Research Findings: Unity Development

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1. Background

Our client has been creating AR apps using Unity. They have told us that using Unity and the Vuforia plugin is the best and easiest way to create their AR applications.

2. Objectives

Evaluate the Unity application and consider if that this is the best platform for us to use for development.

3. Approach

Read through articles about Unity, use Unity personally and see if it is a fit for our use.

4. Findings

4.1. Unity is a cross-platform game engine, it is mainly used to develop video games for PC, consoles, mobiles devices and websites.

4.2. Unity has a big emphasis on portability. It allows for specification of texture compression and resolution settings for each platform the game engine supports.

    4.2.1. Unity's graphics engine's platform diversity can provide a shader with multiple variants and declarative fallback specification, allowing Unity to detect the best variant for the current video hardware; and if none are compatible, fall back to an alternative shader that may sacrifice features for performance.

4.3. Unity is most notable for its ability to target games to multiple platforms. Within a project, developers have control over delivery to mobile devices, web browsers, desktops and consoles. There are many supported platforms, mainly including OS X, Android, iOS.

    4.3.1. The ability to target multiple platforms is good for us as we want the platform to be able to be used by everyone. By being able to do that within one program it reduces time.

4.4. Unity game engine is often referred to as the best video game engine for under a million dollars.

    4.4.1. Unity – "Democratizing game development and enabling everyone to create rich interactive 3D content"

4.5. Unity is "easy to use"

    4.5.1. When creating a project in Unity you can see just how visual everything is. The engine focuses a lot on simplifying the game development workflow. It has click and drag ability.

    4.5.2. You can run the game in the game window and see a preview of the game running and how it will look on a device.

4.6. Unity allows for powerful behaviours written in any of three languages: Javascript, C# and Boo.

    4.6.1. These languages can be used simultaneously in a project to allow people with different technology backgrounds to contribute to a project at the same time.

    4.6.2. The languages are used as scripts which allows for fast compilation times, quick iterations and flexibility of design.

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5. Further Investigation

5.1. I went ahead and downloaded Unity to test it out. I create a simple game by following a tutorial, it was quick and easy and worked well.

5.2. I think the most important aspect it the ability to deploy to iOS, and android easily. The platform needs to be able to be accessed by everybody so this means less development time.

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6. Recommendations

6.1. Play around with Unity more, get a feel for the controls and learn how to use each feature well.

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7. References

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