Optimizing and Debugging Graphics Applications with AMD's GPU PerfStudio 2.2

GPG Developer Tools
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Introducing GPU PerfStudio 2.2

- A GPU Performance Analysis tool from AMD
  - Help you create more stunning games
  - Designed for Game Developers
  - Currently being used in AAA Game development
  - Used in AMD by driver and performance teams

- Debug and Profile DirectX®11, DirectX®10, and OpenGL now on ATI Radeon HD 5xxx Series GPU's now!

- Debug and Profile DirectX®10, and OpenGL, on 5xxx, 4xxx, 3xxx and 2xxx series GPU's.

Introducing GPU PerfStudio 2.2

- Frame Debugger
  - Select a draw call
  - View ALL game resources bound to the pipeline
  - Frame Capture
- Shader Debugger
  - Debug HLSL and Assembly code from inside your app
  - Step, breakpoints, inspect register values.
- Frame Profiler
  - Identify costly draw calls and
  - Identify GPU bottlenecks
- API Trace viewer
  - Inspect all API calls
  - Jump to draw call in Frame Profiler and Frame Debugger

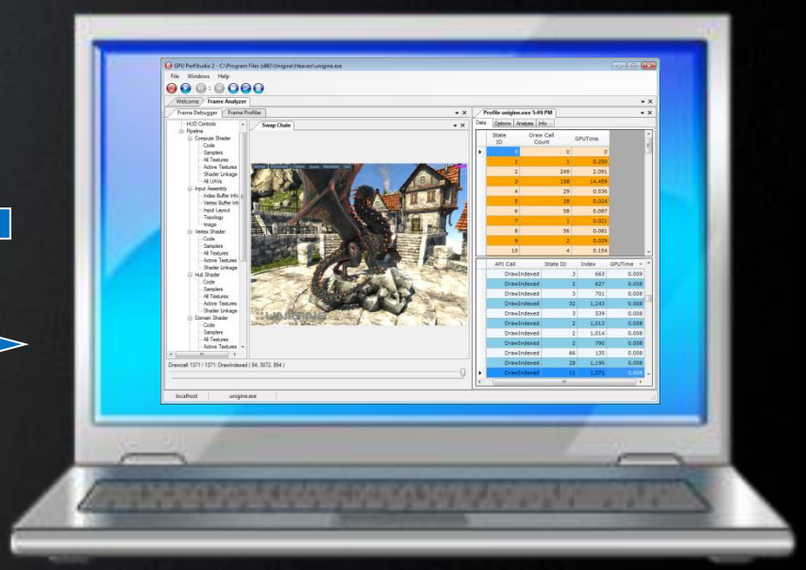
GPU PerfStudio 2.2 - Requirements

- Open Development Tool
  - Works on all vendor hardware
    - Server - Win7, Vista (32 and 64bit versions)
    - Client – Win7, Vista, XP.
  - Supports OpenGL 3.0, DirectX®10 & 10.1, DirectX®11.
  - No custom driver requirements
    - Small footprint – no installation
  - No modifications to target application necessary
    - Simple drag and drop to start debugging!
  - Its Free!
    - $0.00
    - £0.00
    - €0.00

GPU PerfStudio 2.2 - How it works

Server

Remote debugging

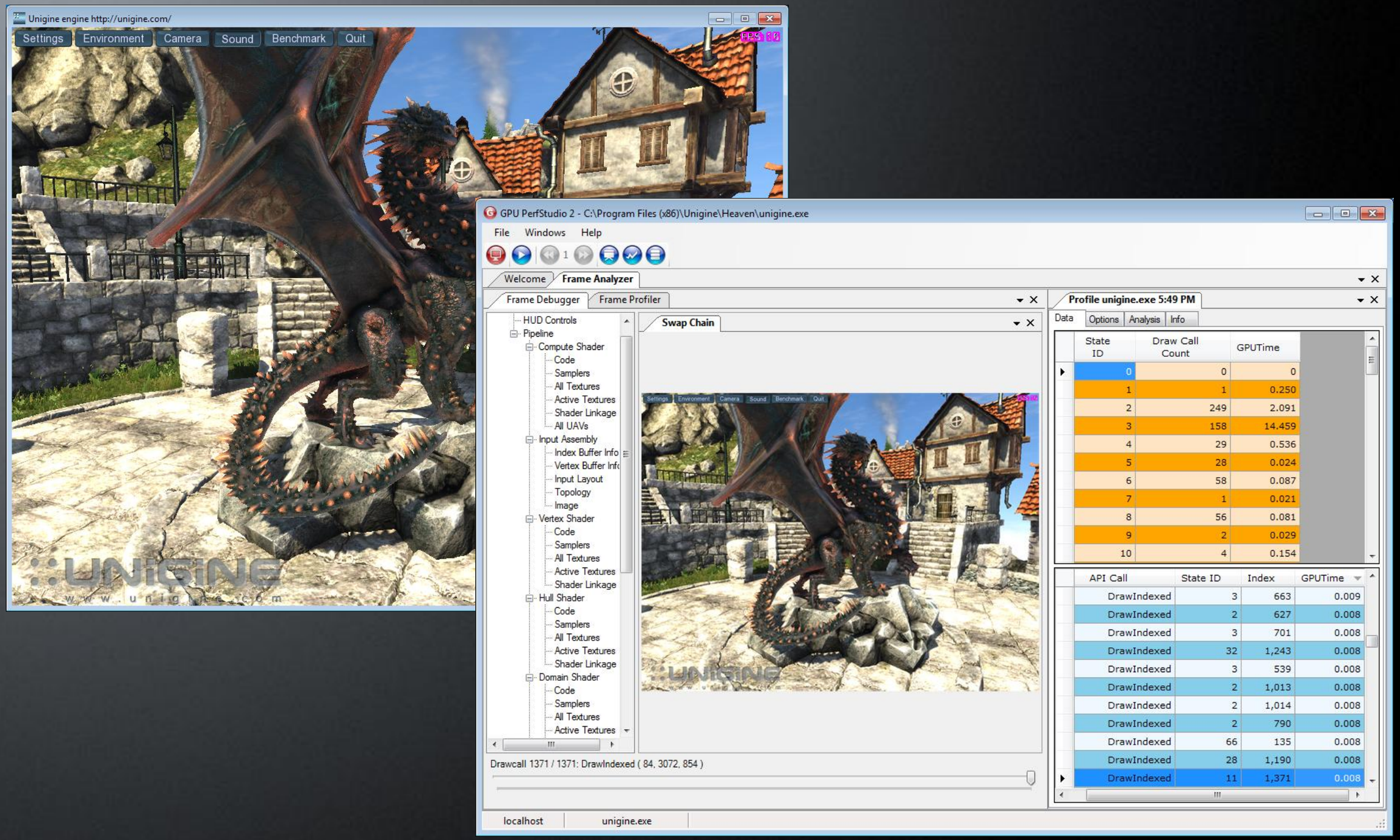


Client

Local debugging

server and client on same computer

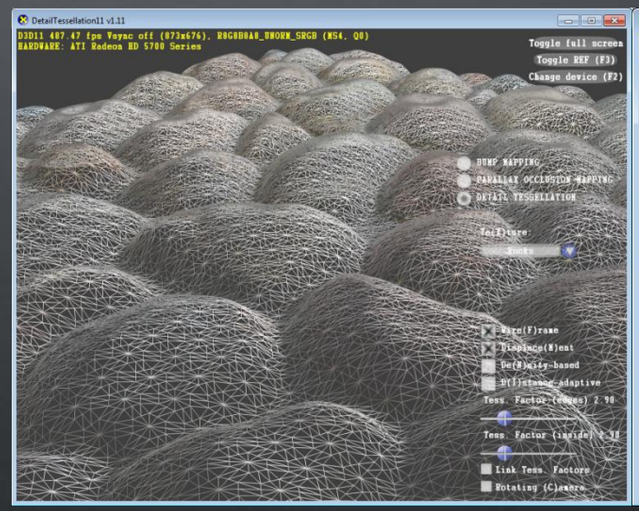
GPU PerfStudio 2.2 and Unigine Heaven

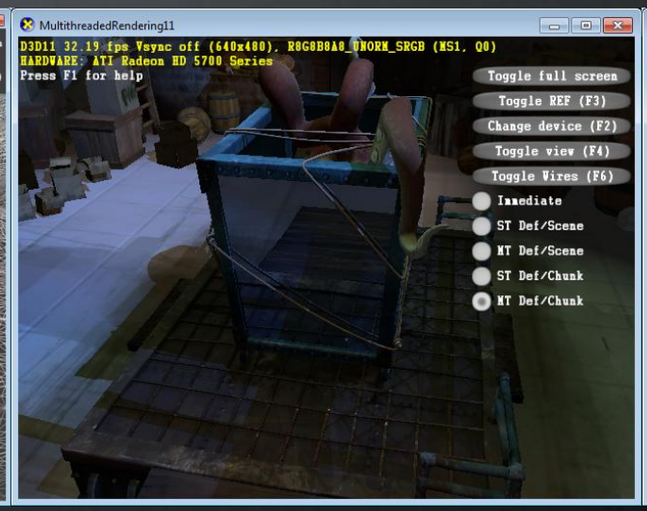


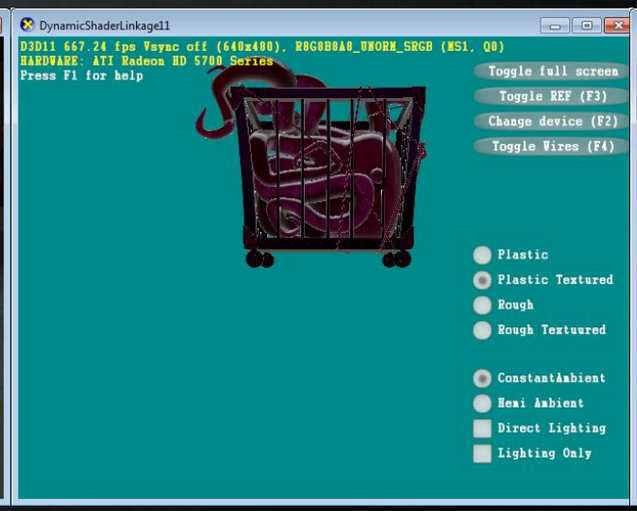
GPU PerfStudio 2.2 - Demo

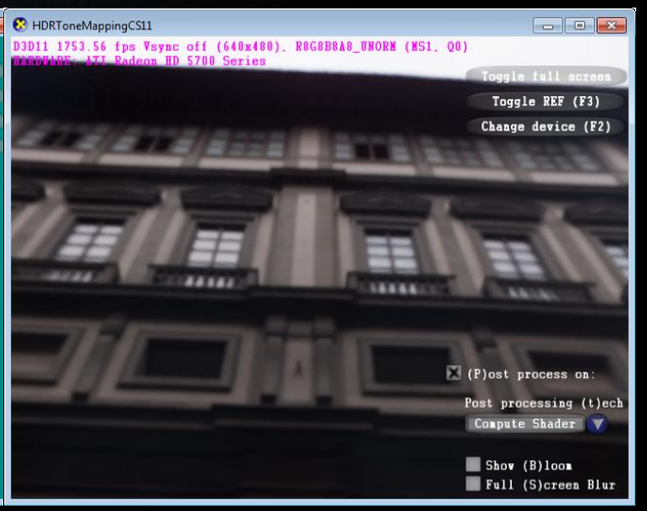
GPU PerfStudio 2.2 –DirectX®11

- Compute Shader debugger
- Tessellation - view HS, DS shader code
- View UAV descriptions (OM and CS)
- View Dynamic Shader Linkages
- Multi-threaded DirectX® 11 application support

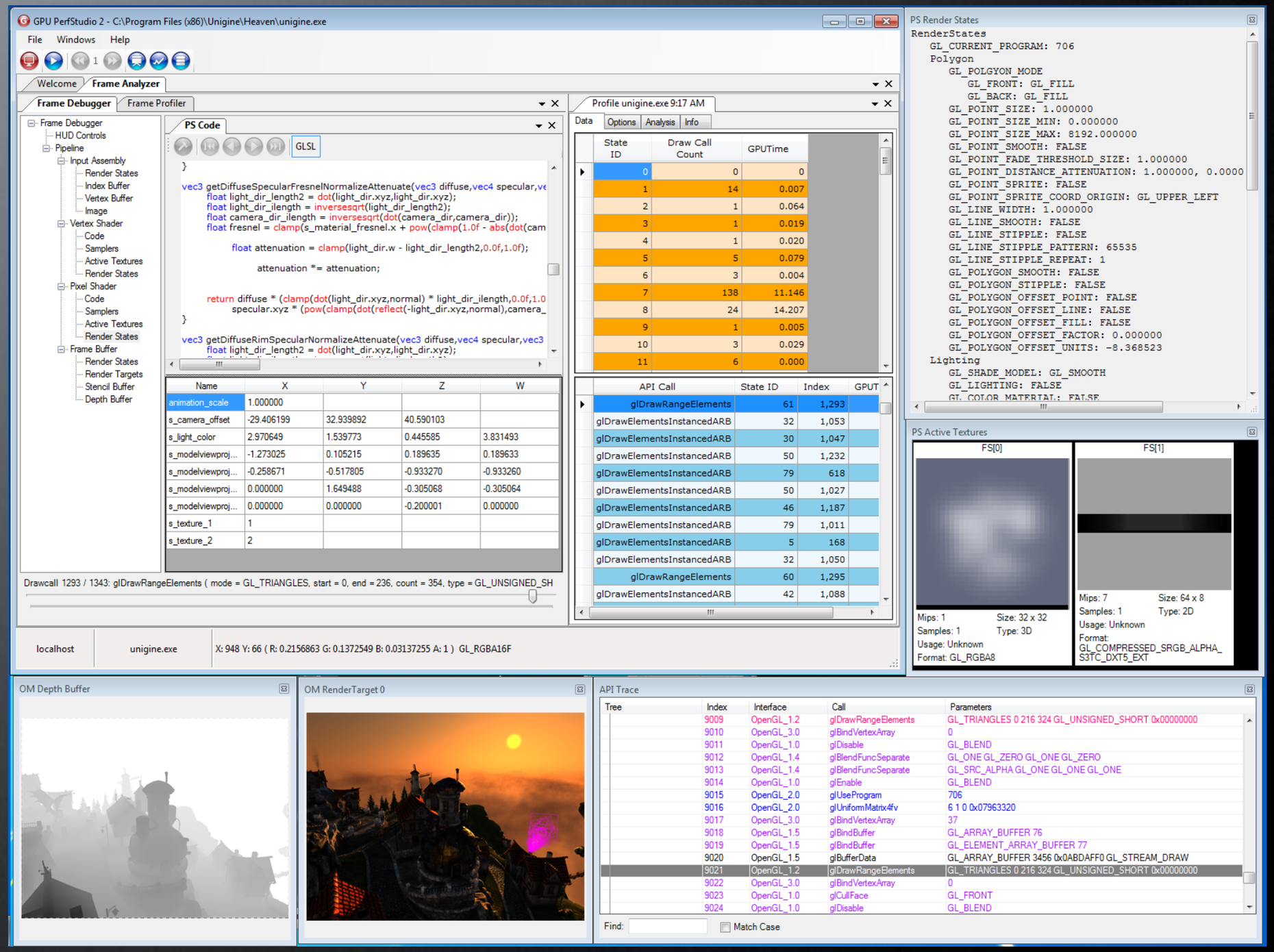








GPU PerfStudio 2.2 – OpenGL



GPU PerfStudio 2.2 Availability

- Download GPU PerfStudio now from
  http://developer.amd.com/gpu/PerfStudio/
- PerfStudio 2.2 available end of March 2010
- Free to all developers

Other AMD GPU Tools

Available at: **http://developer.amd.com/gpu**

- GPU MeshMapper
- GPU ShaderAnalyzer
- The Compressonator \ ATI Compress
- ATI Stream Profiler for OpenCL
- Stream Kernel Analyzer
- And more…

And CPU tools too - **http://developer.amd.com/cpu**

- AMD CodeAnalyst Performance Analyzer
- AMD Performance Libraries
- And more…

GPU PerfStudio 2

- Thank you
  - Unigine
  - ATI ISV partners
  - AMD GPU Developer Tools Team
  - You

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