#RWD WITH SASS+COMPASS

Come On Get Sassy

* * * *

WHO AM !?

- * Sam Richard
- * Frontend Developer
- * @Snugug on Twitter
- * Snugug on D.O.
- * Very Sassy Man

- * Organizer of NYC Responsive Web Design Meetup
- * Co-Organizer of NYC Sass Meetup
- * Co-Organizer of SassConf

WHAT IS THIS SESSION?

* I WILL:

- * Give you an overview of some tools and techniques for RWD
- * Show you how to use Sass+Compass in new and exciting ways for RWD and Progressive Enhancement

* I WON'T:

- * Try and convince you to start building Responsively
- * Teach the basics of Sass+Compass
- * Show you how to compile Sass with Drupal

WHAT FEATURES DO YOU NEED FOR RESPONSIVE WEB DESIGN?

- * As outlined in Ethan Marcotte's Phrase-Coining A List Apart article, Responsive Web Design needs the three following things:
 - * Fluid Grids
 - * Media Queries
 - * Flexible Media

WHAT PRINCIPLES DO YOU NEED FOR RESPONSIVE WEB DESIGN?

- * Design your websites for Mobile First
- * Make Content and Navigation primary concerns over visual flair and social sharing
- * Embrace Progressive Enhancement and build on standard Web technologies (HTML/CSS/JS)
- * Design on a grid, ideally one specific to your design
- * Design in Browser



You can't articulate fluidity on paper.



THE TOOLS OF THE TRADE

- Sass+Compass
 - Susy Compass Extension
 - * Breakpoint/Respond-to Compass Extensions
 - * Toolkit Compass Extension
- * Modernizr
- * Text Editor (I like TextMate or Sublime Text)

- * Modern Web Browser (I like Google Chrome)
- * LiveReload
- * Adobe Shadow + Devices
- * Illustrator for creating vector graphics

Stuff to Avoid

- * Browser Plugins (like Flash and Silverlight)
- * Single browser prefixes (just -webkit, just -moz, etc...)
- * CSS Frameworks
- * The phrase "Pixel Perfect"
- * Photoshop
- * Designing around known devices
- * Device Detection



The web is an inherently unstable medium

Ethan Marcotte



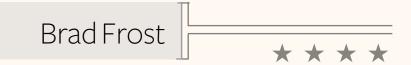




Brad Frost

"

The point of creating [responsive] sites is to create functional (and hopefully optimal) user experiences for a growing number of web-enabled devices and contexts.



"

Repeat after me: Responsive Web Design isn't about current devices and known unknowns, it's about future devices and unknown unknowns.

Donald Rumsfeld



Your device detection is bad and you should feel bad

Dr. John A. Zoidberg

BEFORE YOU GO ANYWHERE, LET'S CHEAT AT CSS

```
@import 'compass';

* { @include box-sizing('border-box'); }
// From Paul Irish's Blog Post
```

```
> gem install susy --pre

require 'susy'

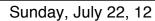
@import "susy";

$total-columns: 12;
$column-width: 4em;
$gutter-width: 1em;
$grid-padding: $gutter-width;
```

```
#page-wrapper {
  @include container;
}

#main {
  @include span-columns(8);
}

#sidebar-first {
  @include span-columns(4 omega);
}
```

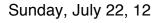


```
#page-wrapper {
  *zoom: 1;
  max-width: 59em;
  _width: 59em;
  margin-left: auto;
  margin-right: auto;
  padding-left: 1em;
  padding-right: 1em;
#page-wrapper:after {
  content: "";
  display: table;
  clear: both;
```

```
#main {
  width: 66.102%;
  float: left;
  margin-right: 1.695%;
  display: inline;
#sidebar-first {
  width: 32.203%;
  float: right;
  margin-right: 0;
  #margin-left: -1em;
  display: inline;
```

```
#user-name {
  @include span-columns(3, 4);
}

#social {
  @include span-columns(1 omega, 4);
}
```



```
#user-name {
  width: 73.684%;
  float: left;
  margin-right: 5.263%;
  display: inline;
}
```

```
#social {
  width: 21.053%;
  float: right;
  margin-right: 0;
  #margin-left: -1em;
  display: inline;
}
```

Breakpoint Media Queries Made Easy

```
> gem install breakpoint

require 'breakpoint'

@import "breakpoint";

$breakpoint-default-media: 'all';
$breakpoint-default-feature: 'min-width';
$breakpoint-default-pair: 'width';
$breakpoint-to-ems: false;
```



Start with the small screen first, then expand until it looks like shit. TIME FOR A BREAKPOINT!

Stephen Hay

Breakpoint Media Queries Made Easy

```
$main-nav-inline: 482px;
$main-nav-inline-right: 823px;
#main-nav {
  clear: both;
  li {
    display: block;
    @include breakpoint($main-nav-inline) {
      display: inline-block;
  }
  @include breakpoint($main-nav-inline-large) {
    @include span-columns(9 omega);
}
```

BREAKPOINT

MEDIA QUERIES MADE EASY

```
#main-nav {
   clear: both;
}

#main-nav li {
   display: block;
}
```

```
@media (min-width: 482px) {
  #main-nav li {
    display: inline-block
@media (min-width: 823px) {
  #main-nav {
    width: 74.576%;
    float: right;
    margin-right: 0;
    #margin-left: -1em;
    display: inline;
```

BREAKPOINT

MEDIA QUERIES MADE EASY

```
$breakpoint-to-ems: true;

#main-nav {
   clear: both;
}

#main-nav li {
   display: block;
}
```

```
@media (min-width: 30.125em) {
  #main-nav li {
    display: inline-block
@media (min-width: 51.438em) {
  #main-nav {
    width: 74.576%;
    float: right;
    margin-right: 0;
    #margin-left: -1em;
    display: inline;
```

RESPOND-TO SEMANTIC BREAKPOINT NAMING



```
$breakpoints: 'inline main navigation' (482px),
              'inline main navigation, floated right' (823px);
#main-nav {
  clear: both;
 li {
    display: block;
    @include respond-to('inline main navigation') {
      display: inline-block;
    @include respond-to('inline main navigation, floated right') {
      @include span-columns(9 omega);
```

FOR MODERN WEB DEVELOPMENT

 \Diamond

> gem install toolkit

require 'toolkit'

A NOTE ON RESPONSIVE MEDIA

- * Sass will not magically give you Responsive Media. Neither will Compass, Modernizr, any CSS or JS Framework, or even Drupal. For Responsive Media to be a reality, we need a new browser based standard. There are currently some proposed solutions for Images, and Apple is forging ahead with a non-standard solution in iOS6, but until then, everything is a hack.
- * There are some tricks you can do in CSS to make media Fluid, however, and Sass rocks at this.

TOOLKIT FOR FLUID MEDIA

```
@import "toolkit/fluid-media";

// Included Automatically
img {
   max-width: 100%;
   height: auto;
}

.foo {
   @include scale-elements;
}

.bar {
   @include scale-elements;
}
.bar {
   @include scale-elements($ratio: 4/3);
}
```

TOOLKIT FOR FLUID MEDIA

```
.foo, .bar {
 position: relative;
 height: 0;
.foo > *, .bar > * {
 display: block;
 position: absolute;
 width: 100%;
 height: 100%;
 top: 0;
 margin: 0;
 padding: 0;
```

```
.foo {
  padding-top: 56.25%;
 width: 100%;
.bar {
  padding-top: 75%;
 width: 100%;
```

FOR PROGRESSIVE ENHANCEMENT



Download a custom build of Modernizr

```
@import "toolkit/pe";

.foo {
    @include enhance-with('touch') {
        min-height: 44px;
    }

    @include degrade-from('touch') {
        min-height: 20px;
    }
}
```

FOR PROGRESSIVE ENHANCEMENT

```
\Diamond
```

```
.touch .foo {
   min-height: 44px;
}
.no-touch .foo, .no-js .foo {
   min-height: 20px;
}
```

FOR PROGRESSIVE ENHANCEMENT



```
$user-bar-icons: "assets/user-bar/*.png";
@include sprite-map-generator($user-bar-icons);

.bar {
    @include replace-text-pe($user-bar-icons, 'user');
}

.baz {
    @include replace-text-pe($user-bar-icons, 'necktie', $inline-svg: false);
}
```

FOR PROGRESSIVE ENHANCEMENT



```
> create images/assets/user-bar-s01cf12a717.png
                                                          .bar {
                                                           width: 24px;
                                                           height: 21px;
                                                          .svg .bar {
.bar, .baz {
                                                            background-image: url('data:image/svg
  text-indent: 110%;
                                                          +xml;base64,PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0...');
  white-space: nowrap;
                                                            background-size: 24px 21px;
  overflow: hidden;
                                                          .no-svg .bar, .no-js .bar {
                                                            background-position: 0 -18px;
.no-svg .bar, .no-js .bar, .no-svg .baz, .no-js .baz {
  background-image: url('../images/assets/user-bar-
s01cf12a717.png');
  background-repeat: no-repeat;
                                                          .baz {
                                                            width: 8px;
                                                            height: 27px;
                                                          .svq .baz {
                                                           background-image: url('../images/assets/user-bar/
                                                          necktie.svg?1341407937');
                                                            background-size: 8px 27px;
                                                          .no-svg .baz, .no-js .baz {
                                                            background-position: 0 -39px;
```

TO KICKSTART YOUR DEVELOPMENT



```
Existing Project
require 'toolkit'
```

- > compass install toolkit
- or -
- > compass install toolkit/respond-to

New Project

- > compass create <my_project> -r toolkit --using toolkit
- or -
- > compass create <my_project> -r toolkit --using toolkit/respond-to

TO KICKSTART YOUR DEVELOPMENT



- * Compass
- * Toolkit
- * Susy
- * Either Breakpoint or Respond-to
- * Border Box Box Model

- * Development Modernizr Build with yepnope
- * loader.js to hold yepnope tests
- * hammer.js for touch events
- * Sass stylesheets and default, empty partials

DID I MENTION...

* Everything you just saw? Yah, it's all backend independent. You can use it anywhere, with anything, for any project. Sass Rocks.

Go Forth, Be Responsive, and MAY THE SASS BE WITH YOU



@Snugug, @Compass, @TheSassWay, @GoTeamSass, @CodingDesigner, @ScottKellum, @ItsMissCS, @ChrisEppstein, @nex3, @beep, @lukew, @brad_frost, @globalmoxie

* Things to Read:

http://snugug.com/rwd http://snugug.com/pe-pattern http://snugug.com/breakpoint http://snugug.com/toolkit http://snugug.com/rwd-mobile http://snugug.com/munich

- * If you liked this talk, I'm Sam Richard. If not, I was Mason Wendell.
- * If you have questions, come to my BoFs tomorrow or find me. I'm happy to talk.
- * Please rate this session (and all of the others)! Thank you!