Abstract

Mobile devices such as cellular phones (CPs) are crucial in our daily life. A lot of work has been
done to handle the problems of designing and developing of GUI and applications for CPs. In
this paper, we survey the existing strategies to design and implement of GUI for CPs. In
addition, the paper reviews the methods to develop the applications for CPs and the guidelines
to overcome the problems which face these methods especially using XHTML in mobile devices
and ordinary web browsers. In addition, we present a bug study and categorization of
android-specific bugs that shows an important number of android bugs. We introduce a new
approach for testing GUI. The new approach focus on generating set of actions to test the user
interface. The approach detects android GUI bugs, based on a combination of android
application analysis tool and event generation with runtime monitoring technique. We introduce
an empirical study to shows the efficiency of our approach.

References

- P. Abrahamsson, A. Hanhineva, H. Hulkko, T. Ihme, J. Jaalinoja, M. Korkalal,
Mobile-D: An Agile Approach for Mobile Application Development. 9th Annual ACM Conference
on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA’04),
2004.
- V. Davis, J. Gray, J. Jones, Generative approaches for application tailoring of mobile devices. 43rd annual Southeast regional conference, Georgia, USA, 2005.
- C. Hu, I. Neamtiu, Automating GUI Testing for Android Applications, 6th International
Workshop on Automation of Software Test, pp. 77-83, 2011.

Index Terms

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