

Rusticl Status update

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New Features

- SVM (iris, radeonsi)
- sRGB
- CL_UNORM_INT_101010_2
- SPIR-V 1.6
- Async and parallel program compilation (thanks Seán)

SVM

- Took me like a year or two
- Rusticl reserves VM regions from drivers
- Rusticl assigns VM addresses to resources
- Works across multiple devices and vendors

New Extensions

- cl_khr_depth_images
- cl_khr_extended_bit_ops
- cl_khr_external_semaphore
- cl_khr_external_semaphore_sync_fd
- cl_khr_fp16
- cl_khr_icd version 2
- cl_khr_kernel_clock
- cl_khr_priority_hints
- cl_khr_semaphore
- cl_khr_spirv_linkonce_odr (Thanks David)
- cl_khr_spirv_queries

New Extensions

- cl_ext_buffer_device_address
- cl_ext_image_unorm_int_2_101010
- cl_ext_immutable_memory_objects
- cl_intel_required_subgroup_size (Thanks ajax)

Driver support

- Freedreno added support for a couple of features and extensions
- Some drivers can be enabled by default: gallium-rusticl-enable-drivers
 - Asahi
 - Freedreno
 - Radeonsi
- Planning to add zink to it, device/driver selection is a mess

Work in progress

- More subgroup extensions
- cl_intel_subgroups (Thanks ajax)
- cl_khr_external_memory
- LLVM SPIR-V target
- Program Scope Global Variables