

P20 Cascading Style Sheets

Monday, May 14, 9:00 am - 4:00 pm
Technical

Cascading Style Sheets, or CSS, provides easier access to your web information and is the selected technology for the California portal. In this introductory class, you will learn how to add CSS styles to your HTML and Web pages. The class will explain what CSS is, how to use in-line styles, page-level style sheets, cascading style sheets for a web site, CSS syntax, and design and usage techniques.

P21 Implementing a Web Site in Cascading Style Sheets

Tuesday, May 15, 9:00 am - 4:00 pm
Technical

This one-day course will provide an overview of CSS, and cover specific strategies for implementing a website using California's CSS templates. The California web portal will be used as an example throughout the class.

Presenter

Drew Gorton is a consultant to XMaLpha Technologies (<http://www.XMaLpha.com>) and the President and CEO of Gorton Studios (<http://www.GortonStudios.com>), based in Minneapolis, MN. He began working on the Web in 1996 and since that time he has provided custom web solutions to a wide variety of public and private sector clients, including government, arts, media, entertainment, education, wholesale, retail, financial, medical, non-profit and manufacturing organizations.

His work and company have received many accolades from both traditional media (e.g. Newsweek) and web (e.g. Yahoo) organizations. In addition to his consulting work, Drew has a passion for teaching and teaches both Web Design and Web Programming at the Universities of Minnesota and Wisconsin.

Drew has a broad range of other interests, has lived and worked in Asia, Europe and North America and speaks several languages.



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What is CSS?

- CSS: New Policy, Old Technology
 - CSS 1: 1996 (minor revisions in 1999)
 - CSS 2: 1998
 - **CSS 2.1: 2004** (revised for state of implementation)
 - CSS 3: In progress
 - CA Web Policy
 - Summer 2006 – IOUCA Recommendations
 - Usability, Accessibility, Separation of form and content
 - January 2007 – Policy Statement
- Management Strategy
 - Separate Content from Presentation
 - Removes time-consuming, error-ridden processes
 - Relevant to both static and dynamic (e.g. CMS) sites
- Templating Strategy
 - Consistency across many pages, agencies
 - Flexibility to change, tweak, adjust
- Accessibility
 - ADA Section 508
 - Target.com, AOL, SouthWest Airlines
 - Search Engines
 - Small-screen devices
- Usability tool
 - Allows for rapid changes in response to testing
- Speed Improver
 - Reduces file sizes and download durations
- Only Downside: YAL (Yet Another Language)
 - Different than HTML, Javascript, SQL, etc.



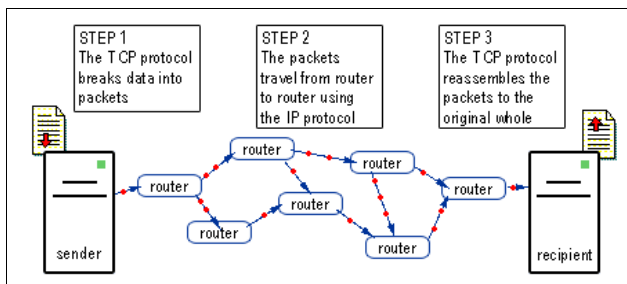
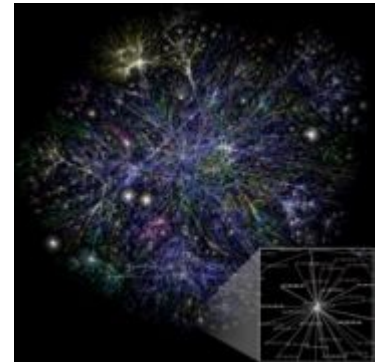
The Internet (Very Briefly)

Some Definitions

- A jumble of networks connecting millions of computers across the world. (All use "TCP/IP" as their "Network Protocol").
- "The Oracle" (As-in: "Don't know? Go ask the Oracle")
- A place for people to directly communicate with each other without regard to physical location and/or time

A Brief History

- 1960's, 1970's, 1980's: Defense, Research, Education...
- Late 80's - start of commercial use (CompuServe, BITNET, MCIMail)
- 1990 - Tim Berners-Lee thinks up the WWW and HTML.
 - For Researchers to communicate (and cite) academic information
- 1992 - 50 web servers in the world
- 1993 - First point-and-click web browser (Mosaic)
- Late 1990's to Today
 - Browser wars
 - Explosion in use and traffic (doubling every hundred days...)
 - HTML 2, 3, 4, XHTML
 - CSS 1, 2, 3





The Web (In Slightly More Detail)

'World Wide Web' ≠ 'Internet'

- The Internet is the global network of computers using TCP/IP
- POP, SMTP (Email)
- HTTP (Web)
- FTP
- more....

Anatomy of a Web Page

Web 'Pages' are made from many (10 – 100) separate files

- **HTML:** the core instruction set for every web page
 - Contains all the text, links for the page
 - Contains references to all the other files used by the page:
 - **Images:**
 - Logos, buttons, icons, photos and more.
 - **Cascading Style Sheets (CSS)**
 - Instructions on how page elements should be displayed.
 - **JavaScript**
 - Rollovers, Popups, etc.
 - Change HTML and/or CSS
 - **Flash**
 - Animation, video, audio
 - Not a "Standard". Plugin required
 - **Others as well**

What Makes a Web 'Site'? Discussion:





What Can CSS Control?

- Short Answer: Everything visual
- Case Study: CSS Zen Garden
 - www.csszengarden.com
- More specifically, display of:
 - Fonts
 - Colors
 - Links
 - Margins, Padding, Borders
 - Position
 - Images
 - and more...

Some Psuedo-Code Examples

- Set the default font
 - `<body>: verdana`
- Default margins, padding
 - `<h1>: 10 pixel top margin, 5 pixel bottom margin`
 - `, : no bottom margin`
- More...

Adding CSS to a Web (HTML) Page

- External
 - Most useful, our focus
- Embedded
 - For inconsistencies...
- Inline
 - Same old pitfall as 'classic' HTML



CSS: The 'Cascade'

- Containment of XHTML

```
<html>
  <head>
    <title>Title Contents</title>
  </head>
  <body>
    <div>
      <h1>Title</h1>
      <p>Paragraph with <em>italicized text</em></p>
    </div>
    
    ...
  </body>
</html>
```

- Cascade of rules
 - <body> rule effects <h1>
 - <p> rule effects
 - ...
- Inheritance and Specificity
 - Rules by proximity
 - Farther away = less influence
- Steps:
 - Gather the rules
 - Sort by origin and importance
 - Sort by proximity
 - Tie breaker: Sort by order defined

CSS Syntax

- selector { property: value; }
 - body { font-family: verdana; }
 - h1 { margin-top: 10px; margin-bottom: 5px; }
- Different selectors
 - <tag>, .class, #id
 - **<tag>** is weaker than **.class** is weaker than **#id**
 - CSSZenGarden example
 - CA Template Example



CSS Design Techniques

- Mind Set more than Rule Set
 - Efficient (Less is More)
 - Clean (Valid)
 - Use headers!
 - h1, h2, h3
- Names should follow meaning, not presentation
 - Good: <div id="navigation">
 - Good: <ul class="linkList">
 - Bad:

Standards Compliance and Browser Differences

- Getting Better
 - IE7 better than IE6 better than IE5
 - Firefox and Safari better yet
- Inconsistencies to watch out for:
 - margins, padding, widths

Doctype Declaration – It Matters!

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"  
"http://www.w3.org/TR/xhtml1/DTD/strict.dtd">
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"  
"http://www.w3.org/TR/xhtml1/DTD/transitional.dtd">
```

Future Considerations

- Present- and future-proof code – best bet is valid code:
 - XHTML Validation
 - CSS Validation

More CSS Examples (Time Permitting)



Further CSS Resources

Definitions, Rules and References

W3C: Official CSS Specification

<http://www.w3.org/Style/CSS/>

California Web Tools: State Templates, Tips, Policies and links to much more

<http://www.webtools.ca.gov/>

http://www.webtools.ca.gov/Using_Templates/CSS.asp

Browser Support of...

CSS Properties

http://www.westciv.com/style_master/academy/browser_support/index.html

<http://www.webdevout.net/browser-support-css>

Doctype Modes

<http://www.webstandards.org/learn/reference/charts/doctype-switch/>

Explanations and Tutorials

Selectoracle: English and Spanish descriptions of CSS selectors

<http://gallery.theopalgrou.com/selectoracle/>

W3Schools Tutorials

<http://websitesetips.com/css/>

Website Tips Tutorials

<http://websitesetips.com/css/>



General Purpose Learning

SitePoint

<http://www.sitepoint.com/>

A List Apart

<http://www.alistapart.com/>

Authoring and Debugging Tools

- Firefox + Web Developer toolbar + Firebug
 - <http://www.mozilla.com/en-US/firefox/>
 - <https://addons.mozilla.org/en-US/firefox/addon/1843>
 - <http://www.getfirebug.com/>
 - <https://addons.mozilla.org/en-US/firefox/addon/60>
- IE7 + Web Developer toolbar
 - <http://www.microsoft.com/downloads/details.aspx?familyid=e59c3964-672d-4511-bb3e-2d5e1db91038&displaylang=en>