Blog Post, Entry 8

Unreal Engine

This week I wanted to write about and research Epic Games' Unreal Engine 5. This is widely considered the most powerful game engine on the planet and has developed into a game development powerhouse. To give a sense of how powerful this engine is, a few weeks back I wrote about *Bright Memory: Episode 1* which is a game developed by a single person using Unreal Engine that has the look and feel of a AAA game. One person is able to develop a game with the same graphics and mechanics as a massive game studio using this engine. So, clearly Unreal Engine is extremely powerful, but let's look closer as to how it has become so popular.

Similarly, to Unity Game Engine which we looked at 2 weeks ago, Unreal is great for beginners with limited coding experience. Although it would be nearly impossible to eliminate the need for programming in game development, Unreal engine has a node-based technology called Blueprint Visual Scripting which allows for users to drag-and-drop features and build off pre-set blueprints without ever writing a line of code. Blueprint Visual Scripting lets developers skip massively time-consuming steps by providing blueprints for everything from player models to health generation, to fighting mechanics. Unreal Engine does a phenomenal job of supporting beginners, both with tools like Blueprint Visual Scripting, but also with their subscription models. If you were a large development studio, then you could access Unreal Engine through their $1,500 seat/year ENTERPRISE PROGRAM. But if you're a solo developer or just a small team planning on developing a game, their PUBLISHING LISCENE model is completely free and only takes 5% royalties (which only kicks in after the first $1,000,000 of revenue).

Another strength of Unreal is the level of graphics it can produce. Unreal engine is the industry standard for that reason. Titles such as (and certainly not limited to) *Star Wars Jedi: Fallen Order*, *Rocket League,* the *Mortal Combat* series have all been developed using Unreal. Studios can create next-generation physics, graphics, and dynamic lighting for their game to produce an immersive, in-game experience. Although other game engines like Unity are amazing for certain types of game development (particularly 2D development), if you're a solo developer or a large studio and you want to develop a 3D game, Unreal is the engine for you. The quality of graphics is unrivaled, and it shows through the success and ubiquity that Unreal has had in supporting both triple-A studios and indie developers alike.

In addition to the beginner friendly UI, blueprint scripting, and the differentiated 3D graphics, Unreal also supports over 10 platforms. This means developers can create and launch their game nearly wherever they please. This ranges from mobile games, to PC, to Nintendo Switch, to web-based games. For some indie developers, like Eric Barone of Stardew valley for example (who else did you expect I pick?), needed to develop the game for every platform that he wanted to release on. When he initially released the game, it was only for PC and then he slowly released it for other platforms as he learned how to make the necessary changes to support those platforms. Unreal Engine handles much of that dirty work, allowing for the developer to focus on the other aspects of the game.

Overall, if you're looking for the most powerful 3D game engine on the market, look no further than Unreal Engine. If you're a solo developer, you can develop for free using their

PUBLISHING LISCENE and if you’re a large scale studio, you have their reasonably priced ENTERPRISE PROGRAM to take advantage of.