
#RWD WITH SASS+COMPASS



Come On Get Sassy

WHO AM I?

- * 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.

Brad Frost



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





THIS IS THE WEB.



THIS WILL BE THE WEB.



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.

Brad Frost



“ 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
```

SUSY

FLUID GRIDS FULL OF WIN

```
> gem install susy --pre
```

```
require 'susy'
```

```
@import "susy";
```

```
$total-columns: 12;
```

```
$column-width: 4em;
```

```
$gutter-width: 1em;
```

```
$grid-padding: $gutter-width;
```

SUSY

FLUID GRIDS FULL OF WIN

```
#page-wrapper {  
  @include container;  
}  
  
#main {  
  @include span-columns(8);  
}  
  
#sidebar-first {  
  @include span-columns(4 omega);  
}
```


SUSY

FLUID GRIDS FULL OF WIN

```
#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;  
}
```

SUSY

FLUID GRIDS FULL OF WIN

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

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

SUSY

FLUID GRIDS FULL OF WIN

```
#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);  
    }  
  }  
}
```

TOOLKIT

FOR MODERN WEB DEVELOPMENT

```
> 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($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%;  
}
```

TOOLKIT 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;
  }
}
```

TOOLKIT

FOR PROGRESSIVE ENHANCEMENT

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

TOOLKIT

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);
}
```


TOOLKIT

FOR PROGRESSIVE ENHANCEMENT

```
> create images/assets/user-bar-s01cf12a717.png
```

```
.bar, .baz {  
  text-indent: 110%;  
  white-space: nowrap;  
  overflow: hidden;  
}
```

```
.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;  
}
```

```
.bar {  
  width: 24px;  
  height: 21px;  
}  
.svg .bar {  
  background-image: url('...');  
  background-size: 24px 21px;  
}  
.no-svg .bar, .no-js .bar {  
  background-position: 0 -18px;  
}
```

```
.baz {  
  width: 8px;  
  height: 27px;  
}  
.svg .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;  
}
```

TOOLKIT

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`

TOOLKIT

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

- * People to Follow:

@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!