

Case Study: Test Automation - Mobile Devices

Client:

Client is a fortune 500 company and one of the world's leading providers of digital television entertainment services delivering premium video experience through state-of-the-art technology, unmatched programming, and industry leading customer service to more than 32 million customers in the U.S. and Latin America.

Challenges:

Client was using web services and platform using a third party content provider to generate video clips and associated metadata of American Sports events. The platform automatically captures video from live broadcast sporting events and automatically clips interesting plays. This is accomplished in a matter of seconds following completion of the live play. Since it was all happening in back end, the biggest challenge was to test the end to end flow of the processes and communication that takes place between the two parties.

As there was no usual interface, we had no visual reference point and it was all happening during a live play live feed so there was no data referencing point. It was thus a difficult task to test web services on hand held devices and architect test framework for performing its automation testing.

There was an issue of compatibility as the single application would have to run on different mobile operating systems. The variety of devices makes executing the test script (Scripting) a key challenge. As devices differ in keystrokes, input methods, menu structure and display properties the same script does not function on every device or OS.

Finally identifying the right automated tool that will drive the success or failure of the project for automation testing on mobile devices was also critical.

Solution:

Test automation is the use of special software (separate from the software being tested) to control the execution of tests and the comparison of actual outcomes to predicted outcomes. We at QA InfoTech, understand the value of automated software testing as well as the challenges it poses, which is why we emphasize on a methodical and planned test automation approach.

Our comprehensive consulting service aligns with the client's Software Development Life Cycle to identify their key business processes and requirements, understand their business and infrastructure and help configure a testing environment that accurately simulates production environment. We follow up with timely, efficient testing, monitoring, in-depth analysis and effective bug reporting.

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In this specific case, we created an optimized Test Harness to test the web services and the platform. The test harness simulated the request that can be sent to the web services. Reply was fetched and verifications and validations were performed. We used Calabash for automating the test application. It is a free open source project used for Android and iOS native and hybrid applications.

We also identified and developed an in-depth understanding of the client's application and system architecture, to capture only those processes with the greatest potential for success

Our team scoped out areas of automation risk, automation goals and requirements to achieve proper focus and avoid expensive over-or under-testing, allowing us to identify potential automation bottlenecks early in the software development life cycle. We created and optimized the scripts and scenarios to produce consistent and repeatable automation tests.

We also added the ability to take screen shots of the application under test whenever a bug or discrepancy is observed. Reports were in HTML format that were emailed to our clients.

Client Benefits:

The results of the focused test automation effort proved as the company's profit surged and there was decrease in customer reported issues by 10%. The number of testers required at the client's end also came down from 3 to 1. To test the compatibility on devices of varying configuration and screen resolution, we executed the test on multiple devices, emulators/simulators in parallel saving a lot of time.

After implementing the proposed solutions the client was delighted and confident about the system as it saved time, effort and the cost related to maintenance and support. QA InfoTech's team of experts have both the ability and flexibility to leverage any popular state-of-the-art performance tools or utilize QAIT's custom framework built around a rich supply of open source automation testing options.

We at QA InfoTech understand and have worked on various test automation models empowering us to customize a solution to meet your needs. Ongoing investments in automation related R&D helps us provide you cutting edge tools to improve test coverage and productivity. We also have invested in tools and frameworks engineered to allow manual testers carry on automated testing resulting in significant cost savings