

14C - Minimizing Maintenance in Test Automation

Presenters

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Session Summary

Test automation is potentially a valuable asset to a development or testing organization, providing a positive return on investment (ROI), as long as the cost of maintenance is minimized. In this presentation, the authors discuss how the choices of automation and the methods employed to build automated tests affect the cost of maintenance. The presentation begins with a discussion and examples about how to choose automation projects to provide a good ROI.

Generally speaking, automated tests are comprised of four phases: Setup, Test, Verify and Cleanup. Of the four phases, the verification steps are the most difficult to create and maintain when using traditional approaches. In this context, the authors suggest building verification steps by predicting expected results at runtime. Take the example of a shopping cart in an e-commerce site. Using a traditional approach, the product and price destined for the cart are specified in the test data set or, in the worse case, in the test script itself. But what happens to the test when that product is dropped from the catalog or when its price changes? Typically these types of test cases require constant maintenance, and that cost erodes the return on investment. A better approach involves randomly selecting a product to purchase, and then capturing related data including the price per unit at runtime.

You can store this 'dynamic' input data and use it to calculate the expected results that are eventually compared to the actual results. While data-driven tests are already an improvement over recordings that merge test function with test data, this approach moves a step further: it reduces the amount of maintenance required for test case data. Reducing test case maintenance at every step of the automation process is the surest way to build tests that last and to achieve a positive return on investment. By attending this presentation, participants learn:

- How to select application features for automation that provide the best Return on Investment
- A notation for creating automation-ready test plans
- Methods for dynamically identifying application objects
- An approach for building small, re-usable test automation components (write once)
- Strategies for selecting input data from the test application and its data sources
- A method for predicting expected results at runtime so as to reduce test data maintenance

About the Presenters – Brian Le Suer and David Laroche

Brian Le Suer is the CEO of Zeenyx Software, INC, a company dedicated to building next generation testing solutions. He is a founding partner of Star Quality; a New England based firm specializing in consulting and training for SQA and automated testing. Brian served as Executive Vice President of R&D for Segue Software, where he played a key role in a successful IPO. His earlier career experience includes various roles as an SQA engineer, technical writer and technical trainer. He regularly contributes presentations and articles for various industry events and publications. He holds a Masters of Computer Science from the University of New Haven and a BA in English Literature from CCSU.

David Laroche is the CTO of AppSage. Dave co-founded Segue Software, and served as its Chief Technology Officer for seven years. He was responsible for the design and architecture of the SilkTest product line, and was co-author of three patents related to automated software testing. While at Softbridge Microsystems, Dave was also the chief architect of another testing tool, the Automated Testing Facility. Dave holds a Bachelor of Science in Computer Science from the University of New Hampshire.