Subject: "New draw" performance preview...
Posted by mirek on Thu, 24 Nov 2005 15:21:45 GMT
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Well, we are at tought decision point with the new Draw system. This is quite controversial stuff - it goes against anything that is regarded to be a "correct behaviour" (bypassing all graphics accelerators, drawing just to plain ARGB memory surface), OTOH it would solve countless problems (and maybe generate other set of problems).

In order to make some real tests, I have created a simple performance demo. It should demonstrate how fast would be new Draw be when used to paint pages full of text (which in the end is the main performance problem always). Note that in this demo, no scroll is used, full page is always repainted to without use of any HW acceleration to memory surface and then moved to VGA.

This simle Win32 executable should work on any Win32 machine (I have just tested it with 486/66Mhz/Win95 - sluggish, but worked).

It reacts only to vertical mouse movement and left click switches between normal and antialiased text rendering.

Please report how it feels.

UPDATE: In order to give it more realistic text density and look, I have added right-click as another switch.

File Attachments
1) CDraw.zip, downloaded 2076 times

Subject: Re: "New draw" performance preview...
Posted by gprentice on Thu, 24 Nov 2005 20:28:27 GMT
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<Curious>
I have 2 GHz P4 with low end video card ATI 9550SE and widescreen LCD. I like page up/ down to work quickly coz I sometimes use it to get from one end of a file to the other. If you feel like it, is it possible to have a version that allows you to load any text you want, and also has scroll bars and page up \ down keys working. Then I can time the difference between this and other things - but only if you think it's worth it ...

Why is text the main performance problem - because it redraws the entire client area?? What about games - (which I know nothing about)?

Is UPP editor window using RichEdit?

</curious>

BTW - I get 98% CPU while moving mouse up/down with the test prog. Rapid scrolling in "normal" editor seems to be 40 - 60% CPU.

TIMING Set : 43.8 s - 4.7 ms (43.8 s / 9409), min: 2.0 ms, max: 30.0 ms, nesting: 1 - 9409
TIMING DrawRect : 93.9 s - 223.3 us (94.0 s / 420524), min: 0.0 us, max: 18.0 ms, nesting: 1 - 420524
TIMING Init : 0.0 us - 0.0 us (0.0 us / 1), min: 0.0 us, max: 0.0 us, nesting: 1 - 1

Graeme

Subject: Re: "New draw" performance preview...
Posted by mirek on Thu, 24 Nov 2005 20:48:36 GMT
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Quote:Why is text the main performance problem - because it redraws the entire client area?? What about games - (which I know nothing about)?

Because it is the thing that is most frequently used. I believe that the goal there is that if you press PageDown/Up and hold it, repainting should be fast enough to "catch" your autorepeat.

While this is true in Win32, I was never able to achieve that in Linux with anti-aliased fonts. X11 is simply too slow....

The idea is that by takeing over painting, we can optimize away some invalid design decisions of X11 design.

This first preliminary preview is to test whether this is possible solution... It is too early to draw something more elaborated, routines are not connect with U++ painting system so far, but they do the similar job and can be used to measure the performance...
