

File created: 20-Jan-93 13:49:09 {DSK}<python>lde>lispcore>library>DMCHAT.;2

changes to: (RECORDS DM2500.STATE)

previous date: 11-Jun-90 15:39:12 {DSK}<python>lde>lispcore>library>DMCHAT.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

```
::  
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```

(RPAQQ **DMCHATCOMS**

```
(  
  ;; DM2500 emulator, with some peculiar functions to handle its silly autocrlf properties  
  (FILES CHATTERMINAL)  
  (FNS DMCHAT.STATE DMCHAT.HANDLECHARACTER DMCHAT.HANDLE.WRAP DMCHAT.ADDRESS DMCHAT.CLEAR  
    DMCHAT.CLEARMODES DMCHAT.NEWLINE DMCHAT.RIGHT)  
  (ADDVARS (CHAT.DRIVERTYPES (DM2500 DMCHAT.HANDLECHARACTER DMCHAT.STATE)))  
  (VARIABLES CHAT.AUTOCRLF)  
  (DECLARE%: EVAL@COMPILE DONTCOPY (LOCALVARS . T)  
    (FILES (SOURCE)  
      CHATDECLS)  
    (RECORDS DM2500.STATE))  
  (INITRECORDS DM2500.STATE)  
  (SYSRECORDS DM2500.STATE))
```

```
:: DM2500 emulator, with some peculiar functions to handle its silly autocrlf properties
```

(FILESLOAD CHATTERMINAL)

(DEFINEQ

**(DMCHAT.STATE**

```
[LAMBDA (CHAT.STATE) ; Edited 15-Feb-90 18:44 by bvm  
  (TERM.RESET.DISPLAY.PARMS CHAT.STATE)  
  (replace (CHAT.STATE CLEARMODEFN) of CHAT.STATE with (FUNCTION DMCHAT.CLEARMODES))  
  (TERM.HOME CHAT.STATE)  
  (create DM2500.STATE])
```

**(DMCHAT.HANDLECHARACTER**

```
[LAMBDA (CHAR CHAT.STATE DM2500.STATE) ; Edited 11-Aug-88 16:35 by drc:  
  (\DTEST CHAT.STATE 'CHAT.STATE)  
  (\DTEST DM2500.STATE 'DM2500.STATE)  
  (PROG NIL  
    [COND  
      ((EQ CHAR (CHARCODE BELL))  
       (RETURN (COND  
         ((NEQ \MACHINETYPE \DORADO) ; Modern machines have audible bells  
          (BOUT (ffetch (CHAT.STATE DSP) of CHAT.STATE)  
              7))  
         ((NOT (ffetch (DM2500.STATE DINGED) of DM2500.STATE))  
          (CL:FUNCALL INVERTWINDOWFN (ffetch (CHAT.STATE WINDOW) of CHAT.STATE))  
              ; Complement window  
          (replace (DM2500.STATE DINGED) of DM2500.STATE with T])  
        (COND  
          ((ffetch (DM2500.STATE DINGED) of DM2500.STATE) ; Last character was a bell, with which we complemented screen.  
           ; Now back to normal  
          (CL:FUNCALL INVERTWINDOWFN (ffetch (CHAT.STATE WINDOW) of CHAT.STATE))  
          (replace (DM2500.STATE DINGED) of DM2500.STATE with NIL)))  
        (COND  
          ([AND (ffetch (DM2500.STATE AUTOLF) of DM2500.STATE)  
              (OR (NEQ CHAR (CHARCODE CR))  
                  (NOT (ffetch (DM2500.STATE EATTOCRLF) of DM2500.STATE))  
              ;; We last received a CR, so DM wants auto LF after it. However, we postpone doing so until the next char is received, so that we get  
              ;; scroll holding right  
              (TERM.DOWN CHAT.STATE)  
              (replace (DM2500.STATE AUTOLF) of DM2500.STATE with NIL)))  
          (COND  
            ((ffetch (DM2500.STATE ADDRESSING) of DM2500.STATE) ; In the middle of receiving an address command  
             (COND  
               ((DMCHAT.ADDRESS CHAT.STATE DM2500.STATE CHAR)  
                (RETURN])  
            (COND  
              ((AND (>= CHAR (CHARCODE SPACE))  
                  (< CHAR (CHARCODE DEL))) ; Normal char  
               (replace (DM2500.STATE EATLF) of DM2500.STATE with (replace (DM2500.STATE EATCRLF) of DM2500.STATE  
                  with NIL))  
              (RETURN (COND  
                ((NOT (ffetch (DM2500.STATE EATTOCRLF) of DM2500.STATE))  
                 ; Print the char
```

```

(COND
  ((ffetch (DM2500.STATE IDMODE) of DM2500.STATE)
    ; this is discouraged by the DM manual, but apparently EMACS
    ; does it, so might as well support it
    (TERM.ADDCHAR CHAT.STATE)))
  (TERM.PRINTCHAR CHAT.STATE CHAR (FUNCTION DMCHAT.HANDLE.WRAP]
;; At this point, we have a non-printing char, presumably some command (or cr, lf).
[COND
  ((ffetch (DM2500.STATE EATLF) of DM2500.STATE)
    (freplace (DM2500.STATE EATLF) of DM2500.STATE with NIL)
    (COND
      ((EQ CHAR (CHARCODE LF))
        ; Yes, it was a LF, so we're done.
        (RETURN)
      (T
        ; Intervening control characters do not stop the eating, except for
        ; a few inconsistent exceptions...
        (SELCHARQ CHAR
          ((^B ^\ ^^ ^_)
            (freplace (DM2500.STATE EATCRLF) of DM2500.STATE with NIL))
          NIL]
        (SELCHARQ CHAR
          (LF (COND
            ((ffetch (DM2500.STATE IDMODE) of DM2500.STATE)
              (TERM.ADDLINE CHAT.STATE))
            (T (TERM.DOWN CHAT.STATE))))
            (CR (freplace (DM2500.STATE EATOCRLF) of DM2500.STATE with NIL)
              (DMCHAT.NEWLINE CHAT.STATE DM2500.STATE T))
            (BS (COND
              ((ffetch (DM2500.STATE IDMODE) of DM2500.STATE)
                (TERM.DELCHAR CHAT.STATE))
              (T (TERM.LEFT CHAT.STATE))))
            (^W
              (TERM.ERASE.TO.EOL CHAT.STATE))
            (^L
              (freplace (DM2500.STATE ADDRESSING) of DM2500.STATE with -1))
            (^B
              (TERM.HOME CHAT.STATE)
              (DMCHAT.CLEARMODES CHAT.STATE DM2500.STATE))
            (^X
              (DMCHAT.CLEARMODES CHAT.STATE DM2500.STATE)
              (freplace (CHAT.STATE ROLLMODE) of CHAT.STATE with NIL))
            ((^^ ^_)
              (DMCHAT.CLEAR CHAT.STATE DM2500.STATE))
            (^\
              (COND
                ((ffetch (DM2500.STATE IDMODE) of DM2500.STATE)
                  (TERM.ADDCHAR CHAT.STATE))
                (T (DMCHAT.RIGHT CHAT.STATE DM2500.STATE))))
              (^Z
                (COND
                  ((ffetch (DM2500.STATE IDMODE) of DM2500.STATE)
                    (TERM.DELETELINE CHAT.STATE))
                  (T (TERM.UP CHAT.STATE))))
                ((^N ^O)
                  (TERM.MODIFY.ATTRIBUTES CHAT.STATE 'BRIGHT)
                  (freplace (DM2500.STATE BRIGHTMODE) of DM2500.STATE with T))
                (^P
                  (freplace (DM2500.STATE IDMODE) of DM2500.STATE with T))
                (^%]
                  (freplace (CHAT.STATE ROLLMODE) of CHAT.STATE with T))
                NIL))
              ; Erase to end of line
              ; Start of cursor address
              ; Homes cursor, cancels some modes
              ; Cancel --resets modes
              ; Master Reset -- Clears screen, modes
              ; Forward space
              ; Up
              ; Enter blink mode, enter protected mode. Do both as embolden
              ; Enter insert/delete mode
              ; Set roll mode
              ;

```

**(DMCHAT.HANDLE.WRAP**

```

[LAMBDA (CHAT.STATE)
;; Called when a character is printed in the last column of the screen
(LET ((DM2500.STATE (fetch (CHAT.STATE TERM.STATE) of CHAT.STATE)))
  (COND
    (CHAT.AUTOCRLF
      (DMCHAT.NEWLINE CHAT.STATE DM2500.STATE))
    (T
      (replace (DM2500.STATE EATOCRLF) of DM2500.STATE with T])
    ; This is standard behavior--do auto crlf
    ; An alternate mode some might like--flush everything til crlf.

```

**(DMCHAT.ADDRESS**

```

[LAMBDA (CHAT.STATE DM2500.STATE CHAR)
(* ejs%: "12-May-85 15:26")
;; In the middle of doing absolute address, which is {^L, xpos, ypos}. Return T (meaning we handled the character) unless CHAR implies a
;; cancellation of the address, in which case caller must handle CHAR

```

```
(\DTEST DM2500.STATE 'DM2500.STATE)
(SELCHARQ CHAR
  ((^X ^ ^ _ )
    (freplace (DM2500.STATE ADDRESSING) of DM2500.STATE with NIL)
    NIL)
  (^L
    (freplace (DM2500.STATE ADDRESSING) of DM2500.STATE with -1)
    T)
  (LET ((ADDRESSING (ffetch (DM2500.STATE ADDRESSING) of DM2500.STATE))
        (NEXTPOS (LOGXOR CHAR 96)))
    (COND
      ((< ADDRESSING 0)
        (freplace (DM2500.STATE ADDRESSING) of DM2500.STATE with NEXTPOS))
      (T
        (TERM.MOVETO CHAT.STATE ADDRESSING NEXTPOS)
        (freplace (DM2500.STATE ADDRESSING) of DM2500.STATE with NIL)))
    T))
```

**(DMCHAT.CLEAR**

```
[LAMBDA (CHAT.STATE DM2500.STATE SETROLL) (* ejs%: "12-May-85 17:13")
  [CLEARW (ffetch (CHAT.STATE WINDOW) of (\DTEST CHAT.STATE 'CHAT.STATE)
    (DMCHAT.CLEARMODES CHAT.STATE DM2500.STATE)
    (AND SETROLL (freplace (CHAT.STATE ROLLMODE) of CHAT.STATE with T))
    (TERM.HOME CHAT.STATE)])]
```

**(DMCHAT.CLEARMODES**

```
[LAMBDA (CHAT.STATE DM2500.STATE) ; Edited 15-Feb-90 18:37 by bvm
  (\DTEST CHAT.STATE 'CHAT.STATE)
  (DSPFONT (ffetch (CHAT.STATE PLAINFONT) of CHAT.STATE)
    (ffetch (CHAT.STATE DSP) of CHAT.STATE))
  [freplace (DM2500.STATE BRIGHTMODE) of DM2500.STATE with (freplace (DM2500.STATE BLINKMODE) of DM2500.STATE
    with (freplace (DM2500.STATE IDMODE) of DM2500.STATE
      with (freplace (DM2500.STATE ADDRESSING)
        of DM2500.STATE with NIL)
    (freplace (CHAT.STATE ROLLMODE) of CHAT.STATE with T)))]
```

**(DMCHAT.NEWLINE**

```
[LAMBDA (CHAT.STATE DM2500.STATE EXPLICIT) (* ejs%: "12-May-85 15:12")
  ;; Do a CRLF. EXPLICIT = T means a CR was received, NIL means we did autowraparound
  (\DTEST CHAT.STATE 'CHAT.STATE)
  (MOVETO (freplace (CHAT.STATE XPOS) of CHAT.STATE with 0)
    (ffetch (CHAT.STATE YPOS) of CHAT.STATE)
    (ffetch (CHAT.STATE DSP) of CHAT.STATE))
  (freplace (DM2500.STATE AUTOLF) of (\DTEST DM2500.STATE 'DM2500.STATE) with T)
  (COND
    (EXPLICIT
      (freplace (DM2500.STATE EATLF) of DM2500.STATE with T))
    (T
      (freplace (DM2500.STATE EATCRLF) of DM2500.STATE with T)))
```

**(DMCHAT.RIGHT**

```
[LAMBDA (CHAT.STATE DM2500.STATE) (* ejs%: "12-May-85 15:31")
  (LET [(XPOS (+ (ffetch (CHAT.STATE XPOS) of (\DTEST CHAT.STATE 'CHAT.STATE))
    (ffetch (CHAT.STATE FONTWIDTH) of CHAT.STATE)
    (COND
      ((< XPOS (ffetch (CHAT.STATE TTYWIDTH) of CHAT.STATE))
        (MOVETO (freplace (CHAT.STATE XPOS) of CHAT.STATE with XPOS)
          (ffetch (CHAT.STATE YPOS) of CHAT.STATE)
          (ffetch (CHAT.STATE DSP) of CHAT.STATE)))
      (T
        (DMCHAT.NEWLINE CHAT.STATE DM2500.STATE))
    T)
    (DMCHAT.NEWLINE CHAT.STATE DM2500.STATE)])]
```

```
(ADDTovar CHAT.DRIVERTYPES (DM2500 DMCHAT.HANDLECHARACTER DMCHAT.STATE))
```

```
(CL:DEFVAR CHAT.AUTOCRLF T
  "If true, dm2500 emulator performs automatic CRLF when it reaches the right edge of the display.")
```

```
(DECLARE%: EVAL@COMPILE DONTCOPY
```

```
(DECLARE%: DOEVAL@COMPILE DONTCOPY
```

```
(LOCALVARS . T)
```

```
)
(FILELOAD (SOURCE)
  CHATDECLS)
```

```
(DECLARE%: EVAL@COMPILE
```

```
(DATATYPE DM2500.STATE ((DINGED FLAG)
                        (EATLF FLAG)
                        (EATCRLF FLAG)
                        (EATTOCRLF FLAG)
                        (AUTOLF FLAG)
                        ADDRESSING
                        (IDMODE FLAG)
                        (BLINKMODE FLAG)
                        (BRIGHTMODE FLAG)))
)

(/DECLAREDATATYPE 'DM2500.STATE ' (FLAG FLAG FLAG FLAG FLAG POINTER FLAG FLAG FLAG)
;; ---field descriptor list elided by lister---
' 4)
)

(/DECLAREDATATYPE 'DM2500.STATE ' (FLAG FLAG FLAG FLAG FLAG POINTER FLAG FLAG FLAG)
;; ---field descriptor list elided by lister---
' 4)

(ADDTOTVAR SYSTEMRECLST (DATATYPE DM2500.STATE ((DINGED FLAG)
                                                (EATLF FLAG)
                                                (EATCRLF FLAG)
                                                (EATTOCRLF FLAG)
                                                (AUTOLF FLAG)
                                                ADDRESSING
                                                (IDMODE FLAG)
                                                (BLINKMODE FLAG)
                                                (BRIGHTMODE FLAG)))
)

(PUTPROPS DMCHAT COPYRIGHT ("Venue & Xerox Corporation" 1984 1985 1988 1990 1993))
```

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