QA@BPA Delivers an Agile Solution to Test Mobile Apps for a Healthcare Startup

Client

A consumer-facing healthcare company focused on home-based care solutions

Applications

Native iOS and Android applications to sync with a web application that was already in production

Business Use

The applications were targeted towards end users to help coordinate home care, visits, and share updates among loved ones. Professional caregivers use the apps to coordinate their schedules with their patients and also simultaneously provide updates to the friends and relatives of their loved ones.

Challenge

The apps were developed within a rigid and ambitious timeline. A fully agile methodology with weekly sprints was implemented to meet the goals. With such rapid turnaround times, manually testing out all new features on two different platforms was a daunting task. For each sprint, the apps had to be tested for regression defects as well. To ensure that the project stayed on track, the client contracted with QA@BPA to ensure that the apps remained fully functional as they evolved through each sprint.

Solution

With the short sprints, and tight deadline, QA@BPA resources were divided into manual and automation groups. The manual testing group started by creating test cases for all available screens right from the first sprint. We put together a sanity test suite that ensured that the core features remained functional as soon a build was deployed.

As new features were implemented, the manual testing team focused on finding UI and functional issues. Since a significant portion of the target audience was unlikely to be tech savvy, more emphasis was given to UI and UX issues. Based on QA feedback, several menu options were redesigned.

The automation team utilized Calabash, a Ruby-based BDD (Behavior Driven Development) tool to automate the most common business transactions. The tool allows business to write test cases in plain English, for which the team develops fixtures that allow them to execute the steps on the mobile app.

Calabash supports both iOS and Android, which allowed the team to execute the same set of test cases on both platforms using different fixtures. In house, tests were run on some of the most common devices used on both platforms (iPhone 4S, iPad IInd generation, Samsung Galaxy S4, Samsung Galaxy Tab II). However, to ensure that the apps rendered and performed as expected across multiple versions and devices, QA leveraged Xamarin Test Cloud, a cloud service for mobile testing. Automated tests were executed on multiple devices with different configurations.

Result

The automation suite allowed the manual testers to focus on testing new features and also ensured that the application builds were solid enough for further testing.

By testing across multiple devices simultaneously, the time for testing was drastically cut down. Leveraging cloud services, the apps were tested on a variety of devices and configurations. It helped isolate and in many cases, fix issues specific to manufacturers and configurations.

The manual testing team, working closely with the developers, helped ensure that new features were implemented as per design. Through the quick feedback loop, the rate of incidence for new issues was reduced and identified issues were rectified in successive releases.