Graphics Programming

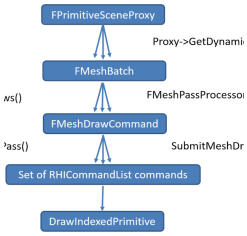
Information for graphics programmers working with the rendering systems and writing shaders.

The Renderer module in the engine manages and renders scenes, which hold the renderable information associated with each world. It includes the definition of all drawing policies and shader.

The RHI module, which is the interface for rendering APIs, is another key module for graphics programming. The Graphics Programming Overview covers many key classes, settings, and variables to investigate, while the other subpages below cover specific rendering topics.

FShaderCache

The FShaderCache provides mechanisms for reducing shader hitching in-game.

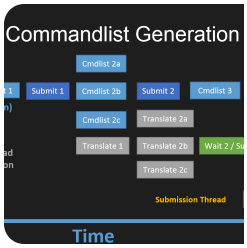


Mesh Drawing Pipeline

Guide to adding custom mesh passes and understanding Unreal Engine's mesh drawing performance characteristics.

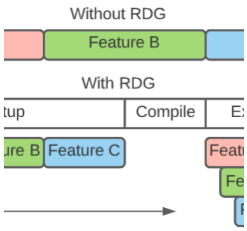
Graphics Programming Overview

Information for graphics programmers working with the rendering systems and writing shaders.



Parallel Rendering Overview

An overview of parallel rendering.

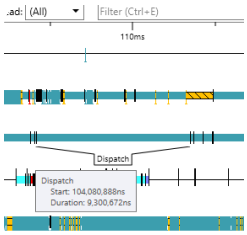


Render Dependency Graph

An immediate-mode API which records render commands into a graph data structure to be compiled and executed.

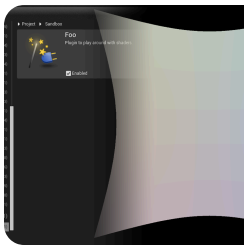
Shader Development

Information for graphics programmers writing shaders.



AsyncCompute

AsyncCompute is a hardware feature that interleaves different GPU tasks to improve efficiency.

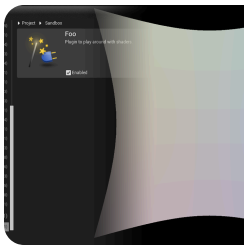


Shaders in Plugins

Information on creating and using shaders in plugins.

Overview of Shaders in Plugins

Going over creating shaders in Plugins.



Creating a New Global Shader as a Plugin

Creating and setting up a new Global shader via a Plugin.

Threaded Rendering

Information for graphics programmers working with the threaded renderer.