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Subject: Re: Painter future

Posted by [mirek](#) on Tue, 24 Feb 2009 15:50:21 GMT

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Mindtraveller wrote on Tue, 24 February 2009 08:58luzr wrote on Tue, 24 February 2009 15:22Personally, I am quite sceptical about GPU acceleration.Mirek Could you please explain why?

Well, for example imagine the difference between GPU accelerated "true subpixel precision" text rendering.

Each text glyph consists of about 50 line segments (after curve approximations), usually very small.

To rasterizer them in software, I have to do very little CPU steps. Rasterizer only goes through "real" pixels, subpixel precision is "collected" on the way; what I want to say here is that drawing line from [0, 1.23] to [1.21, 2.91] is basically done in 2 steps.

I can rasterize the whole glyph polygon quite quickly this way and then just draw resulting scanlines.

Compare to GPU solution. AFAIK, I would have to tessellate these 50 line segments into ~50 triangles, not an easy task, then push a lot of data through GPU API. I think that CPU would win here.

(And do not let me start to examine how diffucult would be to implement even-odd rule there

Mirek

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