATTACHWINDOW *DC-SET-TIME-MENU* *DC-WINDOW* 'RIGHT 'TOP))
    (DETACHWINDOW *DC-SET-TIME-MENU*)
    (OPENW *DC-SET-TIME-MENU*)))
)

```

(DEFINEQ

(DC-EXTRACT-STARTING-SET-TIME-DATE

; Edited 4-Aug-88 06:16 by Mountford

```

(LAMBDA (DATE-STRING)
  (|if| (EQUAL " " (SUBSTRING DATE-STRING 1 1))
    |then| (WINDOWPROP *DC-SET-TIME-WINDOW* 'DY (MKATOM (SUBSTRING DATE-STRING 2 2)))
    |else| (WINDOWPROP *DC-SET-TIME-WINDOW* 'DY (MKATOM (SUBSTRING DATE-STRING 1 2))))
  (WINDOWPROP *DC-SET-TIME-WINDOW* 'MO (MKATOM (SUBSTRING DATE-STRING 4 5)))
  (WINDOWPROP *DC-SET-TIME-WINDOW* 'YR (MKATOM (SUBSTRING DATE-STRING 7 8)))
  (WINDOWPROP *DC-SET-TIME-WINDOW* 'HR (MKATOM (SUBSTRING DATE-STRING 10 11)))
  (WINDOWPROP *DC-SET-TIME-WINDOW* 'MIN (MKATOM (SUBSTRING DATE-STRING 13 14))))
)

```

(DC-SET-TIME-MAKE-DATE-STRING

; Edited 25-Jul-88 07:31 by Mountford

```

(LAMBDA NIL
  (CONCAT (WINDOWPROP *DC-SET-TIME-WINDOW* 'MO)
    "_ "
    (WINDOWPROP *DC-SET-TIME-WINDOW* 'DY)
    "_ "
    (WINDOWPROP *DC-SET-TIME-WINDOW* 'YR)
    " "
    (WINDOWPROP *DC-SET-TIME-WINDOW* 'HR)
    " : "
    (WINDOWPROP *DC-SET-TIME-WINDOW* 'MIN)))
)

```

(DEFINEQ

(DC-SET-TIME-ZONE-HEADING

; Edited 20-Jul-88 23:42 by Mountford

```

(LAMBDA (WINDOW)
  (LET ((LOCATION (WINDOWPROP WINDOW 'LOCATION)))
    (CLEARW WINDOW)
    (MOVETOUPPERLEFT WINDOW)
    (WINDOWPROP WINDOW 'LOCATION (PROMPTFORWORD "Location Name: " LOCATION NIL WINDOW NIL 'TTY
      (CHARCODE (EOL ESCAPE LF TAB))))))
)

```

(DC-SET-TIME-ZONE

; Edited 25-Jul-88 06:54 by Mountford

```

(LAMBDA (WINDOW)
  (LET ((TIME-ZONE-INFO (DC-GET-TIME-ZONE)))
    (|if| TIME-ZONE-INFO
      |then| (|if| (EQ WINDOW *DC-WINDOW*)
        |then| (SETQ |\\TimeZoneComp| (CDR TIME-ZONE-INFO))
        (|for| W |in| (WINDOWPROP *DC-WINDOW* 'ATTACHEDWINDOWS)
          |do| (WINDOWPROP W 'TIME-ZONE-OFFSET (ITIMES 3600 (IDIFFERENCE (WINDOWPROP
            W
            'TIME-ZONE)

```


(DC-RING-ALARM

```
(LAMBDA NIL ; Edited 25-Jul-88 06:57 by Mountford
  (LET ((ALARM-MESSAGE (CDR (WINDOWPROP *DC-WINDOW* 'ALARM-RINGING)))
        (MESSAGE-WINDOW (DC-GET-MESSAGE-WINDOW)))
    (DC-PRINT-JUSTIFIED-STRING MESSAGE-WINDOW ALARM-MESSAGE 'CENTERED 'CLEARW)
    (|if| (EQ (WINDOWPROP *DC-WINDOW* 'ALARM-MODE)
              'LOUD)
          |then| (RINGBELLS)
          |else| (|for| I |to| 30 |do| (VIDEOCOLOR (NOT (VIDEOCOLOR))
                                                    (BLOCK 110)))))))
```

(DC-TURN-ALARM-OFF

```
(LAMBDA (ITEM MENU BUTTON) ; Edited 25-Jul-88 06:53 by Mountford
  (LET ((TEMP-ALARM-LIST)
        (|for| ALARM |in| (WINDOWPROP *DC-WINDOW* 'ALARM-LIST) |do| (|if| (CAR ALARM)
                                                                              |then| (SETQ TEMP-ALARM-LIST
                                                                              (APPEND TEMP-ALARM-LIST (LIST ALARM)
                                                                              ))
                                                                              |else| ()))
        (WINDOWPROP *DC-WINDOW* 'ALARM-LIST TEMP-ALARM-LIST)
        (WINDOWPROP *DC-WINDOW* 'ALARM-RINGING NIL)
        (DC-CLOSE-MESSAGE-WINDOW)))
  )
```

(DEFINEQ

(DC-PROMPT-FOR-ALARM-MESSAGE

```
(LAMBDA (MESSAGE-WINDOW) ; Edited 22-Feb-89 16:19 by Mountford
  (LET (MESSAGE)
        (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE NIL)
        (CLEARW MESSAGE-WINDOW)
        (MOVETOUPPERLEFT WINDOW)
        (SETQ MESSAGE (PROMPTFORWARD " Message: " "No Message" NIL MESSAGE-WINDOW NIL 'TTY
                                     (CHARCODE (EOL ESCAPE LF TAB))))
        (WINDOWPROP *DC-WINDOW* 'CAN-UPDATE T)
        MESSAGE)))
```

(DC-GET-MESSAGE-WINDOW

```
(LAMBDA NIL ; Edited 25-Jul-88 07:07 by Mountford
  (OR (CAR (WINDOWPROP *DC-WINDOW* 'ATTACHEDWINDOWS))
      (LET ((MESSAGE-WINDOW (CREATEW (CREATEREGION 1 (IDIFFERENCE SCREENHEIGHT 25)
                                             430 30)))
            (ATTACHWINDOW MESSAGE-WINDOW *DC-WINDOW* 'BOTTOM 'JUSTIFY)
            (WINDOWPROP MESSAGE-WINDOW 'MESSAGE-WINDOW T)
            (DSPFONT *DC-AUXW-FONT* MESSAGE-WINDOW)
            MESSAGE-WINDOW)))
  )
```

(DC-CLOSE-MESSAGE-WINDOW

```
(LAMBDA NIL ; Edited 25-Jul-88 06:58 by Mountford
  (LET ((MESSAGE-WINDOW (CAR (WINDOWPROP *DC-WINDOW* 'ATTACHEDWINDOWS)))
        (|if| (WINDOWPROP MESSAGE-WINDOW 'MESSAGE-WINDOW)
              |then| (DETACHWINDOW MESSAGE-WINDOW)
              (CLOSEW MESSAGE-WINDOW))))
  )
```

:: Display & Misc functions

(DEFINEQ

(DC-DISPLAY-TIME

```
(LAMBDA (ITIME MERIDIAN) ; Edited 1-Aug-88 08:00 by Mountford
  (LET* ((LOCAL-TIME (DC-GET-DATE *DC-DATEFORMAT* ITIME))
         (DISPLAY-TIME (DC-MAKE-DISPLAY-TIME-STRING LOCAL-TIME MERIDIAN))
         (DC-PRINT-JUSTIFIED-STRING *DC-WINDOW* DISPLAY-TIME 'CENTERED 'CLEARW)))
  )
```

(DC-MAKE-DISPLAY-TIME-STRING

```
(LAMBDA (DATE-STRING MERIDIAN) ; Edited 15-Aug-88 09:18 by Mountford
  (LET ((DISPLAY-TIME DATE-STRING)
        (HOUR (MKATOM (SUBSTRING DATE-STRING 11 12))))
    ;; If *DC-DATEFORMAT* is changed to number.of.month, it causes the clock to break in 12-hour mode.
    (|if| MERIDIAN
          |then| (LET ((DAY (SUBSTRING DATE-STRING 16))
                      (COND
                       ((ZEROP HOUR)
                        (SETQ DISPLAY-TIME (CONCAT (SUBSTRING DATE-STRING 1 10)
                                                    "12"
                                                    (SUBSTRING DATE-STRING 13 15)
                                                    "am"))))
                       ((ILESSP HOUR 10)
                        (SETQ DISPLAY-TIME (CONCAT (SUBSTRING DATE-STRING 1 10)
                                                    "12"
                                                    (SUBSTRING DATE-STRING 13 15)
                                                    "am"))))
                    )
          )
  )
```



```

" "
(SUBSTRING DATE-STRING 12 15)
"am"))
((ILESSP HOUR 12)
 (SETQ DISPLAY-TIME (CONCAT (SUBSTRING DATE-STRING 1 15)
 "am")))
(EQP HOUR 12)
 (SETQ DISPLAY-TIME (CONCAT (SUBSTRING DATE-STRING 1 15)
 "pm")))
((ILESSP HOUR 22)
 (SETQ DISPLAY-TIME (CONCAT (SUBSTRING DATE-STRING 1 10)
 " "
 (IDIFFERENCE HOUR 12)
 (SUBSTRING DATE-STRING 13 15)
 "pm"))))
(T (SETQ DISPLAY-TIME (CONCAT (SUBSTRING DATE-STRING 1 10)
 (IDIFFERENCE HOUR 12)
 (SUBSTRING DATE-STRING 13 15)
 "pm"))))
(|if| DAY
 |then| (SETQ DISPLAY-TIME (CONCAT DISPLAY-TIME DAY))))
(|if| (EQUAL " " (SUBSTRING DISPLAY-TIME 1 1))
 |then| (SETQ DISPLAY-TIME (SUBSTRING DISPLAY-TIME 2)))
DISPLAY-TIME)))

```

(DC-PRINT-JUSTIFIED-STRING

; Edited 15-Aug-88 06:41 by Mountford

```

(LAMBDA (WINDOW STRING JUSTIFICATION CLEARW?)
 (LET ((STRING-WIDTH (STRINGWIDTH STRING WINDOW))
 (WINDOW-WIDTH (WINDOWPROP WINDOW 'WIDTH)))
 (|if| CLEARW?
 |then| (CLEARW WINDOW))
 (MOVETOUPPERLEFT WINDOW)
 (COND
 ((IGREATERP STRING-WIDTH WINDOW-WIDTH)
 (DC-SHAPE-TO-FIT *DC-WINDOW* STRING)
 (SETQ WINDOW-WIDTH (WINDOWPROP WINDOW 'WIDTH))))
 (COND
 ((EQ JUSTIFICATION 'LEFT)
 (SETQ STRING (CONCAT " " STRING)))
 ((EQ JUSTIFICATION 'RIGHT)
 (SETQ STRING (CONCAT STRING " ")))
 (SETQ STRING-WIDTH (IPLUS 3 (STRINGWIDTH STRING WINDOW)))
 (DSPXPOSITION (IDIFFERENCE WINDOW-WIDTH STRING-WIDTH)
 WINDOW))
 ('CENTER (DSPXPOSITION (IQUOTIENT (IDIFFERENCE WINDOW-WIDTH STRING-WIDTH)
 2)
 WINDOW)))
 (PRINTOUT WINDOW STRING))))

```

(DC-CONVERT-DATE-FORMAT

; Edited 25-Jul-88 11:50 by Mountford

```

(LAMBDA (DATE-STRING NEW-FORMAT-LIST)
 (|if| (EQ (CAR NEW-FORMAT-LIST)
 'DATEFORMAT)
 |then| (GDATE (IDATE DATE-STRING)
 NEW-FORMAT-LIST)
 |else| (GDATE (IDATE DATE-STRING)
 (CONS 'DATEFORMAT NEW-FORMAT-LIST))))

```

(DC-SHAPE-TO-FIT

; Edited 17-Feb-89 16:12 by Mountford

```

(LAMBDA (WINDOW STRING)
 (LET ((WINDOW-LIST (WINDOWPROP *DC-WINDOW* 'ATTACHEDWINDOWS))
 (STRING-WIDTH (STRINGWIDTH (CONCAT " " STRING)
 WINDOW))
 (HEIGHT (HEIGHTIFWINDOW (FONTPROP WINDOW 'HEIGHT)))
 (REGION (WINDOWPROP WINDOW 'REGION))
 STRING-WIDTH AUXW-STRING-WIDTH AUXW-HEIGHT X Y)
 (WINDOWPROP WINDOW 'RESHAPEFN NIL)
 (|for| AUXW |in| WINDOW-LIST |do| (DETACHWINDOW AUXW)
 (SETQ AUXW-STRING-WIDTH (STRINGWIDTH (CONCAT (WINDOWPROP AUXW
 'LOCATION)
 " " STRING)
 AUXW))
 (|if| (IGREATERP AUXW-STRING-WIDTH STRING-WIDTH)
 |then| (SETQ STRING-WIDTH AUXW-STRING-WIDTH)))
 (SETQ X (CAR REGION))
 (SETQ Y (CADR REGION))
 (SETQ WIDTH (WIDTHIFWINDOW STRING-WIDTH))
 (SHAPEW WINDOW (LIST X Y WIDTH HEIGHT))
 (SETQ AUXW-HEIGHT (HEIGHTIFWINDOW (FONTPROP (CAR WINDOW-LIST)
 'HEIGHT)))
 (|for| AUXW |in| WINDOW-LIST |do| (SHAPEW AUXW (LIST X Y WIDTH AUXW-HEIGHT))
 (ATTACHWINDOW AUXW *DC-WINDOW* 'BOTTOM 'JUSTIFY))
 (WINDOWPROP *DC-WINDOW* 'RESHAPEFN 'DON\T))))

```

(DC-GET-DATE

```
(LAMBDA (DATEFORMAT ITIME OFFSET)
  (|if| ITIME
    |then| (|if| OFFSET
      |then| (GDATE (IDIFFERENCE ITIME OFFSET)
        DATEFORMAT)
      |else| (GDATE ITIME DATEFORMAT))
    |else| (|if| OFFSET
      |then| (GDATE (IDIFFERENCE (IDATE)
        OFFSET)
        DATEFORMAT)
      |else| (GDATE (IDATE)
        DATEFORMAT))))))
```

; Edited 1-Aug-88 07:55 by Mountford

(DC-MENU-POSITION

```
(LAMBDA (MENU)
  (LET ((WINDOW-REGION (WINDOWPROP *DC-WINDOW* 'REGION))
    (MENU-HEIGHT (CADDR (MENUREGION MENU))))
    (CONS (IPLUS (CAR WINDOW-REGION)
      (CADDR WINDOW-REGION))
      (IDIFFERENCE (IPLUS (CADR WINDOW-REGION)
        (CADDR WINDOW-REGION))
        MENU-HEIGHT))))))
```

; Edited 11-Aug-88 06:14 by Mountford

;; Font functions

(DEFINEQ

(DC-SET-FONT

```
(LAMBDA (WINDOW ALL-AUXW-P)
  (LET ((FAMILY (DC-FONT-FAMILY-MENU))
    (SIZE (DC-FONT-SIZE-MENU))
    (FACE (DC-FONT-FACE-MENU))
    OLD-FONT NEW-FONT)
    (|if| (NOT (AND FAMILY SIZE FACE))
      |then| (|if| WINDOW
        |then| (SETQ OLD-FONT (DSPFONT NIL WINDOW))
        |else| (SETQ OLD-FONT (DSPFONT NIL *DC-WINDOW*)))
      (|if| (NOT FAMILY)
        |then| (SETQ FAMILY (FONTPROP OLD-FONT 'FAMILY)))
      (|if| (NOT SIZE)
        |then| (SETQ SIZE (FONTPROP OLD-FONT 'SIZE)))
      (|if| (NOT FACE)
        |then| (SETQ FACE (FONTPROP OLD-FONT 'FACE))))))
```

; Edited 2-Sep-88 15:44 by Mountford

```
(DC-PRINT-JUSTIFIED-STRING *DC-WINDOW* "Fetchng Font" 'CENTER 'CLEARW)
(SETQ NEW-FONT (FONTCREATE FAMILY SIZE FACE NIL NIL 'NOERRORFLG))
(|if| NEW-FONT
  |then| (COND
    (ALL-AUXW-P (SETQ *DC-AUXW-FONT* NEW-FONT)
      (|for| AUXW |in| (WINDOWPROP *DC-WINDOW* 'ATTACHEDWINDOWS)
        |do| (DSPFONT *DC-AUXW-FONT* AUXW)))
    (WINDOW (DSPFONT NEW-FONT WINDOW))
    (T (SETQ *DC-FONT* NEW-FONT)
      (DSPFONT *DC-FONT* *DC-WINDOW*)))
    (DC-SHAPE-TO-FIT *DC-WINDOW* (DC-MAKE-DISPLAY-TIME-STRING (GDATE (IDATE)
      *DC-DATEFORMAT*)
      (WINDOWPROP *DC-WINDOW* '12-HOUR-MODE))))
  |else| (DC-PRINT-JUSTIFIED-STRING *DC-WINDOW* "Font Not Found" 'CENTER 'CLEARW)
  NEW-FONT)))
```

(DC-FONT-FAMILY-MENU

```
(LAMBDA NIL
  (|if| (OR (NOT (BOUNDP '*DC-FONT-FAMILY-MENU*))
    (NULL *DC-FONT-FAMILY-MENU*))
    |then| (SETQ *DC-FONT-FAMILY-MENU* (|create| MENU
      ITEMS _ ' (( Titan | 'TITAN)
        ( Hippo | 'HIPPO)
        ( Gacha | 'GACHA)
        ( Classic | 'CLASSIC)
        ( BoldPS | 'BOLDPS)
        ( Modern | 'MODERN)
        ( Terminal | 'TERMINAL)
        ( Helvetica | 'HELVETICA)
        ( Helveticad | 'HELVETICAD)
        ("Old English" 'OLDENGLISH)
        ("Letter Gothic" 'LETTERGOTHIC)
        ("Times Roman" 'TIMESROMAN)
        ("Times Romand" 'TIMESROMAND))
      CENTERFLG _ T
      TITLE _ " Font ")))
  (MENU *DC-FONT-FAMILY-MENU* (DC-MENU-POSITION *DC-FONT-FAMILY-MENU*)))
```

; Edited 13-Aug-88 11:01 by Mountford

(DC-FONT-SIZE-MENU

```
(LAMBDA NIL
  (|if| (OR (NOT (BOUNDP '*DC-FONT-SIZE-MENU*))
            (NULL *DC-FONT-SIZE-MENU*))
        |then| (SETQ *DC-FONT-SIZE-MENU*
                    (|create| MENU
                        ITEMS _ '(6 7 8 9 10 11 12 14 16 18 24 26 30 36 72)
                        MENUCOLUMNS _ 3
                        TITLE _ " Size ")))
  (MENU *DC-FONT-SIZE-MENU* (DC-MENU-POSITION *DC-FONT-SIZE-MENU*))))
```

; Edited 13-Aug-88 10:52 by Mountford

(DC-FONT-FACE-MENU

```
(LAMBDA NIL
  (|if| (OR (NOT (BOUNDP '*DC-FONT-FACE-MENU*))
            (NULL *DC-FONT-FACE-MENU*))
        |then| (SETQ *DC-FONT-FACE-MENU* (|create| MENU
                                            ITEMS _ ' ( (|Bold| 'BRR)
                                                       (|Italic| 'MIR)
                                                       ("Bold Italic" 'BIR)
                                                       (|Regular| 'MRR)
                                                       TITLE _ " Face "
                                                       CENTERFLG _ T)))
  (MENU *DC-FONT-FACE-MENU* (DC-MENU-POSITION *DC-FONT-FACE-MENU*))))
```

; Edited 11-Aug-88 06:46 by Mountford

)

:: List of the world's time zones

(RPAQQ *DC-TIME-ZONE-LIST*

```
(("Nome, Alaska" '("Nome, Alaska: " . 11)
  '(-180 . -165))
 ("Honolulu, Hawaii" '("Honolulu, Hawaii: " . 10)
  '(-165 . -150))
 ("Marquesas Islands" '("Marquesas Islands: " . 9)
  '(-150 . -135))
 ("San Francisco, California" '("San Francisco, California: " . 8)
  '(-135 . -120))
 ("Denver, Colorado" '("Denver, Colorado: " . 7)
  '(-120 . -105))
 ("Houston, Texas" '("Houston, Texas: " . 6)
  '(-105 . -90))
 ("Washington DC" '("Washington DC: " . 5)
  '(-90 . -75))
 ("Buenos Aires, Argentina" '("Buenos Aires, Argentina: " . 4)
  '(-75 . -60))
 ("Brasilia, Brasil" '("Brasilia, Brasil: " . 3)
  '(-60 . -45))
 ("Rio de Janeiro, Brasil" '("Rio de Janeiro, Brasil: " . 2)
  '(-45 . -30))
 ("Reykjavik, Iceland" '("Reykjavik, Iceland: " . 1)
  '(-30 . -15))
 ("Greenwich, England" '("Greenwich, England: " . 0)
  '(-15 . 0))
 ("Paris, France" '("Paris, France: " . -1)
  '(0 . 15))
 ("Athens, Greece" '("Athens, Greece: " . -2)
  '(15 . 30))
 ("Moscow, USSR" '("Moscow, USSR: " . -3)
  '(30 . 45))
 ("Riyadh, Arabia" '("Riyadh, Arabia: " . -4)
  '(45 . 60))
 ("Kabul, Afganistan" '("Kabul, Afganistan: " . -5)
  '(60 . 75))
 ("Kathmandu, Nepal" '("Kathmandu, Nepal: " . -6)
  '(75 . 90))
 ("Bangkok, Thailand" '("Bangkok, Thailand: " . -7)
  '(90 . 105))
 ("Hong Kong" '("Hong Kong: " . -8)
  '(105 . 120))
 ("Seoul, South Korea" '("Seoul, South Korea: " . -9)
  '(120 . 135))
 ("Tokyo, Japan" '("Tokyo, Japan: " . -10)
  '(135 . 150))
 ("Sydney Austrailia" '("Sydney Austrailia: " . -11)
  '(150 . 165))
 ("Aukland, New Zealand" '("Aukland, New Zealand: " . -12)
  '(165 . 180))))
```

:: Call digi-clock

```
(PUTPROPS DIGI-CLOCK COPYRIGHT ("XEROX Corporation" 1988 1989))
```

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