

Titel

Understanding Eclipse Plug-in Test Suites

Abstract

Testing plug-in based systems entails testing a complex net of multiple plug-ins which not only interact with, but also enhance the functionality of each other by extension mechanisms.

In the Eclipse Testing Study, testing practices of successful Eclipse projects have been studied. Among others, Eclipsers stress integration testing as an important testing activity for plug-in systems, and explain that understanding complex plug-in test suites can become a challenging task.

To remedy the problem of understanding plug-in test suites, we developed the Eclipse Plug-in Test Suite Exploration (ETSE) tool. ETSE combines static and dynamic information on plug-in dependencies, extension initialization, and extension or service usage during a test run. This information is used to create five architectural views of the system under test and its test suite, which developers can use to understand how the integration of multiple plug-ins is tested.

In this presentation, we will talk about plug-in test suites and present the architectural views, which help answering questions like: "which plug-ins are tested by this test suite?", "where are test harness and test utilities located?", "which extensions influence the state of the test system?", and many more.

We will end this session with a short demonstration of ETSE by visualizing the test suite of Mylyn.

Author

Michaela Greiler is doing her PhD in the Software Engineering Research Group at the Delft University of Technology. Her research focuses on developing efficient testing methodologies for plug-in based systems, in particular for Eclipse.

As part of her research, the Eclipse Plug-in Test Suite Exploration (ETSE) tool is being developed. The tool will be released as open source tool soon.

Michaela holds a Master's degree in Computer Science, has presented her work at various international conferences and workshops, and she has won a best paper award for her presentation on Understanding Plug-in Test Suites at WCRE 2010. More information:

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