

Case Study

Sync Tool for iPhone & Mac OS X

Background

ReliSource worked with a Leading provider of Online Appointment Scheduling Solutions to develop a Sync Tool for MAC.

Scope

- * Communicate with client's Proprietary Application & update / Synchronize info, according to different filtering criteria set for various types of stakeholders.
- * Create Full Test Automation for all applications developed in Mac OSX & iPhone

Business Objective

- * Increase product Usability, Portability & Reliability.
- * Bring other Appointment Services (Outlook, gCal, iCal) under the scope.
- * Ensure Peace of Mind for current & future customers by replicating the same Data Set into all of their devices through iCloud.

Challenges

- ▶ Develop Sync programming keeping pace with Continuously Evolving Apple Frameworks
- ▶ Memory management & Concurrency Programming in Multi-Threading environment
- ▶ Perform Test Automation for this Tool; Test Automation implementation by software developers rather than traditional software testers

Solutions

- ▶ R&D and Prototype Coding to keep up with the evolving Frameworks
- ▶ Study and R&D on Memory Management
- ▶ Perform necessary documentation for Automated Test Tools

iPhone & Mac Sync Tool

Features

- Read/Fetch Appointment Data from Client's Proprietary Appointment Scheduling Application and set those data to Various Types & Platforms of devices (Windows, Apple; iPod / iPhone / iPad, Android etc.) of an end user.
- Filter Out (Public / Private) which set of data is viewable / accessible by a specific set of stakeholders.
- Invitation for Appointment on email.
- Finding out Free / Busy time schedules.
- Dropbox like user notification system on application status, i.e. application data updating, network connectivity etc.

Return on Investment (ROI)

Before

- ▶ Supported Appointment Scheduling clients = 1 (Outlook only)
- ▶ # of Validated Builds: 10
- ▶ Fully Manual Testing
- ▶ Unmanaged Testing
- ▶ No / Very Low Documentation & Reporting

After

- ▶ Supported Appointment Scheduling clients = 3 (Outlook, gCal, iCal)
- ▶ # of Validated Builds: 25
- ▶ Fully Automated Testing
- ▶ Visibility in the Low Levels
- ▶ Automated Test Documentation & Reporting

Test Automation

Tools & Technologies

- * Unit Testing was implemented by using OCUit.
- * Features in Requirement & Design Document were tested by Acceptance Testing.
- * It was implemented Fully Automated, on top of OCUit Test Environment.

Hudson Build

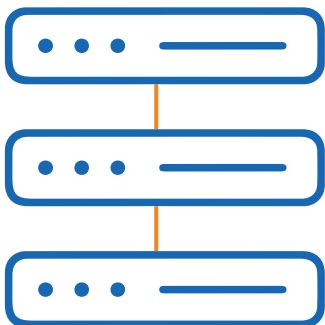
External Build Manager executes all build scripts and automated tests scripts on daily basis and reports failure by e-mail.

Reporting

Test Suit logs all system events and exceptions so that developers can trace any kind of test failure.

Technologies:

- Objective C; XCode 4.0
- SOAP & REST based web service API;
- JBoss; JSON; Oracle
- Test Automation (Hudson Builds)
- Cocoa; Calendar / EK Event Kit Framework
- XML based processing
- Oracle
- iCloud



Project Management & Communication Tools:

- **GitHub:** Source Code Repository
- **VersionOne:** For Scrum management
- **Pivotal Tracker:** For Scrum management
- **Test Track Pro:** Bug Tracking
- **Doxygen:** Engineering Documentation
- **Wiki / Confluence:** Project Documentation