No more web app headaches

Janina Bläsius, Michael Graf
Let's build a Soccer App
So what's your device?
Devices Used to Search the Internet

Most Popular Devices:
- PC/Laptop: 91%
- Smartphone: 80%
- Tablet: 47%
- Game Console: 37%

Emerging Devices:
- Smart TV: 34%
- Smart Watch: 9%
- Smart Wristband: 7%
- None of the above: 91%

Source: http://www.smartinsights.com/mobile-marketing/mobile-marketing-analytics/mobile-marketing-statistics/
Mobile Operating Systems

- Android OS: 53%
- Apple OS: 40%
- Blackberry: 3%
- Windows Phone: 2%
- Others: 2%

One Web App to Rule Them All

How will you build apps for multiple mobile platforms?

- 70% Native apps and HTML5 fallback app
- 16% One native app
- 14% One HTML5 app

Apache Cordova
For native features

Challenges

Devices
Consistency
Colors
Responsive
Design Patterns
User Experience

Challenges
Screen Sizes

49 times
screen real-estate

iPhone 5 (4"

28" monitor
Screen Sizes

http://opensignal.com/reports/fragmentation.php
Screen Sizes – Grid Systems


ussoccer.com


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Screen Sizes – Orientation
## CSS resize property

Method of allowing an element to be resized by the user, with options to limit to a given direction.

<table>
<thead>
<tr>
<th>Browser</th>
<th>IE 8</th>
<th>IE 9</th>
<th>IE 10</th>
<th>IE 11</th>
<th>Firefox</th>
<th>Chrome 31</th>
<th>Chrome 36</th>
<th>Chrome 37</th>
<th>Chrome 39</th>
<th>Safari 31</th>
<th>Safari 36</th>
<th>Safari 37</th>
<th>Safari 39</th>
<th>Opera 7</th>
<th>Opera 7.1</th>
<th>iOS Safari 7.1</th>
<th>Opera Mini 8</th>
<th>Android Browser 4.1</th>
<th>Android Browser 4.3</th>
<th>Android Browser 4.4</th>
<th>Android Browser 4.4.4</th>
<th>Chrome for Android 42</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>59.55%</td>
<td>59.53%</td>
<td>59.53%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

[http://caniuse.com/#feat=css-resize](http://caniuse.com/#feat=css-resize)
Browser Support - Workarounds

- Use a library or framework that takes care of these things
- There will still be things that you need to take care of
Device Features

Phone + Tablet

Desktop

Interactivity

Productivity
Device Features - Adaptiveness

- Make best use of the available features
- You do not have to support the same feature set on every device
One size does not fit all!
Mobilize, don’t miniaturize

- Keep it simple!
- Do not show everything
- Define the mobile feature set
Mobile First

http://experience.sap.com/fiori-design/
Mobile First – Start simple and minimalistic

Pull to refresh

Mobiscroll
Same things should behave the same
UI Design Patterns

Dialog actions are consistent and in the same place

Yes  No  Cancel  Ok

A link is always a link

Underlined text is always a link

Main interactions are at the same place

Accept  Reject  Edit  Delete
Visual Feedback – Interaction States

An Input field

A hovered input field

An active input field

A focused input field

A disabled input field

A Button

A hovered button

An active button

A focused button

A disabled button
Interaction Flow

- edit
- surprise me
- delete

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Navigation Patterns

Drill In/Out, Deep Linking, Back, 404, Dialogs, New Tabs, …
Exception Handling

**success**
Congratulations, you made it!

**error**
Oops, that went totally wrong…
Exception Handling – Semantics & Position

Default: You should fill out this page really carefully

Error: That is really messed up

Warning: You are about to break something

Success: Yes, this actually worked.
Exception Handling - Types

- **Validation error**: Incorrect or missing input, such as a non-valid email address.
- **Technical error**: A system error, such as a failure to process a request.
- **General Validation**: Errors in the validation process, such as a missing field.
- **Navigation error**: Errors in the navigation, such as a URL not found.

Examples:
- Incorrect email address.
- System failure.
- Missing input fields.
- URL not found.
Colors

green red blue yellow
orange magenta cyan
Semantic Colors

Color balance

Semantic Colors

Accent Colors
Branding and Theming

@uiBrandColor

@uiHighlightColor  mix(@uiBrandColor, white, 50%)

@uiButtonEmphasized  @uiHeaderBackgroundColor
Colors?

www.lingscars.com

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Typography

The Quick Brown Fox Jumps Over The Lazy Dog
Typography – Define Semantics

Status
Placeholder

Aa
Default text
without semantics

Aa
Unread
Not processed

Aa
Got a headache?
We might have a pill for you
Why not let a framework do the work for you?

- Device Detection
- Development Efficiency
- Theming Support
- Common Design Language
- Consistent User Experience
- Cross-Browser Support
Some Words About OpenUI5

www.openui5.org

#UI5 @OpenUI5
Main Features of OpenUI5

Feature-Rich UI Controls

Powerful Development Concepts

Enterprise-Ready Web Toolkit

Responsive Across Browser and Devices

Consistent User Experience

Free and Open Source
OpenUI5 – A Soccer App

http://openui5.org/worldcup2015women/

<table>
<thead>
<tr>
<th>Rounds</th>
<th>Selected Round</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matchday 1</td>
<td>2015/06/06 - 2015/06/06</td>
</tr>
<tr>
<td>Matchday 2</td>
<td>2015/06/07 - 2015/06/07</td>
</tr>
<tr>
<td>Matchday 3</td>
<td>2015/06/08 - 2015/06/08</td>
</tr>
<tr>
<td>Matchday 4</td>
<td>2015/06/09 - 2015/06/09</td>
</tr>
<tr>
<td>Matchday 5</td>
<td>2015/06/11 - 2015/06/11</td>
</tr>
<tr>
<td>Matchday 6</td>
<td>2015/06/12 - 2015/06/12</td>
</tr>
<tr>
<td>Matchday 7</td>
<td>2015/06/13 - 2015/06/13</td>
</tr>
<tr>
<td>Matchday 8</td>
<td>2015/06/15 - 2015/06/15</td>
</tr>
</tbody>
</table>

Matchday 3
From 2015/06/08
To 2015/06/08

<table>
<thead>
<tr>
<th>Matches</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameroon</td>
<td>6:0</td>
</tr>
<tr>
<td>Ecuador</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>1:0</td>
</tr>
<tr>
<td>Switzerland</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>3:3</td>
</tr>
<tr>
<td>Nigeria</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>3:1</td>
</tr>
<tr>
<td>Australia</td>
<td></td>
</tr>
</tbody>
</table>
OpenUI5 – Sports One
No More Web App Headaches?! Q&A
THANK YOU!