Curses

COLLABORATORS

	TITLE : Curses		
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Contents

Chapter 1

Curses

1.1 Curses implementation for AmigaTalk© 1998:

The Curses interface for the AmigaTalk system is documented herein

& is only a subset of the complete Curses package utilized by the

rest of the world. Most of the methods are accessed from primitive 124,

with the exception of the printAt: method, which uses primitive 126.

The following Curses functions are NOT implemented by AmigaTalk, since

they use variable arguments & it will take someone with more than my

miniscule knowledge of smalltalk to utilize them. They can be faked

by using other parts of the AmigaTalk system & the Curses package, so

in a sense they are redundant anyway:

int printw(char *fmt, ...);

int wprintw(WINDOW *win, char *fmt, ...);

int mvprintw(int line, int col, char *fmt, ...);

int mvwprintw(WINDOW *win, int line, int col, char *fmt, ...);

int scanw(char *fmt, ...);

int wscanw(WINDOW *win, char *fmt, ...);

int mvscanw(int line, int col, char *fmt, ...);

int mvwscanw(WINDOW *win, int line, int col, char *fmt, ...);

Methods available for the Curses package are:

Curses Control

Text Display

Text Retrieval

Text Insertion

Text Removal

Miscellaneous

1.2 Control of the Curses Package:

new

Initialize the Curses Class.

initialize

Open the Curses screen (equivalent to initscr()).

closeDown

Kill the Curses environment (equivalent to endwin())

initializeWithColors: depth

Open the Curses screen & use colors (equivalent to:

StartColor() [non-standard Curses] followed by initscr()).

initWithStdColors

Open the Curses screen & use colors (equivalent to:

start_colors() followed by initscr()).

openWindow: xStart yStart: y width: w height: h

Open a new Curses window (equivalent to newwin()).

openSubWindow: parent xStart: x yStart: y width: w height: h

Open a Curses sub-window (equivalent to subwin()).

refreshScreen

Refresh the Curses environment (equivalent to refresh()).

refreshWindow: winNumber

Refresh a single Curses window (equivalent to wrefresh()).

closeWindow: winNumber

Close a Curses window (equivalent to delwin(), followed by

refreshScreen).

moveWindow: winNumber x: x y: y

Move a Curses window (equivalent to mvwin(), followed by

refreshWindow:).

cBreak: status

Either set (status = TRUE: call cbreak()) or reset

(status = FALSE: call ncbreak()) the control-break of the

Curses system.

enableClear: winNumber status: status

Either enable (clearok(status = TRUE)) or disable

(clearok(status = FALSE)) the clear function for the given

window.

enableCursor: winNumber status: status

Either enable (leaveok(status = TRUE)) or disable

(leaveok(status = FALSE)) the cursor for the given window.

newlineMap: status

Either enable (nl(), status = TRUE) or disable

(nonl(), status = FALSE) the mapping of CRLF to CR function for

the given window.

echo: status

Either enable (echo(), status = TRUE) or disable

(noecho(), status = FALSE) the echo function for the given window.

enableDelay: winNumber status: status

Either enable (nodelay(status = FALSE)) or disable

(nodelay(status = TRUE)) the delay function for the given window.

setColor: number red: r green: g blue: b

Change the color register number to the new RGB values supplied

then perform refreshScreen.

setTextPenColor: colornum

Change the text color rendering pen to register colornum.

NOTE: Non-standard Curses.

setBackPenColor: colornum

Change the background color rendering pen to register colornum.

NOTE: Non-standard Curses.

setDrawMode: mode

Change the drawing mode to mode. Allowable modes are:

0 = JAM1

1 = JAM2

2 = COMPLEMENT

4 = INVERSEVID

NOTE: Non-standard Curses.

enableScroll: winNumber status: status

Either enable (scrollok(status = TRUE)) or disable

(scrollok(status = FALSE)) the scroll function for the given window.

enableKeyPad: winNumber status: status

Either enable (keypad(status = TRUE)) or disable

(keypad(status = FALSE)) the following key values to be sent to

the given window:

KEY_BACKSPACE 0010 /* backspace character */

KEY_DC 0177 /* Delete character */

KEY_DOWN 0400 /* The down arrow key */

KEY_UP 0401 /* The up arrow key */

KEY_LEFT 0402 /* The left arrow key */

KEY_RIGHT 0403 /* The right arrow key */

KEY_HELP 0404 /* Help Key */

KEY_F0 0405 /* Function keys */

KEY_F(n) (KEY_F0+(n))

scrollWindow: winNumber

Scroll the given window (scroll(), followed by refreshWindow:).

setScrollRegion: top Bottom: bott

Setup the scroll region for the Curses system (equivalent to

setscrreg(), followed by refreshScreen).

setWindowScrollRegion: winNumber top: top Bottom: bott

Setup the scroll region for the given window (equivalent to

wsetscrreg(), followed by refreshWindow:).

windowNeedsRefresh: winNumber

Tell Curses to add the given window to the refresh list.

setAttributes: attrs

Setup the Curses system attributes, where attrs is one or more of

the following:

NORMAL = 0

INVERSE = 16

UNDERLINE = 32

BOLD = 64 Follow up with a call to refreshScreen.

setWindowAttributes: winNumber attr: attrs

Setup the given window attributes, where attrs is one or more of

the following:

NORMAL = 0

INVERSE = 16

UNDERLINE = 32

BOLD = 64 Follow up with a call to refreshWindow:.

addAttributes: attrs

Add a Curses system attribute, where attrs is one or more of

the following:

NORMAL = 0

INVERSE = 16

UNDERLINE = 32

BOLD = 64 Follow up with a call to refreshScreen.

addWindowAttributes: winNumber attr: attrs

Add an attribute to the given window, where attrs is one or

more of the following:

NORMAL = 0

INVERSE = 16

UNDERLINE = 32

BOLD = 64 Follow up with a call to refreshWindow:.

removeAttributes: attrs

Remove a Curses system attribute, where attrs is one or more of

the following:

NORMAL = 0

INVERSE = 16

UNDERLINE = 32

BOLD = 64 Follow up with a call to refreshScreen.

removeWindowAttributes: winNumber attr: attrs

Remove an attribute from the given window, where attrs is one or

more of the following:

NORMAL = 0

INVERSE = 16

UNDERLINE = 32

BOLD = 64 Follow up with a call to refreshWindow:.

invertColors

Perform a Curses standout() command, followed by refreshScreen.

invertWindowColors: winNumber

Perform a Curses wstandout() command, followed by refreshWindow:.

revertColors

Undo the invertColors (standout()) command by performing a standend()

Curses command, followed by refreshScreen.

revertWindowColors: winNumber

Undo the invertWindowColors (wstandout()) command by performing a

wstandend() Curses command, followed by refreshWindow:.

moveCursorTo: aPoint

Move the cursor from the current location to the given point

(equivalent to move(), followed by refreshScreen).

moveWindowCursor: winNumber to: aPoint

Move the cursor from the current location in the given window to

the given point (equivalent to wmove(), followed by refreshWindow:).

addToRefreshList: winNumber

Add the given window to the refresh list (equivalent to

wnoutrefresh()).

updateWindows

Update all windows on the refresh list (equivalent to doupdate()).

flushKeys

Throw away all keystrokes in the system buffer (equivalent to

flushinp()).

moveCursorFrom: aPoint to: newPoint

Move the cursor from the given point to the newPoint (equivalent to

mvcur(), followed by refreshScreen).

1.3   Displaying of Text for the Curses Package:

For primitive 126, defined within the String Class, printAt:

is:

printAt: The argument must be a Point which describes a location on

the Curses screen. The string is printed at the specified

location.

printChar: c

Print a character c at the current cursor location (equivalent to

addch(), followed by refreshScreen).

printWindowChar: winNumber char: c

Print a character c at the current cursor location in the

given window (equivalent to waddch(), followed by refreshWindow:).

printChar: c at: thePoint

Print a character c at the given location (equivalent to

mvaddch(), followed by refreshScreen).

printWindowChar: winNumber char: c at: thePoint

Print a character c at the given location in the

given window (equivalent to mvwaddch(), followed by refreshWindow:).

printString: string

Print string at the current cursor location (equivalent to

addstr(), followed by refreshScreen).

printWindowString: winNumber string: string

Print a string at the current cursor location in the

given window (equivalent to waddstr(), followed by refreshWindow:).

printString: string at: thePoint

Print a string at the given location (equivalent to

mvaddstr(), followed by refreshScreen).

printWindowString: winNumber string: string at: thePoint

Print a string at the given location in the

given window (equivalent to mvwaddstr(), followed by refreshWindow:).

1.4   Retrieving of Text for the Curses Package:

getChar

Return the character at the current cursor location (equivalent to

getch()).

getWindowChar: winNumber

Return the character at the current cursor location in the given

window (equivalent to wgetch()).

getCharAt: aPoint

Return the character at the given location (equivalent to mvgetch()).

getWindowChar: winNumber at: aPoint

Return the character at the given location in the given window

(equivalent to mvwgetch()).

getString: buffer

Return a string at the current cursor location (equivalent to getstr()).

getWindowString: winNumber buffer: string

Return a string at the current cursor location for the given window

(equivalent to wgetstr()).

getStringAt: aPoint buffer: string

Return a string at the given location (equivalent to mvgetstr()).

getWindowString: winNumber at: aPoint buffer: string

Return a string at the given location for the given window

(equivalent to mvwgetstr()).

readChar

Wait for the user to type in a character (equivalent to inch()).

readWindowChar: winNumber

Wait for the user to type in a character in the given window

(equivalent to winch()).

readCharAt: aPoint

Wait for the user to type in a character at the given location

(equivalent to mvinch()).

readWindowChar: winNumber at: aPoint

Wait for the user to type in a character at the given location in

the given window (equivalent to mvwinch()).

1.5   Insertion of Text for the Curses Package:

insertChar

Insert a character at the current cursor location (equivalent to

insch(), followed by refreshScreen).

insertWindowChar: winNumber

Insert a character at the current cursor location in the given

window (equivalent to winsch(), followed by refreshWindow:).

insertCharAt: aPoint

Insert a character at the given location (equivalent to

mvinsch(), followed by refreshScreen).

insertWindowChar: winNumber at: aPoint

Insert a character at the given location in the given

window (equivalent to mvwinsch(), followed by refreshWindow:).

insertLine

Insert a line at the current cursor location (equivalent to

insertln(), followed by refreshScreen).

insertWindowLine: winNumber

Insert a line at the current cursor location in the given

window (equivalent to winsertln(), followed by refreshWindow:).

1.6   Removal of Text for the Curses Package:

emptyScreen

Erase the Curses system display (equivalent to erase(), followed by

refreshScreen).

emptyWindow: winNumber

Erase the given window display (equivalent to werase(), followed by

refreshWindow:).

clearScreen

Clear the Curses system display (equivalent to clear(), followed by

refreshScreen).

clearWindow: winNumber

Clear the given window display (equivalent to wclear(), followed by

refreshWindow:).

clearScreenToBottom

Clear the Curses system display from the current location to the

bottom (equivalent to clrtobot(), followed by refreshScreen).

clearWindowToBottom: winNumber

Clear the given window display from the current location to the

bottom (equivalent to wclrtobot(), followed by refreshWindow:).

clearScreenToEOL

Clear the Curses system display from the current location to the

end of the current line (equivalent to clrtoeol(), followed by

refreshScreen).

clearWindowToEOL: winNumber

Clear the given window display from the current location to the

end of the current line (equivalent to wclrtoeol(), followed by

refreshWindow:).

deleteChar

Remove a character at the current cursor location from the Curses

system display (equivalent to delch(), followed by refreshScreen).

deleteWindowChar: winNumber

Remove a character at the current cursor location from the given

window display (equivalent to wdelch(), followed by refreshWindow:).

deleteCharAt: aPoint

Remove a character at the given cursor location from the Curses

system display (equivalent to mvdelch(), followed by refreshScreen).

deleteWindowChar: winNumber at: aPoint

Remove a character at the given cursor location from the given

window display (equivalent to mvwdelch(), followed by refreshWindow:).

deleteLine

Delete the current line the cursor is on (equivalent to deleteln(),

followed by refreshScreen).

deleteWindowLine: winNumber

Delete the current line the cursor is on in the given window

(equivalent to wdeleteln(), followed by refreshWindow:).

1.7   Miscellaneous Curses methods:

drawBorder: winNumber hChar: hc vChar: vc

Draw a box around the given window (equivalent to box(), followed

by refreshWindow:).

beep

Send a Ctrl-G (ASCII Bel) to the system.

flash

Flash the Curses screen.

hasColors

Return the status of the Curses screen color usage.