QUALITEST™

Automation Helps VR App Organization Achieve 90% Defect Removal Efficiency Rate for VR Headset

Challenges

Our Client was building out a companion app that supported the management of the first mobile consumer VR headset.

The app also needed proven API support to work for third party integrators.

Solutions

Round the clock test coverage was self-managed both offshore and onshore.

Automated regression tests were performed against emulators and simulators.

Results

Over 200 market-driven devices were tested for compatibility.

This resulted in over 500 defects being filed with a 90% defect removal efficiency rate.

Client overview

Our Client is a maker of popular Virtual Reality headsets and also has a eco-system of VR applications available directly from their app store. For their mobile ready VR headsets, they also host a companion app on android and iOS platforms to communicate directly with the headsets.

Not only does the companion app control the entire new user experience from compatible smart phones, but it also hosts an app store and management system of over thousands of apps.

Our Client's headsets works autonomously, without a wired connection. It's a multifunctional device for entertainment and education that immerses its user in a virtual environment. When you put on the headset, the functionality allows you to look around the outside world to understand exactly where you are before immersing yourself in the virtual world. You can play games or browse multimedia even on the go. In addition, you can participate in interactive training in a virtual environment.

Building a fully immersive experience with native API compatibility in 3 months

Cross compatibility testing of the native companion app was untested and unproven from our Client's side, and not only did they only start with a web app solution, but they had no UI/UX nor mobile infrastructure to support payments and Bluetooth compatibility.

Our Client wanted a product that was more than a web page port, and needed native API compatibility for iOS and Android. This project was to launch and go to market within 3 months, so we worked without Client to:

- Build out a companion app that supported setup and management the first mobile consumer VR headset
- Ensure the mobile application would support 95% on all mainstream mobile devices on android and IOS platforms
- Provide proven API support for the app to work with third party integrators
- Ensure the project was completed within a 3-month timeframe

Providing the perfect marriage to ensure go-to-market timeframes were hit

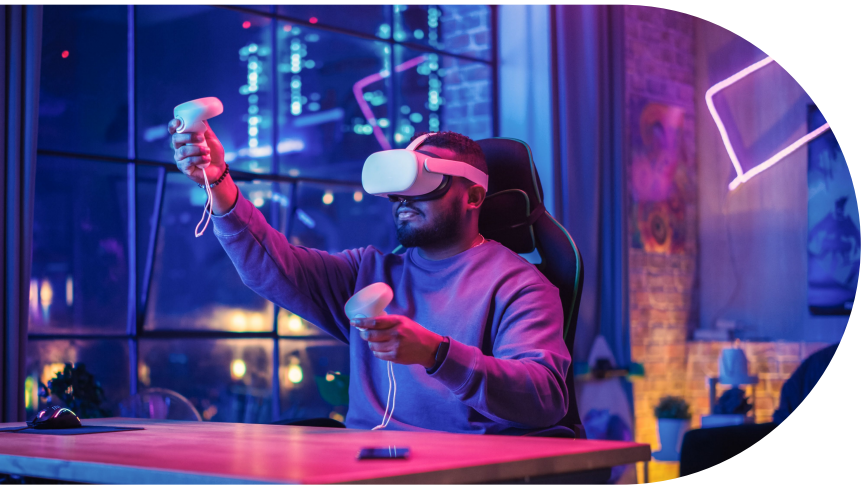
While onsite, many of our current resources were deployed to test full-stack VR devices, and, transferring knowledge and approaches to providing the perfect mobile application solution. Mobile tools experience like Xcode and Android Studio were already in place, and the onsite test team worked directly with engineering scrum teams to handle new feature test development and quick to build test plans for seamless execution.

Automation was written on emulators and real devices, while quickly integrating daily automated tests into continuous Integration frameworks within our Client's headset. The offsite team was sufficient to handle a range of various smart phones on Android and IOS based on market-driven data. This team performed daily companion app smoke tests, regression tests, functional tests, and performance tests.

Both the onsite and offsite teams had a system that covered active development and device compatibility and would report detailed defects and blocking issues on a daily basis. In addition, our consultants provided strong documentation back to our Client, and would cross train internally to cover all aspects of test coverage.

Finally, when the product shipped to market with a burndown chart of zero blockers, our team did not stop there. They owned backward compatibility testing, support related issues and testing, and more regression automation and continued to work with OEMs developing beta devices to create internal beta and dogfooding programs for employees to take part in.

> **"Automation was written on emulators and real devices, while quickly integrating daily automated tests into continuous Integration frameworks within our Client's headset. This was sufficient to handle a range of various smart phones on Android and IOS based on market-driven data."**



Key benefits

- Tested over 200 market driven devices for compatibility, later automating the top 10% of devices for regression testing of the companion app.
- Introduced best practices of efficient QA collaboration across continents on a 3-month project..
- Over 500 defects filed with a Defect Removal Efficiency > 90%.
- Defect rates measured below 5%.
- Documented procedures and cross trained for future related projects.
- Reduced manual testing operation by 20%, meanwhile encouraging career development and opportunities for manual test staff.

> **“Our Client wanted a product that was more than a web page port, and needed native API compatibility for iOS and Android. This project needed to be ready to launch and go to market within 3 months.”**