Subject: : AmigaOS4
Topic: : GL4ES: another OpenGL over OpenGLES2 emulation - some tech. info and porting progress
Re: GL4ES: another OpenGL over OpenGLES2 emulation - some tech. info and porting progress
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URL:

@Capehill
Talking with ptitSeb about all that, that what he say:

VBO are 1 thing: vertices data in VRAM, so in the graphic card memory ready to use. So the main thing that consume time is the time to transfert the data in VRAM. If you reuse those data, you just activate the VBO, no need to transfert the data.

So, when a software/game use VBO, it create one, fill it with data, and then simply use the transfered data (sometimes, it changes pert of the VBO, to update some of data).

The Transfert of data is traditionnaly at the "Unlock" part of the VBO (lock gives you and address where to put the data, Unlock transfert from that address to VRAM).

On the Amiga, the transfert to VRAM can be slow if you don't have some kind of DMA for that (that's the 1st thing), and all, all data need to be in LittleEndian, because the GraphicCard is LittleEndian (so you need to analyse the VBO, to know what data need swapping, and what data doesn't).

So yes, I think this VBO transfert can be a bottleneck.

But we also tested with working DMA in graphics.library on x1000, and results are still the same. Maybe by DMA he mean something like GART there, dunno. That DMA in graphics.library probabaly other kind of DMA expected from VRAM transfers ?

Interestengly also, that in the documentation about BufferUnlock of warp3dnova, there is no mention about any big->little endian conversion ..