Contribution ID: **23**   Type: **not specified**

Buffer constraints

Thursday 17 September 2020 17:35 (1h 25m)

James Jones fron NVIDIA has presented a proposal a few years back to redesign the buffer allocation mechanisms on Linux (especially for GPUs, display devices, etc). However this is a pretty ambitious undertaking because it involves rewriting a big part of the graphics stack.

His proposal included several components. The recent work on modifiers allows to solve the "capability" part of the proposal. For instance last year James gave another talk which uses modifiers for Nouveau tiling.

However some other parts still haven't been implemented. A common issue is that buffer consumers and producers have no way to agree on buffer constraints like alignment, max pitch, contiguous memory and other placement restrictions. Today, buffer producers need to assume a number of constraints when allocating buffers, some of which may be unnecessary for a given usage.

This workshop aims to discuss about potential solutions to this particular issue. I'll give an overview of the problem we're trying to solve, and give a few possible start of solutions to kickstart discussions. A goal of the solution would be to integrate well with the existing ecosystem, extending it rather than replacing it completely.

I'd like to gather feedback from various vendors to make sure potential solutions are sensible, and collect more ideas to bring this forward.

GSoC, EVoC or Outreachy

No

Code of Conduct

Yes

Primary author: SER, Simon (sway/wlroots)

Session Classification: Workshop

Track Classification: Workshop Discussion Topic