

Improving Khronos CTS tests with Mesa code coverage

Friday, September 18, 2020 1:20 PM (20 minutes)

The Khronos Conformance Test Suite is an open-source testing suite developed by the Khronos Group to certify that a given driver is conformant to the respective graphics API specification (OpenGL, OpenGL ES, Vulkan). As this testing suite is publicly available on Github, many Mesa driver developers use it, together with piglit and other tools, to make sure the driver follows the specification, there are no regressions when adding a new change, or to test new features under development.

However, the Khronos CTS tests are not perfect. Sometimes they miss checking some SPIR-V opcodes, or all the different data type options for the arguments to a given opcode, or they don't call all the API functions... to name a few things.

In this talk, we will introduce the work done by Igalia to easily detect low-hanging fruit missing test coverage in this testing suite. Thanks to this work, we have added more test coverage to many Vulkan CTS tests that will ultimately benefit all of Mesa's open-source Vulkan drivers. We will explain how we did it and the lessons learned from that work.

GSoC, EVoC or Outreachy

No

Code of Conduct

Yes

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Session Classification: Main Track

Track Classification: Talk (half slot) (Closed)