

Development of a Smartphone Data Collection Application

Abstract

The client had a partially formed business idea for a mobile application that they wanted taken from research through to user testing to a market-ready solution. The business idea was a smartphone application that would allow customers to count anything they wished, and produce rich and detailed reports. The aim of the project was to work with the client to understand the business idea, research the market and competitors, build a series of prototypes, trial the prototypes with potential customers, and finally develop a market-ready solution.

The application went through a number of iterations. The final system is geared towards business users and allows for observational data collection from multiple devices. The final system consists of a hosted service and a counting application for Apple iPhone and iPad. The *Counting Application* provides a user interface for observational data collection. The hosted service provides a web-based *Administration Application* for managing data collection projects. Examples of observational data collection include counting people entering a venue, counting pedestrians crossing at a zebra crossing, and counting the number of passes and goals scored in a soccer match. The system was constructed using the programming languages PHP, SQL, JavaScript, HTML, CSS, and JSON, and the open source packages Appcelerator Titanium, nginx, Node.js, MySQL, Redis and jQuery.

The final system exceeds the client/s expectations and provides a firm footing for further development. Additionally, a number of companies are currently testing the service and have expressed an interest in becoming customers when it launches in the future.