Model-Based Testing of Thin-Client Web Applications and Navigation Input

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Abstract

It is a trend to use a browser as the universal graphical interface in many new applications. As a consequence the application inherits browser navigation as parts of its interface. Typical browser actions are the use of the back- and forward-button and the cloning of windows. Since it is easy to forget or misunderstand the consequences of this aspect in the construction of a program, it is very desirable to test it, preferably with an automatic model based test tool. Hence a specification including browser navigation is needed. In this paper we introduce a transformation to lift the specification of the behavior of a program to a specification including the browser navigation. Only exceptions to the general behavior need to be specified explicitly. We show how this lifting of specifications is used for some small examples and how errors are found in real web-applications. It appears that the place where the state of the web-program under test is stored, at the client or at the server, is critical for the desired behavior. The described system builds on the model based test tool G∀ST.