

Graphics: Vulkan and Mesa

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[RLSL Allows Running A Subset Of Rust On Vulkan/SPIR-V Enabled GPUs](#) [2]

There was a recent Khronos meet-up in Munich where Maik Klein of Embark Studios talked about their work on bringing a sub-set of the Rust programming language to Vulkan (SPIR-V) enabled GPUs.

RLSL is the project being worked on by the Swedish game studio for opening up Rustlang use for GPUs to benefit from the language's same design advantages, provide a unified front-end, and being able to leverage the existing Rust ecosystem with the likes of Cargo/crates.



[Raspberry Pi 4's V3D Driver Lands OpenGL ES 3.1 Bits In Mesa 19.3-devel](#) [3]

The Broadcom "V3D" Gallium3D driver that is most notably used by the new Raspberry Pi 4 boards now is effectively at OpenGL ES 3.1 support within the newest Mesa 19.3 code.

We've known that Igalia has been ironing out OpenGL ES 3.1 for V3D after taking over the work from Eric Anholt who left Broadcom earlier this year to go work for Google.

Merged this past week was the OpenGL compute shader bits as the main blocker that prevented the V3D open-source Gallium3D driver from exposing GLES 3.1. Following that was a memory violation fix and then explicitly exposing OpenGL ES Shading Language 3.1. That merge request does note that a few more fixes are still needed before V3D will officially pass all of the OpenGL ES 3.1 conformance tests, but at least Mesa 19.3's code is good enough along to enable the support.

Links:

[1] <http://www.tuxmachines.org/taxonomy/term/148>

[2] https://www.phoronix.com/scan.php?page=news_item&px=RSL-Rust-On-SPIR-V-GPUs

[3] https://www.phoronix.com/scan.php?page=news_item&px=V3D-OpenGL-ES-3.1-Bits-Mesa