Bridging the Gap Between Desktop and Mobile Publishing with Drupal
Drupalcon London 2011

Version 0.1 of the presentation
About ConsumerSearch
Part of the New York Times company
Traffic information
Drupal 5 -> Drupal 6
Mobile Site since 2011
Mobile Traffic

We Simplify The Complex

1. Collect the best reviews
2. Analyze their picks
3. Recommend what to buy
About the speaker

Director of Technology at ConsumerSearch
Twom
http://www.mobiledrupal.com

Expertise
• Solr Search
• Site Migrations
• Mobile Development
• Third-party integration
• Belgian cuisine

Module Maintainer
• Mobile Tools
• WURFL
• Bango Analytics
• Zendesk
Roadmap

Introductions
Mobile Penetration / Stats
Before Development begins
You have a Plan, now Development begins
Unleashing the Power of Drupal
Drupal Strategies & Architecture
Drupal Tools & How Tos
Mobile Testing Techniques / Tools
Q & A
Mobile Penetration

Facebook: 200M mobile users, 2x more active than Desktop users

Twitter Mobile: 50% of total active users, 40% of all tweets

Opportunities
Only 21% of Google’s largest advertisers have a website that is optimized for mobile
Communicate directly with consumers
Social Networking
E-Commerce
Additional Advertising Medium
Gaming
Adoption within the Drupal Community

http://groups.drupal.org/mobile

43 Modules match your search

Modules categories: Mobile

Filter by compatibility: Any

Status: Full projects

Search Modules:

Sort by: Most Installed

Weekly project usage

Weekly Mobile Tools usage by API version

<table>
<thead>
<tr>
<th>Week</th>
<th>5.x</th>
<th>6.x</th>
<th>7.x</th>
<th>Total</th>
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<td>March 13th</td>
<td>24</td>
<td>3900</td>
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</tr>
</tbody>
</table>

Growing number of modules for mobile devices, reflecting increased adoption within the Drupal Community.
Module Matrix

Todo: Matrix showing quick comparison between existing modules:
- Device Detection
- Theme switching
- Redirecting
- Mobile Theme
- Views Integration
- Panels Integration
- Context Integration
Drupal as a multi-platform CMS

Drupal not only targets Desktops, but also tablets and mobile devices.

Flexible content model & templating engine allows Drupal to target multiple devices.

Advantages of using Drupal as a multiplatform CMS

One content store for multiple platforms.

Available tools
- Mobile Tools
- WURFL
- Fusion Mobile
- Context Module
- Services
Drupal 6 / 7 / 8

Some context on the different versions
Drupal as a Desktop focus CMS
Challenges
STAGES OF CREATING A MOBILE PROJECT

Strategy
• Target audience
• Targeted devices
• Business goals
• …

Product Development
• Focus groups
• Defining functionality
• Product flow
• …

IA/Design
• Usability
• Information Architecture
• User Experience
• Navigation

Architecting
• Reusability
• Scalability
• Extendability
• Simplicity
• …

Implementation
• Drupal module development
• Contrib modules
• Extending
• …

Testing
• Device testing
• Functional testing
• Usability testing
ARCHITECTING FOR MOBILE
“APP” VS MOBILE WEBSITE

iPhone/Android/… App

Mobile Website

Drupal supports both strategies!
CREATING AN APPLICATION WITH DRUPAL BACKEND
CASE STUDY: MEDIUM-SIZED NON-PROFIT

Give access to information to members on all devices
Focus on availability of content
Consistency of design across platforms is important
No specific contextual mobile functionality
Value device reach more than design
Creating a responsive template

Media Queries

Fluid CSS

Use Drupal Build Modes

Context Module

- Easy setup
- Large reuse of existing infrastructure
- Multi-content distribution

No mobile first approach
- Desktop-focused default theming behavior needs many changes to fit mobile context
- Hard to create real mobile “experiences” or contextual apps
Use Case: Product Company

Focus on getting crucial information available on mobile devices
- Product information
- Contact details
- Use cases

No specific contextual functionality
- User tasks are similar as on desktop

Need for very high usability and nice design
- Good responsive design must attract customers
Creating a Mobile and Desktop Template

Create a theme specific for mobile and desktop

Share functionality across mobile and desktop

Easy to setup
Large reuse of existing infrastructure
Multi-content distribution

No mobile first approach
Desktop-focused default theming behavior needs many changes to fit mobile context
Hard to create real mobile experiences or contextual apps
Use Case: Big Hospital

Highly-contextual mobile site
- Navigation through campus
- Make simple appointments through mobile
- Shared content store
- Strip down some desktop functionality

Complex Information Architecture

Reuse of content needed
- Doctors’ contacts
- Divisions
- General information
Multisite installation

Create a theme specific for mobile and desktop

Maintain separate configurations for mobile and desktop

Room to create a highly-optimized mobile experience
Large reuse of existing infrastructure
Multi-content distribution

Harder to setup and maintain
OVERVIEW ARCHITECTURE

- **DB Core**
- **Drupal Services**
- **Templateing**
- **Mobile/Desktop**
- **Users Content**
  - **Desktop Configuration**
  - **Shared Configuration**

**Drupal**
- **Core**
- **Contrib**

**App**
- **Responsive**
- **Separate templates**
Step-by-step approach

IMPLEMENTATION:
CREATING THE MOBILE SITE
STEP-BY-STEP: FROM DESKTOP TO MOBILE
Mobile Tools

http://drupal.org/project/mobile_tools

Basic Functionality
Device detection
Device redirection
Theme switching
Detection of device groups
Mobile user roles
Force full view | mobile
Set custom homepage
Custom number of FrontPage nodes
Hide mobile browser scrollbar
Viewport header
Provide mobile build modes
Provide mobile contexts
Provide panel context
Mobile Template

Create your own mobile theme or start from existing contributions

Fusion Mobile  |  Nokia Mobile  |  jQuery Mobile  |  A Cloudy Day Mob
Using Mobile Tools to configure mobile theme

1. Select the mobile theme
2. Tell when to switch theme
3. Additional mobile headers
MOBILE-SPECIFIC HEADERS ADDED BY MOBILE TOOLS

```html
<meta name = "viewport" content = "user-scalable=no, width=device-width, maximum-scale=1.0" />
```

- Default iPhone viewport is 900px
- Set viewport to device width
- Do not allow zooming

```html
<link rel="apple-touch-icon" href="sites/all/themes/northpoint_mobile/webclip.png"
```
HIDE SCROLLBAR USING JAVASCRIPT WIDGET
DEVICE DETECTION: READ USER AGENT STRING

Simple detection

Parse user agent string and search for “iPad”, “Android”, “Nokia”, “Blackberry”

Only information about the device manufacturer

Advanced detection

User device library to match user agent string with

Contains more information like Screen Size, device capabilities

http://drupal.org/project/WURFL
Mobile Tools Configuration

Mobile Tools

Notification / redirection  Theme Switching  External modules

External detection modules

You can let other modules do the device detection or detect if your site is being mobilised.

Device detection module:

- WURFL Group Webkit
- Wurfl
- Mobile Tools

Choose which module is in charge for detecting if the visiting device is a mobile device. The Mobile Tools provides a stand
Content Adaptation
Select Layout
Redirection
Device Detection
Mobile Template Set-Up
REDIRECTION SCHEME SHOULD BE SIMPLE

http://m.domain.tld or http://www.domain.mobi

http://www.domain.com
Configure Redirection

1. Add URLs
2. Enable Redirection
3. Add Exceptions
Override Redirection

Give users control

Add override arguments to your URL
?device=desktop
?device=mobile
?device=auto
?device=<device-group>

http://mobile_tools.local?device=desktop
CONFIGURE MOBILE LAYOUTS: BLOCKS

Using Blocks configuration page
Configure blocks appearing in your Desktop regions
Configure blocks appearing in your Mobile regions
CONFIGURE MOBILE LAYOUTS: CONTEXT MODULE

Conditions
Trigger the activation of this context

<Add a condition>

Context for mobile devices:

- Mobile
- Desktop
- iPhone
- iPod
- iPad
- Android
- Opera Mini
- BlackBerry

Choose for which device type or device group this context must apply
CONTENT ADAPTATION

Different adaptations are possible for mobile devices
- Video adaptation
- Image resizing
- Text summarization (e.g.: provide shorter versions)
- Functional adaptation (e.g. reducing number of form fields)
IMAGE RESIZING USING IMAGECACHE

ImageCache configuration for mobile logo

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ImageCache presets

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Home > Administer > Site building

ImageCache

List  Add new preset

Manage ImageCache presets.

<table>
<thead>
<tr>
<th>Preset Name</th>
<th>Storage</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>desktop_brand_image</td>
<td>Normal</td>
<td>Edit</td>
</tr>
<tr>
<td>mobile_brand_image</td>
<td>Normal</td>
<td>Delete</td>
</tr>
<tr>
<td>mobile_brand_logo</td>
<td>Normal</td>
<td>Flush</td>
</tr>
</tbody>
</table>

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Edit preset: mobile_brand_logo

Preset Namespace:

mobile_brand_logo

The namespace is used in URL's for images to tell imagecache how to process an image. Please only use alphanumeric characters, underscores (_), and hyphens (-) for preset names.

Actions

<table>
<thead>
<tr>
<th>Action</th>
<th>Settings</th>
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</thead>
<tbody>
<tr>
<td>Scale</td>
<td>width 300px</td>
</tr>
</tbody>
</table>

---

New Actions
Configure your build mode

Fields

Formatte
WE LEAD WITH EXPERIENCE

Mobile Template Set-Up

Device Detection

Redirection

Select Layout

Content Adaptation
Q&A AND TESTING
Testing

Usability Testing
- Evaluate your designs and improve
- Test on task completion
- Evaluate usage

Test all your targeted devices
- Simulators
  - iPhone simulator /Android Simulator
  - Blackberry Simulators
  - Opera Mini Simulator

Device banks
- Nokia Remote Access
- Commercial solutions available

Performance Testing
Speeds can vary from 70-135 Kbits/s while new 4G standards will allow for peak values up to 100 Mbit/s
Know your devices upfront!

Enables good client communication. No surprises at the end

Know what to develop for

<table>
<thead>
<tr>
<th>Device</th>
<th>OS</th>
<th>Resolution</th>
<th>Browser</th>
<th>js</th>
<th>CSS-Gradient</th>
<th>css-rounded-corner</th>
<th>Fonts Replacements</th>
<th>Media Queries</th>
<th>Template</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iphone3G</td>
<td>iOS</td>
<td>320x480</td>
<td>Webkit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High end</td>
</tr>
<tr>
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<td>iOS</td>
<td>640x980</td>
<td>Webkit</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>High end</td>
</tr>
<tr>
<td>Samsung Galaxy</td>
<td>Android</td>
<td>480x800</td>
<td>Webkit</td>
<td></td>
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<td></td>
<td>High end</td>
</tr>
<tr>
<td>Tourch 9800</td>
<td>BB v6.x</td>
<td>360x480</td>
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<td>High end</td>
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<tr>
<td>BB Pearl 9100</td>
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<td>360x400</td>
<td>BB 4.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Low end</td>
</tr>
</tbody>
</table>

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QUESTIONS
Thank you

Contact