

# In the Weeds

Nuts & Bolts of developing a **Responsive Website**

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# Vertical Rhythm

Simply setting expectation.

[\*\*http://ribot.co.uk/\*\*](http://ribot.co.uk/)

[\*\*http://naomiatkinson.com/\*\*](http://naomiatkinson.com/)

[\*\*http://thepaintdrop.com/\*\*](http://thepaintdrop.com/)

# A Good Tempo

It starts at the line-height. **<http://alistapart.com/>**

As a general rule, line-height should be about 1.5

```
html {  
  font-size: 100%;  
  /* Sets the base relative font size.  
     Equivalent to 16px on most browsers. */  
}  
  
body {  
  line-height: 1.5;  
}
```

# GET RHYTHM

You'd love for it to have some magical scroll tempo.

But not every element is a multiple of your baseline height

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```
.baseline-grid {  
  background-image: -webkit-gradient(linear, 50% 100%, 50% 0%, color-stop(5%, #000000), color-stop(5%, rgba(0, 0, 0, 0.5)));  
  background-image: -webkit-linear-gradient(bottom, #000000 5%, rgba(0, 0, 0, 0) 5%);  
  background-image: -moz-linear-gradient(bottom, #000000 5%, rgba(0, 0, 0, 0) 5%);  
  background-image: -o-linear-gradient(bottom, #000000 5%, rgba(0, 0, 0, 0) 5%);  
  background-image: linear-gradient(bottom, #000000 5%, rgba(0, 0, 0, 0) 5%);  
  -webkit-background-size: 100% 24px;  
  -moz-background-size: 100% 24px;  
  -o-background-size: 100% 24px;  
  background-size: 100% 24px;  
  background-position: left top;  
}
```

```
.baseline-grid {  
  background-image: -webkit-gradient(linear, 50% 100%, 50% 0%, color-stop(5%, #000000), color-stop(5%, rgba(0, 0, 0, 0  
  background-image: -webkit-linear-gradient(bottom, #000000 5%, rgba(0, 0, 0, 0) 5%);  
  background-image: -moz-linear-gradient(bottom, #000000 5%, rgba(0, 0, 0, 0) 5%);  
  background-image: -o-linear-gradient(bottom, #000000 5%, rgba(0, 0, 0, 0) 5%);  
  background-image: linear-gradient(bottom, #000000 5%, rgba(0, 0, 0, 0) 5%);  
  -webkit-background-size: 100% 1.5em;  
  -moz-background-size: 100% 1.5em;  
  -o-background-size: 100% 1.5em;  
  background-size: 100% 1.5em;  
  background-position: left top;  
}
```



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```
h1.coveted-title {  
  margin-bottom: 10px;  
}  
  
p.on-the-fly-font-changes {  
  margin-bottom: 17px;  
}
```

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All page elements *should* follow the rhythm.

## Heading Titles

Blocks of everything.

Regions like banners, content areas and footers

CALL TO ACTION LINKS

# Media Queries

A browser's device detection.

Some things you can detect:

orientation

aspect-ratio (e.g. 16/9)

color

device-aspect-ratio

resolution

device-height

device-width

height

**width**

From a link element:

```
<link rel="stylesheet" media="all" href="css/base.css">  
<link rel="stylesheet" media="(min-width: 760px)" href="css/tablet-portrait.css"  
>  
<link rel="stylesheet" media="(min-width: 960px)" href="css/desktop.css">
```



From within a stylesheet:

```
// Base styles
.desktop_nav {
  display: none;
}

// Widescreen 60em / 960px
@media (min-width: 60em) {
  .desktop_nav {
    display: block;
  }
  .mobile_nav {
    display: none;
  }
} // End min-60em/960px media query
```

Deciding on breakpoints

iPhone 3-4

320 x 480

iPhone 5

320 x 568

Samasung Galaxy S3-4

360 x 640

iPad

1024 x 768

layout minimum-width

320px = 20em

x-small (phone-landscape)

480px = 30em

small (tablet-landscape)

600px = 37.5em

medium (tablet-portrait)

760px = 47.5em

large (tablet-landscape)

960px = 60em

Breakpoints are cheap.

Start with a set of breakpoints that guided the design, but add media queries as needed at any width, height, resolution, etc.

Mobile first ~ <http://www.lukew.com/>

```
// Styles not wrapped in media queries first
body {
  min-width: 20em;
  max-width: 64em;
}
// 480px
@media (min-width: 30em) {
}
// 600px
@media (min-width: 37.5em) {
}
// 760px
@media (min-width: 47.5em) {
}
// 960px
@media (min-width: 60em) {
}
```

# First floats show at tablet widths

```
// 760px begins two column layout
@media (min-width: 47.5em) {
  #content {
    width: 66.66666%;
    float: left;
  }
  #left-sidebar {
    width: 33.33333%;
    float: left;
  }
}
```

```
// 760px begins two column layout
@media (min-width: 47.5em) {
  #content {
    width: 66.66666%;
    padding: 1.5em;
    float: left;
    -webkit-box-sizing: border-box;
    -moz-box-sizing: border-box;
    box-sizing: border-box;
  }
  ...
}
```

ie6/7 box-sizing polyfill <https://github.com/Schepp/box-sizing-polyfill>



## Left to their own devices

Android, iPhone, and Windows Phone 7 set viewport width to a desktop width.

iPhone and iPod touch use 980 pixels, while Windows Phone 7 uses 1024 pixels.

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

Have a damn good reason if you do this!

```
<... content="width=device-width, initial-scale=1, user-scalable=no">
```

**<https://developer.apple.com/library/ios/documentation/AppleApplications/Reference/Safari>**

## Responsive Images

```
img {  
  /* Responsive images */  
  max-width: 100%;  
  height: auto;  
  /* Correct IE 8 not scaling image height when resized. */  
  width: auto\9;  
}
```

## Responsive Video Embed

```
/* Responsive video embed. Youtube / Vimeo */
.video-container {
  position: relative;
  padding-bottom: 56.25%;
  padding-top: 30px;
  height: 0;
  overflow: hidden;
}
.video-container iframe,
.video-container object,
.video-container embed {
  position: absolute;
  top: 0;
  left: 0;
  width: 100%;
  height: 100%;
}
```

## Fitvids

The elephant in the room...

ie8

:(

Media queries are not new,  
except to Internet Explorer.

IE 6-8 will need special care.

## Fallback Options for ie8

1. Desktop first
2. Rewrite desktop styles, stripped of media queries
3. Respond.js to polyfill missing media query feature in IE 6-8

**<https://github.com/scottjehl/Respond>**

# Navigation Patterns

**<http://bradfrostweb.com/blog/web/responsive-nav-patterns/>**

**<http://bradfrostweb.com/blog/web/complex-navigation-patterns-for-responsive-design/>**

**<http://bradfrost.github.io/this-is-responsive/patterns.html>**



## Navigation Plugins

**<http://tinynav.viljamis.com/>**

**<http://responsive-nav.com/>**

Make you life easier tips:

TIP 1

Get help with your CSS

CSS Preprocessor

**<http://sass-lang.com/>**

Predefined Chunks of CSS

**<http://compass-style.org/>**

**<http://bourbon.io/>**

Easier custom grids

**<http://freqdec.github.io/slabText/>**

TIP 2

Selectivizr

Polyfill for CSS3 in IE

**<http://selectivizr.com/>**

TIP 3

Modernizr

Feature Detection

**<http://modernizr.com/>**

You can also conditionally load javascript or run code:

```
if (Modernizr.touch) {  
    // Touch screen  
} else {  
    // Non-touch code  
}  
  
// With Modernizr.load you can conditionally load files  
yepnope({  
    test : Modernizr.touch,  
    yep  : 'normal.js',  
    nope : ['polyfill.js', 'wrapper.js']  
});
```

Or just use it in css

```
html.touch .submit-btn {  
  height: 44px;  
  line-height: 44px;  
  padding-left: 2em;  
  padding-right: 2em;  
}
```

TIP 4

A few plugins to chew on.

[\*\*http://retinajs.com/\*\*](http://retinajs.com/)

[\*\*http://fittextjs.com/\*\*](http://fittextjs.com/)

[\*\*http://freqdec.github.io/slabText/\*\*](http://freqdec.github.io/slabText/)

[\*\*http://fitvidsjs.com/\*\*](http://fitvidsjs.com/)

[\*\*http://flexslider.woothemes.com/\*\*](http://flexslider.woothemes.com/)



TIP 5

Get to know front-end frameworks.

**<http://getbootstrap.com/>**  
**<http://foundation.zurb.com/>**

Comparison:

**<http://responsive.vermilion.com/compare.php>**

**<http://usablica.github.io/front-end-frameworks/compare.html>**

## TIP 6

If you want that sales presentation browser resize.

You'll need the javascript resize event.

```
$(window).resize(function() {  
    $('#slideshow').cycle('destroy').cycle();  
  
    var width = $(window).width();  
    if (width < 480) {  
        $('body').addClass('mobile');  
    }  
    else {  
        $('body').removeClass('mobile')  
    }  
});  
  
// https://github.com/louisremi/jquery-smartresize
```

## TIP 7

Use **enquire.js** for more advanced js behaviors across media queries.

**<http://wicky.nillia.ms/enquire.js/>**

```
enquire.register("screen and (max-width:30em)", {  
  match : function() {  
    $('body').addClass('mobile');  
  },  
  unmatch : function() {  
    $('body').removeClass('mobile');  
  },  
  setup : function() {},  
  destroy : function() {}  
});
```

```
enquire.register("screen and (min-width: 45em)", {  
  setup : function() {  
    // load content via AJAX  
  },  
  match : function() {  
    // show sidebar  
  },  
  unmatch : function() {  
    // hide sidebar  
  }  
});
```

## TIP 8

Mobile brings HD Displays (Retina). CSS3 them larger images.

```
// Standard Definition styles
a.logo {
  background-image: url(../images/logo1x.png);
}

// HD Displays (aka Retina)
@media
only screen and (-webkit-min-device-pixel-ratio: 2),
only screen and (   min--moz-device-pixel-ratio: 2),
only screen and (     -o-min-device-pixel-ratio: 2/1),
only screen and (       min-device-pixel-ratio: 2),
only screen and (         min-resolution: 192dpi),
only screen and (          min-resolution: 2dppx) {

  a.logo {
    background-image: url(../images/logo2x.png);
    background-size: 200px 120px;
  }
} // End HD media query
```

<http://css-tricks.com/snippets/css/retina-display-media-query/>

## TIP 9

Keep your ears to the tracks.

Responsive is constantly evolving.

**<http://www.smashingmagazine.com>**

**<http://uptodate.frontendrescue.org>**



TIP 10

Get a general sense of mobile through the browser, but...

Chrome != iPhone (min-width capped at 400px)

Firefox = iPhone

TIP 11

Take advantage of the device lab for cross-browser testing.

**<http://www.opengr.org>**

Get inspired!

**<http://mediaqueri.es/>**

**<https://www.awwwards.com/websites/responsive-design/>**

# Questions?

jswitchback on github

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