Research Findings #1

Date 16 July 2015
Researcher Paul Lee

---

1. Background

Our client, Luminary Promotions, currently use the Unity platform to develop most of their mobile applications. For the project, we are required to develop a mobile application in Unity for the client's requirements and specifications (yet to be gathered). Through informal research, we would like to a) develop a basic knowledge of Unity, Vuforia and app development, b) be able to ask relevant questions with Luminary for our requirements/specifications elicitation.

---

2. Objectives

To understand the benefits and complications of the Unity and Vuforia platform for further requirements and specifications elicitation.

---

3. Approach

Installing both Unity software and Vuforia package.
Following online tutorials e.g. Youtube.
Experimentation and troubleshoot.

---

4. Findings

4.1. Unity has four main windows when loading: the hierarchy window, the scene/game window, the project/console window and inspector window.

4.2. Tutorials for using Unity can be found on their website or just by searching on YouTube or google. There are many tutorials that are easy to understand and very helpful for the beginner.

4.3. Initial errors with Vuforia package; Vuforia 5 did not support 64-bit version of Unity. Downloaded 32bit Unity

4.4. Must upload image marker to Vuforia Developer Portal.

4.5. Application scans, analyses markers, compares that with database

4.6. A license key, created in Vuforia Developer Portal by registering an account, must be added in to Unity plugin.

4.7. Many helpful articles on Vuforia website

4.8. No information of GPS/Geolocation services on Vuforia site.

---

5. Further Investigation

5.1. How will the server and client communicate?

5.2. If it is online through wifi/4g, how do we minimise data usage?

5.3. How many POIs would be displayed to the user?

5.4. Will there be a "geofence"? ie. Only show POIs close to the user.

5.5. How big will they appear on the client screen?

5.6. How often will content be updated?

5.7. Will the user have to update the application to receive new content?

5.8. Will the user receive a push notification alerting them on new content?
5.9. Will the user's device automatically download new content each time when the
5.10. application is launched?
5.11. How much data would this take? How to minimise?
5.12. On what platforms will this application be created on?
5.12.1. iOS?
5.12.2. Android?
5.12.3. Windows?
5.1. What will be displayed to the user?
5.2. Images of markers?
5.3. Information about POIs

---

6. Recommendations

6.1. A few SDK's which support GPS are:

- ARLAB
- BEYONDAR (open source)
- DROIDAR
- METAIO
- MIXARE
- WIKITUDE
