Graphics: Mesa 19.1.8, dGPU and Intel

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Submitted by Roy Schestowitz on Tuesday 22nd of October 2019 12:22:22 PM Filed under Graphics/Benchmarks [1]

- Mesa 19.1.8 [2]

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Mesa 19.1.8 is now available.
NOTE: It is anticipated that 19.1.8 will be the final release in the
19.1 series. Users of 19.1 are encouraged to migrate to the 19.2 series
in order to obtain future fixes.
Apologies for the big delay in this release; there were several regress
were investigating, which prevented the pre-release to be on time.
Subject: [ANNOUNCE] mesa 19.1.8
To: mesa-announce at lists.freedesktop.org
Cc: mesa-dev at lists.freedesktop.org
Adam Jackson (1):
      docs: Update bug report URLs for the gitlab migration
Alan Coopersmith (5):
      c99_compat.h: Don't try to use 'restrict' in C++ code
      util: Make Solaris implemention of p_atomic_add work with gcc
      util: Workaround lack of flock on Solaris
      meson: recognize "sunos" as the system name for Solaris
      intel/common: include unistd.h for ioctl() prototype on Solaris
Andreas Gottschling (1):
      drisw: Fix shared memory leak on drawable resize
Andres Gomez (3):
      docs: Add the maximum implemented Vulkan API version in 19.1 rel
      docs/features: Update VK_KHR_display_swapchain status
      egl: Remove the 565 pbuffer-only EGL config under X11.
Andrii Simiklit (1):
      glsl: disallow incompatible matrices multiplication
Arcady Goldmints-Orlov (1):
      anv: fix descriptor limits on gen8
Bas Nieuwenhuizen (2):
      tu: Set up glsl types.
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radv: Add workaround for hang in The Surge 2.
Danylo Piliaiev (1):
        st/nine: Ignore D3DSIO_RET if it is the last instruction in a sha
Dylan Baker (5):
        meson: fix logic for generating .pc files with old glvnd
        meson: Try finding libxvmcw via pkg-config before using find_libr
        meson: Link xvmc with libxv
        meson: gallium media state trackers require libdrm with x11
        meson: Only error building gallium video without libdrm when the
Eric Engestrom (4):
        gl: drop incorrect pkg-config file for glvnd
        meson: re-add incorrect pkg-config files with GLVND for backward
        util/anon_file: add missing #include
        util/anon_file: const string param
Erik Faye-Lund (1):
        glsl: correct bitcast-helpers
Greg V (1):
        util: add anon_file.h for all memfd/temp file usage
Haihao Xiang (1):
        i965: support AYUV/XYUV for external import only
Hal Gentz (1):
        gallium/osmesa: Fix the inability to set no context as current.
Jason Ekstrand (2):
        nir/repair_ssa: Replace the unreachable check with the phi builde
        intel/fs: Fix fs_inst::flags_read for ANY/ALL predicates
Juan A. Suarez Romero (12):
        docs: add sha256 checksums for 19.1.7
        cherry-ignore: add explicit 19.2 only nominations
        cherry-ignore: add explicit 19.3 only nominations
        Revert "Revert "intel/fs: Move the scalar-region conversion to th
        cherry-ignore: Revert "gallium: remove PIPE_CAP_TEXTURE_SHADOW_MA
        bin/get-pick-list.sh: sha1 commits can be smaller than 8 chars
        cherry-ignore: nir/opt_large_constants: Handle store writemasks
        cherry-ignore: util: added missing headers in anon-file
        cherry-ignore: radv: Fix condition for skipping the continue CS.
        cherry-ignore: Revert "radv: disable viewport clamping even if FS
        Update version to 19.1.8
        docs: add release notes for 19.1.8
Ken Mays (1):
        haiku: fix Mesa build
Kenneth Graunke (4):
        iris: Initialize ice->state.prim_mode to an invalid value
        intel: Increase Gen11 compute shader scratch IDs to 64.
        iris: Disable CCS_E for 32-bit floating point textures.
        iris: Fix iris_rebind_buffer() for VBOs with non-zero offsets.
Lionel Landwerlin (5):
        anv: gem-stubs: return a valid fd got anv_gem_userptr()
        intel: use proper label for Comet Lake skus
        mesa: don't forget to clear _Layer field on texture unit

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                intel: fix subslice computation from topology data
                intel/isl: Set null surface format to R32_UINT
        Marek Ol?ák (1):
                gallium/vl: don't set PIPE_HANDLE_USAGE_EXPLICIT_FLUSH
        Matt Turner (1):
                util: Drop preprocessor guards for glibc-2.12
        Michel Dänzer (1):
                radeonsi: fix VAAPI segfault due to various bugs
        Michel Zou (2):
                scons: add py3 support
                scons: For MinGW use -posix flag.
        Paulo Zanoni (1):
                intel/fs: fix SHADER_OPCODE_CLUSTER_BROADCAST for SIMD32
        Prodea Alexandru-Liviu (1):
                scons/MSYS2-MinGW-W64: Fix build options defaults
        Rhys Perry (2):
                radv: always emit a position export in gs copy shaders
                nir/opt_remove_phis: handle phis with no sources
        Samuel Iglesias Gonsálvez (1):
                intel/nir: do not apply the fsin and fcos trig workarounds for co
        Stephen Barber (1):
                nouveau: add idep_nir_headers as dep for libnouveau
        Tapani Pälli (3):
                iris: close screen fd on iris_destroy_screen
                egl: check for NULL value like eglGetSyncAttribKHR does
                util: fix os_create_anonymous_file on android
        pal1000 (2):
                scons/windows: Support build with LLVM 9.
                scons: Fix MSYS2 Mingw-w64 build.
        git tag: mesa-19.1.8
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Mesa 19.1.8 Released To End Out The Series [3]

More than one month has passed since Mesa 19.1.7 compared to the usual bi-weekly release cadence, but on Monday following the closure of remaining blocker bugs, Mesa 19.1.8 was released that also ends out this release series.

Mesa 19.1.8 is the last planned release in the 19.1 Q2 series with users now being encouraged to upgrade at least to the stable Mesa 19.2 while Mesa 19.3 should be out around early December.

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Linux 5.5 To Restore Power-Savings For Hybrid Laptops When Not Using The dGPU [4]

On recent kernels when using a laptop with hybrid graphics but not running with the discrete

GPU graphics enabled, a regression meant the dGPU never got powered off... Fortunately, for Linux 5.5 -- and potentially to be back-ported after that -- is a change to restore that power-savings.

A change enabling NVIDIA HDA controller support inadvertently left dGPUs powered up when not in use, i.e. where the dGPU is not bound to a driver. When the NVIDIA discrete graphics aren't bound to a driver, the power saving path wasn't being hit where the platform power management could disable power to the GPU.

- **Intel Lands More Graphics Code For Linux 5.5 - Jasper, More Intel Xe Multi-GPU Prepping**[5]

    Intel's open-source developers kicked off a new week by sending in their latest vetted changes to DRM-Next ahead of next month's Linux 5.5 kernel cycle.

    They already have sent in a lot of new graphics driver code for Linux 5.5 particularly around Tiger Lake while this week's pull request contains more new hardware enablement. They also anticipate sending in another pull request next week to DRM-Next with any other lingering feature work they are hoping to get into Linux 5.5.

- **Intel's Graphics Compiler For Their NEO Compute Stack Now Supports Jasper Lake**[6]

    The team maintaining the LLVM-based Intel Graphics Compiler as part of their "NEO" OpenCL/Compute Stack have rolled out v1.0.2714 that includes initial support for Jasper Lake among other improvements.

    Just in the past week we've begun seeing Linux graphics driver patches around "Jasper Lake" and that initial kernel-side support coming for Linux 5.5. Jasper Lake is the rumored 10nm successor to Gemini Lake for low-power SoCs but not to be confused with Elkhart Lake that is Tremont+Gen11 also for ultra-low-power environments based upon the limited information thus far.

Graphics/Benchmarks

Source URL: http://www.tuxmachines.org/node/129580

Links:
[1] http://www.tuxmachines.org/taxonomy/term/148
[2] https://lists.freedesktop.org/archives/mesa-dev/2019-October/223702.html
[3] https://www.phoronix.com/scan.php?page=news_item&px=Mesa-19.1.8-Released
[4] https://www.phoronix.com/scan.php?page=news_item&px=Linux-5.5-dGPU-Sound-Bind-Power
[5] https://www.phoronix.com/scan.php?page=news_item&px=Linux-5.5-Jasper-Plus-More
[6] https://www.phoronix.com/scan.php?page=news_item&px=Intel-IGC-Jasper-Lake