I'd like to announce the first release candidate of the 20.1 branch, Mesa 20.1.0-rc1.

Please test it, and report any issues you might find to:
https://gitlab.freedesktop.org/mesa/mesa/issues/new

We also have a GitLab milestone to track issues that need to be fixed and MRs that need to be merged before 20.1.0 final. Please add it to the relevant issues & MRs:
https://gitlab.freedesktop.org/mesa/mesa/milestones/14

The next release candidate is scheduled for 7 days from now, on 2020-05-06.

Eric

Mesa 20.1 feature development is now over with it being branched from Git master and subsequently Mesa 20.1-RC1 being released this evening.

Mesa 20.1 is the Q2'2020 update to this collection of open-source graphics drivers, predominantly Vulkan and OpenCL driver implementations for the likes of not only Intel, Radeon, and Nouveau (NVIDIA) graphics but also Arm/SoC graphics drivers as well.
They join existing X.Org board members Samuel Iglesias Gonsálvez [Igalia], Manasi D Navare [Intel], Lyude Paul [Red Hat], and Daniel Vetter [Intel]. Of the new members, three of them previously served with Collabora's Mark Filion being new to the foundation's board.

The X.Org Board of Directors is principally responsible for organizing the annual XDC developer conference, overseeing the X.Org Endless Vacation of Code and their usual participation within the Google Summer of Code, arranging sponsorships and travel reimbursements and other finances under the SPI, and related matters like their skyrocketing cloud costs associated with the X.Org/FD.o CI.

**AMD AOMP 11.5 Released For OpenMP Offloading To Radeon GPUs** [5]

Released on Wednesday was AOMP 11.5 as the latest version of the AMD/ROCm compiler based off LLVM Clang and focused on OpenMP offloading to Radeon GPUs.

AOMP is part of the ROCm umbrella for Radeon OpenMP device offloading. This is a branched version of upstream LLVM Clang that recently was re-based to LLVM 11 development code and thus the version number for AOMP.


AMDVLK 2020.Q2.2 has been issued today as the company's latest open-source AMD Radeon Vulkan driver based off their official driver source tree.

With this second AMDVLK driver snapshot of Q2-2020, there are a few notable changes in tow. The AMDVLK pipeline binary cache has been enabled by default for helping with load times. AMDVLK also now supports the Vulkan memory protected bit (VK_MEMORY_PROPERTY_PROTECTED_BIT). This driver update has also seen more performance optimization work around the few month old Linux port of Shadow of the Tomb Raider.

**Service process and out of process compositing in Monado** [7]

Moving all drivers and the compositor to the service process brings many advantages to the previous in-process model. For this input and rendering needed to be sent over our new IPC infrastructure. With a separate render loop, now independent of the OpenXR client, the compositor can provide a constant frame rate, even when the application doesn't deliver frames on time. This is required and the foundation of future reprojection work, where old frames can be transformed with new tracking data for a smoother experience if the client lags behind. In addition, the obvious advantage of an out of process compositor is that the
compositor can be started asynchronously to the application and run on its own without any application. This is also required for running multiple clients in the future and for implementing OpenXR extensions like XR_EXTX_overlay.

Amongst other small improvements to the compositor we improved support for direct mode on NVIDIA by recognizing more display identifiers like the Valve Index and the Oculus Rift series of HMDs.

- **Open-source OpenXR runtime for Linux 'Monado' gets an improved compositor - runs Blender VR**

Those crazy-smart folks over at Collabora have continued hacking away on Monado, a fully open source OpenXR (VR / AR standard) runtime for Linux. Now it's progressed quite far and it can run Blender VR.

A refresher on Monado: Monado is the first OpenXR runtime for GNU/Linux. Monado hopes to jump-start development of an open source XR ecosystem and provide the fundamental building blocks for device vendors to target the GNU/Linux platform.

Writing on the Collabora development blog, engineer Lubosz Sarnecki mentioned that Monado now has a "new monado-service binary and out of process compositor" which brings several advantages over the original in-process model. It now has a separate render loop, with the compositor now being able to provide a constant frame rate "even when the application doesn't deliver frames on time". Something that's absolutely vital to produce a smoother experience and help prevent nausea.