

AQUENT

GYMNASIUM

RESPONSIVE WEB DESIGN

Lesson 8

MATERIALS & ASSIGNMENT

THIS LESSON'S CORE CONCEPTS

1. On the one hand, creating a flexible image is technically easy using the CSS style `img {max-width:100%;}`. On the other hand, this creates a fundamental challenge: how to use images to communicate effectively on any given screen or device while balancing performance concerns. The large download size of responsive websites (especially on slower connections) can often be directly attributed to poor implementation of images.
2. There are two primary issues that responsive images can address. One is the ability to serve optimized images to specific screen sizes and device capabilities using media queries (thereby improving performance on slow connections), and the other is the ability to serve specific editorial content based on screen size and device capabilities (also using media queries).
3. It is easier to serve users appropriate images for their screen and/or device if you use CSS background images and target a specific screen width in the media query. In this scenario you should be careful that image is primarily decoration, not content. If it is content, then it should be added using the HTML `` tag. Additionally, if you do end up using CSS background images, be sure to target a unique media query and do *not* style the image within the default style sheet, or else it will be needlessly loaded twice (or potentially multiple times).
4. Due to an inherent limitation in the functionality of the `` tag, only one source attribute is allowed per tag. However, if an image is defined as content, not decoration, you should use the `` tag. To address this fundamental flaw, work has begun on defining new ways to implement responsive images: A new `<picture>` element and a new `srcset` attribute are currently being proposed. Meanwhile you can use alternative techniques such as Picturefill, or a server-side scripting solution or a third-party service.
5. Other options that avoid the performance hit imposed by using graphic formats such as .jpg, .png, and .gif include using the .svg vector format, which reduces file size tremendously but is best used for elements such as line art, illustrations, or icons. Additionally, a new and evolving raster format called .webp is also an option due to its dramatically smaller file size; however, support for the format is still limited.

READINGS

- <https://speakerdeck.com/paulrobertlloyd/the-edge-of-the-web>
Paul Robert Lloyd of the design firm Clearleft proposes the following: “Graphic designers have long honed their craft to meet the specific constraints of television. As web designers begin to understand the true nature of our own medium, isn’t about time we did the same?”
- <http://css-tricks.com/which-responsive-images-solution-should-you-use/>
Chris Coyier of CSS-Tricks.com discusses different scenarios for the use of responsive images.

WEBSITES MENTIONED IN THE PRESENTATION

- <http://24ways.org/2012/responsive-responsive-design/>
- <http://blog.cloudfour.com/responsive-imgs/>
- <http://responsiveimages.org>
- <http://usecases.responsiveimages.org>
- <https://github.com/scottjehl/picturefill>
- <http://www.adaptive-images.com>
- <http://src.sencha.io>
- http://petercollingridge.appspot.com/svg_optimiser
- <http://pauginer.tumblr.com/post/36614680636/invisible-gradient-technique>
- <http://imageoptim.com/>
- <http://tinypng.com/>
- <http://jpegmini.com/>

ASSIGNMENTS

1. Quiz

2. Research a Responsive Style Guide

<http://usecases.responsiveimages.org/>

Make sure you understand the scenarios; if you don't, join the discussion on the the Forum!

3. Add a Responsive Background image to your page

Use the CSS3 background-sizing property, and be sure to ask questions if you run into problems.