Intel® Graphics Performance Analyzers (Intel® GPA) 2017 R3 Release Notes

Thank you for choosing the Intel® Graphics Performance Analyzers (Intel® GPA), available as a standalone product and as part of Intel® System Studio.

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Introduction

Intel® GPA provides tools for graphics analysis and optimizations for making games and other graphicsintensive applications run even faster. The tools support the platforms based on the latest generations of Intel® Core™ and Intel Atom™ processor families, for applications developed for Windows*, Android*, Ubuntu*, or macOS*.

Intel® GPA provides a common and integrated user interface for collecting performance data. Using it, you can quickly see performance opportunities in your application, saving time and getting products to market faster.

For detailed information and assistance in using the product, refer to the following online resources:

- Home Page - view detailed information about the tool, including links to training and support resources, as well as videos on the product to help you get started quickly.
- Getting Started - get the main features overview and learn how to start using the tools on different host systems.
- Training and Documentation - learn at your level with Getting Started guides, videos and tutorials.
- Online Help for Windows* Host - get details on how to analyze Windows* and Android* applications from a Windows* system.
- Online Help for macOS* Host - get details on how to analyze Android* or macOS* applications from a macOS* system.

- Online Help for Ubuntu* Host - get details on how to analyze Android* or Ubuntu* applications from an Ubuntu* system.
- Support Forum - report issues and get help with using Intel® GPA.

What's New

Intel® GPA 2017 R3 offers the following new features:

New Features for Analyzing All Graphics APIs

Graphics Trace Analyzer

- Trace Analyzer now is the only timeline tool in Graphics Performance Analyzers suite. Platform Analyzer tool has been removedAPI Log and Metrics can be exported now.
- A number of stability fixes have been made.

GPU Metrics

- The accuracy of time-based GPU metrics in System Analyzer has been significantly improved
- More correct MDAPI-based "AVG GPU core frequency" metric is shown instead of "GPU Frequency"
- GPU Busy metric calculation in System Analyzer and HUD has been fixed

Graphics Frame Analyzer

- User interface was redesigned:
- Bar Chart, API log and Metrics panes are resizable now
- Bar chart now shows Debug and Render target regions
- Metric groups can be collapsed/expanded
- Ability to sort captured frames by time added
- API Call IDs have been changed. IDs are assigned only to GPU-intensive calls like it is done in Frame Analyzer for DiirectX 9, 10, 11

New Features for Analyzing Microsoft DirectX* Applications

All Tools

- Support for Windows Mixed Reality titles in simulation mode added

Graphics Frame Analyzer for DirectX 12

- Visual experiments (Highlight and Hide) now applied only to selected RT
- Post-Transformation geometry implemented in two modes – transformed mesh and screen-space view.

Graphics Frame Analyzer for DirectX 11

- Highlighting and Simple Pixel Shader experiment for multiple Render Target have been added

Graphics Trace Analyzer

- Trace Analyzer is now the only timeline analysis tool in GPA
- Windows 7 ETW events are enabled
- Initial DX12 Multi-adapter support implemented
- Data synchronization between ETW and ITT tasks improved
- Oculus and HTC Vive VR compositor ETW events added

New Features for Analyzing macOS Metal* Applications

The first version of a new tool called Multi-Frame Analyzer which is targeted at profiling macOS Metal applications has released. Analyze frames during the runtime of your application or during the replay of a recorded game stream. The major features are listed below

- Multi-Frame Capture and Pause Workflows
- Metal 1.0 and 2.0 APIs supported
- Metrics Analysis and Pipeline Statistics visualization that helps identify hotspots within the GPU
- Draw Call Histogram and hierarchical API Log that helps identify optimization opportunities
- Resource Viewer that shows Textures, Buffers, States, Shaders
- Performance experiments such as disabling events
- Scrub mode (draw only to last selected)
- Command line interface

Technical Support and Troubleshooting

For technical support, including answers to questions not addressed in the installed product, visit the Support Forum.

*Other names and brands may be claimed as the property of others.

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