NAME

bkgdset, **wbkgdset**, **bkgd**, **wbkgd**, **getbkgd** - manipulate background of a *curses* window of characters

SYNOPSIS

#include <curses.h>

int bkgd(chtype *ch***);**
int wbkgd(WINDOW **win***, chtype** *ch***);**

void bkgdset(chtype *ch***);**
void wbkgdset(WINDOW **win***, chtype** *ch***);**

chtype getbkgd(WINDOW **win***);**

DESCRIPTION

The *background* of a *curses* window (in the library's non-"wide" configuration) is a *chtype* combining a set of attributes (see **curs_attr**(3X)) with a character called the *blank character.*

The blank character is a spacing character that populates a window's character cells when their contents are erased without replacement. The background's attributes are combined with all non-blank characters written to the window, as with the **waddch**(3X) and **winsch**(3X) families of functions.

The blank character and attributes of the background combine with characters written to the window as described below. The background becomes a property of the character and moves with it through any scrolling and insert/delete line/character operations.

To the extent possible on a given terminal, the attribute part of the background is displayed as the graphic rendition of the character put on the screen.

bkgd, wbkgd

bkgd and **wbkgd** set the background property of **stdscr** or the specified window and then apply this setting to every character cell in that window.

⊕   The rendition of every character in the window changes to the new background rendition.

⊕   Wherever the former background character appears, it changes to the new background character.

ncurses updates the rendition of each character cell by comparing the character, non-color attributes, and colors. The library applies to following procedure to each cell in the window, whether or not it is blank.

⊕   *ncurses* first compares the cell's character to the previously specified blank character; if they match, *ncurses* writes the new blank character to the cell.

⊕   *ncurses* then checks if the cell uses color, that is, its color pair value is nonzero. If not, it simply replaces the attributes and color pair in the cell with those from the new background character.

⊕   If the cell uses color, and its background color matches that of the current window background, *ncurses* removes attributes that may have come from the current background and adds those from the new background. It finishes by setting the cell's background to use the new window background color.

⊕   If the cell uses color, and its background color does not match that of the current window background, *ncurses* updates only the non-color attributes, first removing those that may have come from the current background, and then adding attributes from the new background.

ncurses treats a background character value of zero (0) as a blank character.

If the terminal does not support color, or if color has not been initialized with **start_color**(3X), *ncurses* ignores the new background character's color attribute.

bkgdset, wbkgdset
bkgdset and **wbkgdset** manipulate the background of the applicable window, without updating the character cells as **bkgd** and **wbkgd** do; only future writes reflect the updated background.

getbkgd
getbkgd obtains the given window's background character and attribute combination.

RETURN VALUE
Functions returning an *int* return **OK** on success. **bkgd** returns **ERR** if the library has not been initialized. **wbkgd** and **getbkgd** return **ERR** if a *WINDOW* pointer argument is null.

bkgdset and **wbkgdset** do not return a value.

getbkgd returns a window's background character and attribute combination.

NOTES
Unusually, there is no **wgetbkgd** function; **getbkgd** behaves as one would expect **wgetbkgd** to, accepting a *WINDOW* pointer argument.

bkgd and **bkgdset** may be implemented as macros.

X/Open Curses mentions that the character part of the background must be a single-byte value. *ncurses*, like SVr4 *curses*, checks to ensure that, and will reuse the old background character if the check fails.

PORTABILITY

X/Open Curses, Issue 4 describes these functions. It specifies that **bkgd**, **wbkgd**, and **getbkgd** return **ERR** on failure (in the case of the last, this value is cast to *chtype*), but describes no failure conditions.

The SVr4.0 manual says that **bkgd** and **wbkgd** may return **OK** "or a non-negative integer if **immedok** is set", which refers to the return value from **wrefresh**(3X), used to implement the immediate repainting. SVr4 *curses*'s **wrefresh** returns the number of characters written to the screen during the refresh. *ncurses* does not do that.

Neither X/Open Curses nor the SVr4 manual pages detail how the rendition of characters on the screen updates when **bkgd** or **wbkgd** changes the background character. *ncurses*, like SVr4 *curses*, does not (in its non-"wide" configuration) store the background and window attribute contributions to each character cell separately.

SEE ALSO

curs_bkgrnd(3X) describes the corresponding functions in the "wide" configuration of *ncurses*.

curses(3X), **curs_addch**(3X), **curs_attr**(3X)