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.