CASE STUDY

Siemens Digital Industries Software Accelerates Testing and Improves Quality with Keysight Eggplant

KEYSIGHT

Profile

Siemens Digital Industries Software, a division of Siemens, is an innovation and technology leader in industrial automation and digitalization, employing approximately 70,000 people worldwide.

As the world's number one provider of automation systems and industrial software, it is the driving force for digital transformation in the manufacturing sector, supporting the integration of cutting-edge technologies such as artificial intelligence, edge computing, cloud computing, industrial 5G, blockchain, and additive manufacturing.

Regression Testing of a Desktop Application

The Research & Development (R&D) team within Siemens QMS team focuses on quality management, particularly for the desktop product Opcenter™ Quality software, a quality management system that helps manufacturers meet their quality goals.

Opcenter Quality is developed with OpenText Gupta Team Developer and is on a six-month release cycle. Four weeks in each cycle is dedicated to regression testing.

The process involves 700 security and scenario tests, and three people had been testing manually with the support of the Mercury WinRunner test automation tool to increase the speed of test execution.

However, when Mercury WinRunner stopped being supported, a new solution was needed to ensure regression testing could still be completed within the allocated four-week timescale and without needing additional resource.

The team researched the market for a replacement tool. Of all the capabilities required, only one was non-negotiable – object recognition, because the tool had to be able to identify object IDs within the application. Only one tool fitted the bill – Keysight Eggplant.

A Multinational Implementation Supported by the Keysight Eggplant Technical Team

The R&D team of Siemens QMS team is based in Germany and India. The team is keenly aware that the different cultures and different geographical locations have the potential to add complexity to any software implementation.

Thanks to careful planning on all sides, the rollout of Eggplant was straightforward.

There were no major issues with integrating Eggplant into the existing testing infrastructure, and no compatibility issues.

The Eggplant team was on hand to help as required too, and Dhananjay Rudrawar, Senior Test Lead at Siemens Digital Industries Software, praised their role in the implementation.

He says: “The Eggplant team is very proactive and they are ready to support at any point in time. They helped us with all the specifications, and whatever questions we had, they were there to help.”

The R&D team found it easy to get started with Eggplant and were able to pick up SenseTalk, Eggplant’s programming language, very quickly.

Whenever they did have a query, the Eggplant comprehensive training and enablement portal was a valuable reference point, with resources including a best practice guide that has insights on everything from action and validation to modularization and parameterization. Dhananjay says: “Training materials, documents, everything we needed was available on the website.”

An Accelerated Regression Testing Cycle and Enhanced Quality

Eggplant has been helping to enhance productivity and quality within the R&D team since 2017.

Previously, three people were needed to conduct and complete the necessary regression testing on time. With Eggplant, only one person is needed, which has freed two people to work on other projects, helping to improve the team’s productivity.

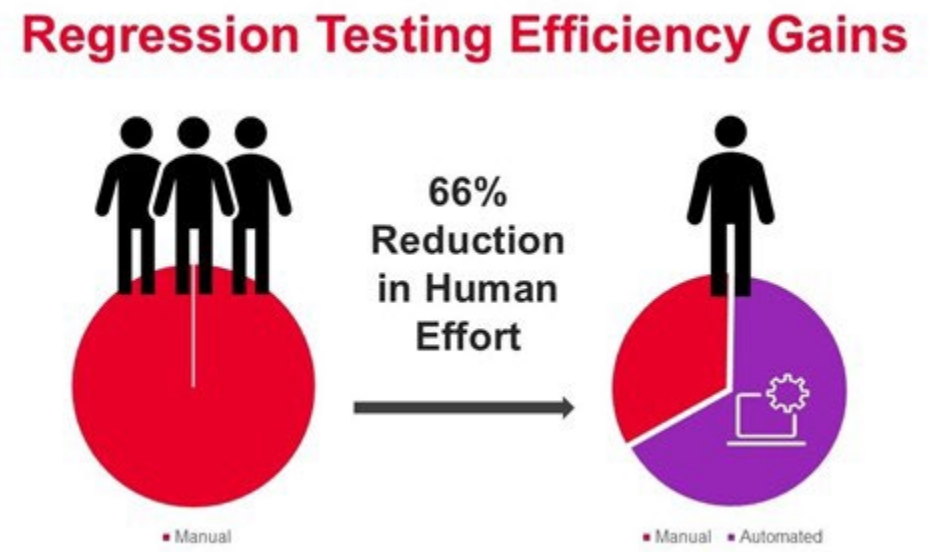

Figure 1. Siemens saw a 66% increase in efficiency since implementing Eggplant.

To illustrate the difference Eggplant has made, Dhananjay highlights one test that has been significantly improved: “In one test, the user has to enter around 500 numbers into a text box and then undertake a number of verification checks. If even one of the numbers is entered incorrectly, the test fails. Eggplant automatically enters the numbers correctly and rapidly and then does the verification. It has saved us a lot of time and increased our accuracy.”

As well as speed, quality has also increased. Dhananjay reports several instances where Eggplant identified high priority defects before they entered production. These include shortcut menu items being deleted from some modules, the option to print Supplier Assessment Score Cards not functioning, and SQL errors when performing functions in several modules. In each case, Eggplant's capabilities ensured that customer workflows continued to run smoothly, avoiding escalation, and saving developer time and cost.

Dhananjay notes: "We are confident we are releasing good-quality software because Eggplant tests are powerful enough to spot smaller defects we might not have found before."

The Transition to Eggplant DAI

The R&D team will be transitioning to Eggplant DAI in the future in order to benefit from the additional capabilities the tool has to offer, and Dhananjay appreciates the potential the tool has. He concludes:

> "Eggplant is easy to learn and understand. It's a powerful automation tool that can be used for any type of platform, application, architecture, operating system, browser, device, etc, without restriction."
>
> **Senior Test Lead**