MASTER'S THESIS REVIEW

Author:	Mikhail Sukhotin
Thesis title:	**Mobile iOS application for a non-profit TV**
Master's thesis advisor:	Ing. Tomáš Valenta
Review performed by thesis opponent:	Ing. Miroslav Macík

Thesis assignment

Aim of the thesis was to state requirements for an iOS mobile application to access content provided by a non-profit Czech-American TV. According the the requirements, an iOS mobile application should be developed and tested. The functionally should include propagation of the project, possibility of financial donation, streaming of TV and audio content (including the server side solution), Czech language quiz, and corresponding web-based administration interface.

Version of Master's thesis submitted for my review is updated version of thesis that was not previously successfully defended.

Technical report (text part)

Technical report is written in English. It consists of five top level chapters - Introduction, Client iOS application, Server application, Testing, and Conclusion. I miss standard thesis structure where parts describing analysis, design and testing are easy to distinguish.

The first chapter - Introduction contains a short problem description, followed with description of functional and non-functional requirements. The facts here are stated as they are, without proper discussion of possible alternatives. Follows a section that states technologies chosen for the development. I still miss more detailed discussion of possible alternatives.

Second chapter describes design and implementation of an iOS client application. Its first part consists of a set of UML diagrams. Prototypes of application UI are presented using wireframes. I miss deeper discussion of possible design alternatives. From the point of view of UI design, I miss explicit specification of the target user group. Second chapter is concluded by statement of technologies and design patterns used for the development.

Third chapter describes design and implementation of server application providing RESTfull API as well as content management system. Structure of this chapter is similar to the previous one. Regarding the UI design, I appreciate usage of prototypes for the design, however, I miss any evaluation of these prototypes.

Forth chapter focuses on testing — namely usability evaluation and beta testing. There is no description of neither the test setup nor the test procedure, the findings of the usability test are also presented in a unstructured informal way. From the text it seems that the test was rather some form of informal product evaluation. Application was also successfully deployed to Apple AppStore and informally tested using ten participants for stability.

Author mostly cites web pages, almost all references miss "accessed on" attribute, which is standard when citing a web resource.

Implementation

Proposed solution was implemented using two distinctive technologies. On the client side, there was an iOS application implemented using standard development environment using Cocoa Touch framework. This application provides only basic functionality and as it is, it is not usable for production. Apart from missing functionality (about us, donations), the application suffers from serious usability problems. E.g. application menu collides with iOS status bar, there is no UI feedback when taping on quiz answers, and it is not possible to add a POI to favorites.

Server application was implemented using the Ruby on Rails framework. Current version provides only RESTfull service for serving implemented iOS application. Web application for content management was partially implemented using Active Admin framework (based on Ruby on Rails). Content management as designed in the technical report was not implemented.

Conclusion

Mr. Mikhail Sukhotin by this version of his Master's thesis proved that he is able to solve complex assignments by himself. Technical report is written in quite good English, however I miss more detailed analysis of possible development technologies and related work. The technical realization is implemented using two different technologies — ruby on rails and iOS development tools (Objective C and Cocoa Touch Framework). Implemented application with subset of functionality is available on Apple AppStore. I would expect greater improvement of the thesis after an unsuccessful defense, therefore I asses the reviewed Master's thesis by same grade **- D - satisfactory.**

In Prague on January, 12th, 2015

Ing. Miroslav Macík