

Aalto University
School of Science
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Kimmo Puputti

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Master's Thesis
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Supervisor: Professor Petri Vuorimaa, Aalto University
Instructor: Risto Sarvas D.Sc.(Tech.)

Aalto University
School of Science

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ABSTRACT OF
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Kimmo Puputti

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0.1 Thesis Git repository info

Git HEAD:

```
commit 8233b8b497ccd04e57c934ab525d72d44c2e2452
Author: Kimmo Puputti <kpuputti@gmail.com>
Date:   Thu Jan 5 08:48:41 2012 +0200
```

Add PDFs to the repo.

Repository status:

```
# On branch master
# Your branch is ahead of 'origin/master' by 1 commit.
#
# Changes not staged for commit:
#   (use "git add <file>..." to update what will be committed)
#   (use "git checkout -- <file>..." to discard changes in working directory)
#
# modified:   Makefile
# modified:   discussion.tex
# modified:   introduction.tex
# modified:   methods.tex
# modified:   research-question.tex
# modified:   results.tex
# modified:   sources.bib
# modified:   thesis.pdf
# modified:   thesis.tex
#
# Untracked files:
#   (use "git add <file>..." to include in what will be committed)
#
# gitinfo.py
# gitinfo.tex
no changes added to commit (use "git add" and/or "git commit -a")
```


Chapter 1

Introduction: Smartphone Market and the Need for Cross-Platform Support

1.1 Smartphone Landscape

1.2 HTML5

1.2.1 History

1.2.2 Markup

1.2.3 CSS3

1.2.4 JavaScript APIs

1.2.5 Related APIs

1.3 Modern Mobile Web Application Architecture

1.3.1 Single-Page applications

1.3.1.1 JavaScript MVC Libraries

1.3.2 Responsive Design

1.3.3 Progressive Enhancement

1.3.4 UI Libraries

1.3.4.1 jQuery Mobile

1.3.4.2 jQTouch

1.3.4.3 Sencha Touch

1.3.5 Hybrid Applications

Chapter 2

Research Question: HTML5 - Hype versus Realities?

Chapter 3

Methods: Example Application and Library

3.1 Qt Developer Days 2011 Conference Schedule Application

3.2 JSONCache JavaScript Library

Chapter 4

Results: What Was Good and Where Were the Compromises

4.1 Targeting Different Platforms

4.1.1 Device Detection

4.1.2 Feature Detection

4.2 Targeting Different Screens

4.3 Handling Mobile Networks

4.3.1 Minimizing Data Transfer

4.3.2 Caching

4.3.3 Preloading

4.3.4 Offline Support

4.3.5 Handling Interruptions

4.4 Graphics and Animations

4.5 Performance Analysis

4.5.1 YSlow

4.5.2 PageSpeed

Chapter 5

Discussion: Bright Future Ahead for HTML5

Chapter 6

L^AT_EXtest

6.1 Citing

- Berners-Lee [1]
- Mikkonen & Taivalsaari [4]
- Taivalsaari & Mikkonen [7]
- Pilgrim [5]
- Crockford [2]
- Souders [6]
- Garrett [3]
- Zakas [8]

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