

TESTING AUGMENT REALITY MOBILE APP

CLIENT PROFILE

The client's business is aiming to launch an AR application project. The product is an AR enabled app that uses the current location of its user to project virtual objects on display, or on special augmented reality glass. It provides enormous potential ranging from chasing digital creatures to designing complex machines or engineering structures.

BUSINESS CHALLENGE

The client looked for a reliable QA and testing service provider well equipped to assist in the Augmented application enterprise market dominated by the new technology and growing end user expectations. The client's application is made to perform exceptionally well in real-time with speed and accuracy so that the augmented model stayed align with the real world when the user interacts with the model. The client's applications use visual markers which are like barcodes and QR codes that augments objects on to those visual markers. The mobile app provides augmented experiences to its user and the plan behind the app was for users to look at and interact with the 3D build models.

And hence the client needed a QA testing team to assure the same level of quality. The testing team was to make the application sturdy, so that the performance of the client's applications could be optimized and made more robust in the real-world environment whilst increasing the overall experience of the end user.

SURETEK SOLUTION

Augmented enhanced reality software testing is far more time-consuming and less consistent than traditional testing. And once it involves mobile AR apps, we at Suretek tend to continuously take into account specific checklists for testing--precise operating in different screen orientations, Internet connection and different stages of memory and battery consumption.

One of the considerations that needed to be made was the number of the users and how that would affect the list of devices we would test. We added iOS and Android systems to the list of devices that were to be tested. It was important to see how the app would perform when accessed by devices with lower system specifications and to note how this affected non-functional problems like device temperature and whether or not lower camera quality affected the ability of the device to recognize the AR markers.



TESTING SCOPE

The testing scenarios that we followed in our lab whilst we were testing the AR App are discussed below.

1. **Tracking Objects in real-time:**
We made sure that the tracking of real-time objects was done in real-time and that the objects were rendered by the AR application with seamless user experience.
2. **Performance of application under different inputs:**
We verified how the AR application handled different inputs such as changing angles, orientation, and distance between the image target and the smart devices.
3. **If application is registering 2D/3D objects appropriately:**
We ensured that the image targets were mapped correctly with their corresponding objects.
4. **Checking if interactive buttons on the AR model redirects to the desired information:**
We ensured that the interactive buttons and hyperlinks on the application were redirected to the anticipated destination.
5. **Scanning the Environment:**
Our QA engineers tested the application in new environments. The application was tested in different spaces, angles, distances, motion and lighting conditions, and levels of ambient noise. For an instance, whether the AR model would be hidden behind objects such as wall or pillars.
6. **Performing Accessibility testing:**
The QA team at Suretek ensured that the AR app can be used irrespective of age and physical condition, reduce discomfort, and ensure quick and natural navigation.

VALUE ADDED

Following results are achieved while the QA team was involved into the project:

- GUI testing made it possible to acknowledge and solve numerous errors in the application's interface.
- Functional Testing disclosed a multitude of errors with the application's logic.
- Security testing help to identify and further remove any possibility of data loss.
- Exploratory testing helped to resolve complex and trivial bugs.
- Use cases enabled the QA lab to cover all the potential scenarios and provide a seamless augmented experience.

TESTING PLATFORMS

Platforms: Windows, MacOS, iOS, Unity for mobile AR

Browsers: Chrome, Safari, Firefox.

Mobile: Variants of Android and iOS OS.



Augmented Reality Testing
Real Devices. Real Environments.

We helped uncover the limits restricting Augmented reality to reach consumers with enhanced customer experience.

Our test engineers covered all the potential scenarios and provided a augmented view of the reality — far more thorough than a simple review of what wireframes can deliver.

"Visit www.suretekinfosoft.com to find out more about the approach that we used to test the AR application"

The graphic features a blue background with 3D isometric blocks labeled 'VR' and 'AR'. It includes icons for a magnifying glass, a bug, a checkmark, and a gear, along with illustrations of people interacting with digital screens and a laptop.

PROVIDED DOCUMENTS AND REPORTS

- Test Plan
- Testing Checklist
- Bug-report
- Test-report
- Test Summary Report