



Master Thesis

Mobile re-use of geo-referenced media content of Sächsische Zeitung

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Born on: 5th December 1985 in Cairo, Egypt

Matriculation number: 4118706

Matriculation year: 2014

to achieve the academic degree

Master of Science (M.Sc.)

Supervisor

Prof. Dr.-Ing. habil Dirk Burghardt (TU Dresden)

Dr.-Ing. Eva Hauthal (TU Dresden)

Volker Klaes (Sächsische Zeitung)

Submitted on: 15th February 2017



Task for the preparation of a Master Thesis

Name: **Abdelrahman Hussein**
Matriculation number: 4118706
Matriculation year: 2014
Title: **Mobile re-use of geo-referenced media content of Sächsische Zeitung**

Objectives of work

The DDV Mediengruppe GmbH & Co. KG, one of the biggest publishers in Saxony, is also a publisher of the Sächsische Zeitung, Morgenpost Sachsen, as well as the well-known News-Portal SZ-Online.de. Next to the core businesses, print and online, DDV Mediengruppe offers a wide variety of products on the market, and is actively engaged in a range of publishing related services. The editorial staff of the Sächsische Zeitung uses a publishing system and intends a further development with the respect to the georeferencing of the media content.

The origin of the theoretical and conceptual part of the thesis shall be an analysis of existing solutions on the market presenting news/media content in relation to space. Subsequently a concept for a workflow is to be development based on the existing data corpus, including rule-based georeferencing and in due consideration of interfaces. The goal is the client-side presentation should be adjustable with filters (e.g time, user group, theme) to access the geo-referenced data. The focus during the development shall be on the cartographic representation.

There should be submitted two printed versions together with the digital version on CD. The digital version should include the text description and all required data and software to run the prototype. It is encouraged to publish the thesis on the publication server Qucosa of SLUB. The major findings will also be presented in the form of an A2 colour poster.

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Statement of authorship

I hereby certify that I have authored this Master Thesis entitled *Mobile re-use of geo-referenced media content of Sächsische Zeitung* independently and without undue assistance from third parties. No other than the resources and references indicated in this thesis have been used. I have marked both literal and accordingly adopted quotations as such. They were no additional persons involved in the spiritual preparation of the present thesis. I am aware that violations of this declaration may lead to subsequent withdrawal of the degree.

Dresden, 15th February 2017

Abdelrahman Hussein

Restriction note

This Master Thesis entitled *Mobile re-use of geo-referenced media content of Sächsische Zeitung* contains confidential data. Publications, duplications and inspections—even in part—are prohibited without explicit permission, as well as publications about the content of this thesis. This thesis may only be made accessible to the supervisor at Technische Universität Dresden, the reviewers and also the members of the examination board.

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To my friends in Dresden who gave me the support and sometimes the kicking that I needed to finish this work, I am really greatfull for the support, encouragement and the kicking.

Finally, I would like to thank my parents. My ultimate goal in life is to make you proud.

Abstract

News is a basic source of daily information for large number of people. Normally news articles are related to a geographical location, whether it is an article about an event that is taking place or a local news in a city or small village. Annotating the news articles with their geographical location opens the door for more powerful tools that can deliver news articles to users. In this research, a conceptual model and workflow for delivering geo-referenced news article to end users will be proposed. A complete browser-based mobile first application will be developed to implement the proposed workflow based on Sächsische Zeitung (SZ) data. Filtering and navigation of the news content based on time, space and theme will be discussed and a technique to address these ideas will be proposed and implemented. Modeling and visualizing different types of news articles will be addressed and basic relevance ranking technique will be presented. Finally, techniques for user interaction and adapting the user interface based on user feedback will be discussed and implemented.