Informal Development Log

Development only truly started when we had the scope change to building the plugins. This was when we had the meeting with Luminary and Ahmed let us know that he would be handing the reigns over to his lead developer Alexis to be our client. Alexis decided that for this project to be of any benefit to their company we should build Unity Plugins that can be used for any of the applications they create. Luminary had not delved in to the GPS side of development in their applications and getting a start with these applications would be a good idea.

We started off by having a meeting with Alexis to get a general overview of what he wants from the plugins or an application that would use the plugins. From this we created a list of requirements that we sent over to Alexis for confirmation and prioritisation. Once the requirements were prioritised we ourselves had a look at what was asked of us and made a decision on whether it would be feasible in the amount of time we had remaining. We sent over a new version of the requirements and a client agreement form for them to understand what we think we could do considering our situation and abilities. Development of the plugins began shortly after.

First of all I looked in to creating an android application that would use location services of a device and grab the GPS coordinates of the user. There was a tutorial online that I was able to follow and edit and change to what I wanted to display (the users coordinates). From this tutorial I was able to use ANT building to create .jar files and use the java/android resources within unity in a “plugin” nature. Then was the need to create somewhere to store gps nodes, Luminary recommended the use of a database, specifically a sqlite3 database as they are small in size and can be created and used in unity easily. I was able to create a sqlite3 database with test nodes in really easily, the nodes were in a database table named “nodes” and follow the table structure of “_id, gps_lat, gps_long, gps_title”. I created a connection to the database in java/android to try and create the .jar to contain both the location services and database handling but had trouble interaction with the database from Unity.

After a meeting with the client I was able to get a better understand of what they wanted from the “plugins” any C# script that is created is essentially a plugin in unity. The scripts can allow input from the users and can generally be implemented in to any other unity project and use the functionality from it. With this understanding I was able to create the database functions using C# scripts. One script would connect to an online server and download the database file that was stored on there. Another script would access the database file and use SQL queries to query the database. Another script handled most of the query functionality including the displaying the distance of nodes from the user, editing, deleting nodes, and also the addition of new nodes. The C# script interacts with the java/android code (.jar) that handles the location services.

Testing happened all the way through development. Functional tests were created after the requirements were gathered. The created plugins was able to pass all the functional tests. It was then up to the client for the acceptance testing.

See more in my log book.