Abstract

One of the most interesting changing in the today’s web users is relying heavily on the mobile web browsers to do all their daily life activity. There are many numbers of web browsers who have their mobile versions released and which work as effectively and efficiently as the stationary web browsers although they do have certain limitations. The reference architecture provides a template solution for the architecture of a particular domain. In this paper, we present new proposed reference architecture for web browser in the mobile domain based on the analysis of three selective mobile web browsers. The work includes (1) the extraction of the conceptual and concrete architectures for three selected well-known mobile web browsers namely: Firefox, Google Chrome and Dolphin, (2) the analysis and discussion of the different extracted architectures and their components as well as their various dependencies, (3) the deriving of the proposed architecture based on the resulted analysis and the evaluation of it using existing stationary web browser reference architecture.

The study is restricted only to open-source and closed-source browsers with limited access to
the code. It would be interesting to check derived reference architecture for mobile web browsers against commercial mobile web browsers and refine it accordingly. Another interesting point is to derive reference architecture for other mobile operating systems and compare the derived reference architectures with the one in Android OS.

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Index Terms

Computer Science                  Information Systems

Keywords

Web browser, Google Chrome, reference Architecture, mobile users, reusability