Mobile Application Developed for IoT Enabled Devices

PSI collaborated with the service provider in information technology systems with focus on innovative tech solutions across domains, to develop an IoT enabled iOS application.

About the Client:

The client is an active intelligent life and comfort system provider and leader in customised IT innovations. Their solutions detects dangerous situations and warns the users about any probable risks.

Client's Service Offering:

The client offers a comprehensive system comprising of a home hub, a central unit, multiple sensors and a server where the data gets stored. The system is user friendly and doesn't require much technical knowledge but just power connectivity to store or record the activities without any structural changes. The system detects and raises an alarm to the stakeholders about any unusual or risky situation, such as extreme variations in temperature, windows or doors left open or are opened unexpectedly, human movement around and inside home observed at unusual time and other such instances. The system also tracks the planned activities and reminds the user about them, be it medication schedule or payment of utility bills etc.

Solution Approach & Methodology:

The client was looking for a mobility solutions service provider, with an expertise in application development specifically iOS expertise.

They were looking for a partner who could work as an extended team, and gather all the requirements while understanding from the underdevelopment android application, and follow the solution roadmap to deliver the changes on time.

The foremost requirement was to have an iOS application with similar UI as of existing android application. The other important feature was to provide relevant information on real time basis to save intermediate time.

PSI developed the application natively using Xcode as the development platform, with Swift as development language. The solution was developed on Model View Controller based approach to ensure reusability with best definitions of all interfaces. The UI was created with the help of storyboards and auto-layout based approach to ensure the design is acceptable across all iOS devices. Core data was used to ensure seamless integration of client side data layer with UI components.

Key Highlights of the Approach:

- The team worked on adapting and reutilising the android application development code.
- UI was pre-defined and the team sticked to the same.
- Frequent changes in environment & along with extensibility of the app features were suggested by the client.
- Improved memory management to store the regular patterns and alarm push notifications.

Key Challenges:

- IoT being an emerging domain with technologies still collaborating, there were no or very limited information on standards to be followed.

- The client wanted the already developed android application to be cloned into an iOS application with the same UI and functions. The team had to deal with the language barrier as the documentation available was in German and had to be translated. There was also very limited documentation or support manuals relevant to be used to develop the new app.

- The application was to be developed from scratch. Google firebase had to be integrated into APNs (iOS push notifications).

Achievements:

- This was a new domain for the team to explore and became a learning curve for them to be used in future.

- The team had first-hand experience on the inherent limitations of any mobile platform, and worked around them to develop the desired solutions.

Project Highlights:

Client: Customised IT solutions provider

Location: Germany

Industry: Innovative Technology Solutions

Project Duration: Three months

(September '15 to November '15)

Team Size: 2 people

Delivery Model: Offshore

Engagement Model: Turnkey

Technology Deployed:

Framework – iOS and some proprietary frameworks

Database – Core data, to keep consistent data locally

Development Platform – iOS

Development Tools – Xcode, Instruments, iOS development environment provided by Apple

Design Tools – Photoshop, where ever required

About PSI

Pratham Software (PSI) is a global IT services company (with established ISO 9001:2008 practices) providing software product development, consulting and outsourcing solutions to enterprises worldwide. While providing a wide range of solutions, we focus on Outsourced Product Development (OPD), Business Process Management (BPM), Application Development and Maintenance (AMD) and Content Engineering. Our extensive experience in OPD helps us build strong relationships with Independent Software Vendors (ISVs), as we work with them throughout the product development lifecycle. Over 12 years of experience in the BPM field with various tools such as Savvion, IBM Lombardi, SharePoint and open source tools such as Activity have helped us gain leadership position in BPM. In terms of technology and platform, we work across all major technologies such as Microsoft, Java and Open source and have capabilities and experience in developing solutions for web, mobile, Cloud and social media. For Enterprise customers, in addition to Process Automation, we also offer development and support services in BI and DWH.