

# Update on Gallium3D ports to AROS and Haiku

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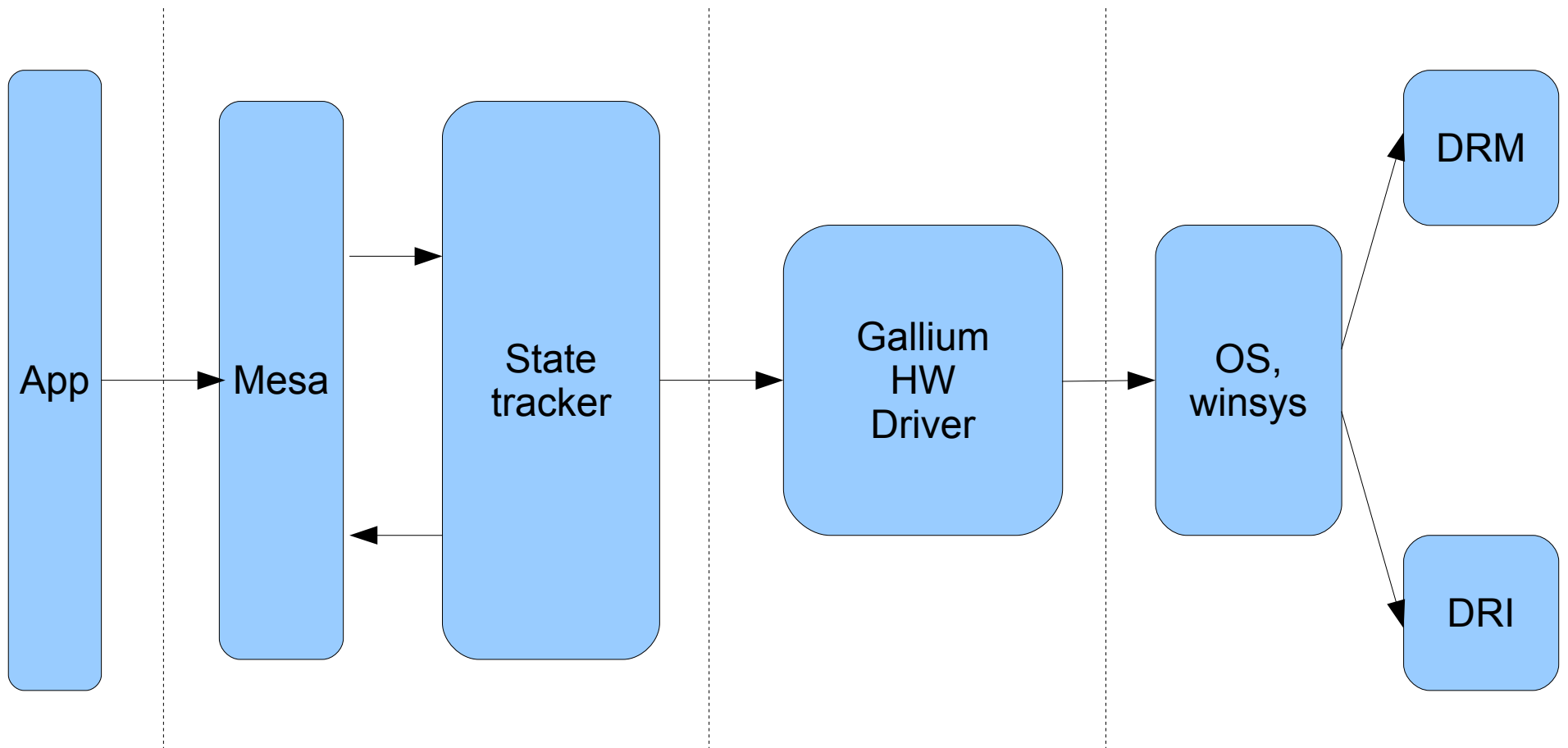


# What is it ?

- New Mesa device driver architecture
- Started in 2007 by Tungsten Graphics
- In Mesa git repository, master branch



# General architecture



# AROS port

- Krzysztof 'deadwood' Smiechowicz
  - <mailto:deadwood@wp.pl>
- <http://web.aros3d.org/>



# History (AROS)

- Softpipe (software) driver ported (mid 2009)
- Nouveau gallium drivers port underway (Q4 2009)
- First alpha release (January 2010)
  - Supports GeForce 5XXX, 6XXX and 7XXX
  - not yet integrated with the system (2D is done in VESA)
  - Intel driver done but missing AGP



# Future plans (AROS)

- AGP support for several motherboard chipsets
  - Intel, ...
- Integrate 3D into current 2D AROS nvidia driver or substitute current 2D AROS nvidia driver with codes from drm
- Support GeForce 5XXX to GeForce 9XXXX



# Haiku port

- Artur 'aljen' Wyszynski
  - <mailto:harakash@gmail.com>
- SVN Branch
  - [haiku/branches/components/gallium3d](http://haiku/branches/components/gallium3d)



# History (Haiku)

- March 2009: announced
- June 2009: gallium3d branch in svn
- Software renderer
- September 2009: added libdrm\*.so, intel renderer (not working)
- December 2009: Added VMware virtual GPU driver (not working, needs drm)



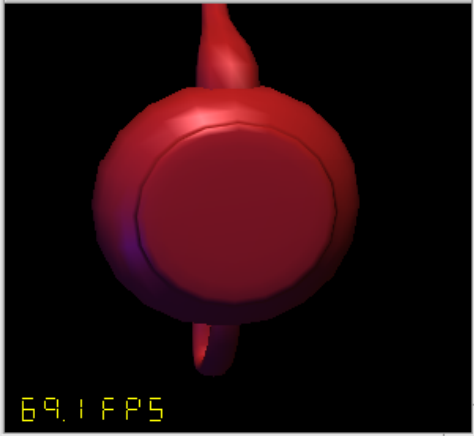


Haiku [Uruchomiona] - Sun xVM VirtualBox

Maszyna Urządzenia Pomoc

GLTeapot

File Options Lights



69.1 FPS

7:11 AM

Tracker

Terminal

GLTeapot

Terminal Edit Settings

```
green : 8
blue : 8
alpha : 8
depthBits : 32
stencilBits : 8
context: 1
AToW> renderer
GL_VERSION: 2.1 Mesa 7.5-devel
GL_VENDOR: Tungsten Graphics, Inc.
GL_RENDERER: Gallium 0.2 on softpipe
GL_EXTENSIONS: GL_ARB_depth_texture GL_ARB_draw_buffers GL_ARB_fragment_program GL_ARB_frag
ment_shader GL_ARB_multisample GL_ARB_multitexture GL_ARB_occlusion_query GL_ARB_pixel_buff
er_object GL_ARB_point_parameters GL_ARB_point_sprite GL_ARB_shader_objects GL_ARB_shading
language_100 GL_ARB_shading_language_120 GL_ARB_shadow GL_ARB_texture_border_clamp GL_ARB_t
exture_compression GL_ARB_texture_cube_map GL_ARB_texture_env_add GL_ARB_texture_env_combin
e GL_ARB_texture_env_crossbar GL_ARB_texture_env_dot3 GL_ARB_texture_mirrored_repeat GL_ARB
_texture_non_power_of_two GL_ARB_texture_rectangle GL_ARB_transpose_matrix GL_ARB_vertex_bu
ffer_object GL_ARB_vertex_program GL_ARB_vertex_shader GL_ARB_window_pos GL_EXT_abgr GL_EXT
_bgra GL_EXT_blend_color GL_EXT_blend_equation_separate GL_EXT_blend_func_separate GL_EXT_b
lend_logic_op GL_EXT_blend_minmax GL_EXT_blend_subtract GL_EXT_compiled_vertex_array GL_EXT
_copy_texture GL_EXT_draw_range_elements GL_EXT_framebuffer_object GL_EXT_framebuffer_blit
GL_EXT_fog_coord GL_EXT_multi_draw_arrays GL_EXT_packed_depth_stencil GL_EXT_packed_pixels
GL_EXT_pixel_buffer_object GL_EXT_point_parameters GL_EXT_polygon_offset GL_EXT_rescale_nor
mal GL_EXT_secondary_color GL_EXT_separate_specular_color GL_EXT_shadow_funcs GL_EXT_stenci
l_two_side GL_EXT_stencil_wrap GL_EXT_subtexture GL_EXT_texture GL_EXT_texture3D GL_EXT tex
ture_edge_clamp GL_EXT_texture_env_add GL_EXT_texture_env_combine GL_EXT_texture_env_dot3 G
L_EXT_texture_lod_bias GL_EXT_texture_mirror_clamp GL_EXT_texture_object GL_EXT_texture_rec
tangle GL_EXT_texture_sRGB GL_EXT_vertex_array GL_APPLE_packed_pixels GL_ATI_blend_equation
_separate GL_ATI_separate_stencil GL_IBM_multimode_draw_arrays GL_IBM_rasterpos_clip GL_IBM
_texture_mirrored_repeat GL_INGR_blend_func_separate GL_MESA_ycbcr_texture GL_MESA_window_p
os GL_NV_blend_square GL_NV_light_max_exponent GL_NV_point_sprite GL_NV_texture_rectangle G
L_NV_texgen_reflection GL_OES_read_format GL_SGI_color_matrix GL_SGIS_generate_mipmap GL_SG
IS_texture_border_clamp GL_SGIS_texture_edge_clamp GL_SGIS_texture_lod GL_SUN_multi_draw_ar
rays
SoftPipeRenderer::EnableDirectMode(enabled: 1)
CALLED: Draw
█
```

Prawy Ctrl



# Future plans (Haiku)

- Port FreeBSD drm driver architecture
- Integrate it with out graphics drivers and accelerants
- Design & implement C opengl layer (similar to glx/wgl/cgl)
- Base BGLView on that
- Redesign OpenGL Kit to allow multiple contexts and render targets



# Help us

- You want teapots on AROS and Haiku ?
  - Test it
  - Fix it
  - Send patches
  - Boil the kettle :-)

