

Mobile and Touch-Based Web Applications

Corsin Decurtins

Welcome

Please switch off your
mobile phones...

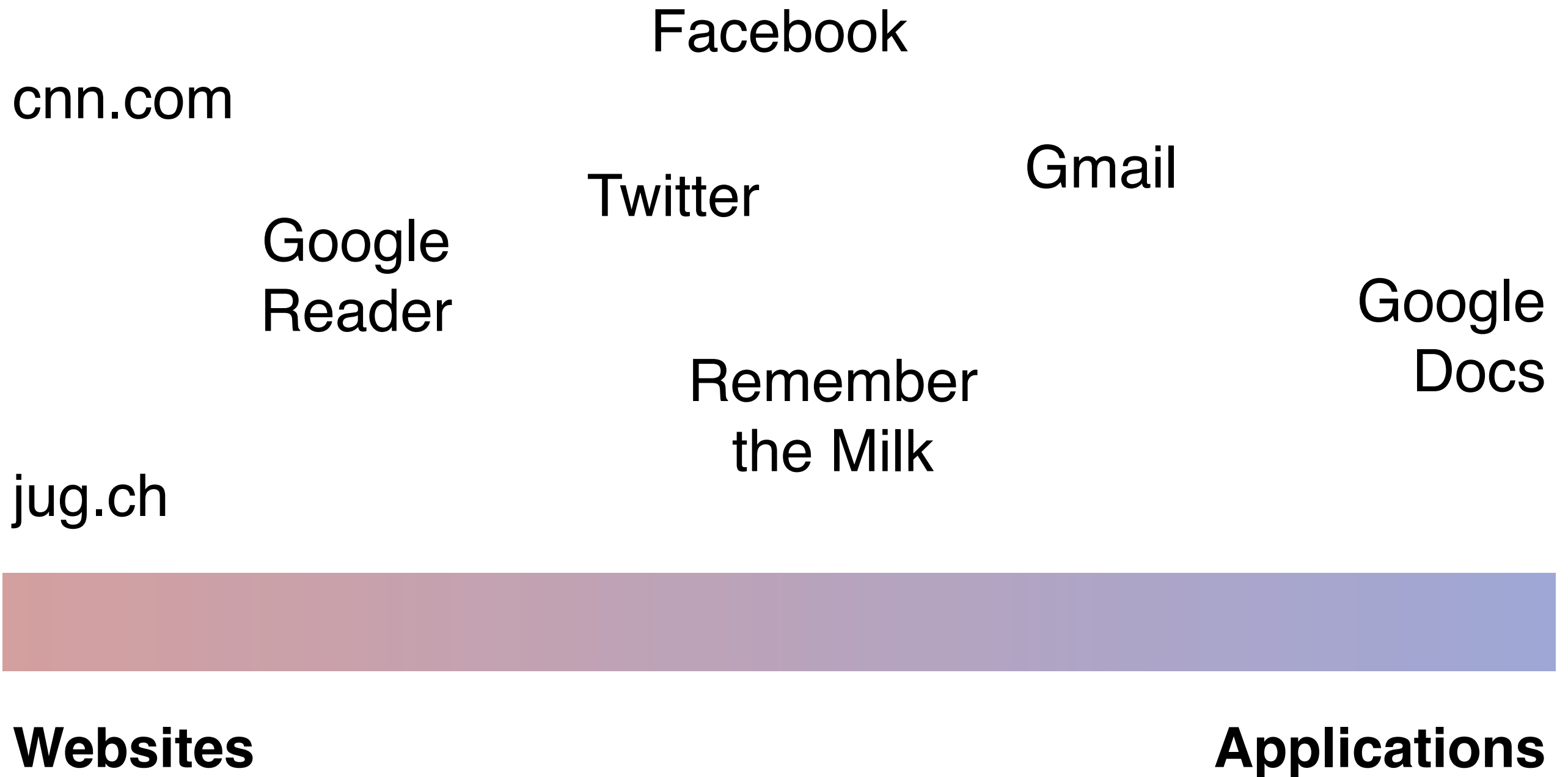
No wait!

Introduction

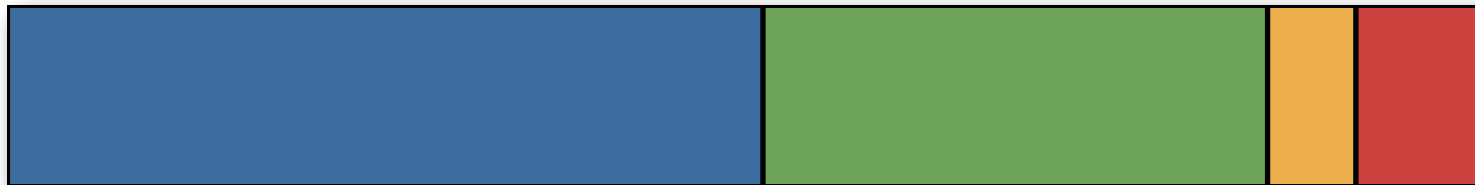
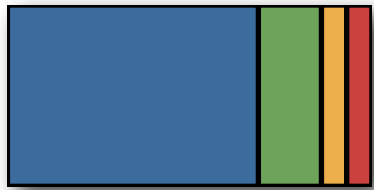
Mobile Applications

Apps

Web Apps



Some (Fake) Smartphone Statistics



Some (Fake) Tablet Statistics



Cost

Deployment

Knowhow

Reuse

Web Stack

HTML

CSS

Javascript

HTML5

New Markup

New APIs

New CSS Features

HTML5 Features

Interesting New Features

CSS

Local Storage

Offline Capabilities

Location API

Application Wrapping

Web Sockets

Frameworks and Libraries

So we're ready to go?

Frameworks

HTML/CSS

Javascript

UI Design

User Interaction

**Sencha
Touch**

**jQuery
Mobile**

JQTouch

...

**Sencha
Touch**

**jQuery
Mobile**

JQTouch

...

JQuery Mobile

JQuery Mobile

<http://jquerymobile.com/>

Builds on top of the JQuery library

JQuery Mobile

HTML/CSS/Javascript Framework

Builds on top of JQuery

HTML Markup with HTML5 **data-*** attributes

Instrumentation with Javascript

Styling with CSS

API, Callbacks, Hooks

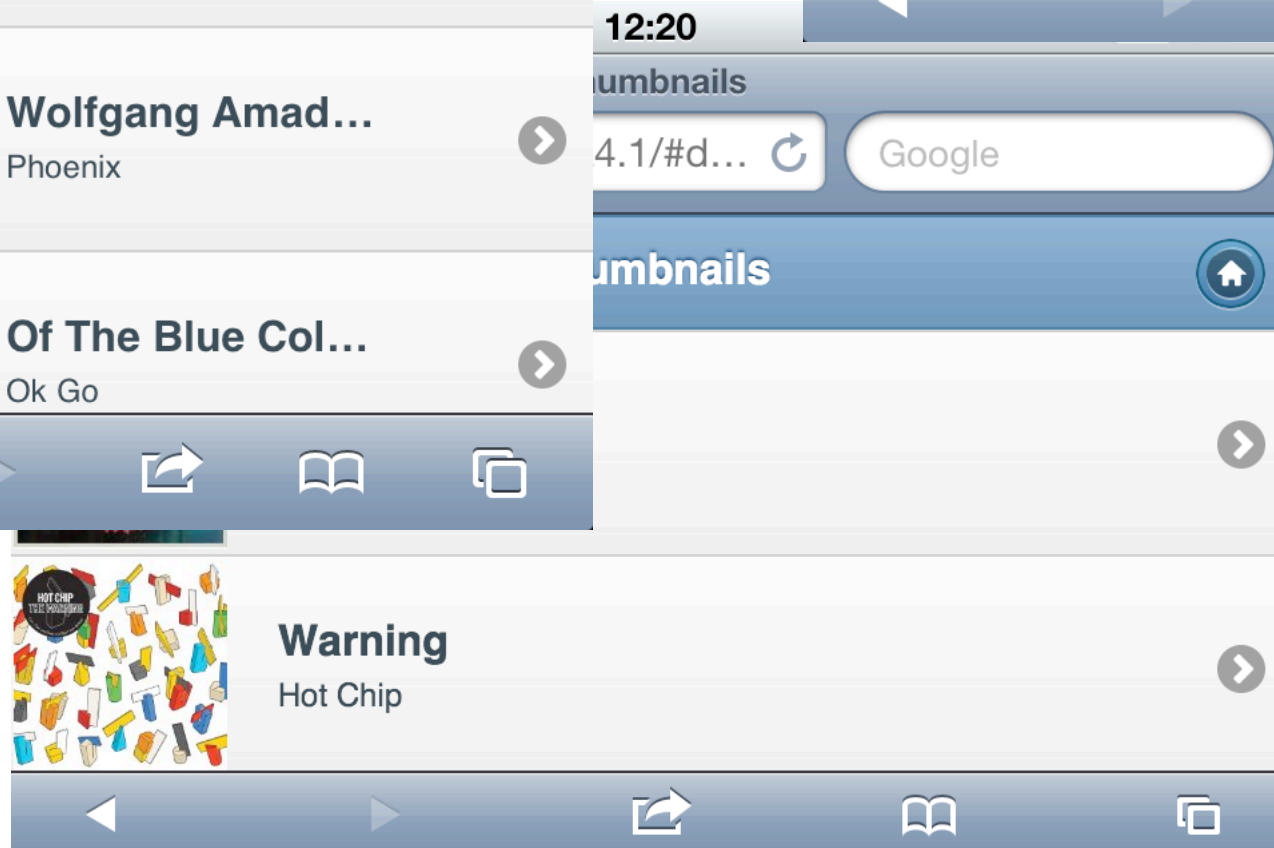
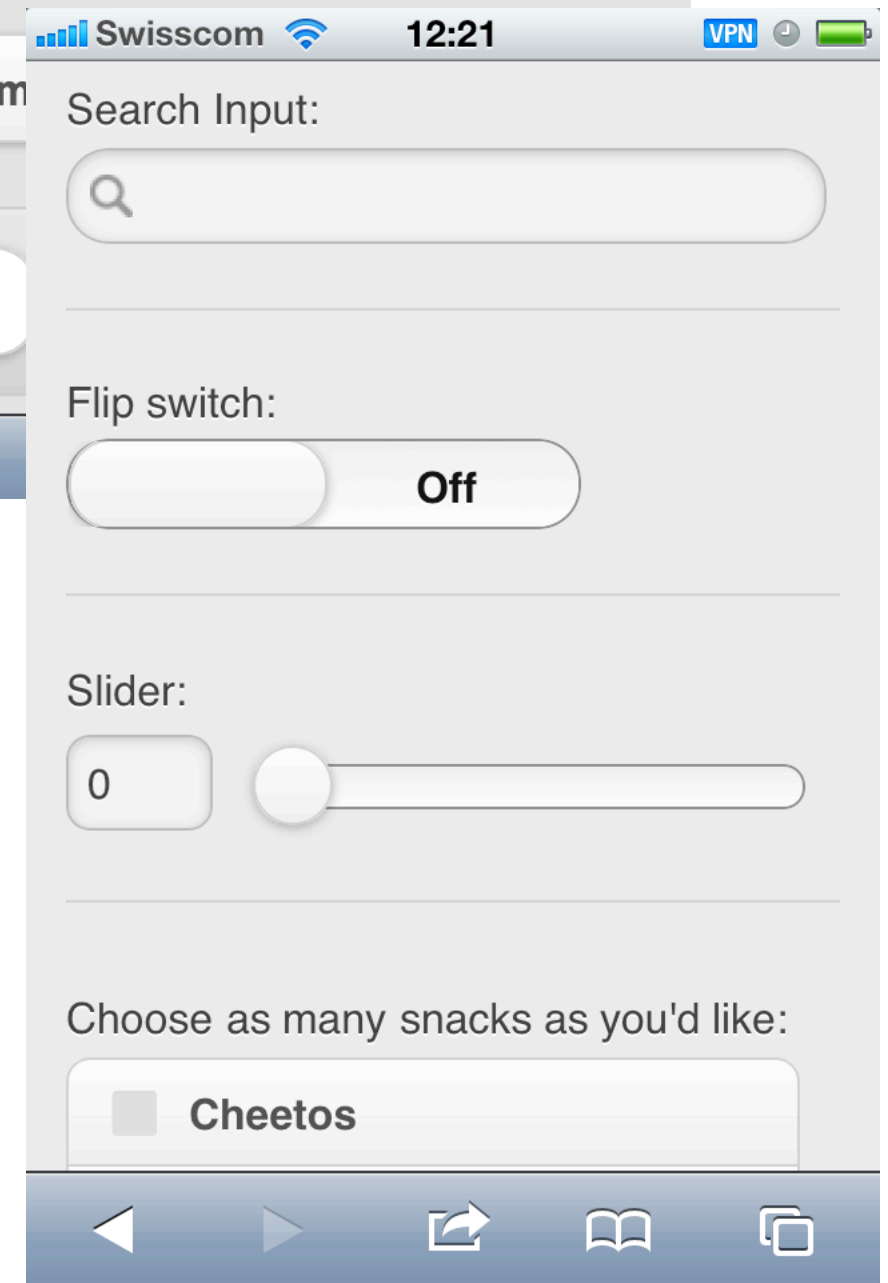
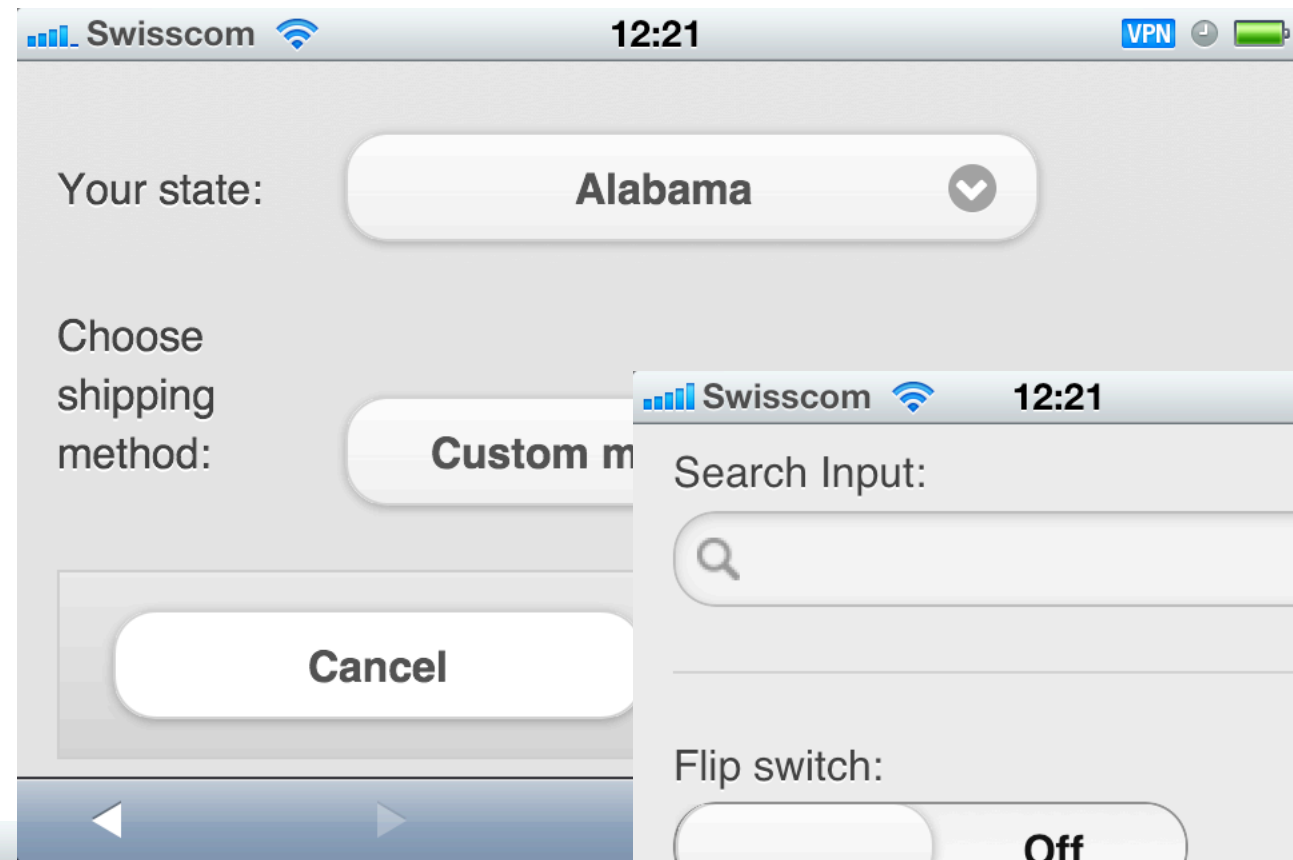
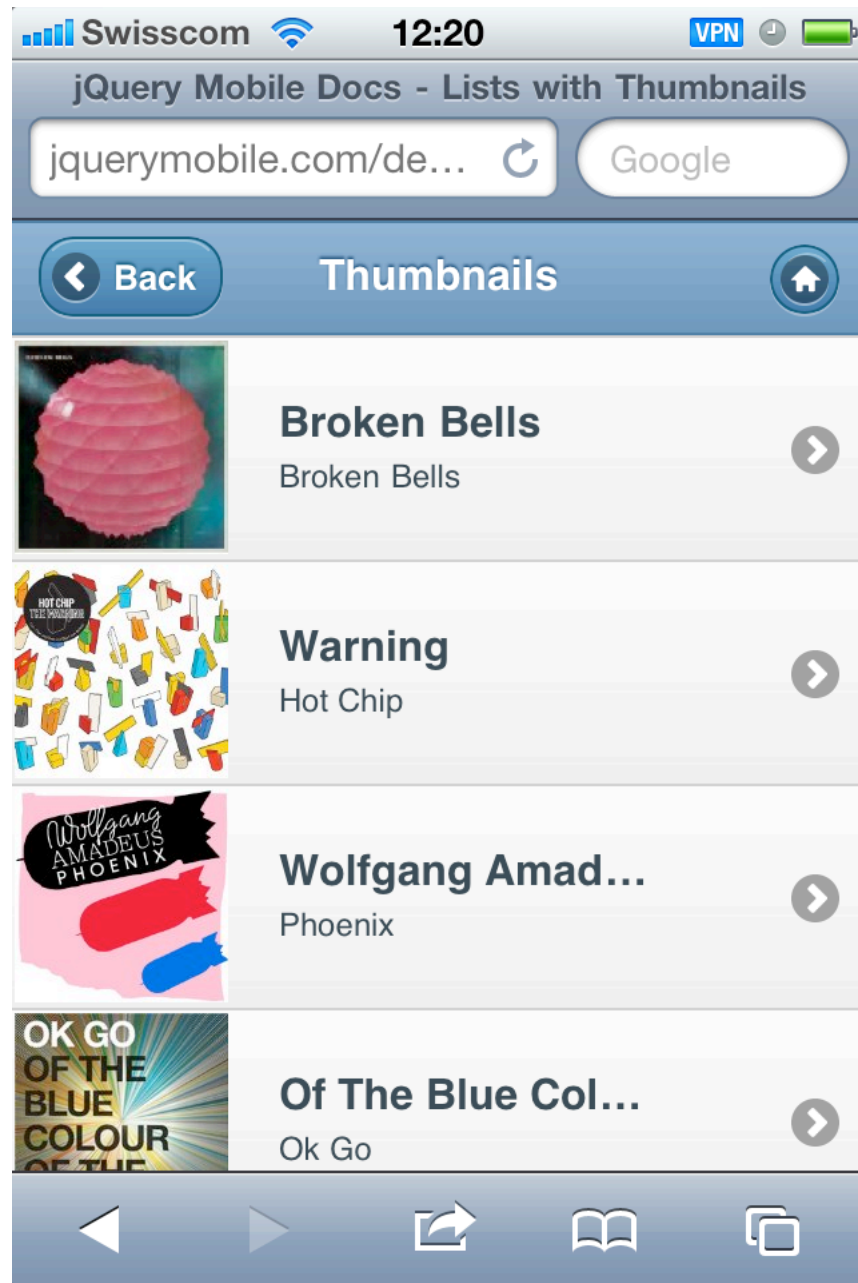
Platform	Version	Native	Opera Mobile				Opera Mini		Fennec		Ozone	Netfront	Phonegap
			8.5	8.65	9.5	10.0	4.0	5.0	1.0	1.1	0.9	4.0	0.9
iOS	v2.2.1	B											A
	v3.1.3, v3.2	A						A					A
	v4.0	A						A					A
Symbian S60	v3.1, v3.2	C	C	C		B	C	B			C	C	
	v5.0	A	C	C		A	C	A					A
Symbian UIQ	v3.0, v3.1			C							C		
	v3.2				C						C		
Symbian Platform	3.0	A											
BlackBerry OS	v4.5	C					C	C					
	v4.6, v4.7	C					C	B					C
	v5.0	B					C	A					A
	v6.0	A						A					A
Android	v1.5, v1.6	A											A
	v2.1	A											A
	v2.2	A				A		C		A			A

Platform	Version	Native	Opera Mobile				Opera Mini		Fennec		Ozone	Netfront	Phonegap
			8.5	8.65	9.5	10.0	4.0	5.0	1.0	1.1	0.9	4.0	0.9
Windows Mobile	v6.1	C	C	C	C	B	C	B				C	
	v6.5.1	C	C	C	A	A	C	A					
	v7.0	A				A	C	A					
webOS	1.4.1	A											A
bada	1.0	A											
Maemo	5.0	B				B			C	B			
MeeGo	1.1	A				A				A			

JQuery Mobile

1.0 Alpha 4.1

Focus on Phones for 1.0



Demo

Application

<http://etc.ch/~corsin/html5/>

Source Code

<http://github.com/corsin/jugshtml5demo>

Demo (1/6)

Demo Environment

Follow along on your mobiles (if you want to)

Text Editor (it's only static files after all)

Browser (Google Chrome)

Demo (2/6)

Overview Demo Application

Splash Screen

Pages / Functionality

Animations, Transitions

Navigation

Graphics (canvas-based)

Fonts

Forms (mobile optimized)

Widgets

Gestures

Touch-based, but pointer or keys work as well

AJAX for event data lookup

Demo (3/6)

Files

HTML

one document with multiple pages, standard HTML
data- markup (hooks for JQueryMobile)

Javascript

JQueryMobile (and other libraries)
custom code (not required, but used for additional functionality)

CSS

JQueryMobile
custom code (not required, but used for custom styling)

Images, Fonts, ...

Data (file in the example, could be dynamic)

Demo (4/6)

Structure of the Application

HTML file

- basic page, one document with multiple screens

- data- attributes (as hooks for JQueryMobile)

- normal JQuery instrumentation will probably become available as well (my guess)

- static pages/screens

- dynamic pages/screens

- template pages/screens

Demo (5/6)

Styling / Theming

jQueryMobile themes (baseline)

offers multiple themes

ThemeRoller support will (probably) come later

customization through CSS

hooks for the customization are a bit difficult to find

JavaScript event handlers for events

e.g. a swipeleft event, tap events, double tap, ...

WebFonts

Viewport

Responsive Layout

Demo (6/6)

Local Installation

- Icons, Startup Screen

Local Storage

- Local database

- Key/Value store

- SQL store

Offline Capability

- Manifest

Canvas

- Best used through (abstraction) libraries

- flot example

Location API

Summary

Web Applications
are an option for mobile and
touch-based applications

Mobile Websites

you can build them manually

Mobile Web Applications

use frameworks

Frameworks
different maturity
different styles

Pick your poison

Mobile Web Apps (vs. Native Apps)

Cost +

Installation -

Deployment +/-

App Store +/-

APIs -

Knowhow / Reuse +

Updates +

Monetizing +/-

Performance -

Responsive Layouts +

Desktop and Mobile

Web Hybrids +

Interoperability +

Marketing / Sales +/-

hybrids are an interesting
option

put HTML5 in your toolbox



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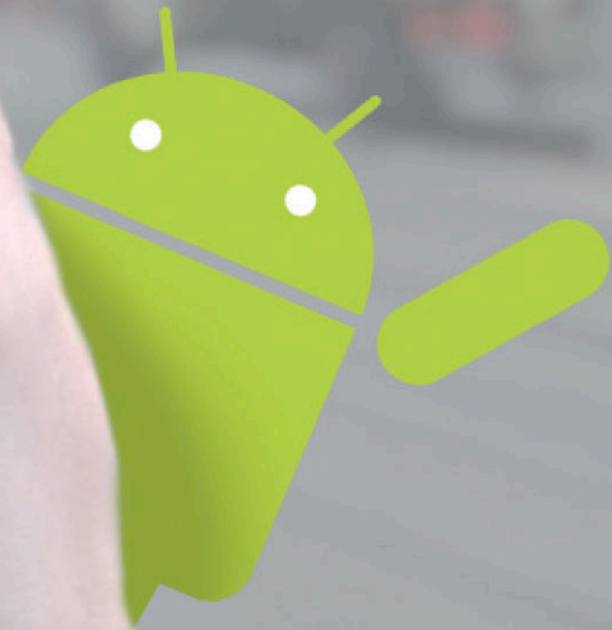
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Quality
Software
Engineering



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