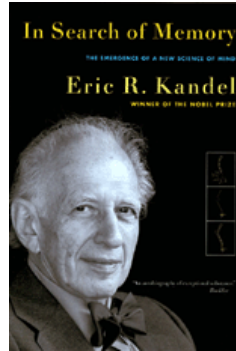# Creating Scalable, Flexible, Cross-browser Pages

Rick Ells

Communications Group

UW Technnology

Do Big Things
While They Are Small

In Search of Memory
Dr. Eric Kandel built an understanding of how memory works by studying Aplysia worms, earning a Nobel Prize.

The Dao of Web Design

http://www.alistapart.com/articles/dao/

Tao de Ching – 63rd verse

http://acc6.its.brooklyn.cuny.edu/~phalsall/texts/taote-v3.html#63

What is rooted is easy to nourish.
What is recent is easy to correct.
What is brittle is easy to break.
What is small is easy to scatter.

Prevent trouble before it arises.
Put things in order before they exist.
The giant pine tree
grows from a tiny sprout.
The journey of a thousand miles
starts from beneath your feet.

Rushing into action, you fail.
Trying to grasp things, you lose them.
Forcing a project to completion,
you ruin what was almost ripe.

Goals

- **Scalable** so people adjust the whole page to the size they find comfortable to read
- **Flexible** so people can adjust the browser window to the configuration they find useful
- **Cross-browser** so that you only have to maintain a single page and a single stylesheet for all your audiences

Use relative units – W3C – WCAG2

http://www.w3.org/TR/WAI-WEBCONTENT/wai-pageauth.html#tech-relative-units

Principles

- Build from basics
- Keep it simple
- Aim for management simplicity
- Be creative within the medium
- User's needs come first
- Content manager's needs come first
- Site manager's needs come first

Methods

- Strive for Standards Mode
- Validate, Validate, Validate
- Tame Default Browser CSS Files
- Keep Division Structure Simple
- Markup Semantically
- Use Relative Sizes for Everything

Strive for Standards Mode

- DOCTYPE Statements On Every Page
  - Strict is good - makes you learn
  - Strict DOCTYPEs do not allow deprecated elements
- Code To Comply With The Declared DOCTYPE
- Avoid Quirks Mode
  - Quirks Mode rewrites your HTML
  - Produces inconsistent results across browsers
- Standards Mode Displays Your Code As Written

•You can see what mode you are in on FireFox by pulling down the Tools menu to Page Info.

•In IE, it's a bit more complicated. See http://css-discuss.incutio.com/?page=RenderingMode
Basically, you enter the following string in the address bar:
javascript:alert(document.compatMode);
If a pop-up box appears that says CSS1Compat, the page is rendering in standards mode. Otherwise it is in Quirks mode.

Interesting Articles:

•CSS Enhancements in Internet Explorer 6
http://msdn2/microsoft.com/en-us/library/bb250395.aspx

Validate, Validate, Validate

- Routine Validation Clarifies Your Understanding of Structure, Syntax, and Relationship
- Tidy is Mighty
- The Browser Is Not a Validator

Sourceforge Tidy Library

http://tidy.sourceforge.net/

UW Web Tidy Interface

http://www.washington.edu/webinfo/tidy.cgi

Tame Default Browser CSS Files

- Each Browser Type and Version Has a Different Default CSS File
- A Reset CSS File "removes and neutralizes the inconsistent default styling of HTML elements"
- A Base CSS File "applies a style foundation for common HTML elements that is consistent across A-grade browsers"

Yahoo User Interface Library Reset and Base Files

http://developer.yahoo.com/yui/reset/

Control Layout With CSS

- KPSS – Keep Page Structure Simple
- Use DIVs For Basic Page Structure
  - Header, Navigation, Sidebar, Main, Footer
- Mind Your P's, B's, and M's
  - Remember padding, borders, and margins are outside the content box - your DIV is wider than you think
  - Often it is better for the DIV to not have padding or margins - apply them to the elements within the DIV instead

•The FireFox add-on FireBug (https://addons.mozilla.org/en-US/firefox/addon/1843) is awesome for sorting out padding and margins. Be sure to disable it when not using it though. Leaving it running may cause FireFox to crash when it encounters a script-heavy page

Markup Semantically

- Use Elements As Semantically Intended
  - \<p> as paragraphs, \<h*x*> as headers, etc.
- Elements of the Same Semantic Type Usually Have the Same Presentation
  - Consistent semantic markup facilitates effective use of CSS to create a consistent look and feel
- Semantic Markup Helps Assistive Technology
  - Voice browsers use headings as quicky table of contents

Use Relative Sizes for Everything

- Use relative units – em, %
- Think fluid
- Be careful about relative sizes within relative sizes
  - Setting font size to 70% in the <body> and then specifying x-small in an element makes really little text

Accessible Layouts - AlastairC

http://alastairc.ac/2006/05/accessible-layouts/

Let Not Thy Floats Bump

- By definition, floats have width and their contents have width
  - They do not like to be squeezed
  - When squeezed they are likely to drop
- Figure out a page layout that minimizes bump as the page is flexed or scaled
  - Have content in the main flow and use floats for secondary information
- Limit the number of floats

Creating a simple 3-column design - Adobe

http://www.adobe.com/devnet/dreamweaver/articles/three_column_layout_06.html

CSS Layouts – Mastering Floats

http://www.devgroupnw.org/download/oct06_csslayout.pdf

Secret Spells

- When some elements have position in a flow and others do not, you may need to give position to the container of the elements or weird spacing may occur in IE.

- Hack be gone – Strict code and standards mode avoids many of the old glitches. Test all hacks, they may not be needed anymore.

- For your IE users, you may need to set "word-spacing: 0; letter-spacing: 0;" in an element for stable scaling behavior.

Quirksblog

http://www.quirksmode.org/blog/index.html

Last Thoughts

- Work Creatively With XHTML/CSS
  - ◆ Don't just try to implement tables designs with CSS
- Simplicity First, Then Complexity
- New versions of HTML and XHTML are coming: Fear them not for they are all fruit of the same XML tree.

HTML 5 Working Draft

http://www.whatwg.org/specs/web-apps/current-work/

A Preview of HTML5 – A List Apart

http://www.alistapart.com/articles/previewofhtml5

XHTML 2.0 Working Draft

http://www.w3.org/TR/xhtml2/

Conversation with the XHTML 2.0 Team

http://xhtml.com/en/future/conversation-with-xhtml-2-team/