Mesa 20.3 Lands Rewritten AMD Zen L3 Cache Optimization - Phoronix

You may recall going back to 2018 that well known open-source AMD Mesa driver developer Marek Olsak was working on Mesa optimizations around the AMD Zen architecture. In particular, better handling of Mesa for Zen's L3 cache design. A rewritten implementation of that has now landed along with some other improvements.

Marek discovered his L3 cache topology code was incorrect and ended up rewriting it to "make Mesa on my AMD CPU faster." The code is catering to AMD Ryzen processors but it's also possible Xeon / multi-CPU systems could employ a similar optimization should anyone be interested in pursuing it.

RadeonSI Lands Optimization For Uber Shaders - Phoronix

On top of the AMD Zen L3 cache optimizations hitting Mesa 20.3 today, Marek Olsak has also landed his RadeonSI Gallium3D driver code for optimizing OpenGL uber shaders.

Marek added a "inline_uniforms" DriConf option to the RadeonSI driver that implements inlinable uniforms.

Intel starts publishing Vulkan Linux driver

Intel's open-source developers have begun publishing their patches enabling their "ANC" Vulkan Linux driver to support Vulkan ray-tracing.
Intel’s other big-ticket items still to come in the near-term include extending the ANV driver to support compiling and dispatching OpenCL kernels, new SPIR-V capabilities, and generic pointer support.

Also needed is the actual support for compiling ray-tracing pipelines, managing acceleration structures, dispatching rays, and the platform support.

Intel is not going to go much further until the Khronos Group has firmed up their VK_KHR_ray_tracing extension. However some of this Intel-specific Vulkan ray-tracing code may prove useful to Mesa’s Radeon Vulkan "RADV" driver as well.

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