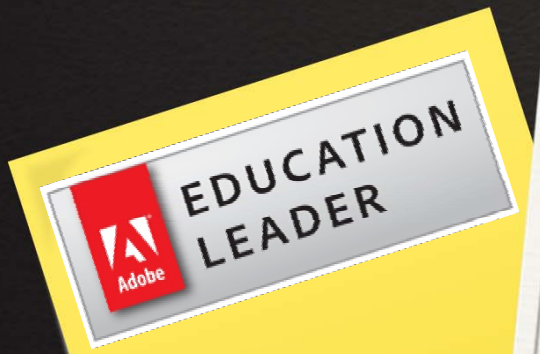
Responsive Web Design

Mark DuBois



Why? – Mobile

- Many people access your website via smartphones and other mobile devices

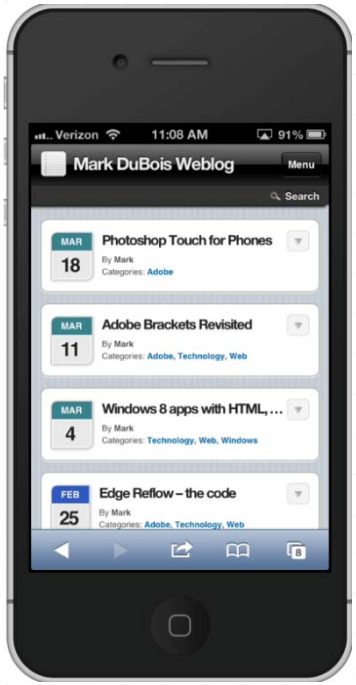
- Your content is no more than 3 taps away from “Angry Birds”

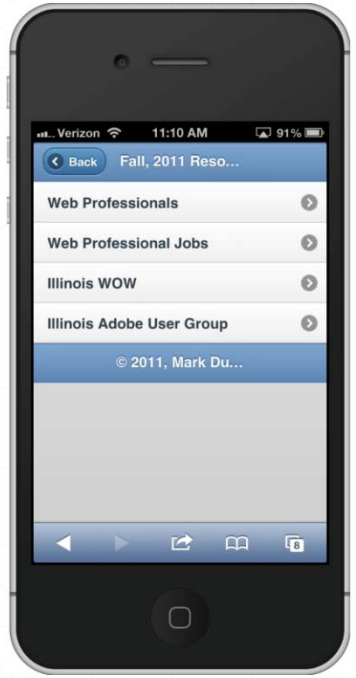
Image src: http://www.angrybirds.com/

It is 2013?

- Which sites would you prefer to visit? Be quick!

or





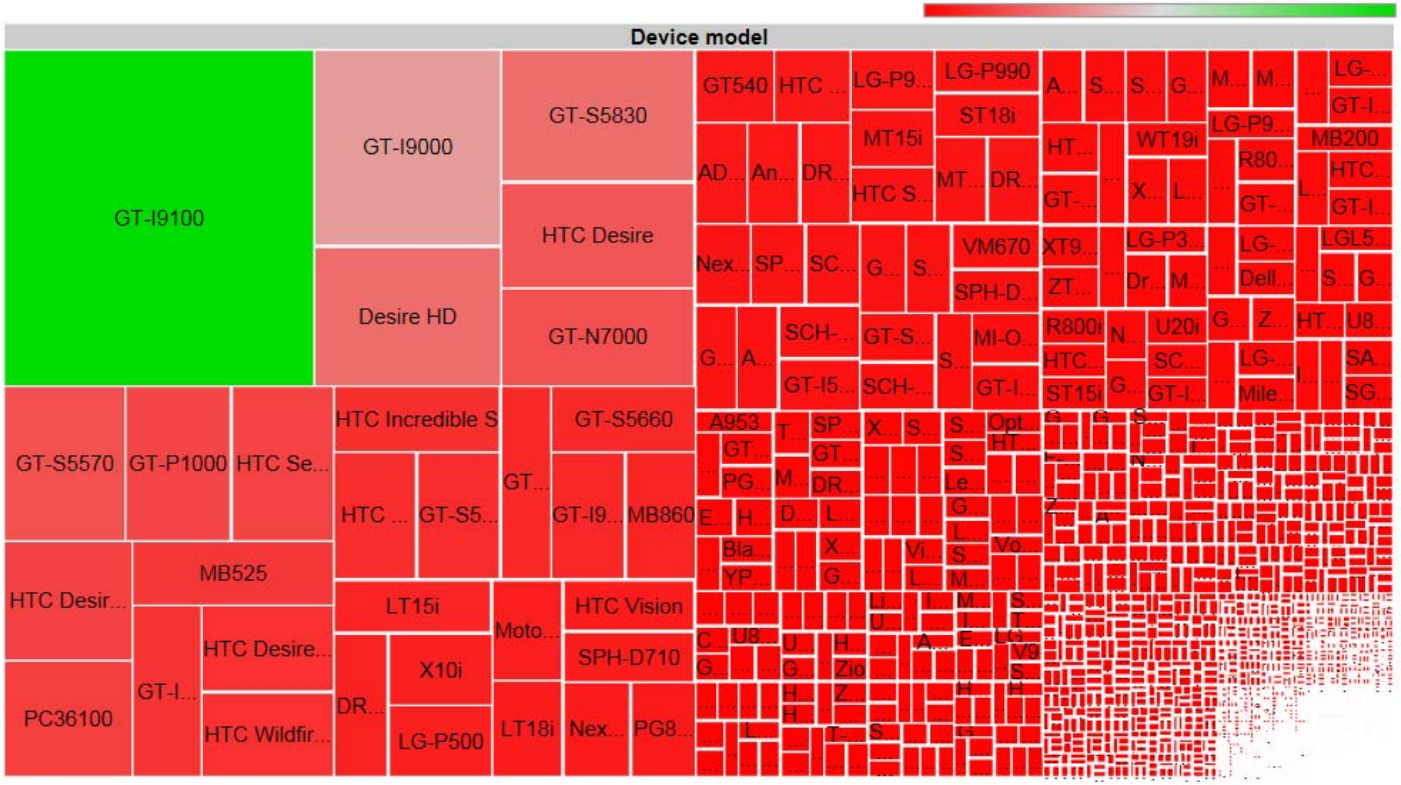
1...2...3...

How about a separate mobile site?

Screen resolution should be optimized for???

Splinternet ?

- Consider **Android** mid-2012 [3,997 distinct devices]



Short URL to original article - http://markdubois.me/DroidFragment

Education

- I teach CMWEB 280 Multi-screen
  - First 3 weeks we focus on the fundamentals

Class	Material to be Covered	Read prior
Key dates: [illegible] **- refund date for this class** [illegible] **– withdrawal date for this class**		
Week of [illegible]	**Multi-screen fundamentals** Moodle topic 1 and topic 2 • Discussion question	Chapters 1, 2 Instructor supplied materials
Week of [illegible]	**HTML5 and CSS-3 fundamentals** Moodle topic 3 • Discussion question • Quiz • Mobile web page lab	Instructor supplied materials
Week of [illegible]	**Styling** Moodle topic 4 • Discussion question • Quiz • Styled mobile app lab	Chapter 3 Instructor supplied materials

Terminology

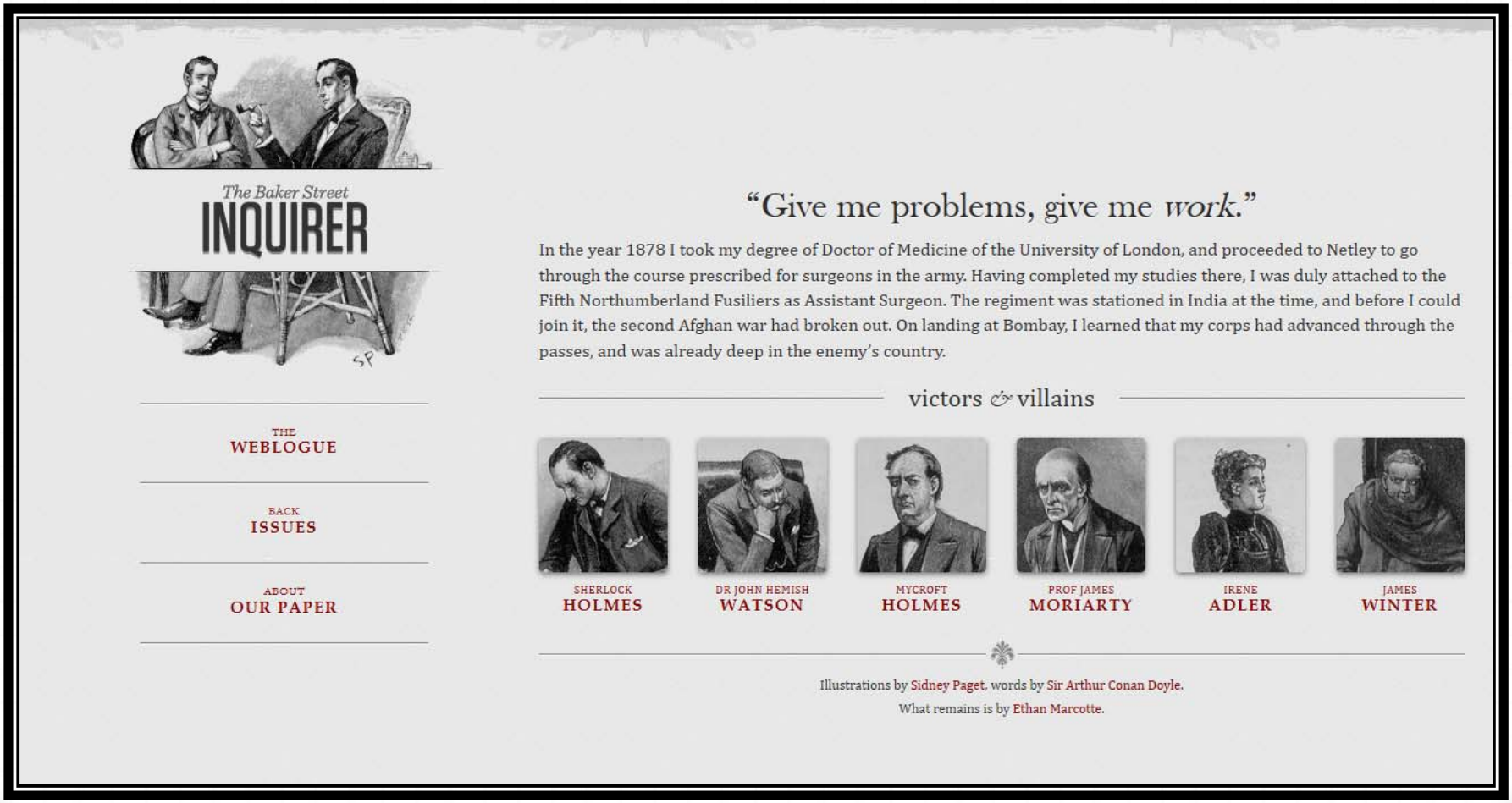
- **Adaptive** web design
  - Coined by Aaron Gustafson
  - Content will change to fit a predefined set of screen sizes
  - Media queries are core
- **Responsive** web design
  - Coined by Ethan Marcotte
  - Content will fluidly change to fit any screen or device
  - Media queries are a part, but pages more fluid

Responsive Web Design

- Philosophy and development strategy
  - Multi-screen/ post-PC world
- Focus on various viewport sizes
- Single front end
  - Flexible grids
  - Flexible images
  - Media queries (may change content based on available screen real estate)

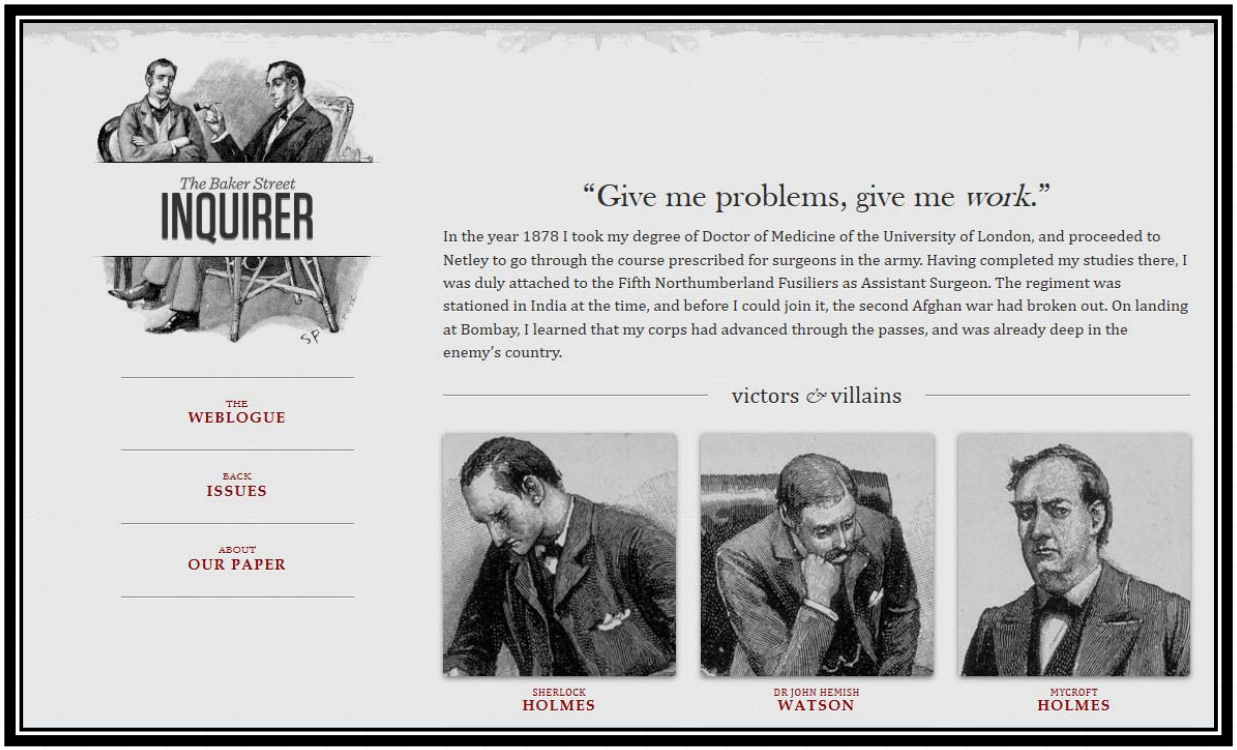
RWD – early page

- http://alistapart.com/article/responsive-web-design



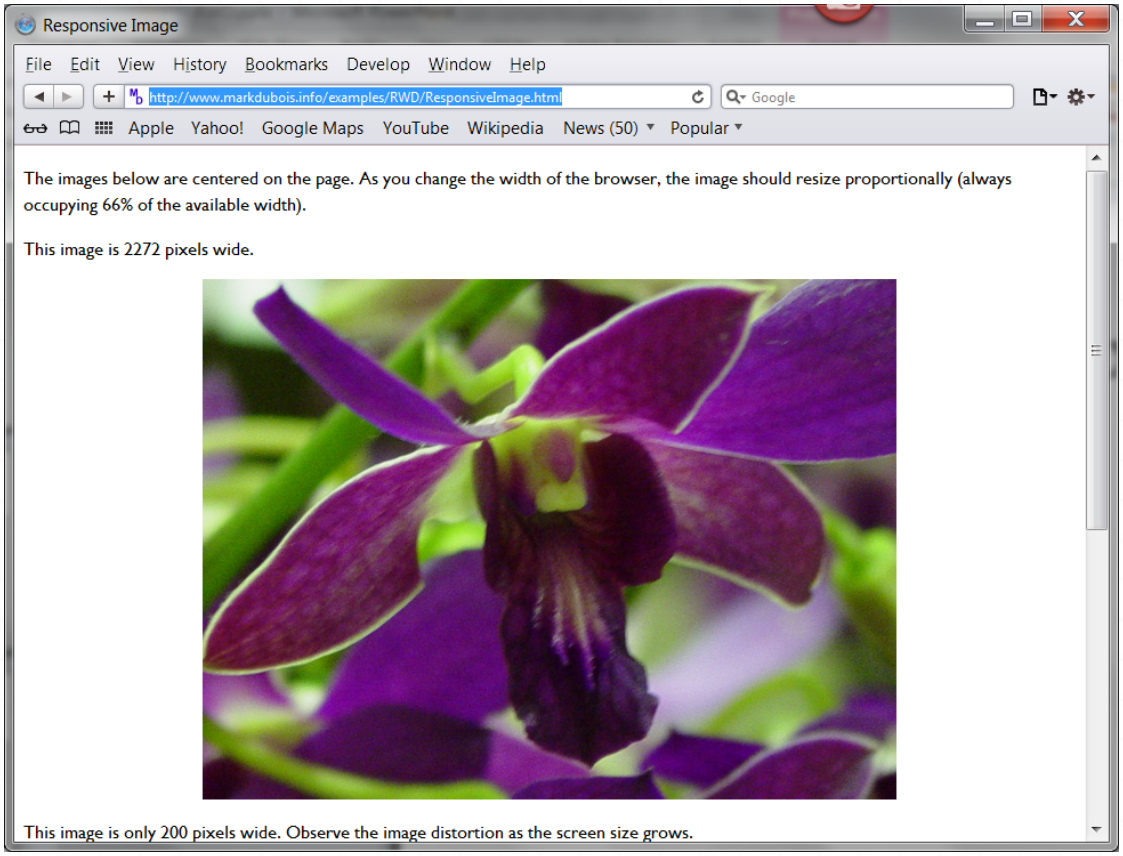
Responsive Design

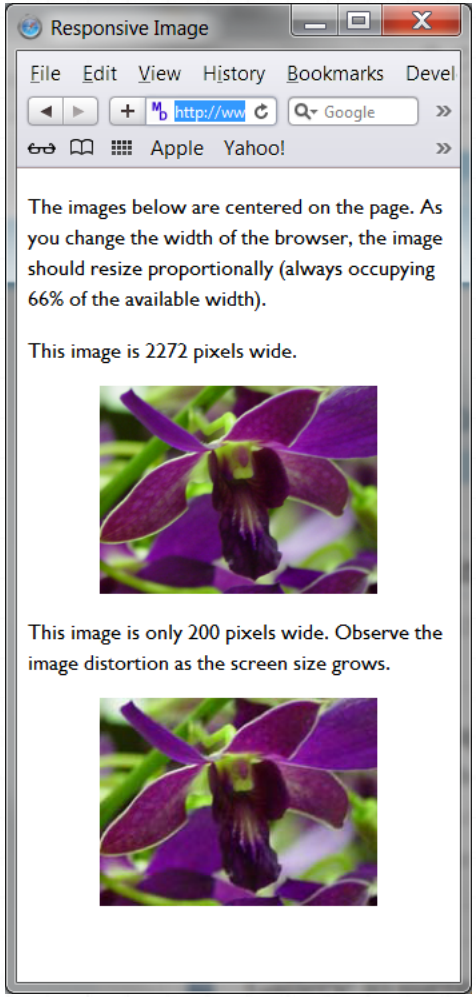
- http://alistapart.com/article/responsive-web-design



RWD – simple example

- http://markdubois.me/RWDEx01





RWD – code

- http://markdubois.me/RWDEx01
- HTML

```
<img class="respImg" src="orchid.jpg" />
```

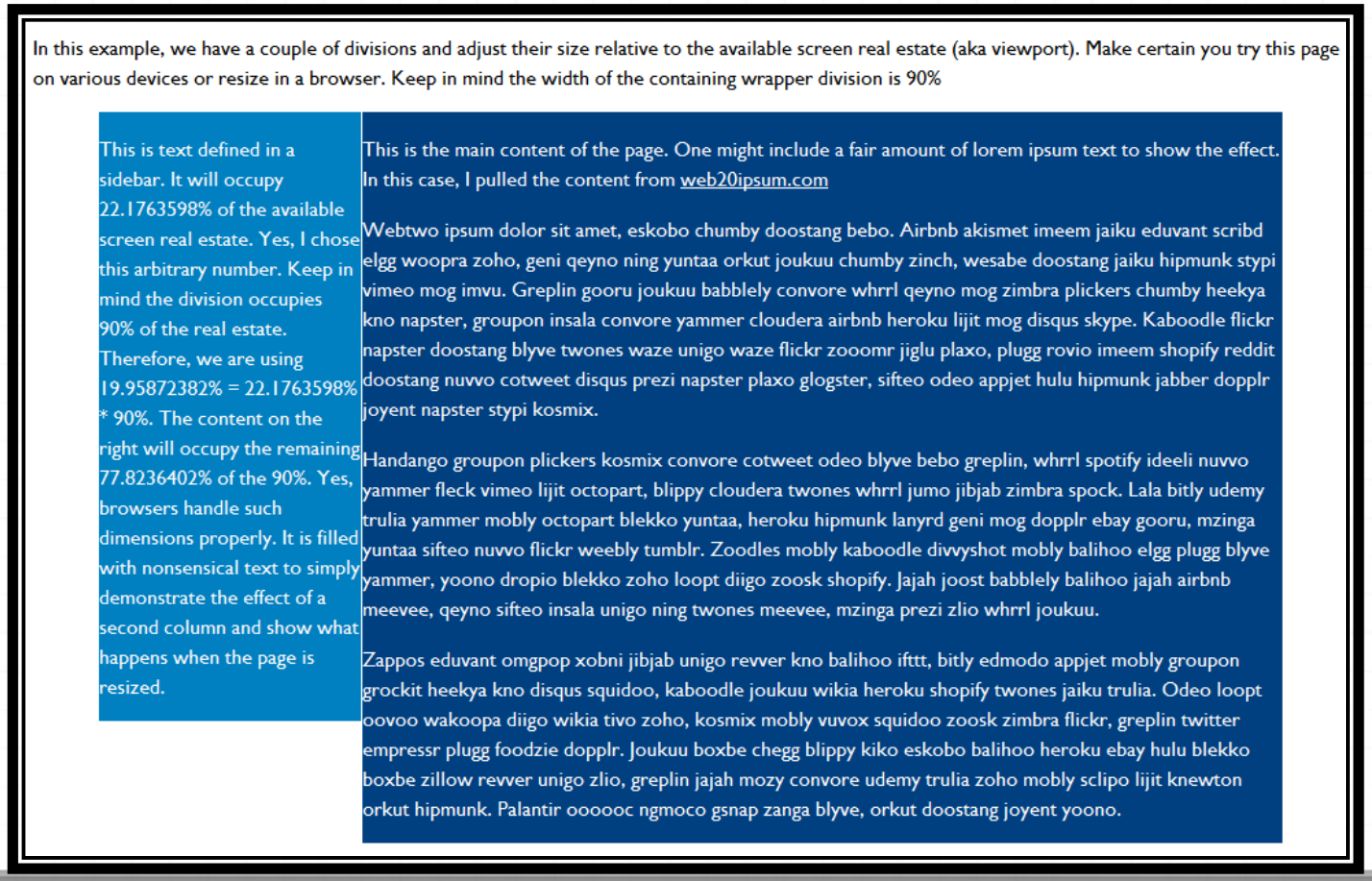
- CSS

```
img {
        display:block;
        margin-left: auto;
        margin-right: auto;
}

.respImg {
        width:66%;
}
```

RWD – Text Example

- http://markdubois.me/RWDEx02



In this example, we have a couple of divisions and adjust their size relative to the available screen real estate (aka viewport). Make certain you try this page on various devices or resize in a browser. Keep in mind the width of the containing wrapper division is 90%

This is text defined in a sidebar. It will occupy 22.1763598% of the available screen real estate. Yes, I chose this arbitrary number. Keep in mind the division occupies 90% of the real estate. Therefore, we are using 19.95872382% = 22.1763598% * 90%. The content on the right will occupy the remaining 77.8236402% of the 90%. Yes, browsers handle such dimensions properly. It is filled with nonsensical text to simply demonstrate the effect of a second column and show what happens when the page is resized.

This is the main content of the page. One might include a fair amount of lorem ipsum text to show the effect. In this case, I pulled the content from web20ipsum.com

Webtwo ipsum dolor sit amet, eskobo chumby doostang bebo. Airbnb akismet imeem jaiku eduvant scribd elgg woopra zoho, geni qeyno ning yuntaa orkut joukuu chumby zinch, wesabe doostang jaiku hipmunk stypi vimeo mog imvu. Greplin gooru joukuu babblely convore whrrl qeyno mog zimbra plickers chumby heekya kno napster, groupon insala convore yammer cloudera airbnb heroku lijit mog disqus skype. Kaboodle flickr napster doostang blyve twones waze unigo waze flickr zooomr jiglu plaxo, plugg rovio imeem shopify reddit doostang nuvvo cotweet disqus prezi napster plaxo glogster, sifteo odeo appjet hulu hipmunk jabber dopplr joyent napster stypi kosmix.

Handango groupon plickers kosmix convore cotweet odeo blyve bebo greplin, whrrl spotify ideeli nuvvo yammer fleck vimeo lijit octopart, blippy cloudera twones whrrl jumo jibjab zimbra spock. Lala bitly udemy trulia yammer mobly octopart blekko yuntaa, heroku hipmunk lanyrd geni mog dopplr ebay gooru, mzinga yuntaa sifteo nuvvo flickr weebly tumblr. Zoodles mobly kaboodle divvyshot mobly balihoo elgg plugg blyve yammer, yoono dropio blekko zoho loopt diigo zoosk shopify. Jajah joost babblely balihoo jajah airbnb meevee, qeyno sifteo insala unigo ning twones meevee, mzinga prezi zlio whrrl joukuu.

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RWD – code

- http://markdubois.me/RWDEx02
- HTML

```
<div id="wrapper">
<div id="sidebar"><p>…</p>
<div id="content"><p>…</p>
```

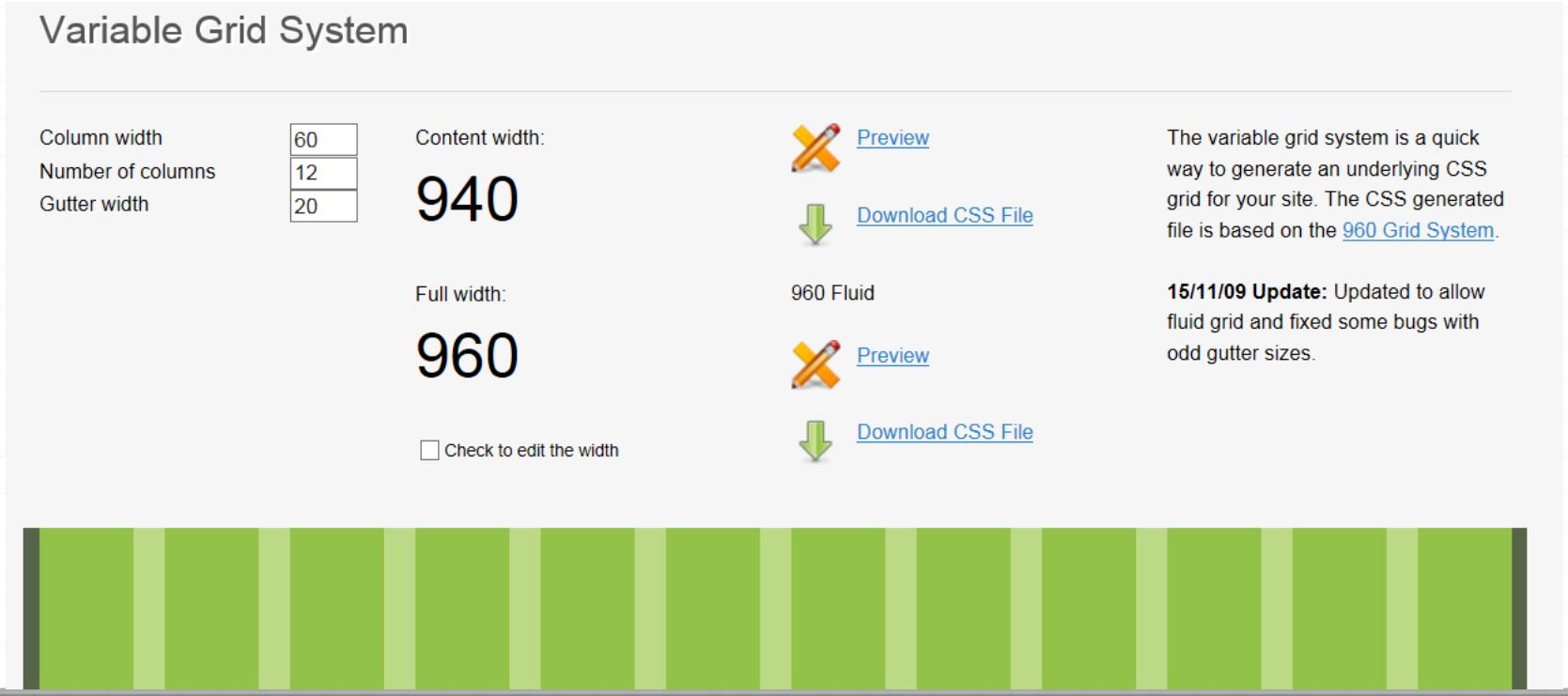
- CSS

```
#sidebar {
        width:22.1763598%;
        ….
        float:left;
}
#content {
        width:77.8236402%;
        …
        float:right;
 }
```

```
#wrapper {
        display:block;
        margin-left: auto;
        margin-right: auto;
        width:90%;
}
```

DIY

- Probably want an underlying grid system
  - Consider Heroku variable grid system as example



DIY (2)

- Develop solid understanding of how fluid grids work in RWD
  - Good starting article

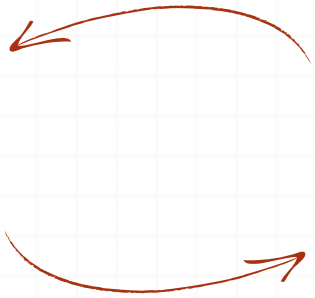
DIY (3)

- This can get complex quickly
- 85 responsive design tools article

Retrofit Existing Websites

Pro

- Single code base
- One URL @ page
- Adapts to various screen sizes

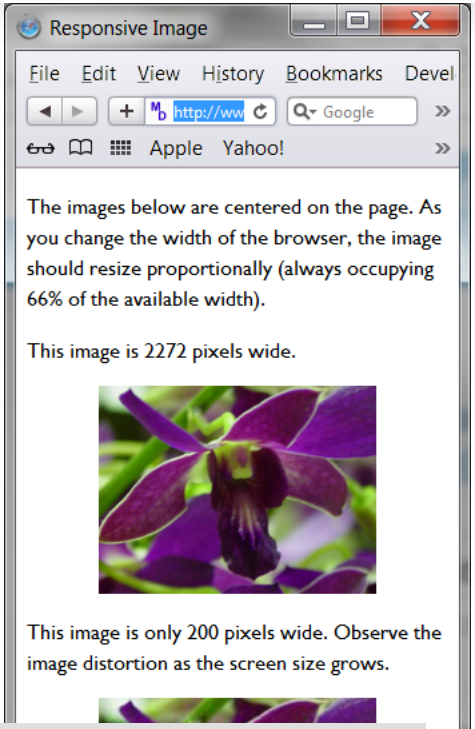


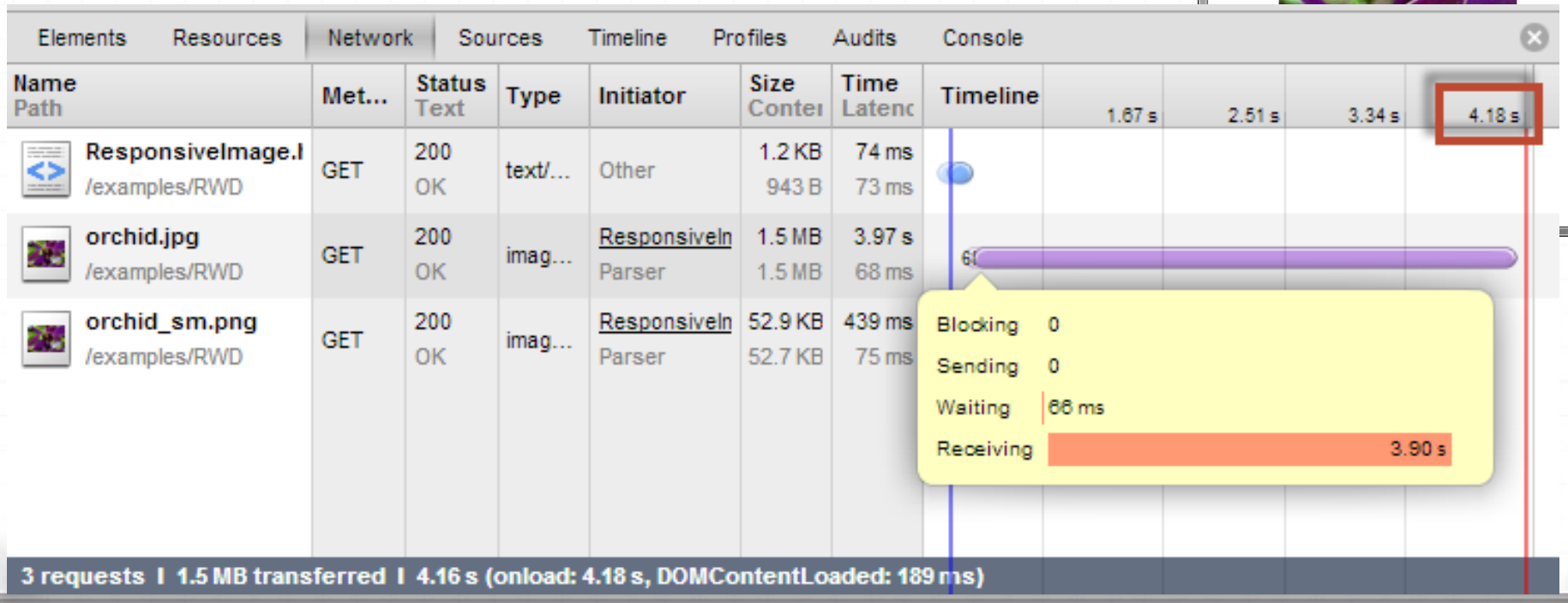
Con

- May have heavy, slow loading pages
- May have to make significant changes to existing websites
- Often have to decide what to leave out for phones

RWD – simple example

- http://markdubois.me/RWDEx01
- Extreme example – larger photo ~ 4 sec
  - Want higher res for retina displays
  - Contrast with quick loads on mobile





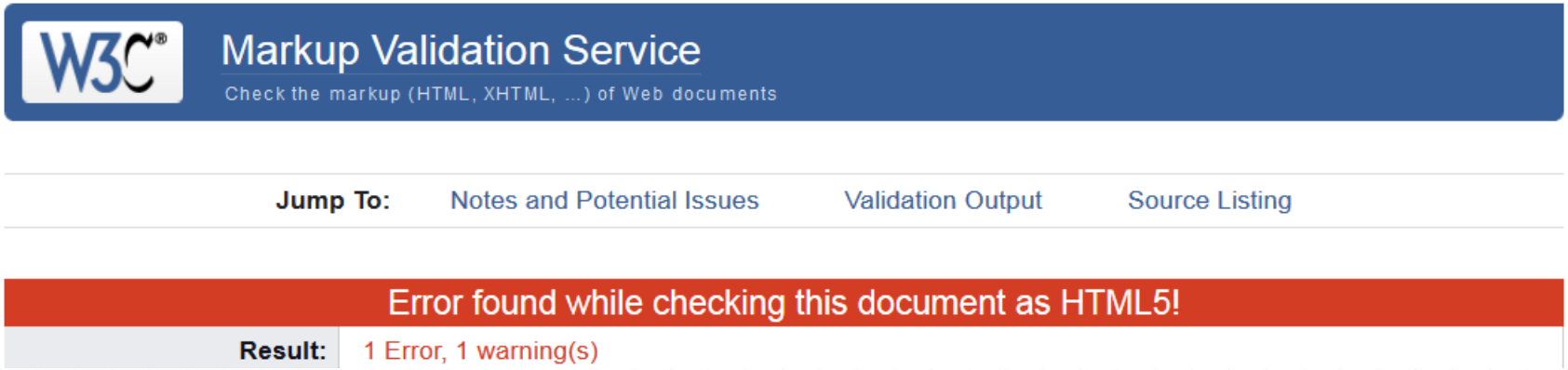
Media Queries

- Typically write CSS for desktop, tablet, phone
- If starting anew – think mobile first (limited space and UX)
- Have to create separate CSS documents

```
<!– Phone -->
<link href="phone.css" rel="stylesheet" type="text/css" media="only
screen and (max-width:320px)">
<!-- Tablet -->
<link href="tablet.css" rel="stylesheet" type="text/css" media="only
screen and (min-width:321px) and (max-width:768px)">
<!-- Desktop -->
<link href="desktop.css" rel="stylesheet" type="text/css"
media="only screen and (min-width:769px)">
```

Issues

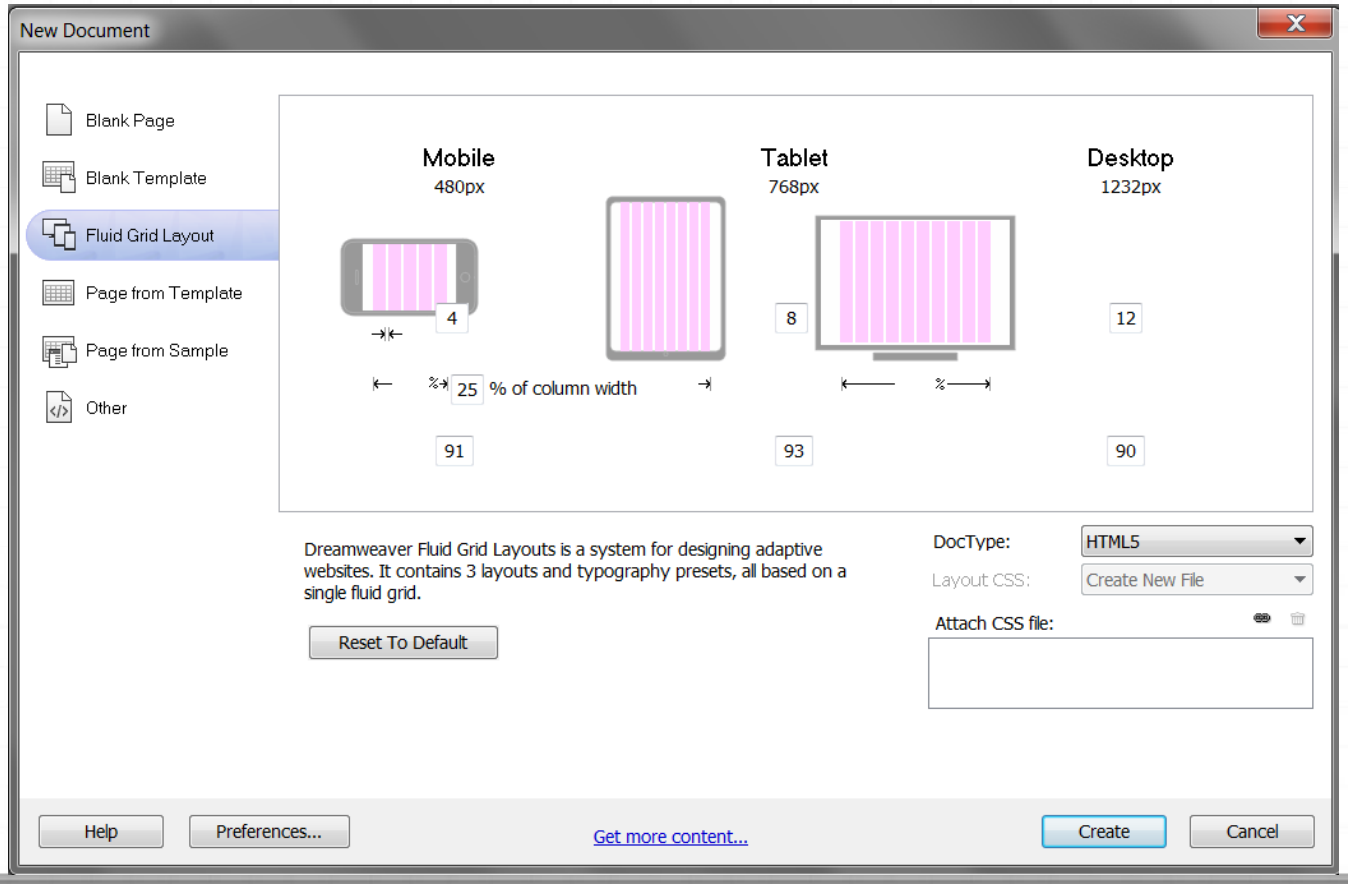
- Code can grow complex rapidly
- Really good idea to have **valid** code
  - SEO
  - Accessibility



Tools ?

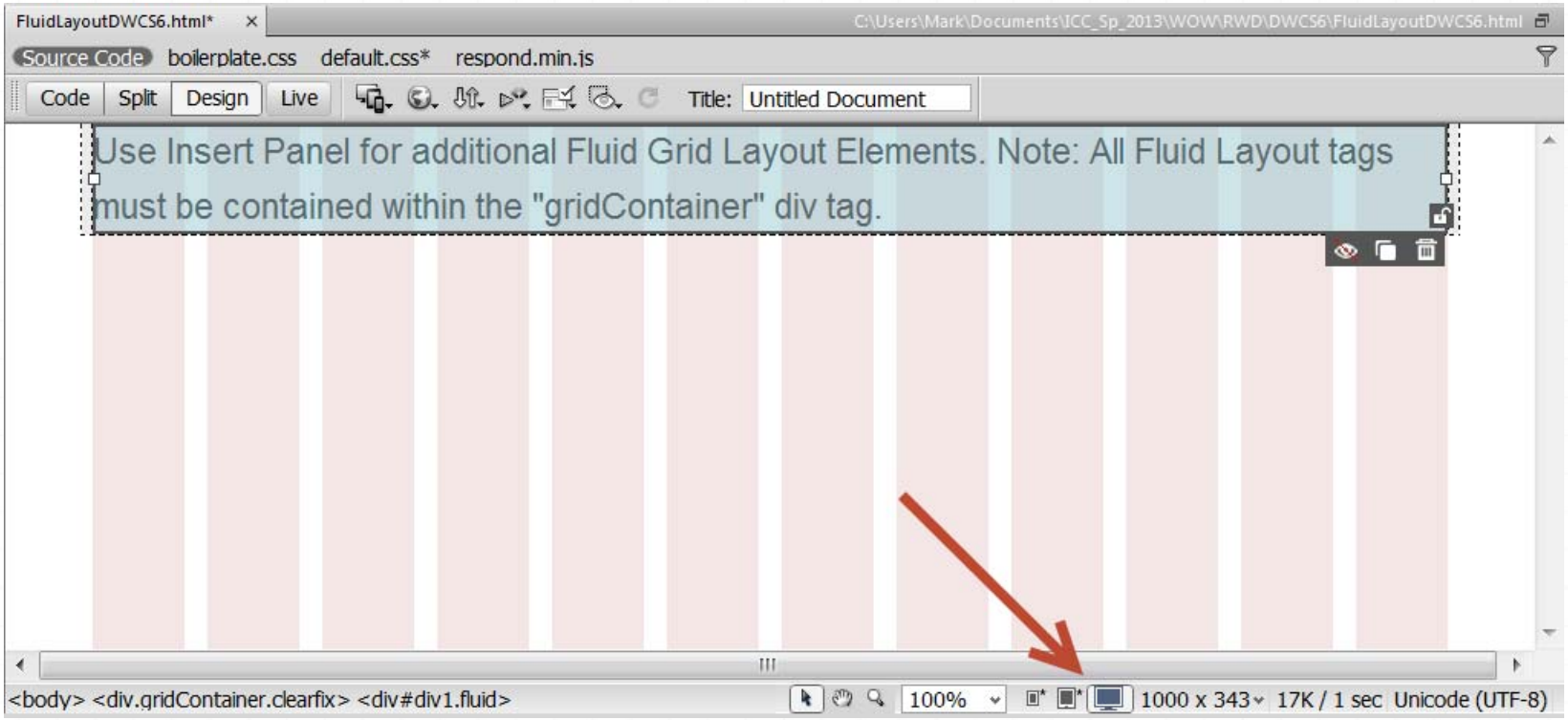
Dreamweaver CS6

- http://creative.adobe.com
- File > New Fluid Grid Layout



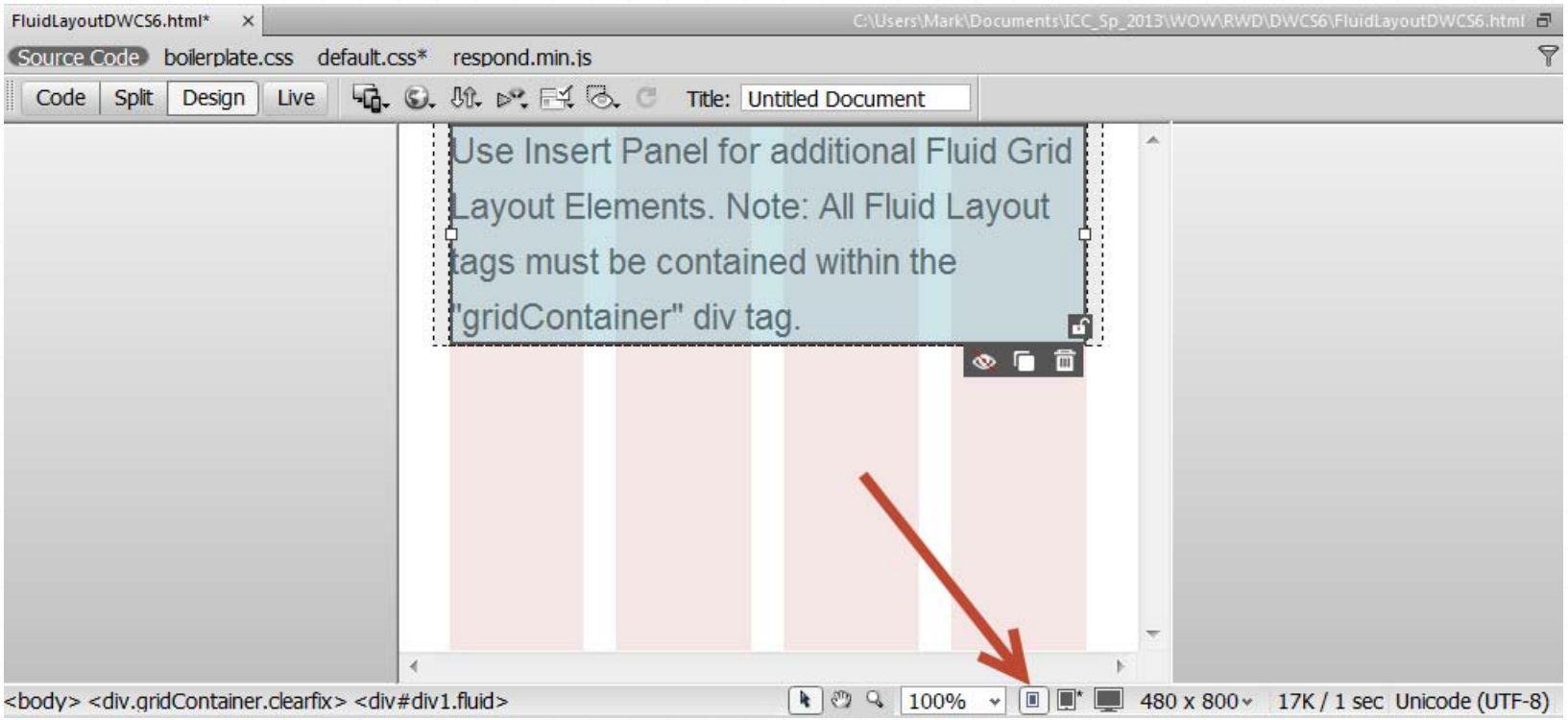
Initial File

- Desktop



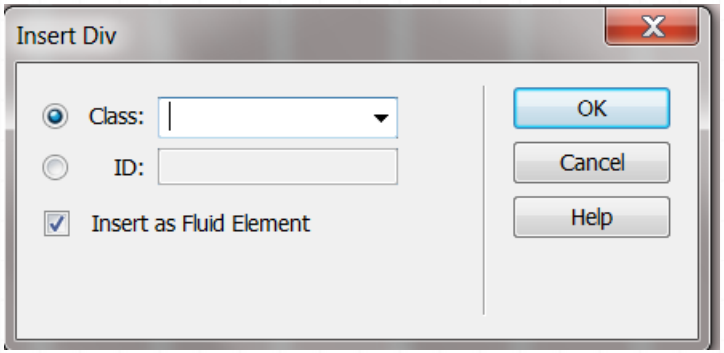
Initial File

- Phone

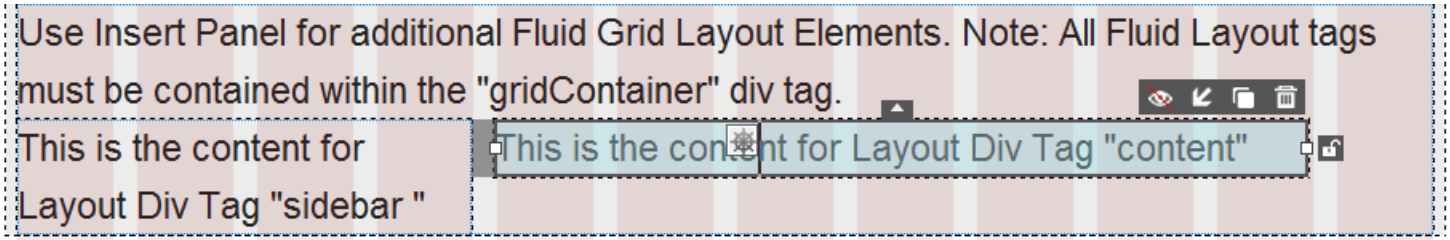


Adding new items

- Insert > Div

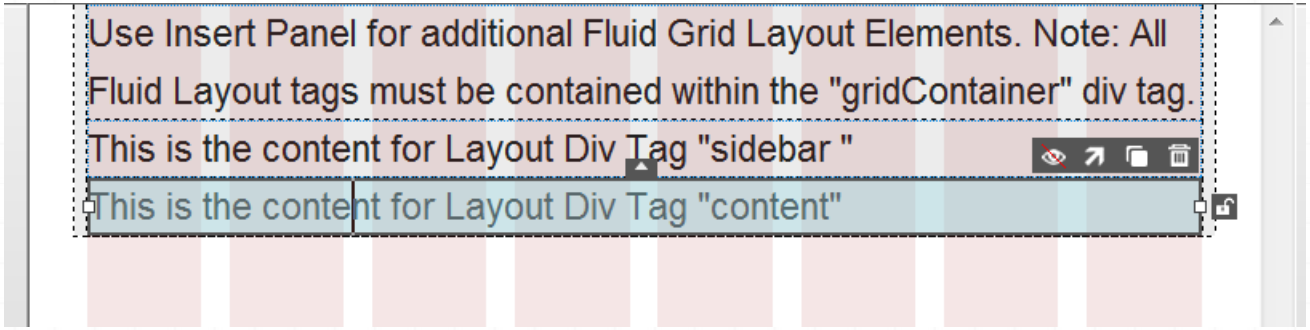


- Result

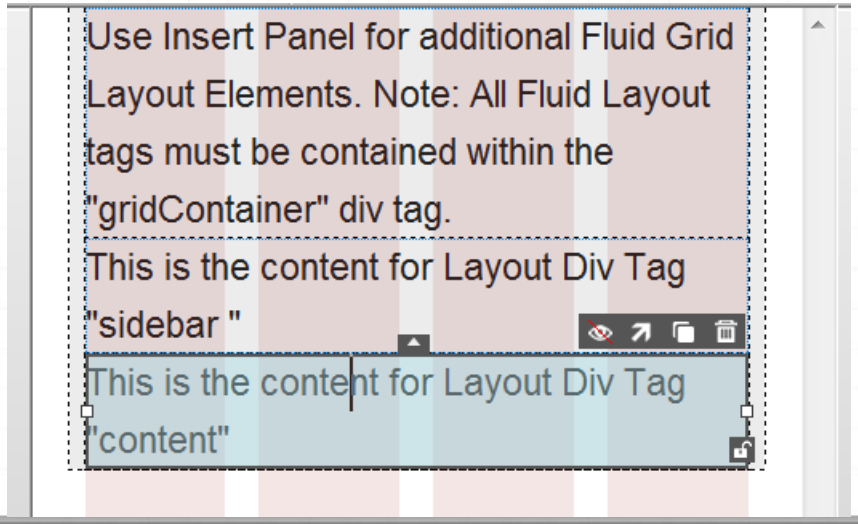


Define for @

- Tablet



- Phone



DW CS6 demo

Example Page

- This was created entirely in design view in DW
- Page contains links to sites mentioned during this presentation.

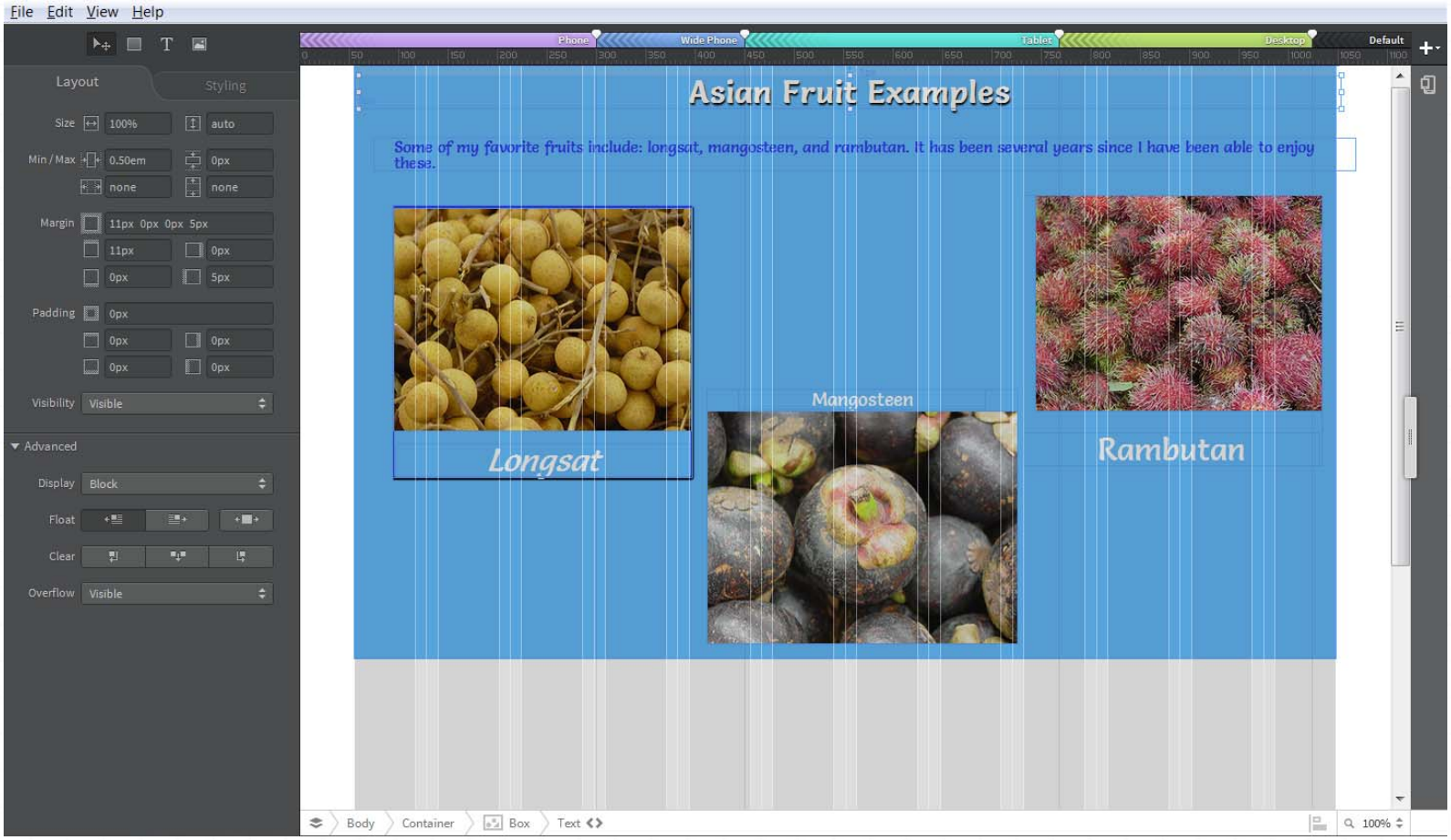
- http://markdubois.me/RWDEx03

Alternate tool

- Edge Reflow (recent release) – works best for Chrome browser

Edge Reflow

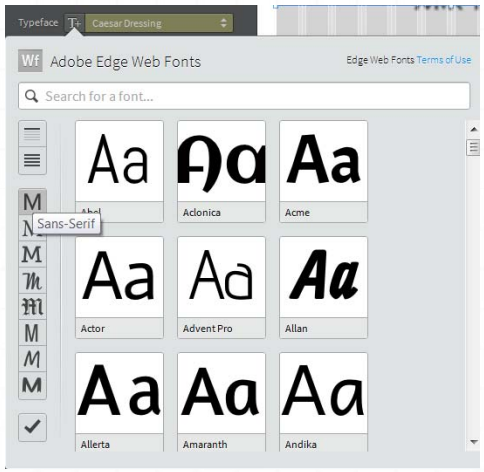
- http://html.adobe.com/edge/reflow/ - preview

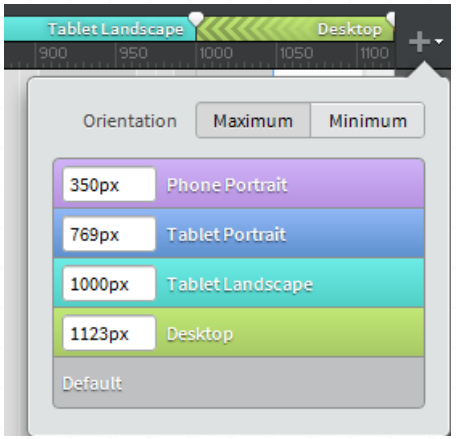


Edge Reflow

- http://html.adobe.com/edge/reflow/ - preview

Demo





Edge Reflow

- http://html.adobe.com/edge/reflow/ - preview
- Features:
  - Set pins for various screen sizes (media queries)
  - Layout and styling tabs
  - Web fonts
  - Grouping objects
  - CSS-3 enhancements (apply properties to all regions)
  - Inspection tools
  - Preview in Chrome (only for now)

RWD

- http://creative.adobe.com

- Questions?
  Please use **question pod**

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Mark@WebProfessionals.org

Slides

http://markdubois.me/2013Apr30

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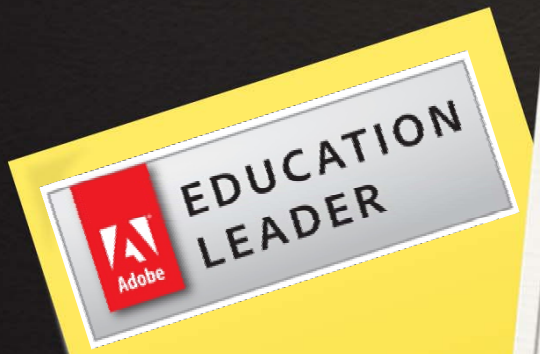
Mark DuBois