Game Engine Design Notes

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1 Introduction

This document is the outline of how the game engine functions. It will discuss the graphics pipeline, each subsystem, external libraries, and tools that are used.

Check out these books maybe : [7], [1], [6], [5], [4], [2], [8], [9], [3],

1.1 Final Project Plans

In this section we describe the overall goal of our engine and the basic minimum functionality it can perform.

2 Graphics Pipeline

In this section we talk about the graphics pipeline.

2.1 An example

In this section describe **in detail** from the start to the end how an object is rendered.

3 Game Engine Components

In this section we talk about each component of the system and what their responsibilities are and how subsystems interacts. We can look at [7] to see what systems they have and if it would be a good idea to include them in our engine.

3.1 Audio Manager

The Audio Manager will handling the loading and playback of sounds.

3.2 Renderer

The Renderer will handle the display of scenes.

References

[1] Tomas Akenine-Moller, Eric Haines, and Naty Hoffman. *Real-Time Rendering.* A K Peters/CRC Press, 3 edition, July 2008.

[2] Edward Angel and Dave Shreiner. *Interacrtive Computer Graphics: A Top-Down Approach with Shader-Based OpenGL.* Addison-Wesley, 6 edition, April 2011.

[3] Mark de Berg, Otfried Cheong, Marc Van Kreveld, and Mark Overmars. *Computational Geometry: Algorithms and Applications*. Springer, 3 edition, March 2008.

[4] David H. Eberly. *3D Game Engine Architecture: Engineering Real-Time Applications with Wild Magic*. The Morgan Kaufmann Series in Interactive 3-D Technology. CRC Press, 2 edition, December 2004.

[5] David H. Eberly. *3D Game Engine Design: A Practical Approache to Real-Time Computer Graphics*. The Morgan Kaufmann Series in Interactive 3-D Technology. CRC, 1 edition, November 2006.

[6] Christer Ericson. *Real-Time Collision Detection*. The Morgan Kaufmann Series in Interactive 3-D Technology. CRC Press, 1 edition, December 2004.

[7] Jason Gregory. *Game Engine Architecture*. A K Peters/CRC Press, 1 edition, June 2009.

[8] Eric Lengyel. *Mathematics for 3D Game Programming and Computer Graphics*. Cengage Learning PTR, 3 edition, June 2011.

[9] James M. Van Verth and Lars M. Bishop. *Essential Mathematics for Games and Interactive Applications: A Programmer's Guide*. Morgan Kaufmann, 2 edition, May 2008.