

1. About the Denver LAMP meetup group

1. Host a presentation every 1-3 months
2. Cover 1-3 related topics per meeting
3. Goal is to provide high quality education and networking, for free

2. The purpose of Denver LAMP meetups

1. To keep up with web development technologies
2. To explore new web developer job opportunities
3. To meet and hire web developers for job openings
4. To meet related specialists in the Denver area

3. Volunteers needed for several positions

Why Responsive Web Design?

Mashable article: [Why 2013 Is the Year of RWD](http://mashable.com/2012/12/11/responsive-web-design/)

- <http://mashable.com/2012/12/11/responsive-web-design/>

- Highlights...

- Media companies like ours are seeing a major shift in the consumption habits of their audiences
- Today, 30% of Mashable's traffic is mobile. By the end of next year, this may exceed 50%
- Last month, Mashable was accessed on more than 2,500 different devices
- While media companies should offer apps, it's clear that having a great mobile website should be the priority

Why Responsive Web Design?

Mashable article: [Why 2013 Is the Year of RWD](http://mashable.com/2012/12/11/responsive-web-design/)

- <http://mashable.com/2012/12/11/responsive-web-design/>

- Highlights...

- The solution is to make a website that works equally well on every device
- Given the rapid adoption of tablets and smartphones — and the fact that users currently seem to prefer reading their news on the mobile web rather than in apps — *I think it's inevitable that 2013 will be the year that responsive design takes off.*

What is Responsive Web Design?

RWD is...

- crafting websites to provide an optimal viewing experience across a wide range of devices
- adapting the layout to the viewing environment

RWD aims to minimize...

- Resizing
- Panning
- Scrolling

Monitors vs. Tablets vs. Phones

- RWD is crafting websites to provide an optimal viewing experience across a wide range of devices



1280px vs. 1024px vs. 640px vs. 480px vs. 320px

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2011 Tablets

- 8 in (20 cm) screen and larger
 - Apple iPad 2nd Gen, HP Touchpad, Motorola Xoom, Samsung Galaxy Tab, etc.
 - 1024x768, 1280x800, etc.
- 5–7 in (13–18 cm) screen
 - BlackBerry Playbook, Kindle Fire, Nook Tablet, Samsung Galaxy Note, etc.
 - 1024x600, 1280x800, etc.

2012 Tablets

- 8 in (20 cm) screen and larger
 - Amazon Kindle Fire HD, Apple iPad 3rd and 4th Gen, Google Nexus 10, Microsoft Surface Pro and RT, Nook HD+, etc.
 - 1920x1200, 2048x1536, 2560x1600, 1920x1080, 1366x768, 1920x1280, etc.
- 5–7.99 in (13–20.3 cm) screen
 - Apple iPad mini, Google Nexus 7, Kindle Fire HD, Nook HD, etc.
 - 1024x768, 1280x800, 1440x900, etc.

2013 Tablets

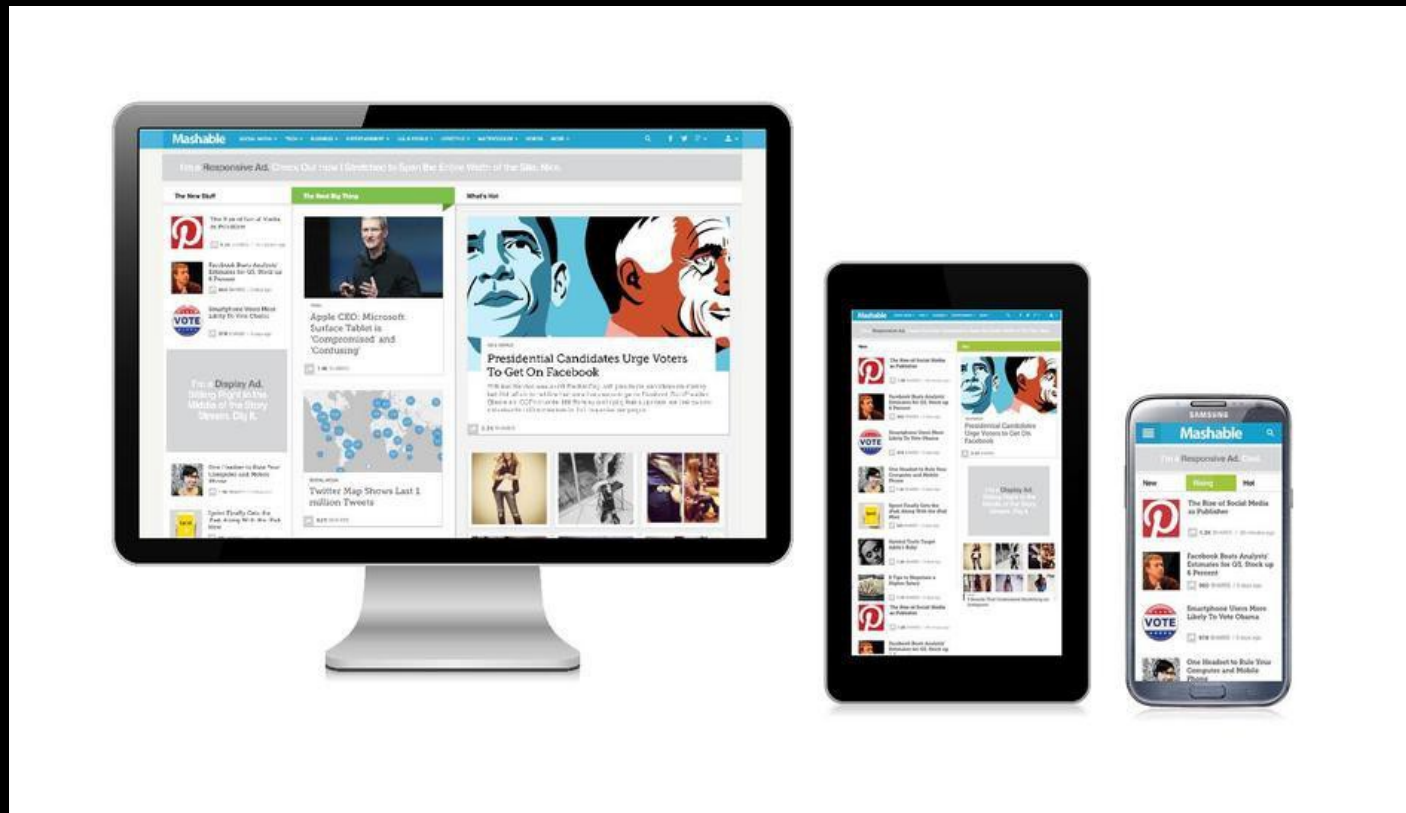
- For the first time since 2001, PC sales in 2013 are projected to be lower than they were in the previous year
- Tablet sales are...
 - expected to exceed 100 million in 2013
 - forecast to increase at a compound annual growth rate of 40.2% over the period to 2015

Mobile Phones

- Apple iPhone 3GS, 4, 4S, 5
 - 480x320, 960x640, 1136x640
- Motorola Droid 3, 4, X, Razr
 - 854x480, 960x540
- The average amount of traffic per smartphone in 2012 was 342 MB per month, up from 189 MB in 2011
- 43% of US internet users access the internet via a mobile device, up from 37% in 2011

What is Responsive Web Design?

- RWD is adapting the layout to the viewing environment



1280px vs. 768px vs. 320px

Image Copyright mashable.com

What is Twitter Bootstrap?

- Download compiled and minified versions of CSS, JS and images
 - <http://twitter.github.com/bootstrap/getting-started.html>
- Bootstrap comes equipped with HTML, CSS, and JS for...
 - Button groups, button dropdowns, navigational tabs, navigational pills, navigational lists, navbar, labels, badges, page headers, thumbnails, alerts, progress bars, modals, dropdowns, tooltips, popovers, accordion, carousel, typeahead, etc.

HTML5, CSS3 and Media Queries

- CSS3 media queries are...
 - responsible for the magic behind RWD
 - able to detect the resolution of the device it's being served on
 - an extension of the CSS3 @media rule
- @media (min-width: 768px) and max-width: 979px) { }
- @media (max-width: 767px) { }
- @media (min-width: 1200px) { }

HTML5, CSS3 and Media Queries

- HTML5 will be the new standard for HTML
- The previous version of HTML, HTML 4.01, came out in 1999
- HTML5 layout starts with...
 - `<!DOCTYPE html>`
 - `<html lang="en"><head><meta charset="utf-8">`
 - `<meta name="viewport" content="width=device-width, initial-scale=1.0">`

HTML5, CSS3 and Media Queries

- Twitter Bootstrap CSS files...
 - `<link href="/bootstrap.css" rel="stylesheet">`
 - `<link href="/bootstrap-responsive.css" rel="stylesheet">`
 - `<link href="/custom-bootstrap.css" rel="stylesheet">`
 - `</head>`
 - `<body>`

HTML5, CSS3 and Media Queries

- Twitter Bootstrap layout div tags...
 - `<div class="container">`
 - `<div class="row">`
 - `<div class="span12">Level 1</div>`
 - `<div class="row">`
 - `<div class="span4">Level 2</div>`
 - `<div class="span8">Level 2</div>`
 - `</div>`
 - `</div>`
 - `</div>`

HTML5, CSS3 and Media Queries

- jQuery and Twitter Bootstrap javascript files...
 - `<script src="http://code.jquery.com/jquery.js">
</script>`
 - `<script src="/bootstrap.js"></script>`
 - `<script src="/custom-javascript.js"></script>`
 - `</body>`
 - `</html>`

HTML5, CSS3 and Media Queries

- Browsers *without* CSS3 support (IE8) and/or *with* a display width between 980-1199 pixels
- /bootstrap.css
 - .span12 { width: 940px; }
 - .span4 { width: 300px; }
 - .span8 { width: 620px; }

HTML5, CSS3 and Media Queries

- Browsers *with* CSS3 support and a display width greater than or equal to 1200 pixels
- /bootstrap-responsive.css
 - @media (min-width: 1200px) {
 - .span12 { width: 1170px; }
 - .span4 { width: 370px; }
 - .span8 { width: 770px; }
 - }

HTML5, CSS3 and Media Queries

- Browsers *with* CSS3 support and a display width between 768-979 pixels
- /bootstrap-responsive.css
 - @media (min-width:768px) and (max-width:979px){
 - .span12 { width: 724px; }
 - .span4 { width: 228px; }
 - .span8 { width: 476px; }
 - }

HTML5, CSS3 and Media Queries

- Browsers *with* CSS3 support and a display width less than 768 pixels
- /bootstrap-responsive.css
 - @media (max-width: 767px) {
 - .span12 { width: 100%; }
 - }

HTML5, CSS3 and Media Queries

- Browsers *with* CSS3 support and a display width less than or equal to 480 pixels
- /bootstrap-responsive.css
 - @media (max-width: 480px) { }
- Browsers *with* CSS3 support and a display width greater than or equal to 980 pixels
- /bootstrap-responsive.css
 - @media (min-width: 980px) { }

What is a Fluid Grid System?

- Fluid grid system...
 - calls for page element sizing to be in relative units like percentages or EMs
 - rather than absolute units like pixels or points
 - uses percentages, not pixels, for setting widths
- One problem for RWD is that banner advertisements and videos are not fluid

HTML5, CSS3 and Media Queries

- Twitter Bootstrap *fluid grid* layout div tags...
 - `<div class="container-fluid">`
 - `<div class="row-fluid">`
 - `<div class="span12">Level 1</div>`
 - `<div class="row-fluid">`
 - `<div class="span4">Level 2</div>`
 - `<div class="span8">Level 2</div>`
 - `</div>`
 - `</div>`
 - `</div>`

HTML5, CSS3 and Media Queries

- [/bootstrap.css](#)

- `.row-fluid [class*="span"] { margin-left: 2.564102564102564%; *margin-left: 2.5109110747408616%; }`
- `.row-fluid [class*="span"]:first-child { margin-left: 0; }`
- `.row-fluid .span12 { width: 100%; *width: 99.94680851063829%; }`
- `.row-fluid .span4 { width: 31.914893617021278%; *width: 31.861702127659576%; }`
- `.row-fluid .span8 { width: 65.95744680851064%; *width: 65.90425531914893%; }`

Twitter Bootstrap Fluid Grid

- Flexible images are sized in relative units (up to 100%), so as to prevent them from displaying outside their containing element
- One problem for RWD is that banner advertisements and videos are not fluid
- Creative jQuery can solve the video problem

Fluid Video via jQuery

- `Var $e_v = $("iframe[src^='http://player.vimeo.com',
iframe[src^='http://www.youtube.com'], object,
embed"),$fluid = $("figure");`
- `$e_v.each(function() { $(this); });`
- `$(window).resize(function() {`
- `var newWidth = $fluid.width();`
- `$e_v.each(function() { $(this); }`
- `}).resize();`

Twitter Bootstrap Scaffolding

- Below is a table of the available classes and their effect on a given media query layout

Class	Phones 767px and below	Tablets 979px to 768px	Desktops Default
<code>.visible-phone</code>	Visible	Hidden	Hidden
<code>.visible-tablet</code>	Hidden	Visible	Hidden
<code>.visible-desktop</code>	Hidden	Hidden	Visible
<code>.hidden-phone</code>	Hidden	Visible	Visible
<code>.hidden-tablet</code>	Visible	Hidden	Visible
<code>.hidden-desktop</code>	Visible	Visible	Hidden

utility classes for showing and hiding content by device

Twitter Bootstrap Form Samples

Example

```
1. <form class="form-search">
2.   <input type="text" class="input-medium search-query">
3.   <button type="submit" class="btn">Search</button>
4. </form>
```

Example

☐ Remember me

```
1. <form class="form-inline">
2.   <input type="text" class="input-small" placeholder="Email">
3.   <input type="password" class="input-small" placeholder="Password">
4.   <label class="checkbox">
5.     <input type="checkbox"> Remember me
6.   </label>
7.   <button type="submit" class="btn">Sign in</button>
8. </form>
```

utility classes for showing and hiding content by device

Bootstrap / Glyphicons Collab

- Glyphicons is a library of precisely prepared monochromatic icons and symbols, created with an emphasis on simplicity and easy orientation
- Glyphicons Halflings are normally not available for free, but an arrangement between Bootstrap and the Glyphicons creators have made this possible at no cost to developers
- `<i class="icon-search"></i>`
- <http://glyphicons.com/>

Bootstrap / Glyphicons Collab

- <http://glyphicons.com/>



Twitter Bootstrap Components

- *Dozens of reusable components built to provide navigation, alerts, popovers, and more*
- Samples and examples @
 - <http://twitter.github.com/bootstrap/components.html>
- Dropdowns, button groups, button dropdowns, navs, navbar, breadcrumbs, pagination, labels and badges, typography, thumbnails, alerts, progress bars, media objects, etc.

Twitter Bootstrap Javascript

- *Bring Bootstrap's components to life—now with 13 custom jQuery plugins.*
- Samples and examples @
 - <http://twitter.github.com/bootstrap/javascript.html>
- Transitions, modal, dropdown, scrollspy, tab, tooltip, popover, alert, button, collapse, carousel, typehead, affix, etc.

How and where do I start?

- Twitter Bootstrap provides several examples
 - <http://twitter.github.com/bootstrap/getting-started.html#examples>
- (1) Starter template, (2) Basic marketing site, (3) Fluid layout, (4) Narrow marketing, (5) Justified nav, (6) Sign in, (7) Sticky footer, (8) Carousel jumbotron

How and where do I start?

- WrapBootstrap is a marketplace for premium Bootstrap themes and templates.
 - <http://wrapbootstrap.com/>
- Prices vary from \$37 to \$4 per theme
- Be sure to confirm that a theme is responsive before buying – not all themes use RWD
- Many themes also use the Modernizr library
 - Modernizr is a JS library that detects HTML5 and CSS3 features in the user's browser

How and where do I start?

- WrapBootstrap is a marketplace for premium Bootstrap themes and templates.
 - <http://wrapbootstrap.com/>
- Many themes also use Google Web Fonts
 - Google Web Fonts makes it quick and easy for everyone to use web fonts
 - All of the fonts are Open Source.
 - This means that you are free to share your favorites with friends and colleagues.

In Conclusion

- Tablets and smartphones...
 - sales are increasing – traditional PC sales are not
 - do not have the same screen sizes and resolutions
- Responsive Web Design...
 - adapts the layout to the viewing environment
 - makes a website work equally well on every device
- Twitter Bootstrap...
 - is a great library of code to get you started in RWD
 - provides lots of useful CSS/JS components too

We're Done

- Any questions?
- Does anyone want to announce a job opening?
- Please stick around for related discussion, unrelated discussion, general networking, etc.