

## Increased Productivity in Software Test Automation for the Leidos Health Informatics & Infrastructure Solutions Team

### Background

Leidos, formerly known as Science Applications International Corporation (SAIC), is a FORTUNE 500® science and technology solutions leader working to address some of the world's toughest challenges in national security, health and engineering. Headquartered in Reston, Virginia, Leidos reported annual revenues of \$11.09 billion for its fiscal year 2019.

The Company's 33,000 employees support vital missions for the US government and the commercial sector with innovative solutions to drive better outcomes and defend the nation's digital and physical infrastructure from 'new world' threats. Leidos develops web-based software applications for research, grants management, electronic health records and other data-intensive processes. Leidos Health team's objective is to develop quality applications for customers that are easy to use, with zero defects.

### Challenge

Leidos supported several projects with the Department of Health and Human Services as part of its Health Services contracts. These projects and others required more than 2,000 test cases. Leidos delivers development, operations, maintenance, and enhancement support for these programs as well as ongoing regression testing on these systems.

The projects encompassed 160 applications written on a variety of different technologies. Some of the test servers for these projects were available over the Internet, while others were not. Leidos had testers with a broad range of skill sets, but preferred a solution that did not require deep technical experience so that testers could focus on providing subject matter expertise rather than spending time learning programming languages to conduct automated testing.

It was critical for the Leidos team to have a cost-effective solution that was easy to install and configure, scaled out of the box, provided cross-browser and cross-environment testing, and did not require any knowledge of coding or scripting.

### Solution

After evaluating several COTS test automation products, including HP QTP, Microsoft Visual Studio, and an internal Selenium framework, and finding these products provided inconsistent test results, the Leidos team decided to pilot Subject7's platform. They were quickly impressed with



*“What we noticed from the first day with Subject7 was the ease of use, and how fast testers were able to ramp up, even without any prior knowledge of testing.... We increased our productivity by 90% and saved 42% on adding headcount.”*

the functionality and ease of use. With only introductory training, the team was creating and running test cases almost immediately. Subject7 delivered:

- A cost-effective solution that could grow easily as Leidos' needs evolved.
- The convenience of Software as a Service (SaaS), with no installation necessary and seamless upgrades.
- Fully automated testing of combinations of operating systems and browsers.
- Data-driven testing out-of-the-box.

- Portable exports on-demand, using industry standards such as Selenium 2, XPath, and regular expressions.

After the pilot, Leidos selected Subject7 and moved all of their testers to the Subject7 platform. The Leidos Health team later established its Testing Excellence Center and standardized on Subject7 as its only automation tool.

### Results

After an initial investment of time to create a library of repeatable test cases, the team observed dramatic increases in the speed with which they could fully regression test applications and get them out into production. Production level defects went down significantly, which they attributed to test automation. The testing teams are now able to focus their energy on testing new functionality, while the Subject7 test automation platform runs all the regression tests.

Leidos reported the following, as a result of working with Subject7:

- 90% increase in productivity.
- 42% savings in testing resources.
- Enhanced ability to pursue new client opportunities.

Today, with more than six years as a successful partnership working directly with Leidos, Subject7 has made a number of additions to its solution (i.e. automated 508 testing, load testing, and native mobile app testing) to serve needs identified by Leidos. Subject7 continues to train and provide support to the Leidos Health team, and has an open dialogue about future product enhancements. Leidos has continually been impressed with Subject7's customer service.