Shanghai OnStar Telematics Co.

On the journey to DevOps, Shanghai OnStar deploys Micro Focus® Mobile Center, integrated with ALM, BPT and UFT to automate testing of lifesaving mobile app.

Overview
OnStar Corp., a subsidiary of General Motors Corp., provides subscription-based communications, in-vehicle security, hands-free calling, navigation and remote diagnostics in key automotive markets worldwide. Shanghai OnStar Telematics Co., Ltd. is a joint venture between GM, SAIC Motor Corp. and Shanghai-GM that provides safety, maintenance and telematics services for vehicles manufactured and sold in China. Record-breaking sales for six consecutive years—nearly four million vehicles in 2016 alone—have made China GM’s biggest market. Shanghai OnStar serves approximately one million active users and has offered customer interaction service more than 316 million times across the country.

Challenge
Driver safety and security by supporting vital services including GPS navigation, roadside assistance and smart SOS emergency alerts. It is the first onboard telematics service in China to support natural voice recognition. Shanghai OnStar is constantly upgrading and adding functionality to its mobile app, empowering consumers to perform actions—such as remotely locking and unlocking vehicle doors—that previously had to be done through call centers. Flawless application performance is essential; lives depend on it. With each new release, Shanghai OnStar endows its mobile app with greater functionality. The Quality Assurance team must test to ensure not only that the new features work properly, but that the application changes do not damage existing functionality.

Shanghai OnStar’s traditional testing processes were manual, and mostly outsourced to a third party. However, this slowed down application release cycles. Shanghai OnStar aimed to accelerate time to market, reduce costs and integrate mobile-application testing with its journey to DevOps.

“We analyzed 2,000 manual test cases and determined that half of them could be automated,” recalls Hailiang Huangfu, test manager at Shanghai OnStar. “By accelerating testing...

At a Glance
- **Industry**: Automotive
- **Location**: Shanghai China
- **Challenge**: Accelerate mobile-application testing through automation; accelerate release cycles; support journey to DevOps
- **Products and Services**
  - Mobile Center
  - Application Lifecycle Management
  - Unified Functional Testing
  - Business Process Testing
- **Results**
  + Automate more than 1,000 regression tests daily
  + Accelerate release cycles by 40%
  + Reduce mobile-app testing costs by 20%
  + Reduce defects into production by 10%

“We compared Micro Focus Mobile Center with other automation tools and found it offers significant advantages. We can do both iOS and Android testing on a single platform. And, Mobile Center’s user interface is very easy for our testers to operate.”

HAILIANG HUANGFU
Test Manager
Shanghai OnStar
through automation, we could support our business teams to develop new functionality faster for the application.”

**Solution**

Huangfu is responsible both for Shanghai OnStar’s global release testing—including applications used by call-center staff—and local testing of mobility services used by customers—drivers using their smartphones to access mobile-app functionality. Researching automation solutions for mobile-app testing, he found one that satisfied Shanghai OnStar’s functional requirements and was easy to use: Micro Focus Mobile Center.

Mobile Center enables complete, end-to-end mobile app testing, creating a quality lab of real devices and emulators delivering extensive real-world mobile app testing, live monitoring and user insights.

“A key capability that distinguished Mobile Center for us was that it covered both Android and iOS platforms with a single tool,” Huangfu says. “Second, we could simulate the network, since we cannot use the real network worldwide. And, the user interface is very easy for our testers to operate.”

The Micro Focus R&D team visited the OnStar office several times to discuss fine tuning the solution to meet Shanghai OnStar’s precise needs. Shanghai OnStar also used Micro Focus implementation services, and today relies on the Micro Focus services organization to ensure the Mobile Center operates at peak efficiency. “Micro Focus is very professional and responsive,” Huangfu says.

To unify the testing environment and drive informed corporate decision making, Shanghai OnStar uses Mobile Center in conjunction with Micro Focus Application Lifecycle Management (ALM) and Micro Focus Unified Functional Testing (UFT) as well as Business Process Testing (BPT) to perform full cycle functional testing and test case management.

“Mobile Center is integrated with ALM and UFT, so when we do the execution on Mobile Center we can generate a report on the ALM dashboard to give our leadership the whole picture of test results including capacity and load testing,” he says.

**Results**

Today Shanghai OnStar has automated more than 1,000 regression tests daily using Mobile Center, ensuring that application changes do not negatively impact previously deployed functionality. The company has accelerated mobile-app testing by 40%, enabling two new releases per month instead of just one, with broader test coverage. It has reduced the time devoted to manual testing by 15 man-days per release, and reduced the number of manual testers from five or six to three or four. This has helped reduce mobile-app testing costs by 20% while reducing defects into production by 10%. Meanwhile, new mobile-app functionality empowering consumers helps reduce call-center costs.

“We’re creating an end-to-end DevOps capability for continuous development, deployment and testing,” Huangfu says. “Mobile Center, along with ALM and UFT, is a key part of our Application Development Management ecosystem enabling faster, better and more comprehensive service to OnStar customers.”

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