



APACHE SLING & FRIENDS TECH MEETUP
BERLIN, 26-28 SEPTEMBER 2012

CQ5 MOBILE IN A REAL LIFE PROJECT

Alex Muthmann,

Bert-Ulrich Baumann, Sebastian Schlick

About the speakers

Sebastian Schlick

Technical Project Lead (pro!vision GmbH)

Alexander Muthmann

Mobile Developer (pro!vision GmbH)

Bert-Ulrich Baumann

Frontend Technical Supervisor (argonauten G2)

pro!vision GmbH

Wilmersdorfer Str. 50-51

10627 Berlin

<http://www.pro-vision.de>



Specialized on Adobe CQ and it's
technology stack since 2003

<http://argonauteng2.de>

argonauten_G2

CQ5 Mobile in a Real Life Project

- Agenda

- Project Setup (Sebastian)
- CQ5 Solution (Alex)
- Frontend Magic (Bert)

Project Setup

- The Team
- The Task
- Project Constraints

Project setup / the team (simplified)

- AKQA

- Design

.psd



- argonauten G2

- Frontend magic

.html/.js/ .css
(Bert Baumann)



- pro!vision

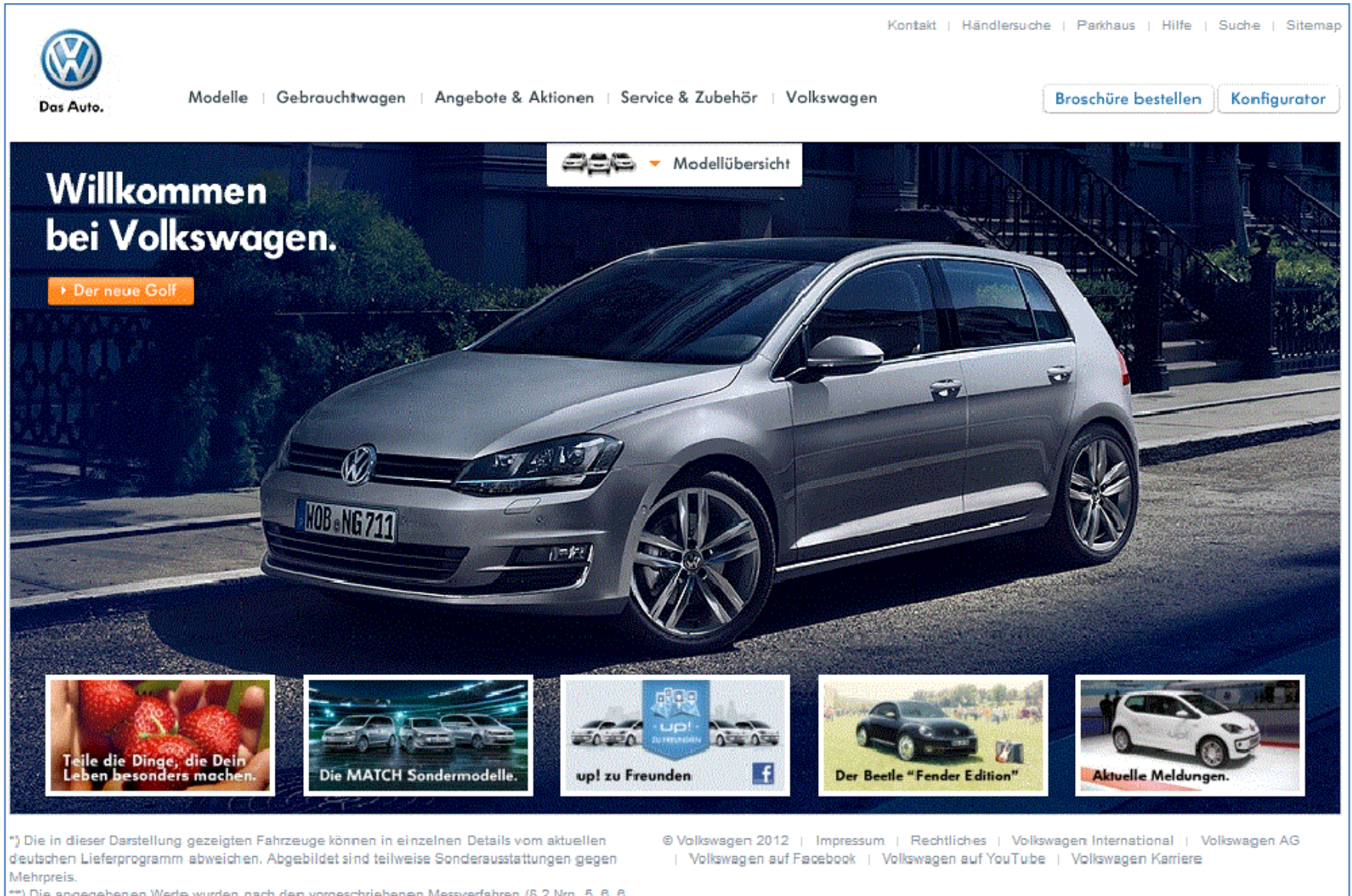
- CQ5 integration

.java

(Alex Muthmann)



Project setup / the task



The screenshot shows the Volkswagen website homepage. At the top, there is a navigation bar with links: Kontakt | Händlersuche | Parkhaus | Hilfe | Suche | Sitemap. Below this, the Volkswagen logo and the tagline "Das Auto." are on the left. In the center, there are links: Modelle | Gebrauchtwagen | Angebote & Aktionen | Service & Zubehör | Volkswagen. On the right, there are buttons: Broschüre bestellen and Konfigurator.

The main banner features a silver Volkswagen Golf with the text "Willkommen bei Volkswagen." and a button "Der neue Golf". Above the car, there is a link "Modellübersicht" with a dropdown arrow.

Below the main banner, there are five promotional tiles:

- Teile die Dinge, die Dein Leben besonders machen.** (Image of strawberries)
- Die MATCH Sondermodelle.** (Image of three cars)
- up! zu Freunden** (Image of three cars with the "up!" logo and a Facebook icon)
- Der Beetle "Fender Edition"** (Image of a black Beetle)
- Aktuelle Meldungen.** (Image of a white car)

At the bottom, there is a disclaimer: "*) Die in dieser Darstellung gezeigten Fahrzeuge können in einzelnen Details vom aktuellen deutschen Lieferprogramm abweichen. Abgebildet sind teilweise Sonderausstattungen gegen Mehrpreis." and a copyright notice: "© Volkswagen 2012 | Impressum | Rechtliches | Volkswagen International | Volkswagen AG | Volkswagen auf Facebook | Volkswagen auf YouTube | Volkswagen Karriere".

Project setup / the task

- One massive author instance (>1 mio pages)
 - Lots of product data pages per market
 - Another brand (commercial cars)
 - Countries / Markets / Languages
 - Car dealers per market
 - About 300k media assets (from image to pdf or video)

Project setup / the task

- Custom tailored mobile site
- Reuse content (fast rollout)
- Support Market applications
- Support as many devices as possible

Project setup / target devices

<http://m.volkswagen.de/de.opt.html>



Samsung Galaxy Nexus
Android 4.1.1
Screen size: 720x1280
Viewport: 360x515



iPhone 5
iOS 6
Screen size: 640x1136
Viewport: 320x444



HTC Desire HD
Android 2.2
Screen size: 480x800
Viewport: 320x533



iPhone 4
iOS 4.3.3
Screen size: 640x960
Viewport: 320x356



Samsung Galaxy Y
Android 2.3.6
Screen size: 240x320
Viewport: 320x341



iPhone 3G
iOS 4.2.1
Screen size: 320x480
Viewport: 320x356

<http://m.volkswagen.de/de.std.html>

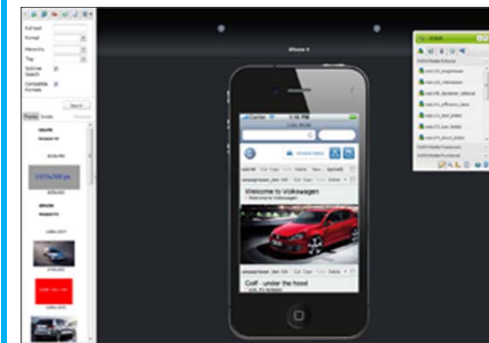


Blackberry Curve 8520



Nokia E63

<http://author:4504.../de.optdsk.html>



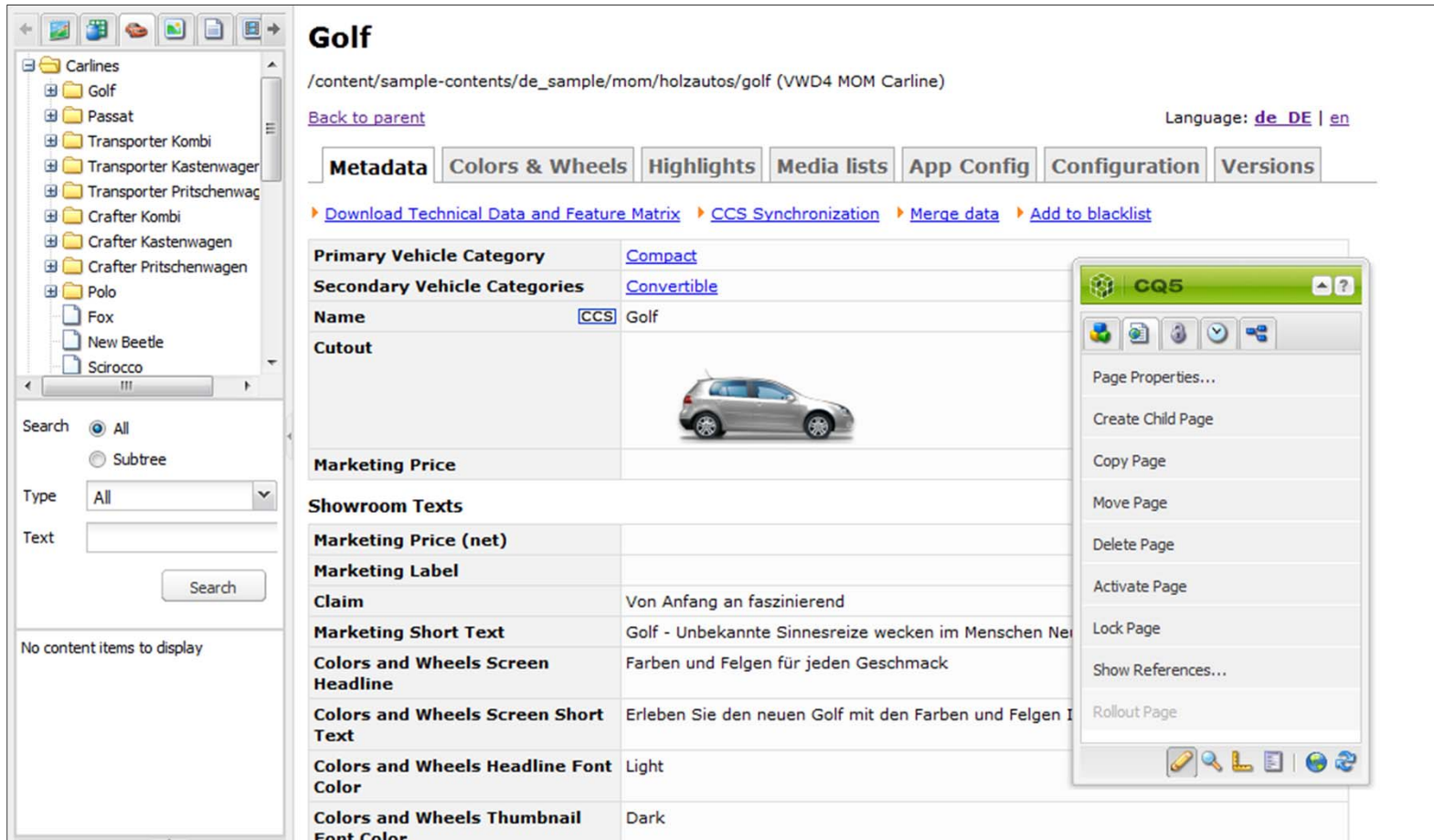
FF
Chrome

Project setup / constraints

- Content to use from desktop site:
 - Product data
 - Digital assets (media)
 - Technical Disclaimer
 - News
 - Backends (CRM, search et cetera)

Project setup / constraints

- Product data was already separated



Golf
/content/sample-contents/de_sample/mom/holzautos/golf (VWD4 MOM Carline)

[Back to parent](#) Language: [de_DE](#) | [en](#)

Metadata Colors & Wheels Highlights Media lists App Config Configuration Versions

[Download Technical Data and Feature Matrix](#) [CCS Synchronization](#) [Merge data](#) [Add to blacklist](#)

Primary Vehicle Category	Compact
Secondary Vehicle Categories	Convertible
Name	CCS Golf
Cutout	
Marketing Price	

Showroom Texts

Marketing Price (net)	
Marketing Label	
Claim	Von Anfang an faszinierend
Marketing Short Text	Golf - Unbekannte Sinnesreize wecken im Menschen Ne
Colors and Wheels Screen Headline	Farben und Felgen für jeden Geschmack
Colors and Wheels Screen Short Text	Erleben Sie den neuen Golf mit den Farben und Felgen I
Colors and Wheels Headline Font Color	Light
Colors and Wheels Thumbnail Font Color	Dark

Project setup / constraints

- Fixed media formats already established

CQ5 WCM Administrator

/content/medialib/vwd4/de_sample/editorial/editorial_standard1 Show References Back To Parent

Preview



Standard 1 Column
215 x 102
40.3kB

Metadata Advanced XML Metadata

Edit... Translate...

Name	Value	de	en
Name	Editorial Standard 1		
Author Comment			
Alt. Text	Alt. Text from Media Library		
Media Source	CMS		
Source ID			
Model Year			

Renditions

+ Add Rendition...



Standard 1 Column
215 x 102
40.3kB



Standard 2 Columns
450 x 213
39.1kB



Standard 3 Columns
685 x 325
57.5kB



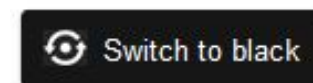
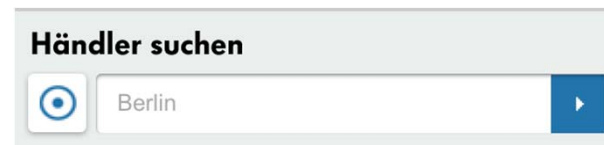
Standard Stage
960 x 455
95.3kB



Home Stage
960 x 485
95.9kB

Project setup / constraints

- Seperate mobile bundle, on top of desktop site
- Complete set of new templates and components
 - But with consistent namings
- New Features
 - ‚switch to black‘
 - Call now
 - Car dealer search

A dark grey rectangular button with rounded corners. It contains a circular icon with a diagonal line through it on the left, followed by the text 'Switch to black' in a white, sans-serif font.A green rectangular button with rounded corners. It contains a white telephone handset icon on the left, followed by the text 'Jetzt anrufen' in a white, sans-serif font.A light grey search bar with rounded corners. It has a title 'Händler suchen' in a bold, sans-serif font. Below the title is a search input field with a magnifying glass icon on the left, the text 'Berlin' in the center, and a blue arrow button on the right.

CQ5 Solution / Templates and Components

- Only two editorial templates
- Many data-driven showroom templates
- No device-group specific templates
- Only 3 device-group specific components
- Degradation for components' output if necessary

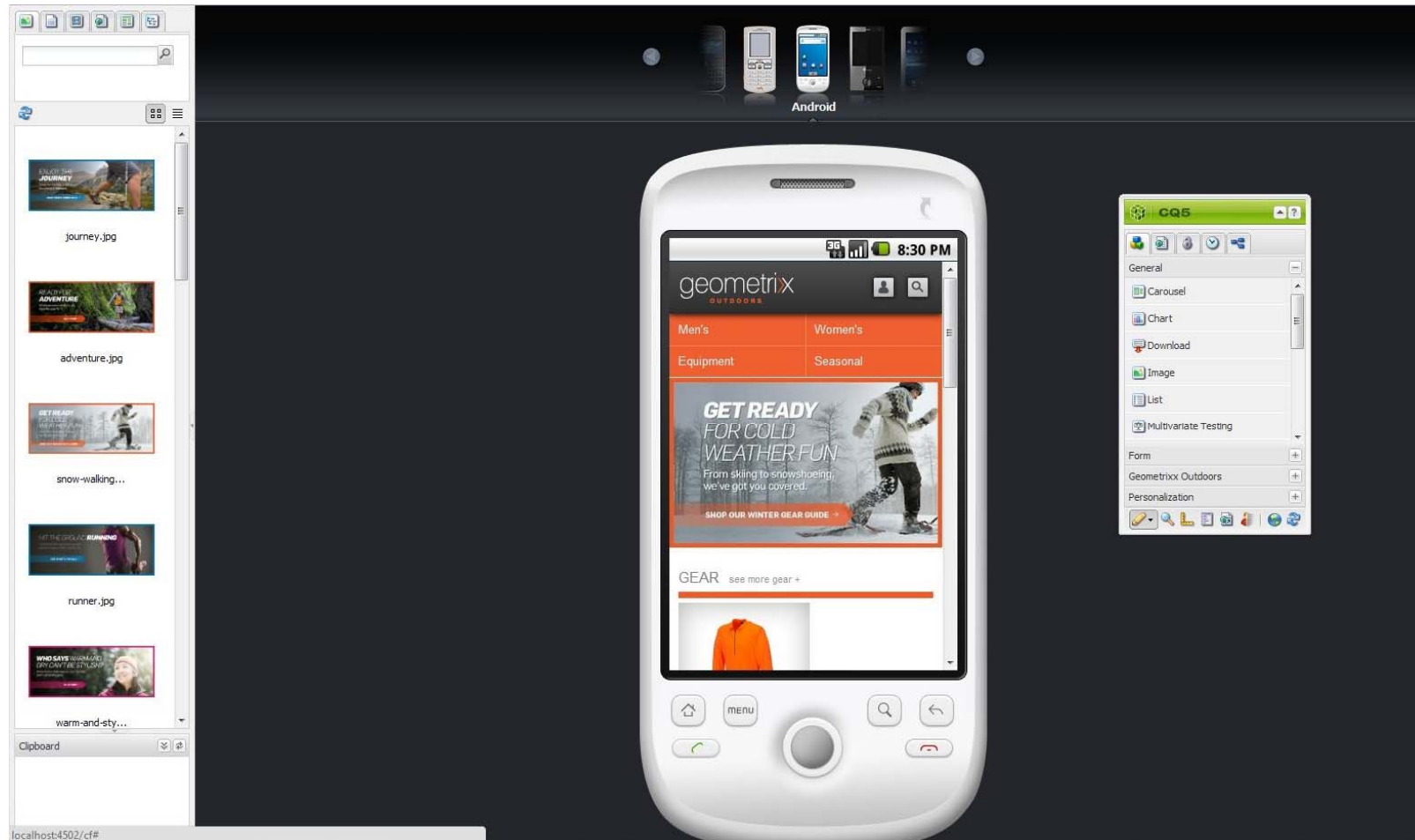
CQ5 Solution / Mobile Features

- Features of CQ5 (as advertised)
 - Emulator Reuse of existing pages & content
 - Drag & drop conversion of pages from desktop to mobile
 - Inline Editing
 - Automatic device detection
 - Authoring with iPads
 - Export websites as native apps
 - And much other cool stuff...



<https://www.day.com/day/en/resources/video/mobile-experience-authoring.html>

CQ5 Solution / Mobile Features



CQ5 Solution / Mobile – Author Issues

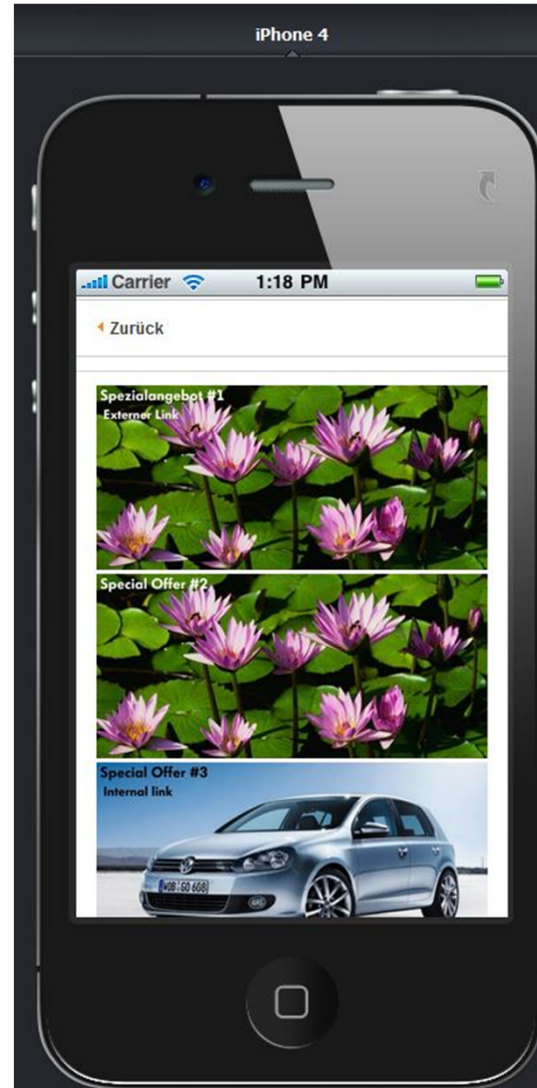
- Some problems for authors
 - Emulator is just a <div/> which reduces the size
 - No device features are emulated
 - Emulator too small for editing (and can't be deactivated)
 - Some frontend features don't work in emulator
- But: there is no real alternative :(

CQ5 Solution / Mobile – Author Issues

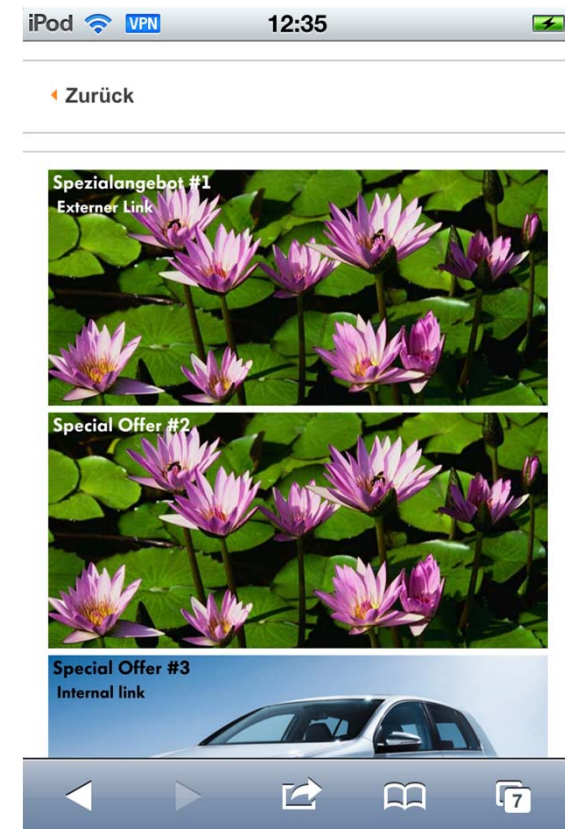
Firefox 3.6



Chrome 21

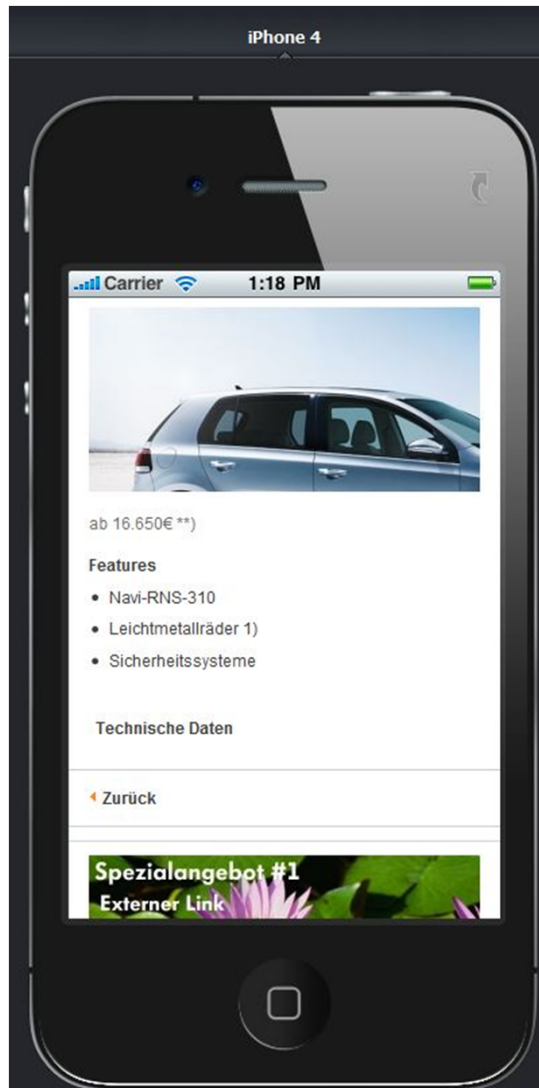


iOS 4

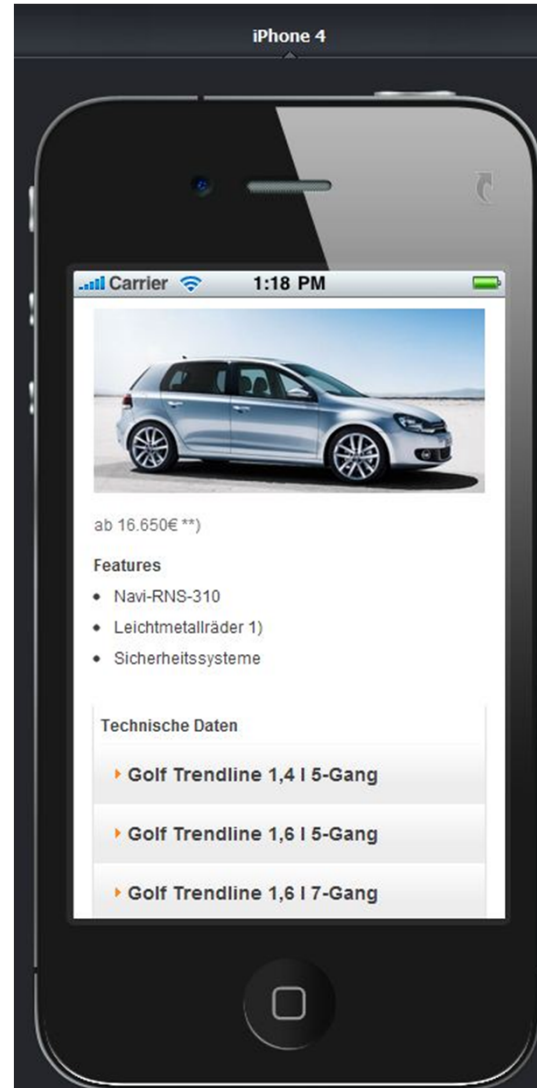


CQ5 Solution / Mobile – Author Issues

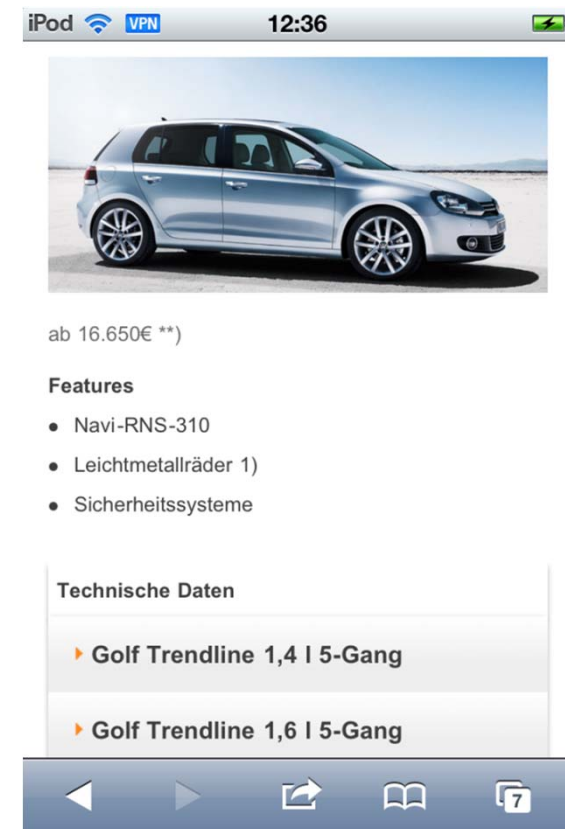
Firefox 3.6



Chrome 21



iOS 4



CQ5 Solution / Mobile – Author Issues

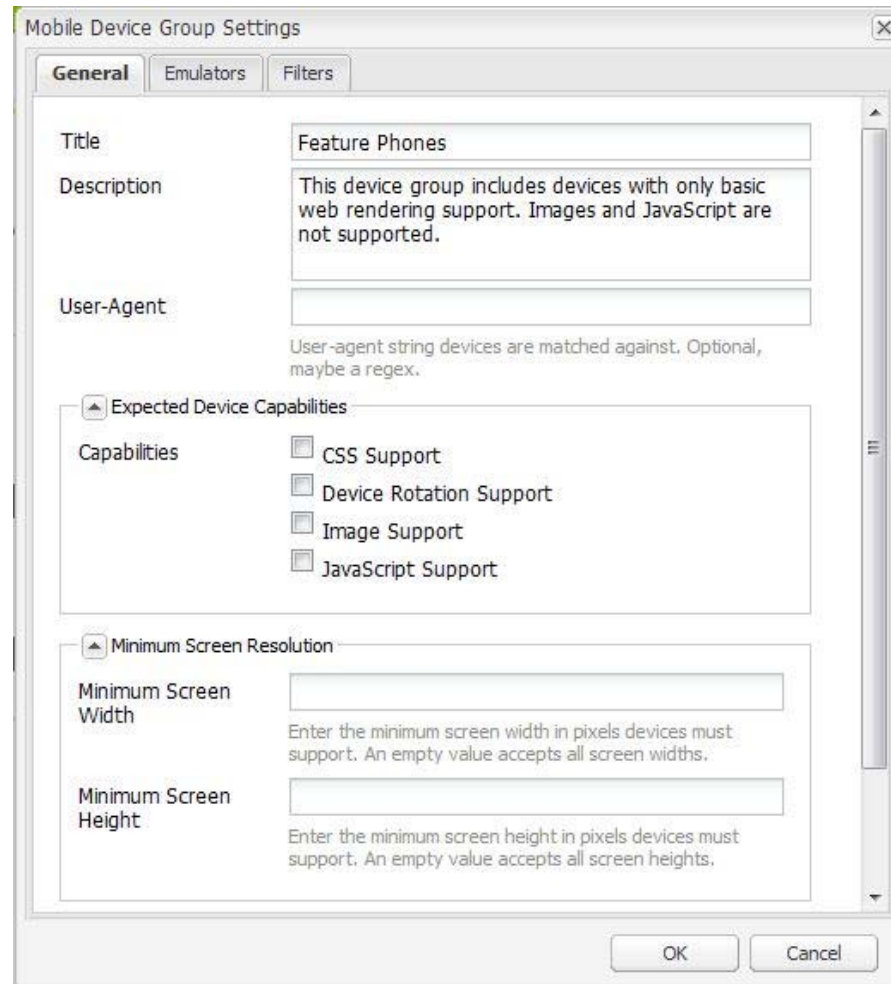
- How we solve(d) them
 - Only support current browsers (no IE)
 - Offer a „Non-Emulator Emulator“
 - No inline editing
 - Enforce usage of physical test-devices
 - Provide feedback to Adobe/Day

- And most important: Talk to the authors

CQ5 Solution / Device detection

- Detection is performed by matching the UA with a xml
- Devices are grouped into DeviceGroups
- Uses WURFL database, which is no OpenSource anymore
- No updates of the database are available
- New devices have to be added manually

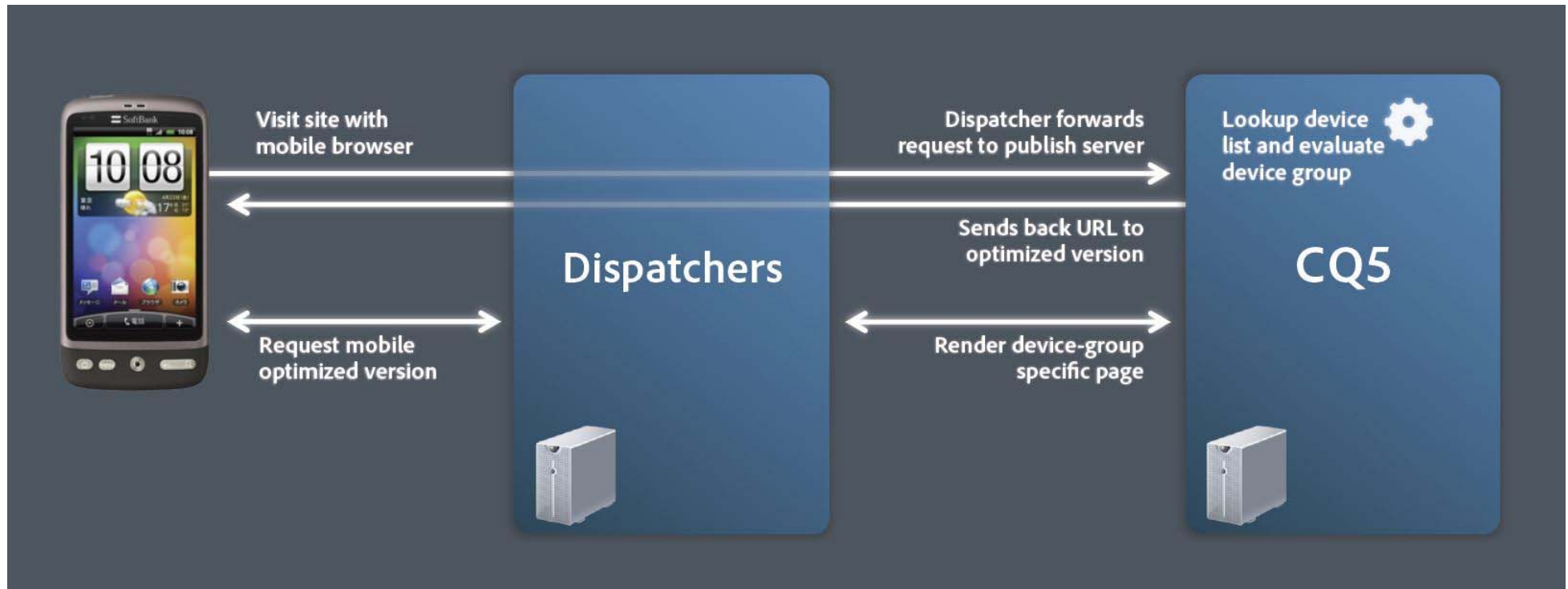
CQ5 Solution / Device detection - Filter

A screenshot of the "Mobile Device Group Settings" dialog box. The "Filters" tab is selected. The "Title" field contains "Feature Phones". The "Description" field contains "This device group includes devices with only basic web rendering support. Images and JavaScript are not supported." The "User-Agent" field is empty. Below it, a note says "User-agent string devices are matched against. Optional, maybe a regex." The "Expected Device Capabilities" section has a collapsed arrow and contains four unchecked checkboxes: "CSS Support", "Device Rotation Support", "Image Support", and "JavaScript Support". The "Minimum Screen Resolution" section has a collapsed arrow and contains two empty text fields: "Minimum Screen Width" and "Minimum Screen Height". Below each field is a note: "Enter the minimum screen width in pixels devices must support. An empty value accepts all screen widths." and "Enter the minimum screen height in pixels devices must support. An empty value accepts all screen heights." The "OK" and "Cancel" buttons are at the bottom right.

CQ5 Solution / Device detection issues

- Only a predefined filter
- New filters can't be parameterized

CQ5 Solution / Device detection



- <http://foobar/mobile/de/mobile.html>
- <http://foobar/mobile/de/mobile.opt.html>

CQ5 Solution / Device detection – Our solution

- We implemented a solution to use a xml file instead of hard-coded filters
 - Allows on-the-fly updates
 - Flexible configuration

```
<device-filter defaultDeviceGroup=„opt“>
  <filter name=„opt“ deviceGroup=„opt“>
    <parameter name=„xhtml_support_level“ pattern=„4“/>
  </filter>
  <filter name=„foo“ deviceGroup=„std“>
    <parameter name=„user_agent“ pattern=„.*myOS5_\d_\d.*“/>
  </filter>
</device-filter>
```

- Mobile Web Development
- Challenges
 - Vendors
 - Operating systems
 - Browsers
 - Screen sizes and resolutions
 - Capabilities
 - Input methods
 - Media support
 - Network connection

Learnings from Volkswagen Base

- We knew how to work in the CQ context
- Folder structure
- Use of SSI to create template and component structure
- Namespace for Javascript
- Prefixed all CSS
- CSS selectors are carefully set

- We have decided early to use HTML 5 Doctype but use XHTML syntax to facilitate possible changes due to lacking support in some devices
- Layout should be adaptive to screen size and device orientation
 - 100% width
 - Responsive Images
 - CSS Media-Queries
 - Javascript Events and DOM inspection

Smart Phones (Optimized Cluster)

- Support most of HTML 5 and CSS3 specs
- Most browsers are Webkit based
 - Safari on iOS
 - Stock Android Browser
 - Chrome on Android (and iOS 😊)
 - BlackBerry OS 6 and later
- Fair to good Javascript performance
- Support CSS transitions/animations
- Large screen, high resolution, touch input

Feature Phones (Standard Cluster)

- Accept HTML even without proper support of HTML 5
- CSS support is fair
- Browser are often proxied and interfere with media and Javascript
 - Nokia Ovi, Opera Mini
- We decided to stick to simple HTML without Javascript
- Smaller screens with clumsy navigation

- Initial development is tested on desktop browsers
 - Webkit in Safari or Chrome
- We use Simulators and Emulators to test layout on desktop
 - iOS Simulator Part of Xcode
 - Android SDK with AVD
(<http://developer.android.com/sdk/index.html>)
 - Opera Mini Emulator
(<http://de.opera.com/developer/tools/mini/>)

Debugging

- Try to catch errors on desktop with build in web inspectors or Firebug
- Debugging on actual devices is difficult but possible
- Mobile browser have options to output Javascript logs
 - Android needs to navigate to about:debug and enable Javascript console
 - iOS has a preference setting for Safari to show console (remote inspection is new in iOS 6)

Test on devices

- Always test on actual devices
- Try to get hold of as many devices as you can
 - At least have an iOS device (iPod touch or iPhone)
 - At least one Android device (try to get one for every mayor Android release 2.2, 2.3, 4.0, 4.1)
 - At least one feature phone (Nokia E Series or older BlackBerry)
 - Open Device Labs #ODL

Remote Web Inspector

- **WEINRE offers remote inspection in Webkit**

- **Part of Apache Cordova**

- <https://git-wip-us.apache.org/repos/asf?p=incubator-cordova-weinre.git>

- **Include script in your source**

- http://debug.phonegap.com/target/target-script-min.js#id_string

- **Open client in Safari or Chrome on desktop**

- http://debug.phonegap.com/client/#id_string

- **Load the target page on any supported browser**

- It will show your connection and you can start using the build-in web inspector of Safari or Chrome



APACHE SLING & FRIENDS TECH MEETUP
BERLIN, 26-28 SEPTEMBER 2012

Thank you for your attention!
Any questions?