

Automated GUI Testing Validation guided by Annotated Use Cases

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This paper presents a new approach to Automatic GUI Test Case Generation and Validation: a use case-guided technique to reduce the effort required in GUI modeling and test coverage analysis. The test case generation process is initially guided by use cases describing the GUI behavior, recorded as a series of interactions with the application widgets (e.g. widgets being clicked, data input, etc.) These use cases (modeled as a set of initial test cases) are annotated by the tester to signal interesting variations in widget values (ranges, valid or invalid values) and validation rules with expected results. Annotations and validation rules allow this approach to automatically generate new test cases and expected results, easily expanding the test coverage. Also, the process allows narrowing the GUI model testing to precisely the set of widgets, interactions, and values the tester is interested in.

Keywords: GUI Testing, Model Based Testing, Test Case Auto Generation, GUI Verification