Rusticl
Status update XDC2024

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Drivers

- Asahi (CL 3.0 conformant)
- V3d
- Zink (CL 3.0 conformant)

New OpenCL Features

- __opencl_c_read_write_images
- cl_khr_gl_sharing (thanks Antonio)
- cl_khr_subgroup_shuffle
- cl_khr_subgroup_shuffle_relative
- cl_khr_suggested_local_work_size (thanks David)

New Rusticl Features

- Dispatches bigger than one hardware dispatch
- Kernel variants
- Lots of core reworks and bug fixing

- cl_khr_depth_images
- cl_khr_mipmap_image
- cl_khr_gl_depth_images
- cl_khr_gl_msaa_sharing
- cl_ext_buffer_device_address
- SVM on iris and radeonsi

Work In Progress (community)

- etnaviv
- freedreno

Shared Virtual Memory

- tldr: like VM_BIND but in gallium

Shared Virtual Memory

- new gallium interfaces:
  - PIPE_RESOURCE_FLAG_FRONTEND_VM and
    PIPE_RESOURCE_FLAG_FIXED_ADDRESS
  - PIPE_CAP_MIN_VMA_SHIFT and PIPE_CAP_MAX_VMA_SHIFT
  - alloc_vm and free_vm
  - resource_assign_vma
  - resource_get_address (for Zink)
  - pipe_grid_info::globals and num_globals
- should work across vendors!
- needs fixed multi-device memory support (it's broken right now)