Responsive Images & Slideshows

Brian Smith
Director’s Cut

This includes a lot more information than presented during the conference session.

Responsive Web Design
Responsive Images
How big is your img? (Not responsive)

2048 x 1536 pixels
scaled to 1800 x 1350 pixels
438 KB

2048 x 1536 pixels
scaled to 256 x 192 pixels
438 KB
How big is ur img? (Responsive)

2048 x 1536 pixels
scaled to 1800 x 1350 pixels
438 KB

350 x 263 pixels
scaled to 256 x 192 pixels
47 KB
Hey, Girl ... Tell me about yourself.

320 pixels wide, etc.

We need pic for screen <= 480px.

OK

(resizes, fetches)

Here ya go ...

Groovy! Thx!
What You’ll Need

• Current PHP-based CMS
• Responsive theme
• Image upload interface
• Image handling – create resized versions (core in WordPress and Drupal)
• Add-on to map breakpoints to image versions
• For slideshows: FlexSlider
• For adaptive layout: Mobile Detect (or similar)
Theme
WordPress: WooThemes

www.woothemes.com
Drupal: AdaptiveTheme

Responsive HTML5 Drupal 7 Base Theme

Adaptivetheme is a powerful theme framework designed from the ground up to power modern, cross browser/cross device websites using responsive design techniques.

Adaptivetheme allows you to set up specific layouts for different device groups - such as desktop, tablet and smartphone - all with zero coding. Its all easy point-and-click configuration.

The layout system is entirely pluggable, so while AT ships with many layout options by default you can easily extend this in your sub-theme with your own layout plugins.

drupal.org/project/adaptivetheme
Drupal: ThemeBrain

Responsive Web Design

www.themebrain.com
Drupal: SooperThemes
Media Queries
(min-/max-) width
(min-/max-) device-width
(min-/max-) resolution
Smartphone portrait:
only screen and (max-width: 480px)

Retina display:
only screen and (-webkit-min-device-pixel-ratio: 2),
only screen and ( min--moz-device-pixel-ratio: 2),
only screen and ( min-device-pixel-ratio: 2),
only screen and ( min-resolution: 192dpi),
only screen and ( min-resolution: 2dppx)
Arrgh ... Microsoft!

- CSS3 media queries not supported in IE < 9 or IE Mobile 7.
- Conditional stylesheet needed, particularly for Windows phones ... [if IEMobile]
- Does anyone actually have a Windows 7 phone?
Breakpoints

• Usually 3 to 5 breakpoints defined.
• E.g.: Layouts for smartphone, tablet portrait, tablet landscape, desktop, etc.
• E.g. ...

max-width: 480px
min-width: 481px AND max-width: 768px
min-width: 769px AND max-width: 992px
min-width: 993px AND max-width: 1382px
min-width: 1383px
Recommended Reading

Posts Tagged ‘Responsive Design’

We are pleased to present below all posts tagged with ‘Responsive Design’.

Responsive Web Design With Physical Units

From Radu Chelariu

March 21st, 2013  33 Comments

This post should be titled “Getting Ahead of Yourself.” “…By a Few Years,” actually. Here’s the deal: at the time I’m writing this, early 2013, there’s no way to accurately design for the Web using physical units, nor will there be for a very long time. But there is a way ...

Read more.

www.smashingmagazine.com
Plug-Ins
WordPress Options

- **WP Resolutions** – based on Adaptive Images
github.com/JorgenScott/WP-Resolutions
- **Hammy** – implementation of `<picture>`
.wordpress.org/extend/plugins/hammy
- **Simpler Responsive Images** –
.wordpress.org/extend/plugins/simple-responsive-images
Drupal 7 Options

• **Picture/Breakpoints** – implements Picturefill
  drupal.org/project/picture
  drupal.org/project/breakpoints

• **Adaptive Image** – based on Adaptive Images
  drupal.org/project/adaptive_image

• **Adaptive Image Styles** –
  drupal.org/project/ais
CMS options may be built or based on code that DIY developers could also make use of …
Adaptive Images
Deliver small images to small devices

Adaptive Images detects your visitor's screen size and automatically creates, caches, and delivers device-appropriate re-scaled versions of your website's embedded HTML images. No mark-up changes needed. It is intended for use with Responsive Designs and to be combined with Fluid Image techniques.

Why? Because your site is being increasingly viewed on smaller, slower, low-bandwidth devices. On those devices your desktop-centric images load slowly, cause UI lag, and cost you and your visitors unnecessary bandwidth and money. Adaptive Images fixes that.

Features

- Works on your existing site
- Requires no mark-up changes
- Device agnostic
- Mobile-first philosophy
- Easy & powerful customisations
- Up and running within minutes

Set-up

- Add one line of JavaScript into the <head> of your site.
- Add your CSS Media Query values into $resolutions in the PHP file.

Requirements

- Apache 2
- PHP 5.x
- GD lib *

* Normally a default with PHP

See more features
You're done. Seriously.
Picturefill: A `<picture>` element polyfill

For more info: see project home.
Breakpoints
How many? Where to break?

<table>
<thead>
<tr>
<th>NAME</th>
<th>BREAKPOINT, @MEDIA ...</th>
<th>MULTIPLIERS</th>
<th>SOURCE</th>
<th>STATUS</th>
<th>OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>mobile-port</td>
<td>(max-width: 320px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
<tr>
<td>full</td>
<td>(min-width: 1025px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
<tr>
<td>med</td>
<td>(max-width: 1024px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
<tr>
<td>narrow</td>
<td>(max-width: 870px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
<tr>
<td>mobile</td>
<td>(max-width: 600px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CSS/Retina Pixel Math

**Retina:**
2px X 2px

**CSS:**
1px X 1px
Map Breakpoint to Resized Image
Multiple Mapping Profiles?
To-Do List

• Add size for each breakpoint.
• Setting image sizes for breakpoints takes some trial and error.
• Double up (x2) for Retina.
• If possible, create separate resize profiles for main content and sidebars.
• Upload really large images – storage is cheap and the future is HD.
• View at all sizes after upload (save your users’ time).
Slidescnows
FlexSlider
An awesome, fully responsive jQuery slider toolkit.

- Simple, semantic markup
- Supported in all major browsers
- Horizontal/vertical slide and fade animations
- Multiple slider support, Callback API, and more
- Hardware accelerated touch swipe support
- Custom navigation options
- Compatible with the latest version of jQuery

DOWNLOAD FLEXSLIDER OR Live Demo
WordPress Options

- **WooThemes** – FlexSlider built into some
  www.woothemes.com
- **Responsive Slider for Developers** –
  wordpress.org/extend/plugins/flexslider-hg
- **Meta Slider** –
  wordpress.org/extend/plugins/ml-slider
Drupal 7 Options

• **FlexSlider Module** –
drupal.org/project/flexslider

• **FlexSlider Views Slideshow** –
drupal.org/project/flexslider_views_slideshow

• **FlexSlider Entityreference** –
drupal.org/project/flexslider_entityreference
Use Your Responsive Images

**IMAGE STYLE**

**Image type**
- Image Style
- Picture Mapping

Choosing picture mapping will give you a truly responsive slider. Flexslider is responsive because it will resize the images for smaller screens, but it will still load the large image. With picture mappings, a smaller image will be loaded for smaller screens (and thus less data transfer).

**Normal picture mapping**
- responsive

Picture mapping for the main stage images

**Normal image style**
- flexslider_full

Image style for the main stage images. If you selected Picture Mapping above, this image style will be used as a fallback.

**Thumbnail image style**
- flexslider_thumbnail

Image style for the thumbnail images.
Options Galore!

**General Slideshow and Animation Settings**

**Navigation and Control Settings**

**Advanced Options**

- **Next/Previous Controls**
  - Add controls for previous/next navigation

- **Paging Controls**
  - **On**

  Add controls to jump to individual slides. (Note: set to "On" if using Manual Controls)

- **Keyboard Navigation**
  - Allow slider navigating via keyboard left/right keys

- **Multiple Keyboard**
  - Allow keyboard navigation to affect multiple sliders.

- **Mousewheel Navigation**
  - Allow slider navigating via mousewheel

- **Touch**
  - Allow touch swipe navigation.

- **Previous Link Text**
  - **Previous**

  Set the text for the "previous" control item. *Text translation can be controlled using the String Overrides module.*

- **Next Link Text**
  - **Next**

  Set the text for the "next" control item. *Text translation can be controlled using the String Overrides module.*
Slideshow Demonstration

Talking books for all ages
Adaptive Design

• Gets information about the user’s device and web browser, e.g. using Mobile Detect.
• Varies the content delivered, based on the device.
• May be used in conjunction with CSS-based responsive design.
Mobile Detect v. 2.5.8

The lightweight PHP class for detecting mobile devices.

This is a computer. Your UA is Mozilla/5.0
(Windows NT 6.1; WOW64; rv:19.0) Gecko/20100101 Firefox/19.0
WordPress Options

• **Mobile Detector** –
  wordpress.org/extend/plugins/wp-mobile-detector

• **WP Mobile Detect** –
  wordpress.org/extend/plugins/wp-mobile-detect
Drupal 7 Options

• AdaptiveTheme 7.x-3.x –
drupal.org/project/adaptivetheme

• Mobile Detect –
drupal.org/project/mobile_detect

• Browscap / Browscap Block –
drupal.org/project/browscap
drupal.org/project/browscap_block
Drupal Details (Extra!)
Responsive Images in Drupal 7

- Picture - drupal.org/project/picture
- Breakpoints - drupal.org/project/breakpoints
- Requires Chaos Tools – drupal.org/project/ctools

OR ...

- Adaptive Image Styles – drupal.org/project/ais

Both approaches use Imagecache (in Drupal 7 core)
### Image Field in Content Type

The image below shows the interface for managing fields in a content type. The interface includes options for adding new fields and selecting widgets for these fields. The table below the interface lists various fields with their labels, machine names, field types, and associated widgets.

<table>
<thead>
<tr>
<th>Label</th>
<th>Machine Name</th>
<th>Field Type</th>
<th>Widget</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>title</td>
<td>Node module element</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Image</td>
<td>field_slide_image</td>
<td>Image</td>
<td></td>
<td>edit, delete</td>
</tr>
<tr>
<td>Text</td>
<td>field_slide_text</td>
<td>Long text</td>
<td>Text area (multiple rows)</td>
<td>edit, delete</td>
</tr>
<tr>
<td>URL redirects</td>
<td>redirect</td>
<td>Redirect module form elements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>URL path settings</td>
<td>path</td>
<td>Path module form elements</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Below the table, there are sections for adding new and existing fields. When adding a new field, you can select a field type and a widget. When adding an existing field, you can select an existing field and a widget.

**Add new field**
- **Label**: Enter the label for the new field.
- **Type of data to store**: Select the type of data to store.
- **Form element to edit the data**: Select the widget for editing the data.

**Add existing field**
- **Label**: Enter the label for the existing field.
- **Field to share**: Select the existing field to share.
- **Form element to edit the data**: Select the widget for editing the data.
Configuration

**MEDIA**

- **File system**
  Tell Drupal where to store uploaded files and how they are accessed.

- **Breakpoints**
  Manage breakpoints

- **FlexSlider**
  Administer FlexSlider presets.

- **Image styles**
  Configure styles that can be used for resizing or adjusting images on display.

- **IMCE**
  Control how your image/file browser works.

- **Picture**
  Manage Pictures

- **Image toolkit**
  Choose which image toolkit to use if you have installed optional toolkits.
Breakpoints: Set Breakpoints

You can manage all your breakpoints on this screen, if one of your themes has breakpoints defined inside the .info file they will be shown here.

- To create a new breakpoint, you have to enter a name and a media query (ex. (min-width: 15em)).
- All breakpoints can be enabled or disabled so they cannot be used by other modules.
- For each breakpoint you can define what multipliers have to be available (needed to support ‘retina’ displays).
- Breakpoints you created yourself can be deleted.
- You can group multiple breakpoints in a group by using ‘Add a new group’, so other modules can easily interact with them.

<table>
<thead>
<tr>
<th>NAME</th>
<th>BREAKPOINT, MEDIA</th>
<th>MULTIPLIERS</th>
<th>SOURCE</th>
<th>STATUS</th>
<th>OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>full</td>
<td>(min-width: 1025px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
<tr>
<td>med</td>
<td>(max-width: 1024px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
<tr>
<td>narrow</td>
<td>(max-width: 768px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
<tr>
<td>mobile</td>
<td>(max-width: 320px)</td>
<td>1.5x, 2x</td>
<td>user (custom)</td>
<td>Enabled</td>
<td>Disable, Delete, Export</td>
</tr>
</tbody>
</table>

Show row weights

Save
Breakpoints: Image Styles

Image style

- large

This image style will be cloned to create the responsive style.

Image style base name

- responsive

The name is used in URLs for generated images. Use only lowercase alphanumeric characters, underscores (_), and hyphens (-).

breakpoints

- full (min-width: 1025px), multiplier: 1x
- med (max-width: 1024px), multiplier: 1x
- narrow (max-width: 768px), multiplier: 1x
- mobile (max-width: 320px), multiplier: 1x

Select the breakpoints to create an image style for.

Create
Image Styles: Set Size for Each Style

Edit responsivecustom_user_narrow_1x style

Preview

original (view actual size)

responsivecustom_user_narrow_1x (view actual size)

Image style name

responsivecustom_user_narrow_1x

The name is used in URLs for generated images. Use only lowercase alphanumeric characters, underscores (_), and hyphens (-).

EFFECT | OPERATIONS
---|---
Scale 300x300 | edit delete

Select a new effect
Add

Update style
Picture: Map Breakpoints to Styles
Content Type: Image Field Display

Content items can be displayed using different view modes: Teaser, Full content, Print, RSS, etc. Teaser is a short format that is typically used in lists of multiple content items. Full content is typically used when the content is displayed on its own page.

Here, you can define which fields are shown and hidden when content is displayed in each view mode, and define how the fields are displayed in each view mode.

<table>
<thead>
<tr>
<th>FIELD</th>
<th>LABEL</th>
<th>FORMAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image</td>
<td>&lt;Hidden&gt;</td>
<td>Picture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Picture group: responsive Automatic fallback</td>
</tr>
<tr>
<td>Text</td>
<td>&lt;Hidden&gt;</td>
<td>Default</td>
</tr>
</tbody>
</table>

Hidden

No field is hidden.

CUSTOM DISPLAY SETTINGS

Save
WYSIWYG Editor Integration

- **WYSISYG module w/ CKEditor** – drupal.org/project/wysiwyg ckeditor.com
- **Media 7.x-2.x** – drupal.org/project/media
- **File Entity** – drupal.org/project/file_entity
- **Patches may be needed! See issues queue for Picture module (search for “wysiwyg”).**
FlexSlider Integration

- FlexSlider library - www.woothemes.com/flexslider
- FlexSlider – drupal.org/project/flexslider

Requires:
- Chaos Tools – drupal.org/project/ctools
- Libraries – drupal.org/project/libraries
- Views – drupal.org/project/views
## Enable FlexSlider Modules

<table>
<thead>
<tr>
<th>Module</th>
<th>Version</th>
<th>Description</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>FlexSlider</td>
<td>7.x-2.0-alpha1</td>
<td>Integrate the FlexSlider 2 library with Drupal</td>
<td>Libraries (enabled), Chaos tools (enabled), Image (enabled), File (enabled), Field (enabled),</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Field SQL storage (enabled)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Required by: FlexSlider Fields (enabled), FlexSlider Views Style (enabled), FlexSlider Example</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(disabled), FlexSlider Picture (enabled)</td>
</tr>
<tr>
<td>FlexSlider Example</td>
<td>7.x-2.0-alpha1</td>
<td>Sample implementation of FlexSlider</td>
<td>Context (missing), Features (missing), FlexSlider (enabled), Libraries (enabled), Chaos tools</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(enabled), Image (enabled), File (enabled), Field (enabled), Field SQL storage (enabled),</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FlexSlider Fields (enabled), FlexSlider Views Style (enabled), Views (enabled), Menu (enabled),</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Strongarm (missing)</td>
</tr>
<tr>
<td>FlexSlider Fields</td>
<td>7.x-2.0-alpha1</td>
<td>Adds a display mode in Fields for FlexSlider</td>
<td>FlexSlider (enabled), Libraries (enabled), Chaos tools (enabled), Image (enabled), File (enabled),</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Field (enabled), Field SQL storage (enabled)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Required by: FlexSlider Example (disabled), FlexSlider Picture (enabled)</td>
</tr>
<tr>
<td>FlexSlider Picture</td>
<td>7.x-1.1+25-dev</td>
<td>Integrates the Picture module with the FlexSlider module for a truly responsive slider.</td>
<td>Picture (enabled), Breakpoints (enabled), Chaos tools (enabled), FlexSlider (enabled), Libraries</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(enabled), Image (enabled), File (enabled), Field (enabled), Field SQL storage (enabled),</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>FlexSlider Fields (enabled)</td>
</tr>
<tr>
<td>FlexSlider Views Style</td>
<td>7.x-2.0-alpha1</td>
<td>Adds a Views style plugin for FlexSlider</td>
<td>Views (enabled), Chaos tools (enabled), FlexSlider (enabled), Libraries (enabled), Image (enabled),</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Field (enabled), Field SQL storage (enabled)</td>
</tr>
</tbody>
</table>
# FlexSlider Configuration

## IMAGE STYLE

**Image type**

- Image Style
- Picture Mapping

Choosing picture mapping will give you a truly responsive slider. Flexslider is responsive because it will resize the images for smaller screens, but it will still load the large image. With picture mappings, a smaller image will be loaded for smaller screens (and thus less data transfer).

### Normal picture mapping

- responsive

Picture mapping for the main stage images.

### Normal image style

- flexslider_full

Image style for the main stage images. If you selected Picture Mapping above, this image style will be used as a fallback.

### Thumbnail image style

- flexslider_thumbnail

Image style for the thumbnail images.
Options Galore!

**General Slideshow and Animation Settings**

**Navigation and Control Settings**

**Advanced Options**

- **Next/Previous Controls**
  - Add controls for previous/next navigation

- **Paging Controls**
  - On

  Add controls to jump to individual slides. (Note: set to "On" if using Manual Controls)

- **Keyboard Navigation**
  - Allow slider navigating via keyboard left/right keys

- **Multiple Keyboard**
  - Allow keyboard navigation to affect multiple sliders.

- **Mousheel Navigation**
  - Allow slider navigating via mousewheel

- **Touch**
  - Allow touch swipe navigation.

**Previous Link Text**

**Next Link Text**

Set the text for the "previous" control item. Text translation can be controlled using the String Overrides module.

Set the text for the "next" control item. Text translation can be controlled using the String Overrides module.
Create View w/ Image Field
Select Format

Block: How should this view be styled

For: All displays

- FlexSlider
- Grid
- HTML list
- Jump menu
- Slideshow
- Table
- Unformatted list

If the style you choose has settings, be sure to click the settings button that will appear next to it in the View summary. You may also adjust the settings for the currently selected style.

Apply (all displays)  Cancel
Praesent accumsan lacus quis velit porttitor non scelerisque ligula tincidunt. In sed ligula magna. Quisque eu eros id sem commodo consetetur. Curabitur enim nulla, porta eget suscipit eget, euismod ac lacus.
Narrower Screen
Adaptive Design in Drupal 7

• **AdaptiveTheme 7.x-3.x** –
drupal.org/project/adaptivetheme

• **Browscap / Browscap Block** –
drupal.org/project/browscap
drupal.org/project/browscap_block

• **Mobile Detect** – better!
drupal.org/project/mobile_detect
# Block Administration

## Visibility settings

<table>
<thead>
<tr>
<th><strong>Pages</strong></th>
<th>Restricted to certain pages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Content types</strong></td>
<td>Not restricted</td>
</tr>
<tr>
<td><strong>Is Mobile</strong></td>
<td>Show in mobile only</td>
</tr>
<tr>
<td><strong>Roles</strong></td>
<td>Not restricted</td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td>Not customizable</td>
</tr>
</tbody>
</table>

**Hide or show this block in mobile devices**

- Not restricted
- Hide in mobile
- Show in mobile only
Content Creation Form

Image *

![Image](GoodBooksGoodFriendslarge.jpg) (437.53 KB) [Remove]

Alternate text

Talking books for all ages

This text will be used by screen readers, search engines, or when the image cannot be loaded.

Important: The Alt text will replace the longer text field on smartphones. Make sure it describes the service in the photo.

Text *

Talking Book and Braille Service is provided free of charge to children, teens, and adults who are blind, visually impaired, or have physical disabilities preventing the reading of standard print.

Audiobooks are available in cartridge/player format or as downloadable e-audio.
Create Alternative Slideshows, Adaptively Apply for Mobile

Talking Book and Braille Service is provided free of charge to children, teens, and adults who are blind, visually impaired, or have physical disabilities preventing the reading of standard print.

Audiobooks are available in cartridge/player format or as downloadable e-audio.

This mobile version has fewer images, less text.
brian.smith@railslibraries.info