

Overcoming a Quality Assurance Hurdle with an Automated Testing Tool for Multi-language Dashboards



Summary

We created a fast and efficient automated quality assurance testing solution that allowed our client, a global leader in web communications and analytics, to develop customer-facing reporting dashboards in a wider range of languages.

Industry

Marketing, Communications, and Web Analytics

Users

Data Quality Team

Technologies

Selenium RC, Perl Scripting, Microsoft Excel, MicroStrategy

Team Size

3 InfoCeptions

→ The Challenge

Our client, a global leader in online marketing and web analytics, develops platforms for businesses to use to engage customers in real time via chat, voice, and video messaging. With platforms in nine different languages, our client wanted to offer dashboards in an even wider variety of languages but faced substantial testing and quality assurance obstacles:

- The manual testing process involved a number of redundant, time-consuming steps that made it prone to human error.
- The quality assurance group tasked with testing would have to go through a laborious, error-prone process for every dashboard in each language. This, in turn, would create a bottleneck in the process and lead to ongoing delays, not only with the current run of dashboards but also with every new one added in the future.

→ The Solution

Our data quality experts identified the gaps and designed a well-defined multi-language automation-testing framework using Selenium, an open-source testing tool. The framework takes inputs from an Excel sheet and performs testing against any other language file. A detailed output of the test suite is then generated with pass/fail statuses, along with screenshots of the dashboard in the corresponding language. The framework can also:

- Test any web application and is browser and platform independent.
- Test text on the dashboards and in the tool tips, as well as text aligned with MicroStrategy customizations.
- Test for different language exports in PDF and print versions.
- Plugin with the reporting platform after a simple, one-time configuration effort.

→ The Results

Our work led to an automated testing solution that allows our client to conduct dashboard testing in any language much more efficiently and accurately:

- While manual testing required about two days to test one dashboard in nine languages, our solution **reduced that testing time to three hours**.
- Automated validators accelerate multi-language testing and identify issues quickly, with a reduction in manual errors.
- Overnight execution of the testing script enables our client to **better utilize the time and bandwidth of users**.

The framework we developed can be used for functionality testing and can be implemented for any other web application with few changes. Moreover, it is easily scalable to any number of dashboards and languages.