TECH mahindra

Ensuring Quality and Release of Social VR Application at Industry-Leading Speed for A Global Internet Service Provider

Overview

The client, a globally leading internet services company offering various products to its users. They wanted to have a predictable and reliable release of their VR application at an industry-leading speed in areas like testing new features functionally and perform ad hoc testing. Tech Mahindra helped the client by ensuring the quality and speed of releases by bringing in the best practices that are niche to this domain and building a practice to comprehensively test and identify the root cause of any defects to minimize test escapes.

Client Background and Challenge

A leading internet services company has seen an unprecedented growth in the recent 4 to 5 years in several products, revenue, and user base and has a huge expectation on quality of experience, and more frequently released product features and updates, from their users. One such product is a social virtual reality (VR) application which they have launched as an industry first and pioneered a strategy to further user engagement in pretty much unchartered territory. This consists of various VR devices that have been sequentially launched on, and new features are added daily to weekly.

Testing such applications to avoid critical defect escapes comes with its own set of challenges, indicatively mentioning a few:

Setting up a test case, finding the bug, and then performing a regression for a test case could take around 30 min- with the headset on.

This is a special skill experiential in nature and needs knowledge of the full stack to recognize a defect and identify its root cause.

Huge amount of accountability as the stakes are high (impacts on users- for example, motion sickness, privacy compromise in a multiuser environment, suboptimal device performance and memory management).

With the quality of experience depending on various layers involved (network, hardware and sensor, operating system (OS), complex application, and varied presentation layers.) they wanted an independent quality assurance provider for their social VR application to test the new features functionally, perform ad hoc testing, and enable them with a predictable and a reliable release at an industry-leading speed, in keeping with the speed of evolution of technology as well.

Our Approach and Solution

The client teamed up with the telecom product validation services of Tech Mahindra, a specialist provider in ensuring the quality and speed of releases by building a niche practice to comprehensively identify and point to the root cause of any defects that would have otherwise missed the regular test cases.

The application, being one of the key products of the client, thrives on engaging end users and content creators with a platform that helps imagine new ways of interaction and transaction. The coverage of QA for ensuring a best-in-class experience is across:

- Applications
- System user experience
- VR browser environment
- Sensors and tracking
- Account and user base

- Integration of metaverse with other channels and products of the client
- Parental controls
- Multiuser engagement with users inviting and getting together socially and virtually

Tech Mahindra's acquisition, Lodestone, specializes in this area, and our investments made us the right partner of choice (state-of-the-art labs, robust training programs, and ability to innovate with test methodologies in an otherwise unconventional/non-standardized domain to adapt to faster release cycles, upholding the predictability and quality of the output). Leveraging these, the team is providing regression, new feature testing, ad-hoc testing, build verification testing, localization testing for assuring the quality of the metaverse experience to its users.

These have enabled the team to deliver quality assurance in some of the key areas like

- Ensuring right memory usage, and performance and upholding privacy in-app sharing and device sharing cases
- Multiuser scenarios with account unification across the products of the client
- Ensuring session termination when switching users
- Revving up the regressions twice a month to once weekly in all such key scenarios

Business Impact

The methodologies and capabilities have enabled us to Identify bugs that were critical to the launch of the product and have them fixed before launch with a regression speed of 2 runs per week

60%+ bug fix rate provided consistently

Informed the client's business about risks concerning privacy, data migration, and account unification to release or postpone a feature release to a next operating system (OS) version

Best in class 'launch critical bugs' identification with 70%+ fix rate

To know more, reach us at **DigitALL@techmahindra.com**

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