

MASTER'S THESIS

A Domain-Specific Language for UI-Navigation in Mobile Applications

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Motivation

Tablet computers like the Apple iPad or corresponding devices of other manufacturers provide simple access to data of all kinds. Whether one wants to get the latest weather forecast, book a flight or simply check e-mails, mobile applications provide access to almost any online resource. Tablet computers are even more portable than traditional laptops and have a longer battery service life of around 10h. These devices along with smart phones are steadily gaining popularity compared to conventional devices like personal computers or laptops. Also in the business environment a growing demand for tablet computers and applications for these devices is recognized. This growing popularity presents software developers with challenges to efficiently support many such platforms by their applications.

Topic Description

This thesis aims to develop an approach to UI generation of mobile applications based on reusable screens and screen flows. The approach utilizes a combination of Domain Specific Languages (DSLs) and UI patterns. Similar approaches are considered and the results of the presented approach are compared to those approaches. By this comparison benefits and drawbacks of the developed approach will be highlighted.

The master thesis is carried out in cooperation with msg systems AG (Eschborn).

Prerequisites

- Advanced aspects of object-oriented programming
- Good programming knowledge

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