Subject: Re: BufferPainter::Clear() optimization
Posted by mirek on Fri, 22 May 2020 08:04:03 GMT
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Didier wrote on Fri, 22 May 2020 09:32Hello mirek ans Tom,
Grenat work hère but I have une simple question: what is the point with cache ?
Normally cache speeds things up when you need to reaccess data just After writing it.
So filling a buffer with a constant value that is not read immediatly After in most cases isn't a corresponding use case.
So, I think that having a fill function that doesn't use cache at all will benefit in two points:
Timing stability and more importantly, cache is not touched so it can speed up other functions calls further

Thing that started this whole issue: If you need to clear buffer for 4K screen, that is about 32MB of data. Thats definitely more than can fit into the cache. So what really happens in that in this case is that at some point cache runs out and you are significantly slowed down by CPU writing data from the cache to main memory. The "fix" is to bypass the cache in this case (we have for now established that the reasonable threshold is somewhere around 4MB).

That said, really a lot of other things were optimised thereafter, mostly on the other size of size spectrum...