



viSer Test Automation

viSer brings a complete automation setup from an easy deploy standalone solution up to a complex Lab automation setup to fit any customer testing needs.

viSer is a device-agnostic mobile application that converts any android device into a probe offering a series of automated mobile services tests with an intelligent scheduler.

viSer is a powerful, scalable and fully automated "Virtual User Bot". It is an APK that can be installed on any device Android or IOS.

viSer is an all in one solution to perform automated testing with over 100 KPIs. It offers ready-made test cases that can for test plans, scenarios and suites and even allow you to create your own test cases using embedded scenario creation, with no programming skills required.

viSer can reduce testing time by 75% and achieve an average 40% ROI

Benefit from a fully scalable end-to-end solution delivering test execution with repeatable test scenarios that reflects real usage to enhance analytics.

All test results are presented in comprehensive and detailed reports. Viser Web Analytics Studio provides the fastest way to analyse your test results and view them.

Viser Web Services (VWS) is a complement product to the viSer Test Automation solution and provides an enhanced viSer user experience.

Top 5 Customer Cases

- Device Validation – Launch Readiness
- Media Battery Pre-Rating
- VoLTE/VoWifi feature Verification
- Device Operator Acceptance
- Overseas Deployment Verification

SERVICE GUIDE

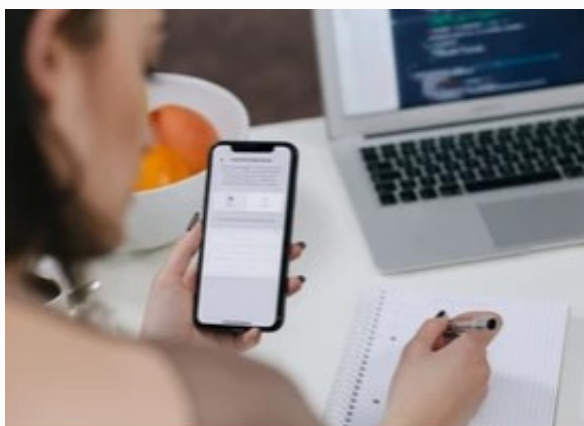
Testing User Cases

1. Battery Testing

The battery life is key for any product launching, Battery life assessment can be easily performed with reference scenario able to generate the real end-user usage.

The power drain can as well be verified to help the power consumption tuning with an automated bench providing a deep dive on each activity (Call, Video Streaming, Gaming, Idle ...) which is key for a comprehensive product development verification. We all know that the new product sales success will be highly influenced by reviews from the media.

If a device is failing in a key area, then this can have a negative impact on sales. Before submitting a device for review it's key to ensure that reviewers will not discover that one key KPI is not at all at the expected level compared to the targeted price and the competition.



Finally, in Operator's acceptance testing there is always a large part of the test plan that focuses on Battery life performance. Carrying out fully automated pre-tests can give further confidence in the product and smoother approval by the Operator.

2. Modem Testing

The Modem remains the core part of the Smartphone, the functionality and the Modem performance are not "nice to have" features, but "must-have" essential functionalities. Technology advancements are bringing regularly new functionalities for which performance is key: both for Operator selection and for brand success.

For instance, VoLTE/IMS and 5G are the most important technological highlights for 2019-2020, but legacy features still need to be verified to ensure superior performance for the end-user.

The Modem verification includes thousands of repetitive actions such as calls, SMS, MMS, and Data transfer ... over several networks or RAT configurations, aiming to ensure performance as per Operator requirements but also stability as per end-user expectations. The automation of the Modem testing is key to ensuring product quality and launching on time

3. Reliability Testing

Ensuring the Quality of the product before launching is an important factor of success. Robustness and reliability are also key factors to ensure the brand image reducing the after-sales cost and increasing customer loyalty.

Ageing Testing is a very time consuming and resource-heavy activity. Automation of ageing testing (MTBF, Stress test ...) brings a real optimization of the testing cost and reduce significantly the after sales cost. SmartViser thanks to their viSerDevice test suite provides a reliable, trustable, repeatable and cost-effective solution for reliability testing

4. Device Performance Testing

Smartphones bring much more capabilities than just Call and Data transfer. Multimedia and connectivity performance is Key. Some examples like GPS time to first fix, accuracy or even device fluidity and reactivity remain Key Performance Indicator that needs to be verified to reach the expected quality level by the end-user (or by the Media reviews)



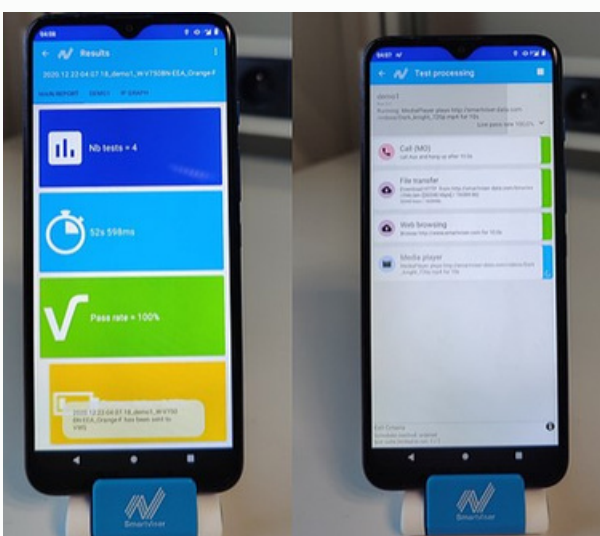
4. Field Testing

Smartphones should be tested with various network configurations and correctly execute mobility procedures to provide seamless voice & data connectivity. Field Testing activities verify device interoperability on live network conditions. This requires executing a full set of tests in static and mobility conditions.

Engineers should perform a maximum of tests and capture all the KPIs in the shortest time frame. viSerDevice can be installed on several devices and execute the testing without any supervision in mobility conditions. This reduces the need for large teams of engineers travelling to perform mobility testing in different countries for overseas deployment.

6. Device Pre-launch Assessment

When rolling out a new device you rely on internal indicators to decide the product readiness. SmartViser gives you the expected confidence level by executing automatically testing to capture all the important device KPIs and to compare easily with any commercial reference device. This will increase the level of confidence before the device is launched in the market.



7. Any Device Function Stimulation

For any testing like new Software release verification, new OS upgrade, maintenance release or new feature roll out the testing of repeatable action are always key for ensuring quality and maintaining efficiency. viSer with the scenario creation capabilities allows simulating of any function in order to automate your test plan.

viSer Set-up

viSerDevice test Suite is a fully scalable solution able to fit any customer needs. Providing a turnkey solution based on viSer (Virtual User) App can be enhanced with the powerful “companion” hardware products to set up a full Automated test environment.

- viSer is the standalone APK able to execute test scenarios and monitor KPI for instant report
- viSer can be provided with a Reference scenario based on the SmartViser library (Battery life, Modem testing, Reliability testing ...)
- viSer can be easily used as DIY allowing test engineers to create their own test scenario thanks to a simple interface for scenario creation (or Smartviser can do it for you)
- viSer Test Suite brings also an optional testing solution for any custom test setup for instance:
 - SynchroviSer the Add PC SW to synchronise multiple devices' activities with external equipment
 - The SmartBoard is able to control 10 SIM cards connected to one Device for Multinetwork testing
 - The SmartHub is able to pilot (4 or 8) USB ports and allow a fully automated bench setup
 - The viSer Audio MOS set up for an automated and standalone Audio speech quality scoring



VWS Analytics Studio - Key Features

- Fully customisable Sandbox report
- The ability to create customisable reports
- A comprehensive range of pre-defined dashboards showing a concise, visual representation of test results
- Compare report feature to contrast and compare test results
- Build your own dashboards, display information and data clearly
- A variety of chart types can be used to extract insights
- Full access and control to Remote Control function to manage to test remotely

viSer Test Suite allows the ability to:

Execute testing by real usage execution

- parallel
- sequential
- random

Trigger your test execution on specific events

- Time
- % battery
- RAT change
- Cell ID
- GPS Location

Obtain consistent Metrics from

- VWS Analytics Studio
- Statistic
- Time-lines
- Sandbox
- Plotted results
- Comparison dashboard

Set a specific bench to ensure a fully automated setup through a specific API



Summary

Automated

- Repeatable
- 24/7 operation

Scalable

- From a standalone setup up to a full automated bench
- Allowing to run pre-embedded test script up to the specific scenario design required

Easy to Use and Deploy

- Same script on any different devices (HW agnostic)
- Launch testing on multiple devices

Key Metrics

- Comprehensible reports
- Full coverage of end-user functions
- Instant results viewable on a predefined dashboard

