

Case Study

Full Visual



Company overview

Background Full Visual are an Edinburgh based company who produce high quality, high resolution Virtual Tours and Still Panoramic Images. Established in 2007 they have grown rapidly, attracting a high profile client base due to both the quality of their work and their competitive rates. With experience in both website design and photography they produce spectacular virtual tours which are complemented with effective interfaces.

The company are keen to expand their business into the mobile space. Due to the success of the Apple 'App Store' and the processing power and features the iPhone offers, they have selected the iPhone as their best route to market

Web site: www.fullvisual.co.uk

Feasibility Study

The primary objective of Full Visual's feasibility study was to develop an Apple iPhone equivalent of their current web application. Their current application provides users with an immersive 360 degree virtual tour experience by using advanced features of Apple's Quicktime movie player. The secondary objective was to overlay the locations of the properties for which virtual tours exist on a map and to use the iPhone's location tracking ability to highlight the nearest.

The deliverables of the feasibility study were as follows:

- Convert Quicktime or Flash (another interactive movie player) format into a format compatible with iPhone software.
- Implement a standard interface using a Google maps overlay which has potential to be extended to customise the interface to the client.
- Create a user interface that works with the iPhones touch screen and is intuitive for the user to use.
- Investigate how to automatically send updates to users who have downloaded the software.



The outcome

Investigation into the conversion of the Quicktime formatted tours proved that it was not possible to directly reproduce it on the iPhone as Quicktime was not a supported format. Therefore an alternative solution had to be found to allow for the development of a proof of concept solution. Quicktime's method uses a feature called cubic rendering. This method takes a series of images and wraps them round the faces of a cube. It then places a view point or camera inside the cube and allows the user to move the view point or camera around using a pointing device or mouse.

The approach adopted was to use OpenGL ES, a clever piece of software that accelerates drawing of 3D and 2D graphics on the iPhone. Creating the cubic render effect on the iPhone was achieved by first creating a 3D environment to display the cube and then adding the images and view point. Once this was complete the 3D environment was connected to a user interface which allowed it to be interacted with via the iPhone's touch screen. A Google maps framework was used to develop a bespoke map view for the application. From this view the application can automatically connect to a secure web server to download content updates as they become available. These updates are displayed as new pins on the map - clicking the pin markers allows the user to start a virtual tour.

The proof of concept solution developed met all the deliverables of the feasibility study and provided a excellent prototype for Full Visual to demonstrate to their prospective clients.