Validation of Input-Dependent Behaviour in Android Applications

Description

Recently there has been growing interest towards validation of behaviour of smartphone applications, especially in the context of application marketplaces that wish to filter out non-quality applications or otherwise malicious ones [2, 3]. Standard testing of these applications faces two main obstacles: first, such applications are heavily graphic-interface intensive, which has proven to be difficult to test. Second, the sheer number of application submissions requires an automated procedure for validation. A first approach at this problem is that of statically extracting an abstract, but comprehensive, model of application behaviour that captures the GUI abstraction [1]. Such a model is amenable to testing analysis such as what Selenium (http://www.seleniumhq.org) performs for GUI intensive web sites. Interesting extensions to further automate the process include static analysis of applications to obtain the GUI models.

References


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