

Microsoft

WWW09

THE NEXT WEB NOW

<3  
YOUR  
WEB

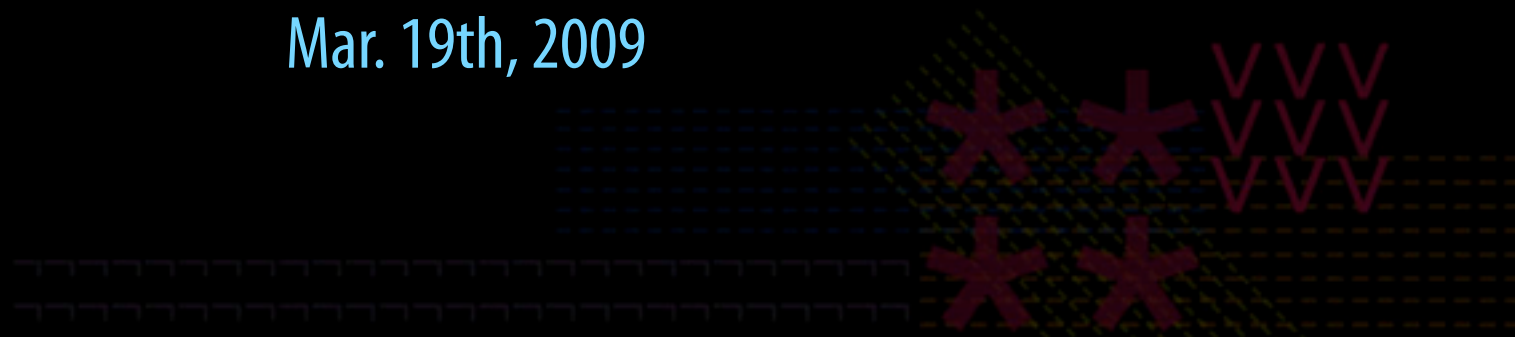
# Interactive Prototyping with DHTML

tips, techniques, tools, libraries and frameworks for rapid prototyping

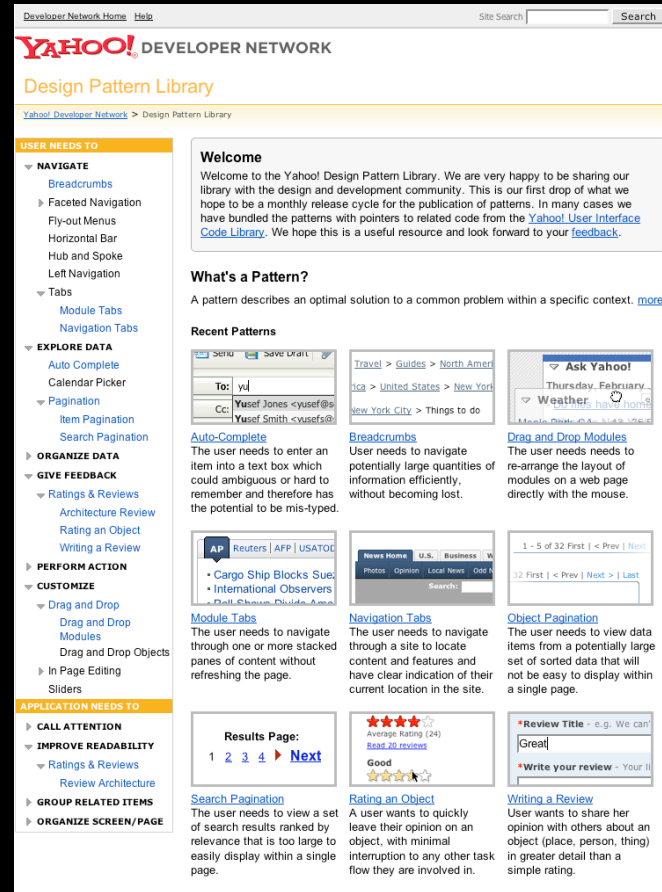
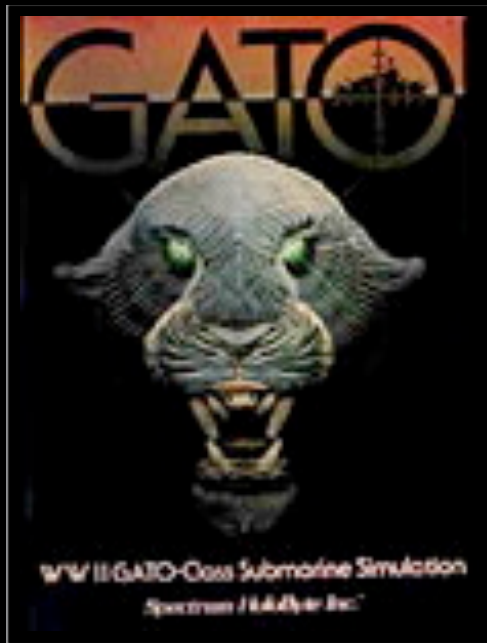
Mix 09

Bill Scott

Mar. 19th, 2009



# My Background



## Rico

### JavaScript for Rich Internet Applications

Home Features Demos Documentation Downloads About

An open-source JavaScript library for creating rich internet applications. Rico provides full Ajax support, drag and drop management and a cinematic effects library.

#### BACKGROUND

Rico is a Spanish word meaning rich. The goal of Rico is to provide a rich experience for web sites using Ajax technology.

Rico is just one small part of a larger effort at Sabre Airline Solutions to create a suite of rich internet components, behaviors and effects for the web application space.

The library is a fully object-oriented JavaScript library. Recently we refactored the library to extend the excellent [prototype.js](#) effort from the Ruby on Rails folks.

#### OPEN SOURCE

Rico is provided free and open-source ([license 2.0 License](#)) for either your personal or commercial use. [Sabre Airline Solutions](#) retains the copyright on the Rico code produced at Sabre.

#### BROWSER SUPPORT

Rico has been tested on IE 5.5, IE 6, Firefox 1.0x/Win, Camino/Mac, Firefox 1.0x/Mac. Currently there is no Safari or Mac IE 5.2 support. Support will be provided in a near future release for Safari.

#### AJAX SUPPORT

Ajax is the term that describes a set of web development techniques for creating interactive web applications. One of the key ingredients is the JavaScript object XMLHttpRequest. Rico provides a very simple interface for registering Ajax request handlers as well as HTML elements or JavaScript objects as Ajax response objects. Multiple elements and/or objects may be updated as the result of one Ajax request.

Want to get started learning? Check out our [demos](#) and then read our two Ajax tutorials on the [Documentation](#) page.

#### DRAG AND DROP

Desktop applications have long used drag and drop in their interfaces to simplify user interaction. Rico provides one of the simplest interfaces for enabling your web application to support drag and drop. Just register any HTML element or JavaScript object as a draggable and any other HTML element or JavaScript object as a drop zone and Rico handles the rest.

#### CINEMATIC EFFECTS

When actions are no longer occurring just at the page level but within the page itself, more clues are required to clue the user on what has transpired. Cinematic effects such as scaling and smooth sliding transitions can communicate change in richer ways than traditional web applications have explored before. Rico provides several cinematic effects as well as some simple visual style effects in a very simple interface.

#### BEHAVIORS

Take some raw HTML and sprinkle in some behaviors and what do you get? Well in Rico you can get an [Accordion](#) component like those found in Macromedia Flex and Lasso. Just nest some DIVs and with one line of JavaScript turn your div panels into an accordion. And the latest behavior is the LiveGrid. LiveGrid allows you to connect an HTML table up to a stream of Ajax responses. Ajax requests are automatically called during table scrolling. The result is now HTML tables can hold an unlimited amount of data scrolled into view on the fly as needed! More behaviors are planned!

#### NEW! LiveGrid Behavior!



Check out the Alternative to Paging!



See Rico in Action!



# the challenge

interaction is dynamic



# Interaction is Nuanced

## Front Grounds



flickr. inline edit

## Pick Up at the Store

- ☐ Milk
- ☐ Orange Juice
- ☐ Tomatoes
- ☐ Lettuce
- ☐ Bread
- ☐ Chips

backpackit. contextual tools

[TEXT ONLY]

**USGS**  
science for a changing world

**Hawaiian Volcano Observatory**

**Volcanic Hazards**

### When Lava Enters the Sea: Growth & Collapse of Lava Deltas



Photograph by C. Heliker on November 12, 1992.

Only four days old, this fan-shaped lava delta (center of image) extends about 200 m into the ocean on the southeast coast of Kilauea Volcano, Hawai'i. The diffuse plume of white steam at the leading edge of the delta indicates that several small lava flows are pouring into the ocean. Countless deltas have formed

**YAHOO! GOBBLER**

Projects (8)

- Geography: Land...
- Birds' Nests
- Scratchpad

Return to Y! Teachers

y! teachers. drag & drop

0 items in **my bag** **checkout**

### Pique polo

only at gap.com

**overview** you'll also like

Soft cotton pique knit.  
Short-sleeved, button neckline.  
♦ [Need large quantities? Click for Corporate Apparel](#)  
♦ 100% Cotton. Machine wash. imported.

**regular** **tall**

**Buy More and Save**

select Color: **royal grape**

\$29.50 **Buy 2 or more, \$25.00 each**

~~\$29.50~~ **\$9.99**

select Size: **XS** S M L XL XXL XXXL

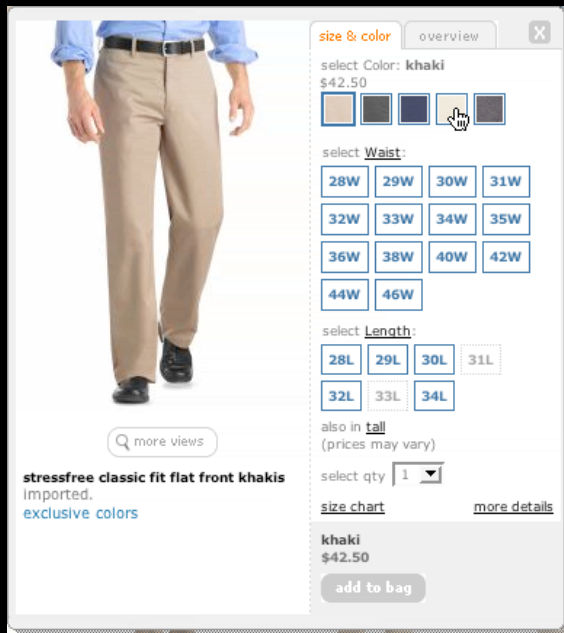
size chart

Quantity: 1

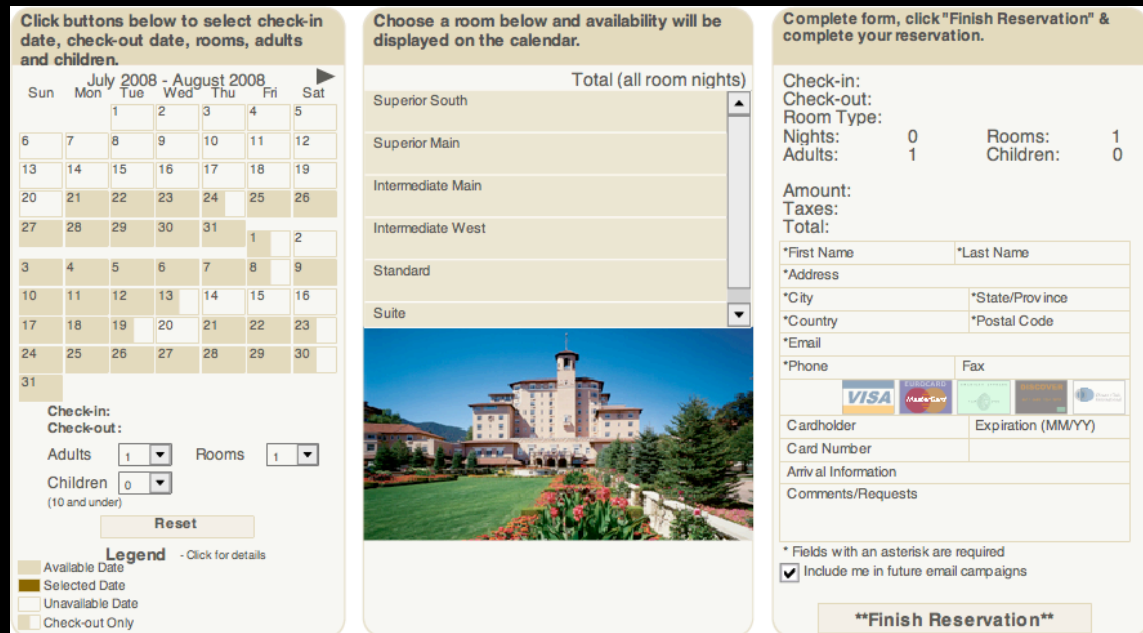
royal grape **\$29.50 \$9.99** **add to bag**

the gap. inline assistant

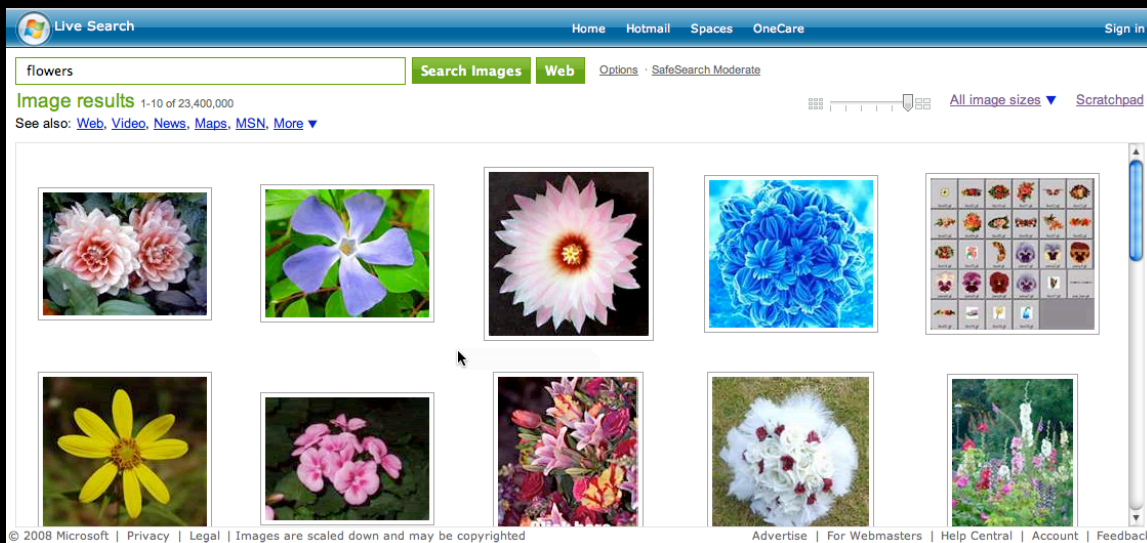
# Interaction is Nuanced



the gap. inline assistant

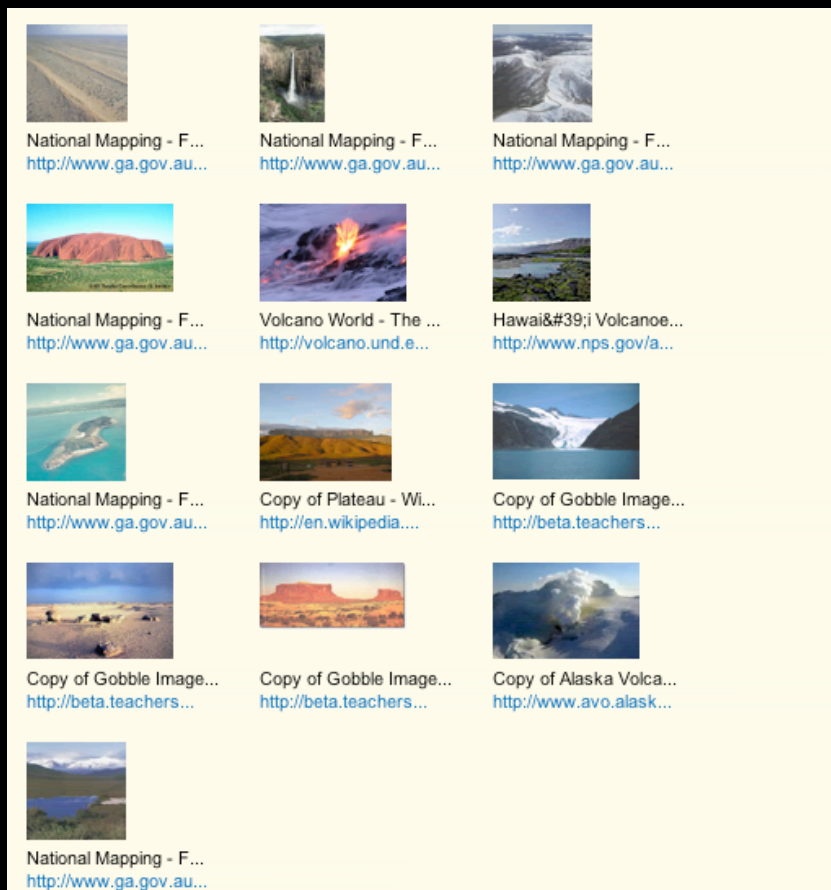


broadmoor hotel. one page checkout

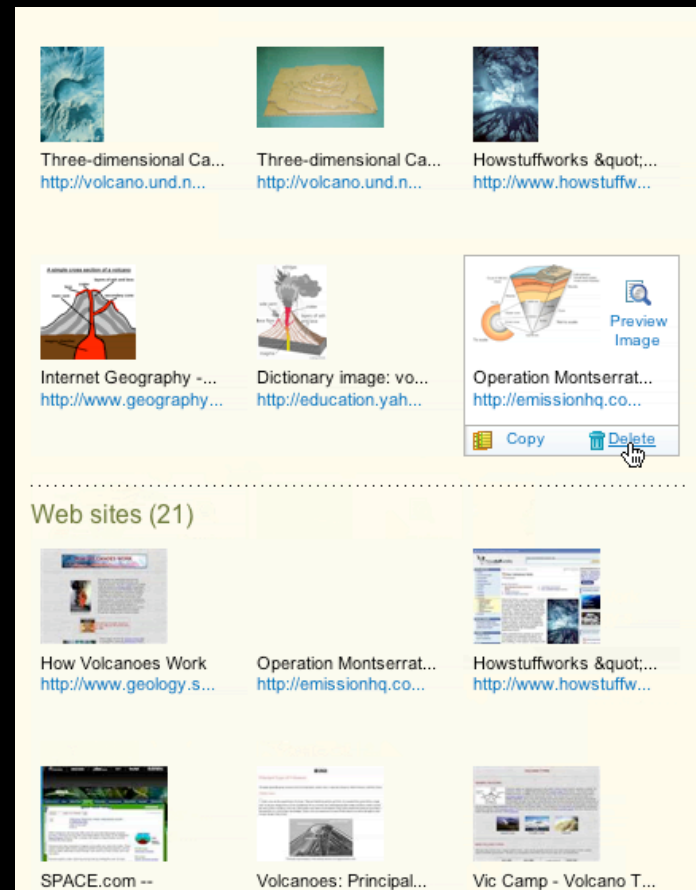
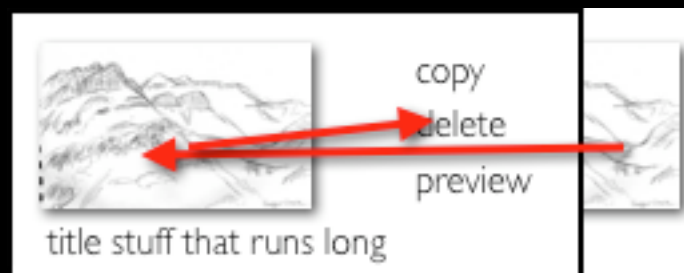


microsoft live. paged scrolling

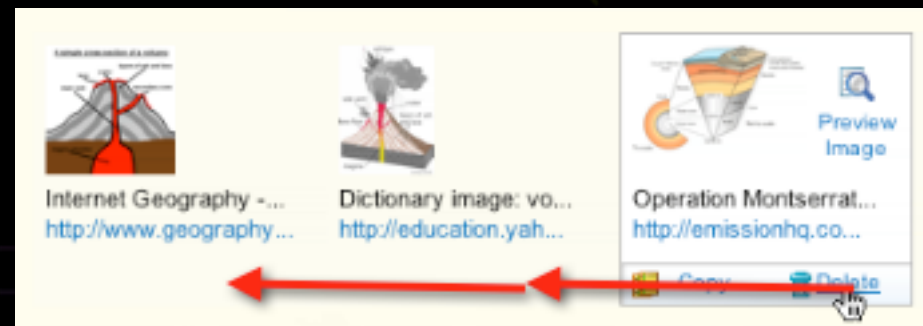
# Devils in the Details



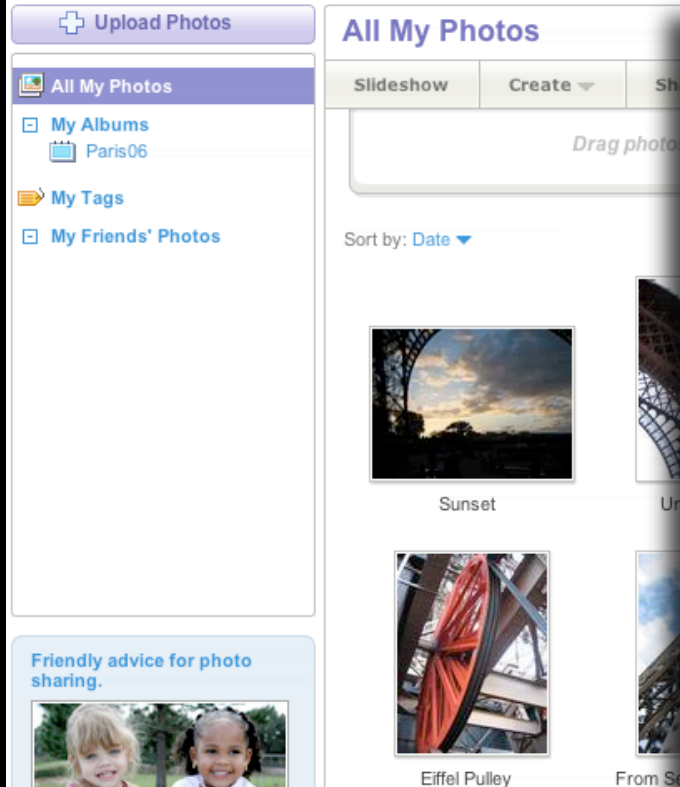
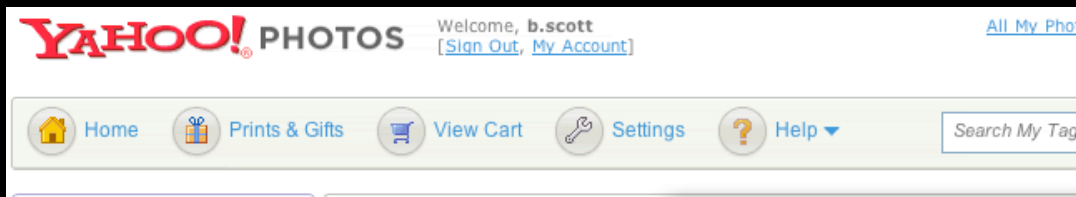
y! teachers. anti-pattern. hover & cover



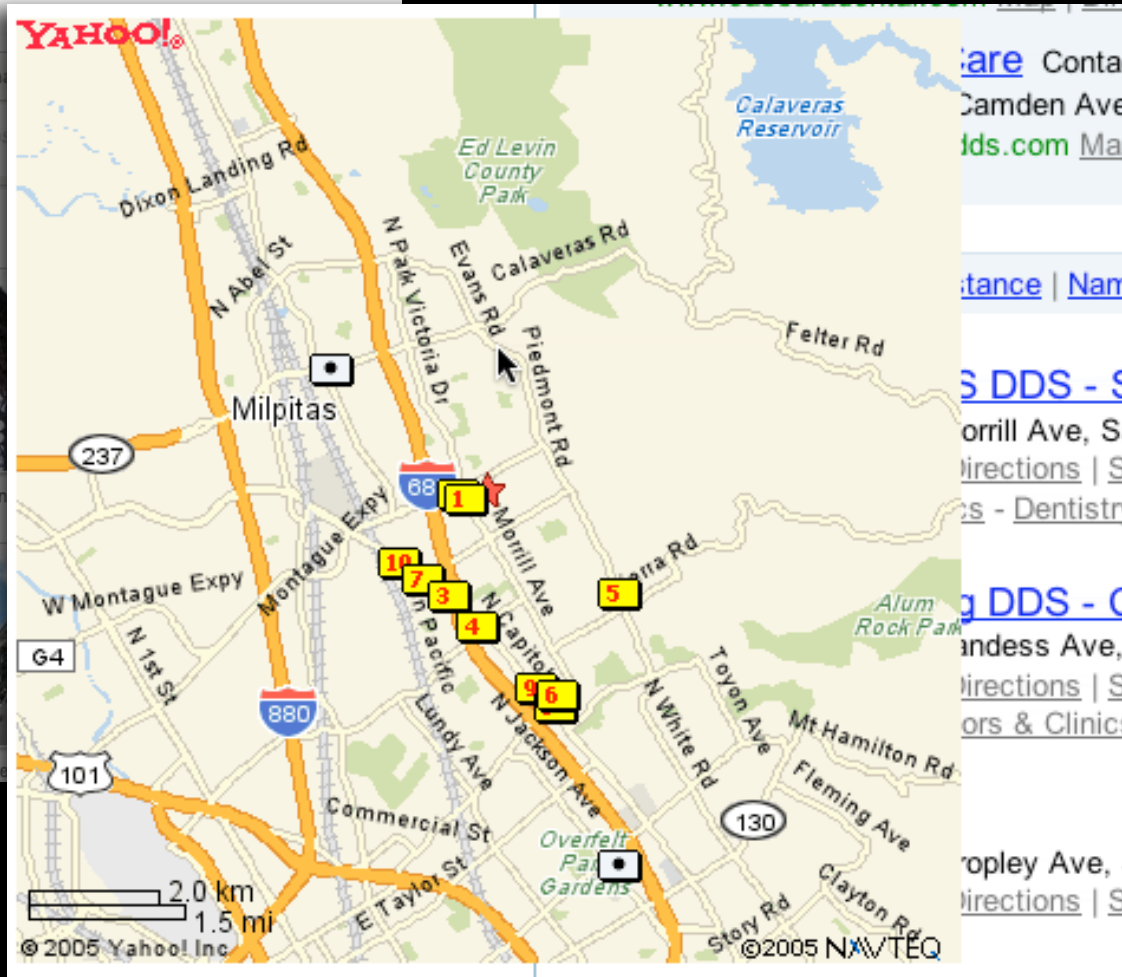
y! teachers. anti-pattern. hover & cover - resolved



# Devils in the Details



! photos. anti-pattern. idiot boxes



! maps. anti-pattern. mouse trap



# Timing Concerns

Lists

☐ Remove this item

☐ And this one too

☐ Edit ☐ adding a new item

Add item or I'm done adding items

Women GapBody GapMaternity GapKids babyGap my account see order status sign in

3 items in my bag checkout

## Shoes, Belts & More

1 2 >> See All

bags



Premium canvas duffle bag \$49.50



urban nylon sling \$34.50



urban nylon backpack \$29.50



nylon commuter bag \$68.00

Batch Organize Your Sets Finished? Go home! flickr

Edit photos Permissions Edit dates Add tags Add to set Clear this batch



timing is important  
makes actions seem faster  
slows down interaction for understanding  
reveals state change  
shows relationships between objects  
focuses attention

Connecting...

YAHOO! PLUS

Animated Tour Useful New Features We Upgraded Mail Storage: Now 2GB

Select Type: Web Images Local News Shopping

Search: Search

My Services Feedback

Music Video Mail

Hello Bill [ Sign Out, My Account ] 42° - 57°

Add Content Change Layout Change Colors Select Page: My Front Page

### Scoreboard

TODAY

NHL

|                      |     |           |
|----------------------|-----|-----------|
| Tampa Bay vs. Dallas | 5 3 | 13:15 2nd |
|----------------------|-----|-----------|

NBA

|                        |     |          |
|------------------------|-----|----------|
| Dallas vs. LA Clippers | 0 0 | 10:30 ET |
|------------------------|-----|----------|

YESTERDAY

no games for selected teams

Listen to live audio of college games

### Best Fare Tracker

Depart: New York, NY - all

|                     |          |
|---------------------|----------|
| Paris, France - all | \$193.00 |
|---------------------|----------|

Depart: Seattle/Tacoma, WA

### Message Center

Check Email

Launch Messenger 14 friends on

### Weather

|                   |           |
|-------------------|-----------|
| Dallas, TX        | 40...75 F |
| Denton, TX        | 35...75 F |
| Sunnyvale, CA     | 42...57 F |
| Boulder Creek, CA | 39...59 F |
| Gilroy, CA        | 38...57 F |
| San Jose, CA      | 42...58 F |

Search

search by Zip Code or City

### Software News

- AccuRev gives software configuration system global focus - 5 hours ago
- Anti-virus Software: The Next Big Worm Target? - 10 hours ago
- India's Satyam logs 64 percent rise in third-quarter profit - 10 hours ago
- Cisco Patches Router, Call Manager Software - 1 day ago

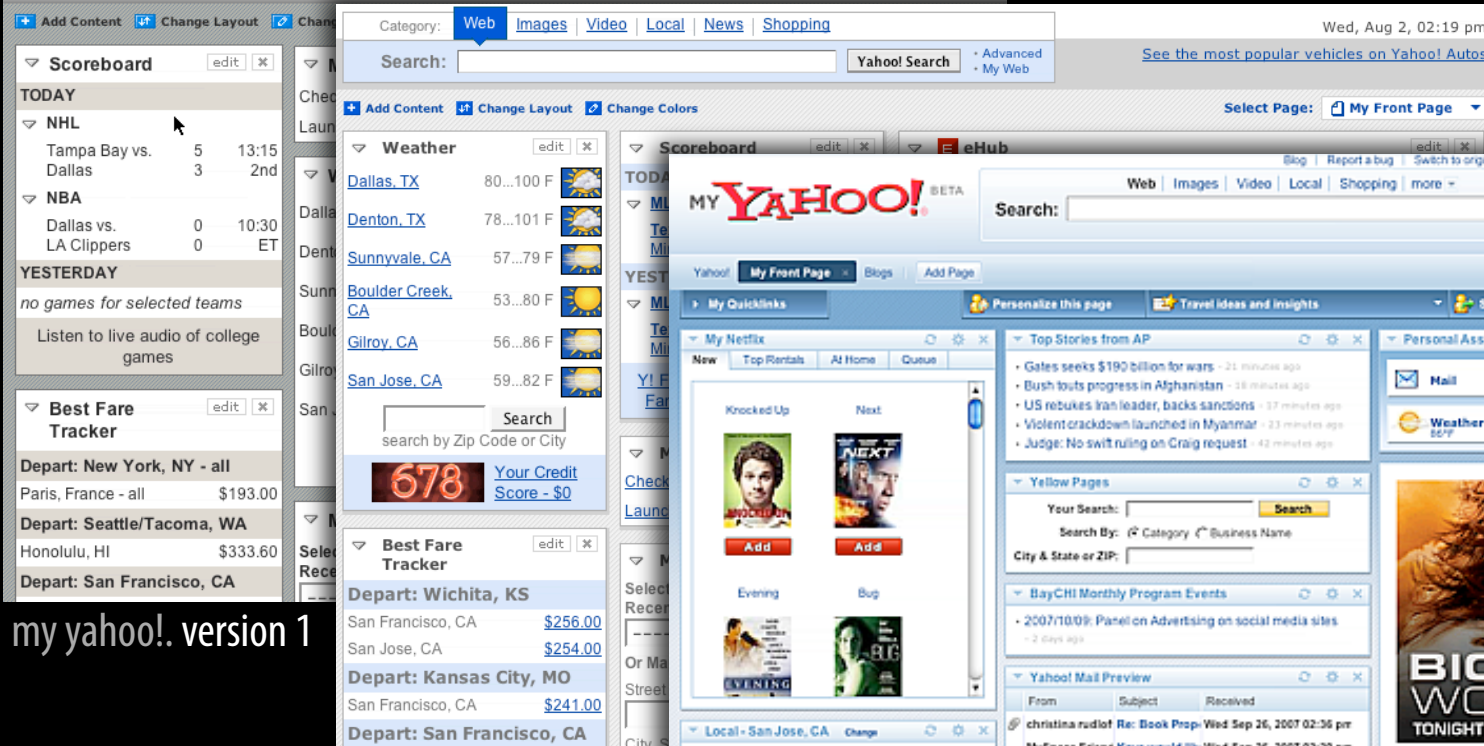
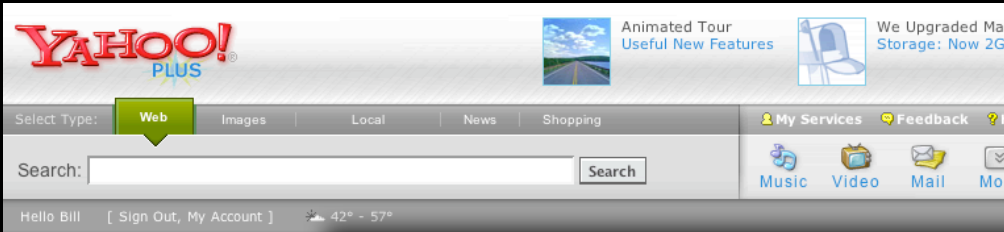
### eHub

- eHub Interviews Prodigem - 11 hours ago
- Veetro - 20 hours ago
- MediaMax - 2 days ago
- iOWEYOU - 2 days ago
- HyperSuper - 2 days ago

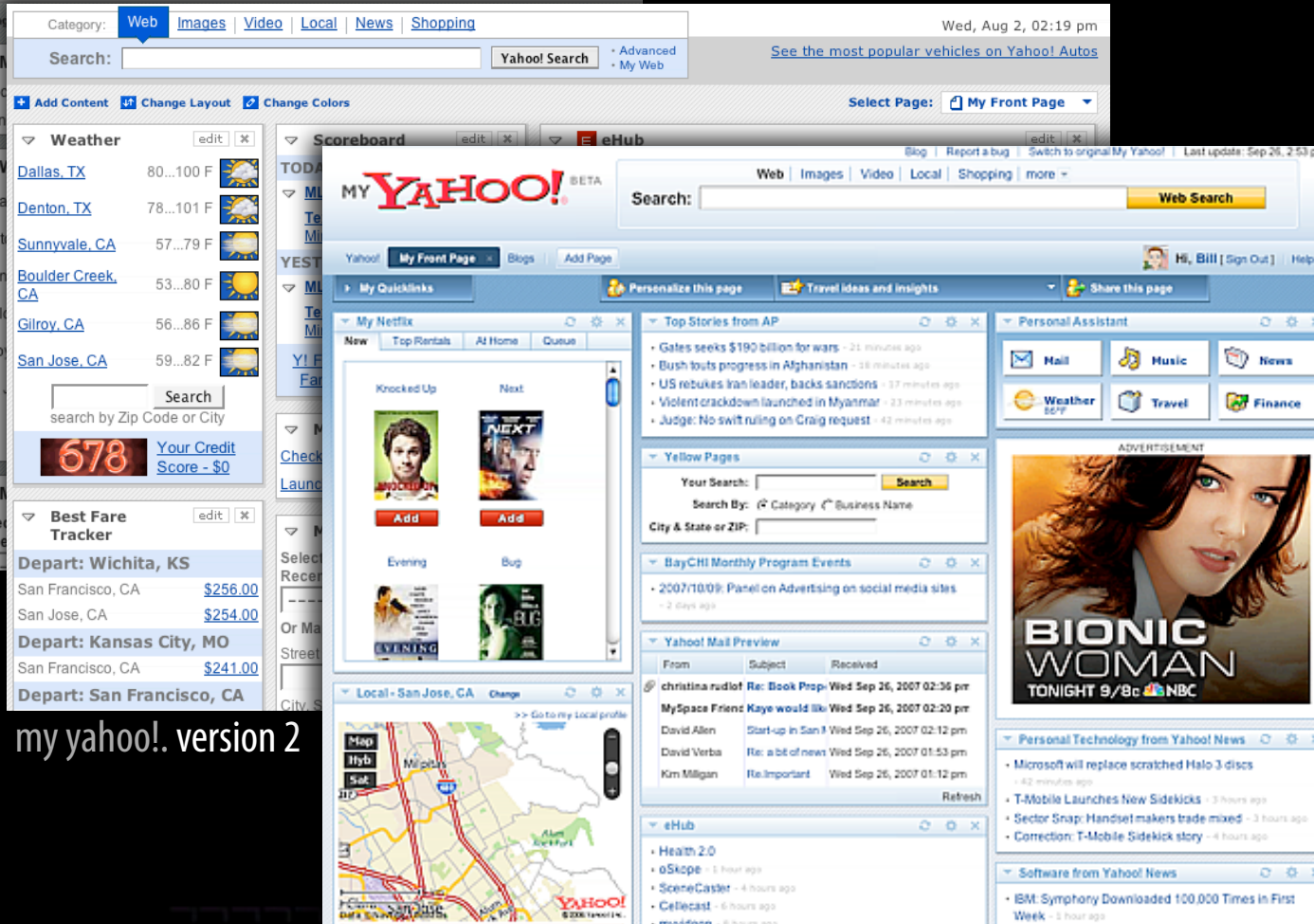
### BayCHI Monthly Program Events



# Timing Concerns



my yahoo!. version 1



my yahoo!. version 2

my yahoo!. version 3

# prototyping with DHTML

# Prototyping with DHTML

## Benefits

Start simple & add complexity

Higher fidelity

Closer to final solution

Living example

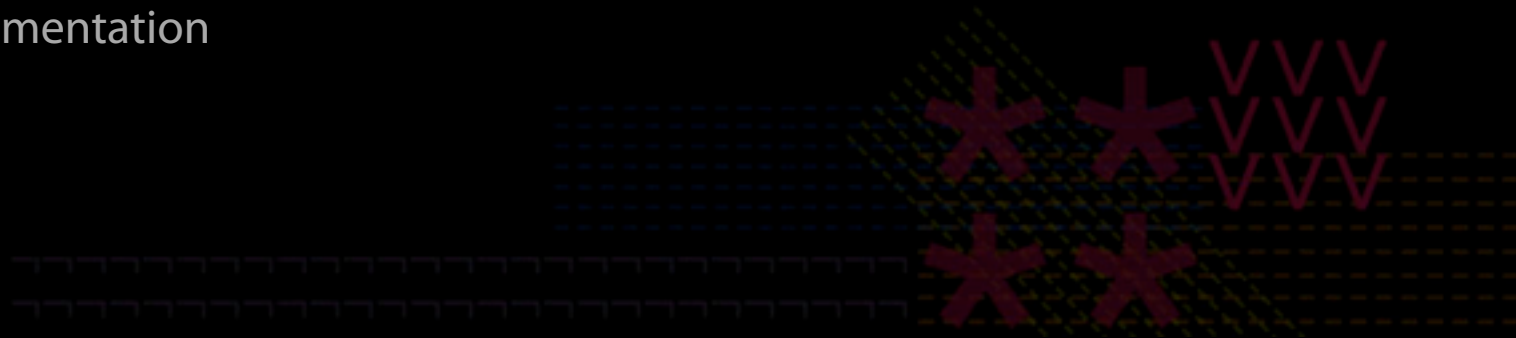
## Disadvantages

Requires technical savvy

Bugs can suck down time

Too much time spent 'messaging with code'

Hard to extract into documentation



## Button Prototypes

NOTE: Prototypes have only been vetted in Firefox 3. Hard refresh pages to make sure you have the latest version

### Evaluate for Qual

- Side-by-Side Buttons
  - Member Home
  - Watch Instantly Home
- Play Boxshot Overlay
  - Side-by-Side Add Buttons
    - Member Home
    - Watch Instantly Home
  - Instant Options on Play Click
    - Member Home
    - Watch Instantly Home
    - TOOO: On Click Instant Options Flyout
  - Queue Options on Add Click
    - Member Home
    - Watch Instantly Home
    - TOOO: On Click Queue Options Flyout
- Eye Boxshot Overlay
  - Member Home
  - Watch Instantly Home
  - TOOO: This should be the prototype that Adds to Instant Queue and offers big Play promo on Quad

### Alternate Explorations of above

- Bottom Buttons
  - Alternate Flyup Test

### Old Designs: Evaluate for Qual

- Left Buttons
  - Member Home
  - Watch Instantly Home
  - Start Not Interacted Hidden
  - Show instant options on click
  - Hover in boxshot area of that button activates button hover
- Side-by-Side Buttons
  - Member Home
  - Watch Instantly Home
  - Start Not Interacted Hidden
  - Click-only movie button full-width
  - No flyup on click-only full-width button
- Play Overlay
  - Instant Actions on Play Click
    - Member Home
    - Watch Instantly Home
  - Queue Actions on Add Click
    - Member Home
    - Watch Instantly Home
  - Split Add
    - Member Home
    - Watch Instantly Home

### Additional Explorations of above

- Left Buttons
  - Remove Boxshot as MSP Link
  - Only box is hover target
  - Show Instant Options on Mouseover - w/ adjustable delays
  - Light Overlay when inactive
  - Light Overlay with Text when inactive
- 3 Buttons: Watch Instantly, Instant Add, DVD Add
  - Short Text w/ Verbose Tooltips
    - Member Home
    - Watch Instantly Home
    - Start Not Interacted Hidden
    - Tooltips could be offered until someone has used the button enough.
    - Text could vary by customer state (i.e. activated device, day one experience, etc.)
  - Add to Playlist
  - Based on current site catalog, 3 buttons left common
- Bottom Buttons
  - Flyup on click-only full-width button
- Play Overlay
  - Queue Actions on Add Click
    - Show All Icons

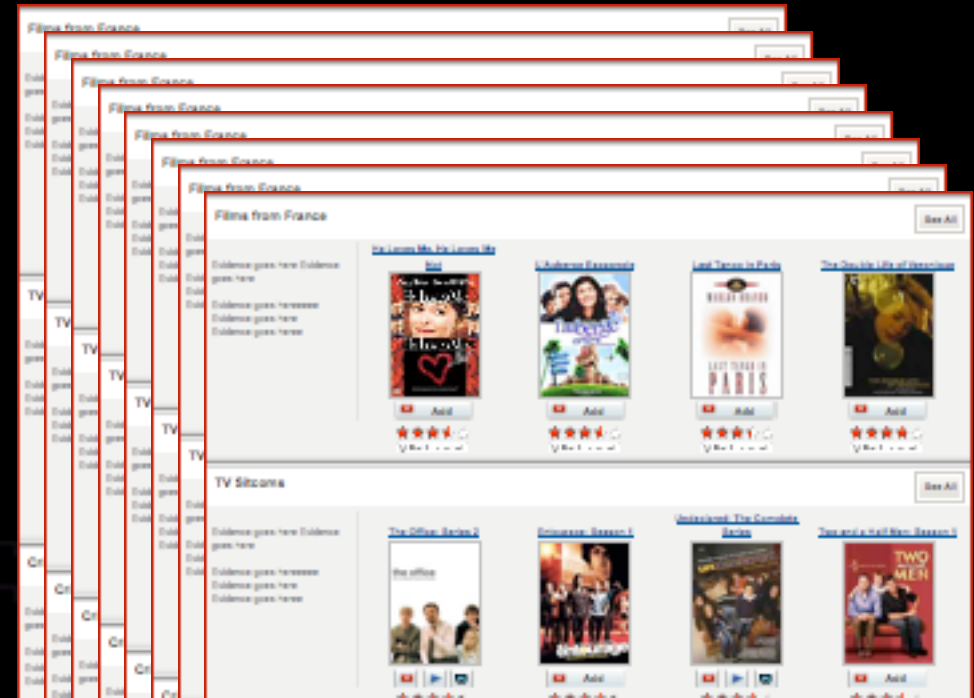
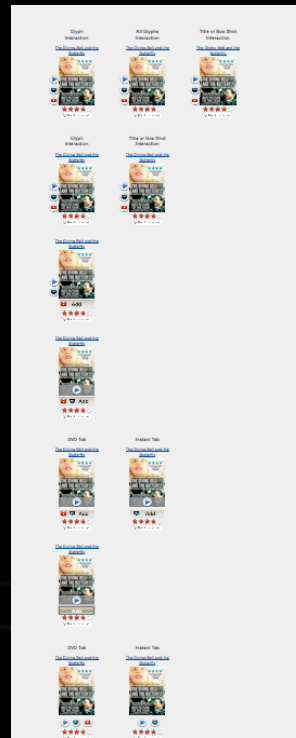
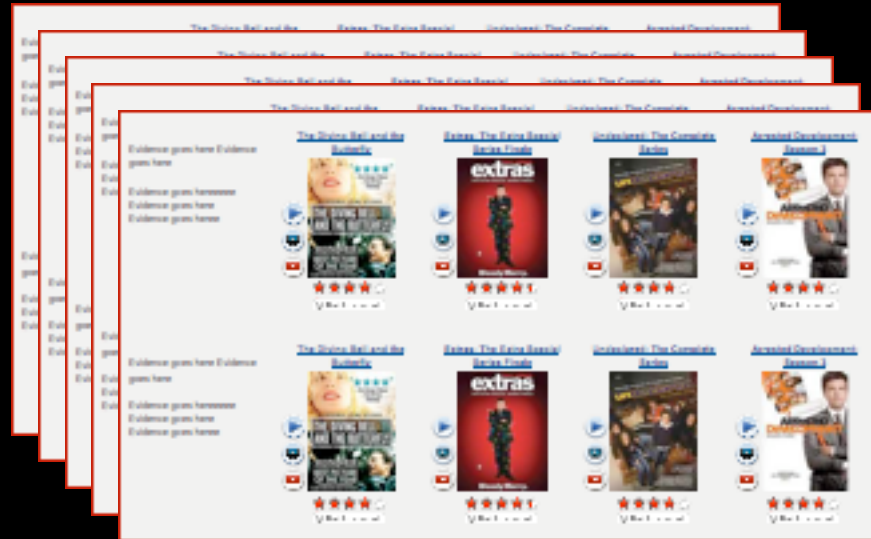
### Initial Quick Explorations

- Lots of Quick Prototypes
- Expanding Movie Layout 1
- Expanding Movie Layout 2 (mini sub-44%)
- Interactive QOO
- Interactive QOO - Smaller Footprint
- Interactive QOO - Smaller S&B and Truncated Synopses
- Interactive QOO - Wide

100+ variations prototyped over 1 week

Winnowed down between PMs, Design & Eng.

Put before users the next week & again 2 weeks later



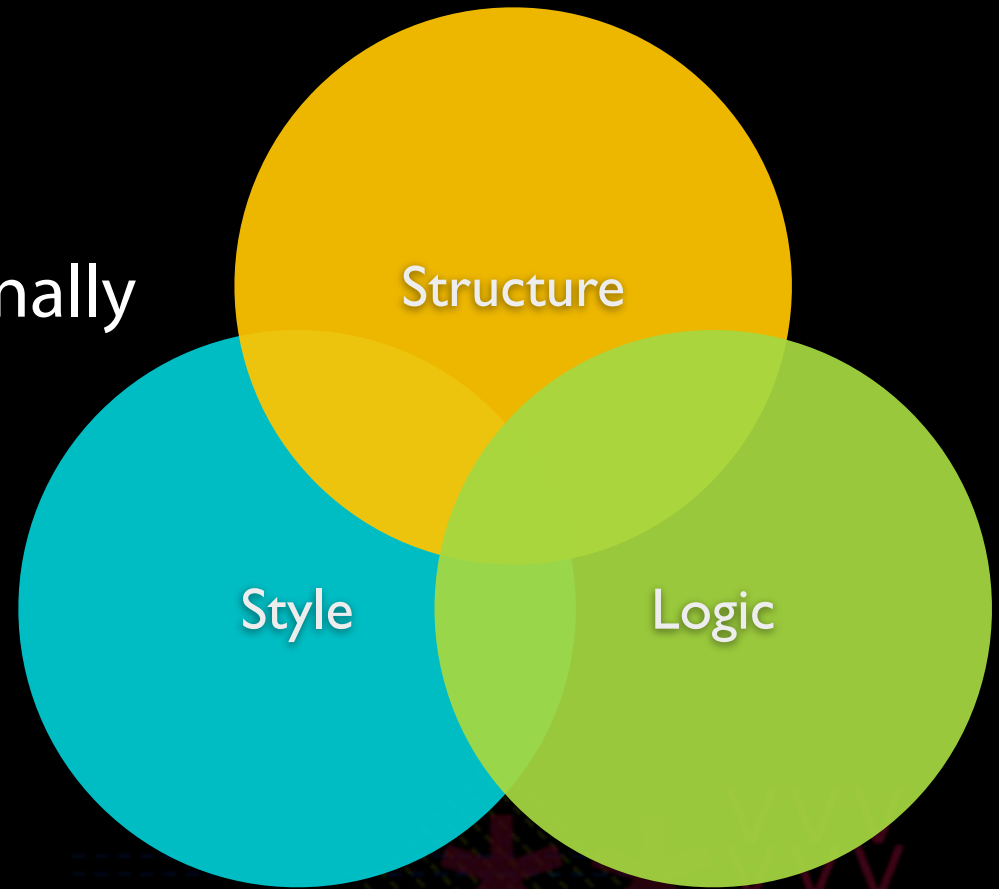


# Separation of Concerns

Content/Structure should be free of style & behavior logic

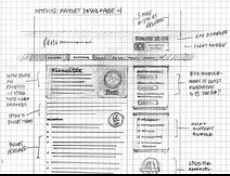
Style should be layered in externally

Logic should be handled in separate code



“Keep structure, style and logic separate”

# Prototyping Challenges



## Layout

Getting the page laid out correctly & quickly



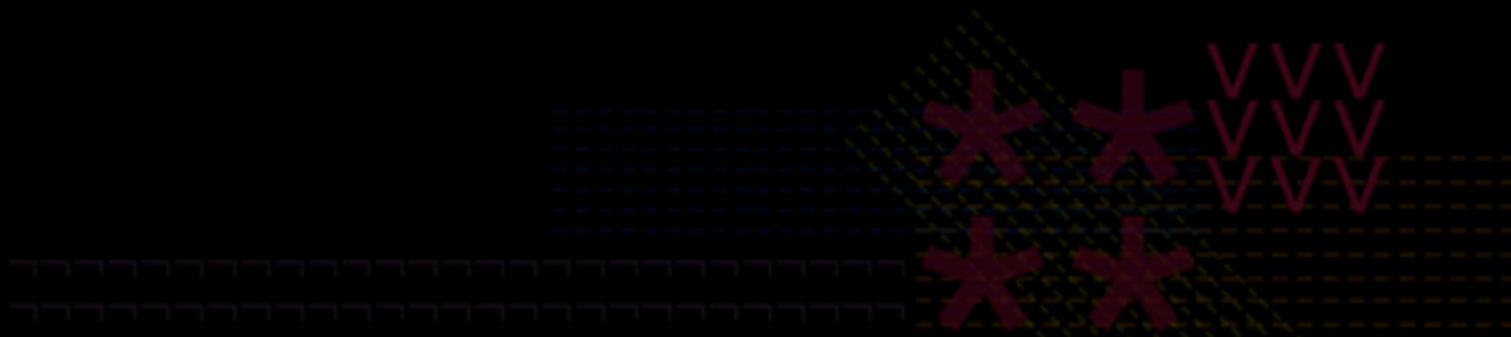
## Behavior

Adding interactivity to the page



## Data

Populating the prototype with fake or semi-realistic data

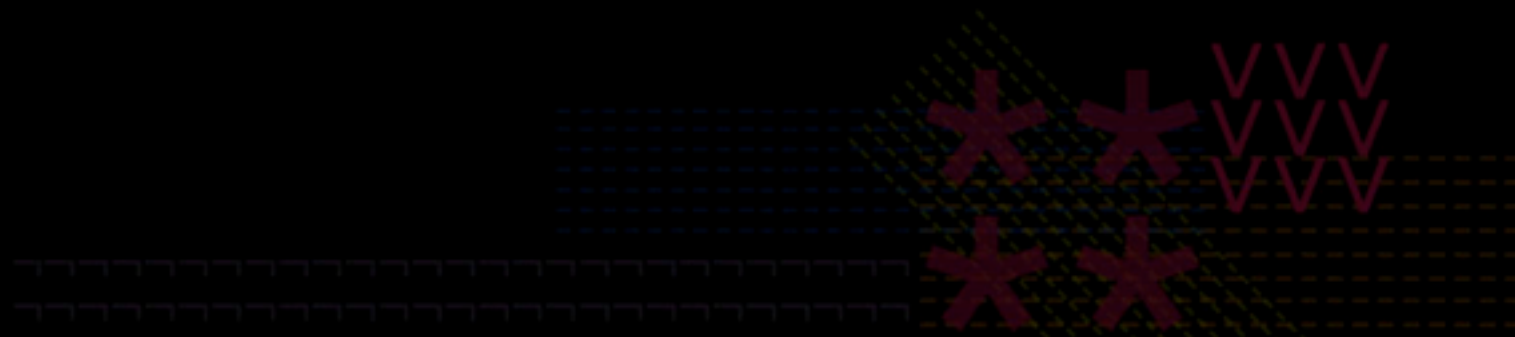




# Layout

Putting everything where it should be as quickly as possible\*

*\*with minimal hacking*



# It's Not That Easy

14 IE 6 layout bugs

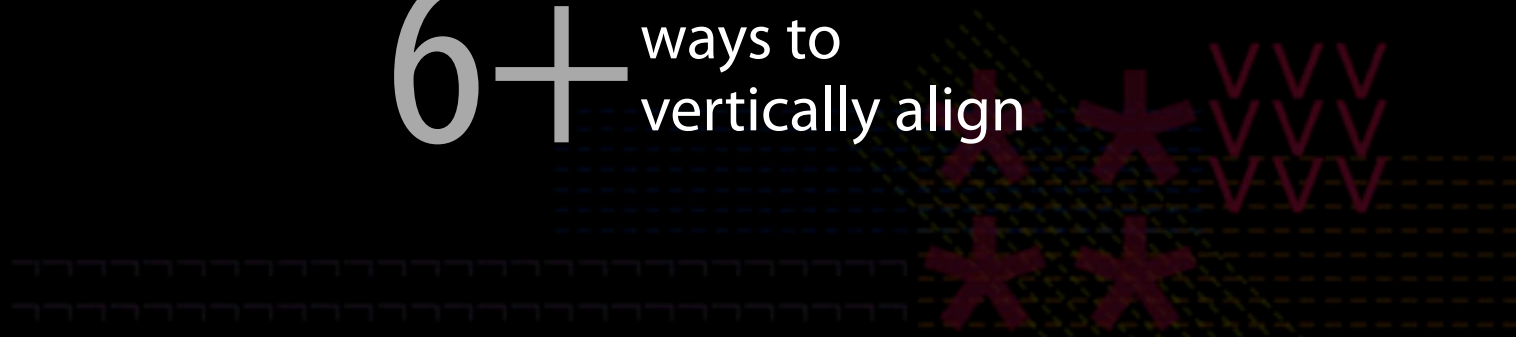
9 ways to layout columns

3 rendering engines

8 major browsers

5 ways to layout elements

6+ ways to vertically align



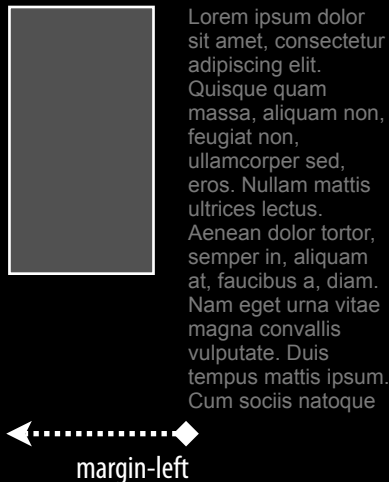
# This Should Not Be Hard... But It Is

Confronted with many techniques

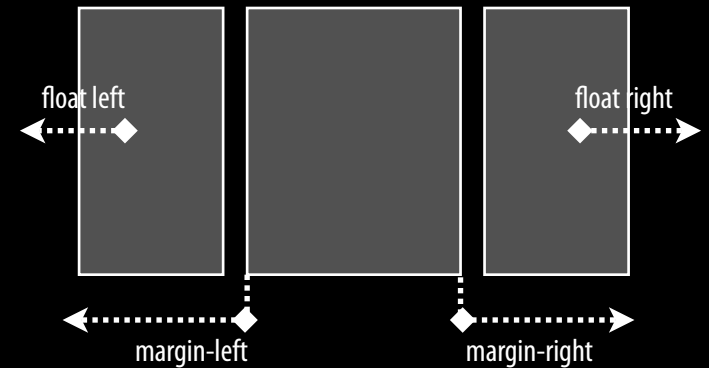
Slows prototyping

Problem: Laying out against the flow

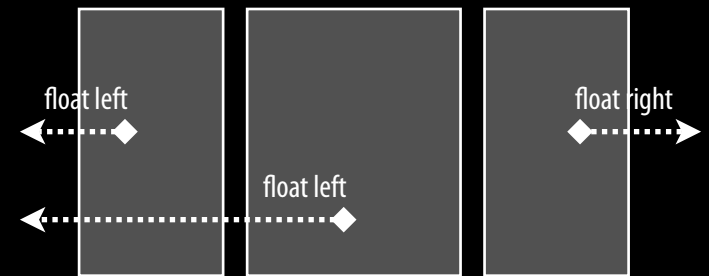
Simple Margin



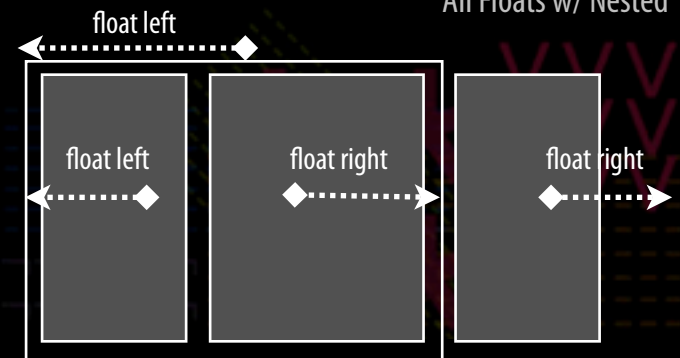
Floats + Margins



All Floats



All Floats w/ Nested

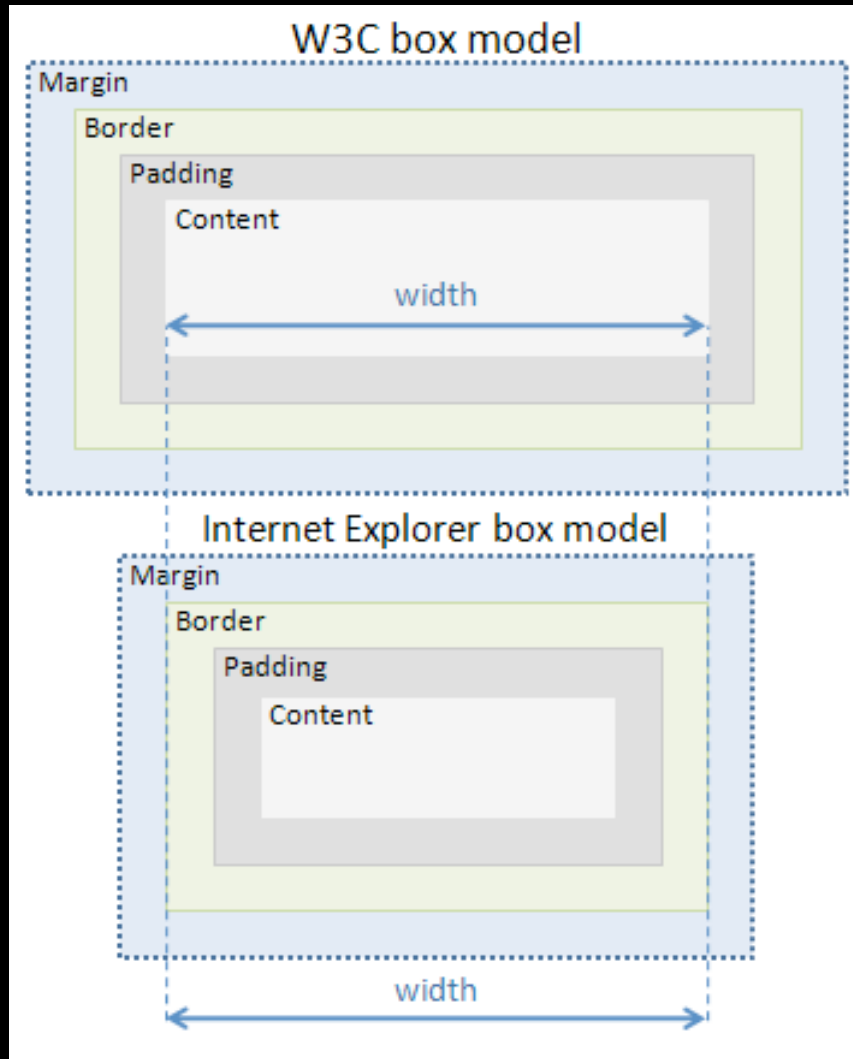




# Box Model

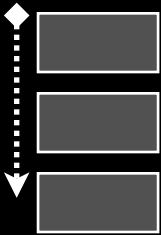
IE6 Quirks mode (and earlier IE) have different handling

Use strict mode to eliminate this concern

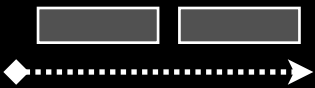


# Understanding Floats

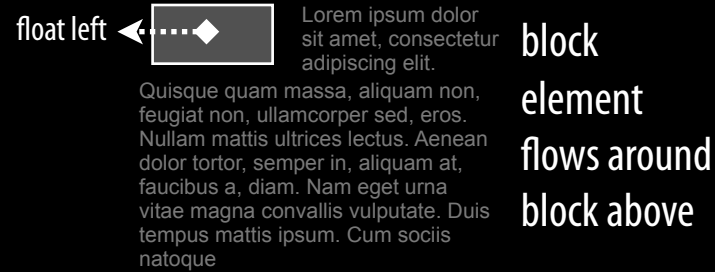
## Flow of block elements



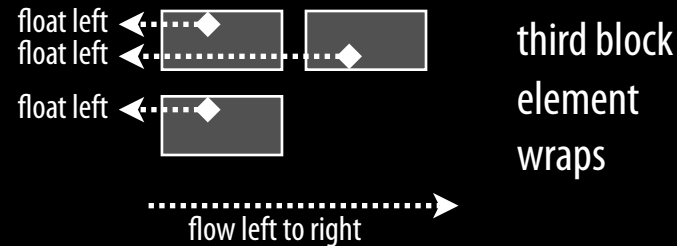
## Flow of inline elements



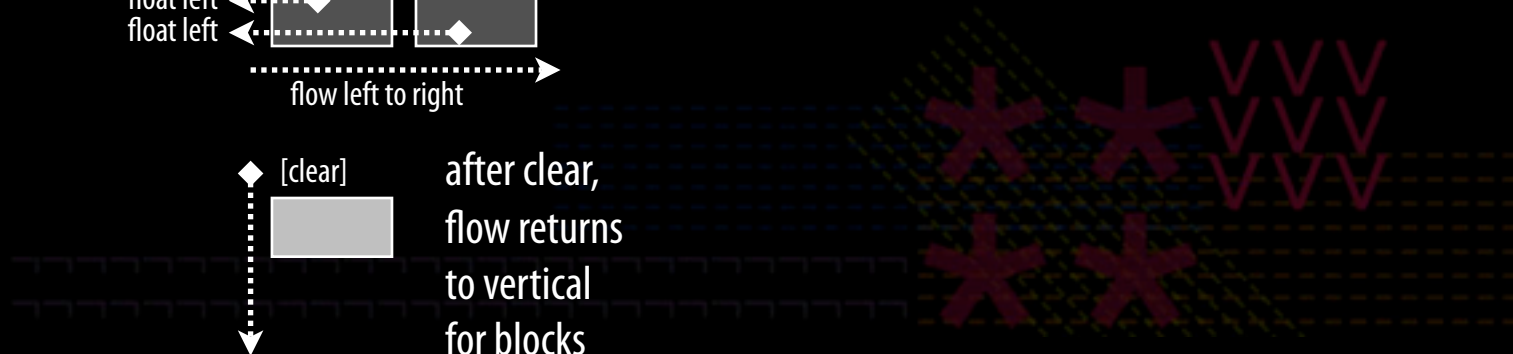
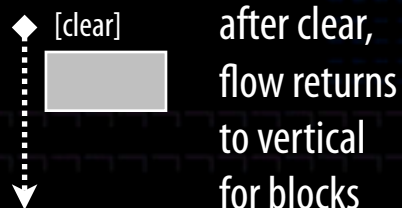
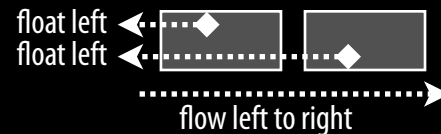
## Flow of block elements



## Floating block elements

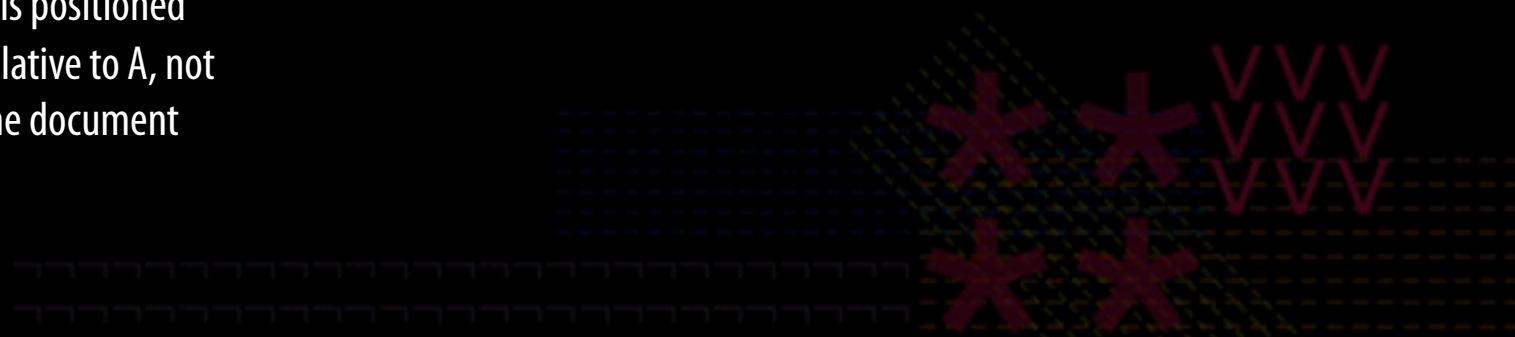
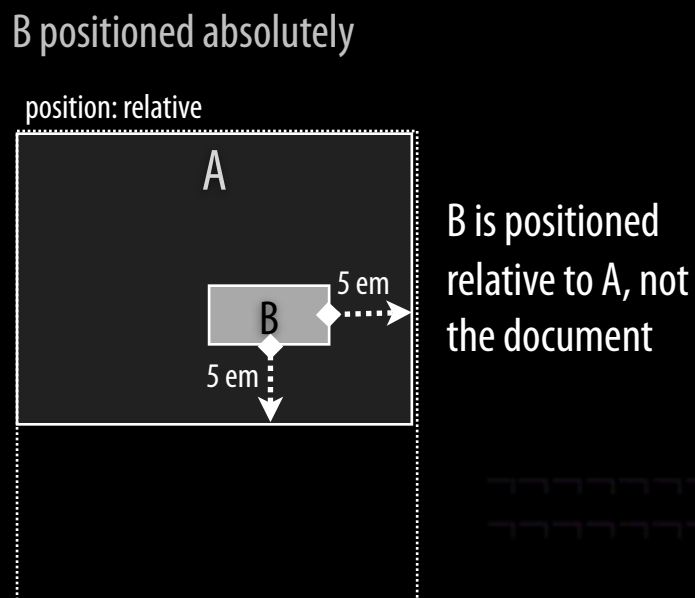
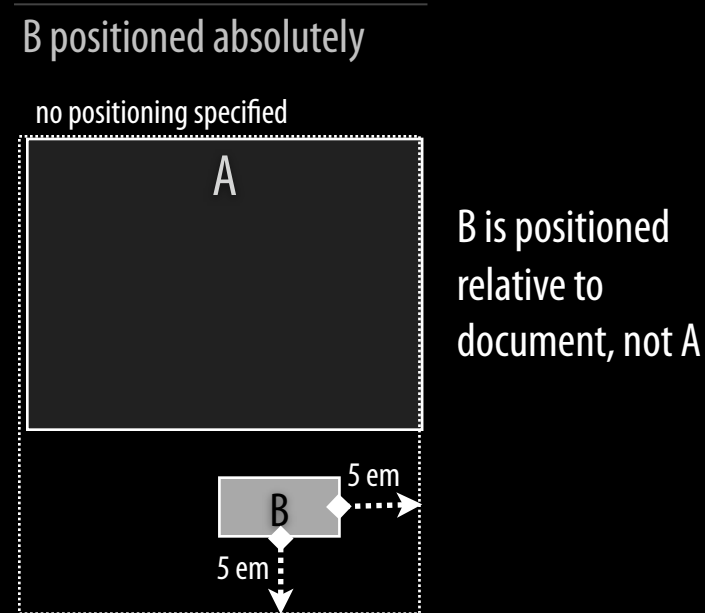
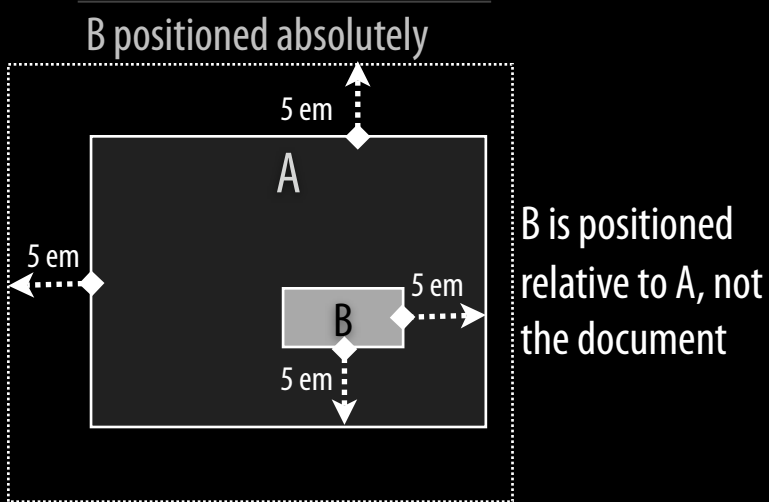


## Clearing floats



# Absolute Positioning

It is actually *relative* to its closest positioned ancestor

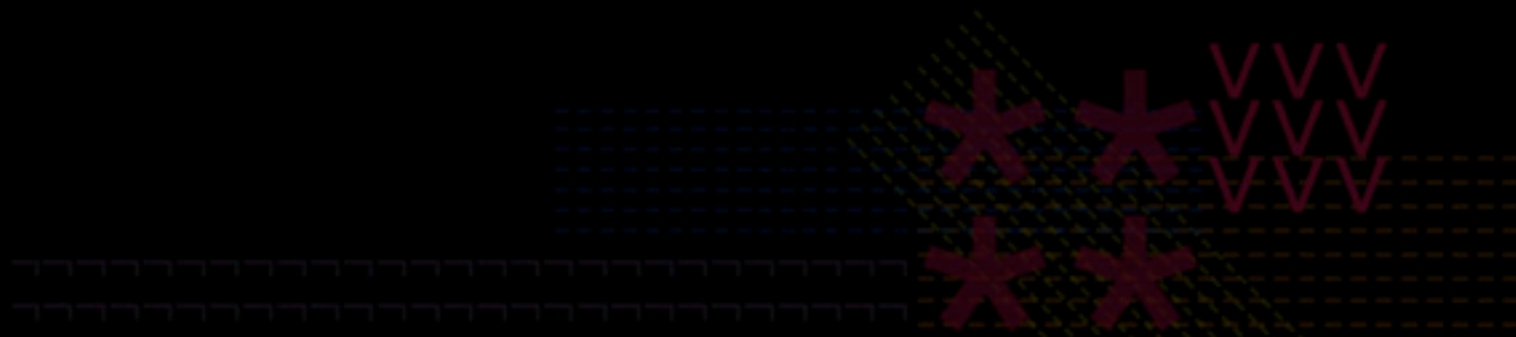


# Layout Techniques

Choose positioning over floats

Use a grid layout system

Use a CSS framework to simplify life



# CSS Frameworks

Building on the work of others

Hide complexity

Simplify the layout process

Express layout

Define templates and/or grids

Normalize browsers

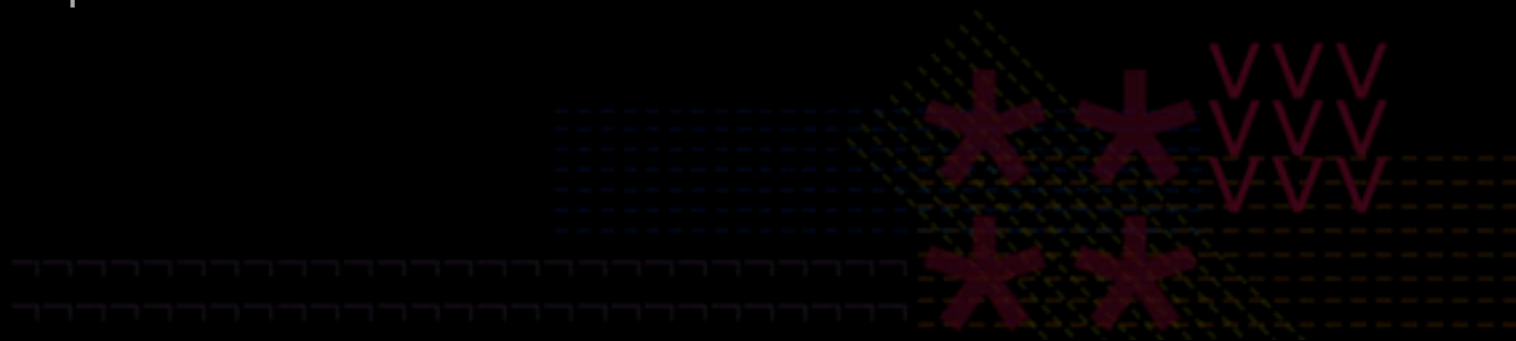
CSS Reset

Handle IE

Objections?

Takes away the craftsmanship

Non-semantic



# CSS Frameworks

Elements CSS Frameworks

WYMstyle: a CSS framework

YAML CSS Framework

YUI Grids CSS

Boilerplate CSS Framework

Blueprint CSS

960 Grid

Schema Web Design Framework

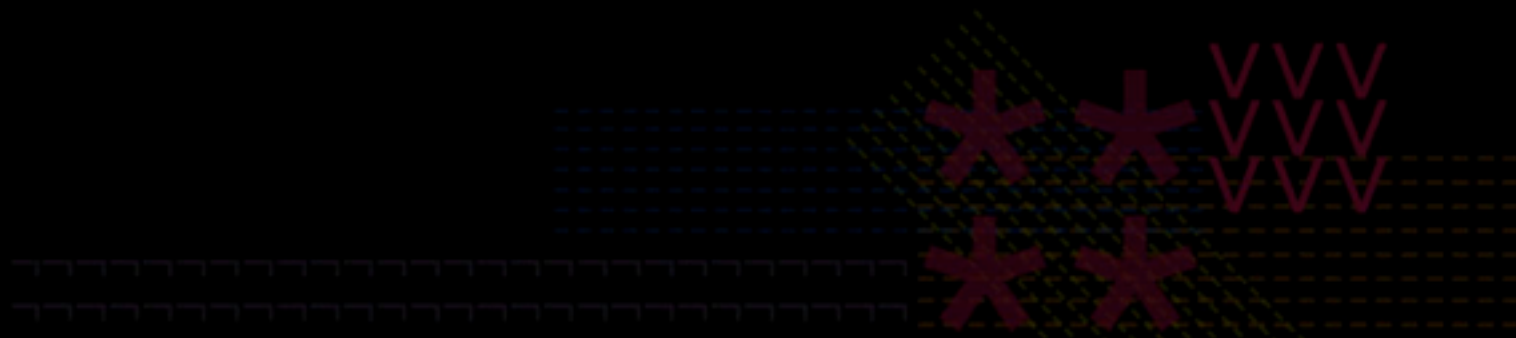
CleverCSS

Tripoli Beta CSS Framework

ESWAT Web Project Framework

CwS CSS Framework

My (not really mine) CSS  
Framework





# CSS Frameworks

Elements CSS Frameworks

WYMstyle: a CSS framework

YAML CSS Framework

YUI Grids CSS

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Blueprint CSS

960 Grid

Schema Web Design Framework

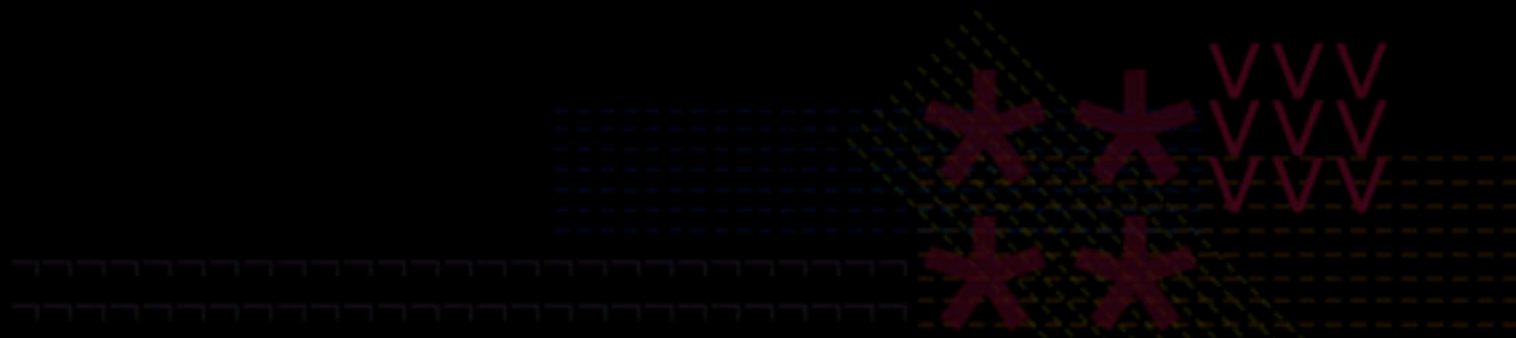
CleverCSS

Tripoli Beta CSS Framework

ESWAT Web Project Framework

CwS CSS Framework

My (not really mine) CSS Framework



# Blueprint CSS Framework

## A simple sample page

*This sample page demonstrates a tiny fraction of what you get with Blueprint.*

### Here's a box

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip.

### And another box

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea

### This box is aligned with the sidebar

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco



orci eu imperdiet malesuada, nisi purus fringilla odio, odio tincidunt nulla. Cras in libero. Aenean rutrum, morbi convallis est tortor blandit ligula. Nulla id augue.

Nullam mattis, odio ut tempus facilisis, metus nisi mauris. Vestibulum odio erat, fermentum at, commodo sagittis condimentum, sem nulla aliquam velit, sed in Aenean aliquet magna eget orci. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Vivamus euismod. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Suspendisse vel nibh ut turpis dictum sagittis. Sed neque lacinia pretium. Quisque nunc erat, venenatis Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Morbi dignissim sollicitudin libero. Nulla lorem.

Integer cursus ornare mauris. Praesent nisi arcu, sagittis erat sed velit tempus imperdiet. Ut tristique quis rutrum mauris lorem quis sem. Vestibulum ligula suscipit placerat odio. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Pellentesque tortor libero, venenatis

Maecenas vel metus quis magna pharetra fermentum. Integer sit amet tortor. Maecenas porttitor, pede sed gravida auctor, nulla augue aliquet elit, at pretium urna orci ut metus. Aliquam in dolor. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Sed aliquam, tellus id ornare posuere, quam nunc accumsan turpis, at convallis tellus orci et nisi. Phasellus congue neque a lorem.

### This is a nested column

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

### This is another nested column

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

*This sample page demonstrates a tiny fraction of what you get with Blueprint.*

### Here's a box

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip.

Layout is specified by using style classes that denote layout.

“span-7” means span 7 grid columns.

“colborder” means provide one grid column to the right as a border.

```
Inspect Edit div.span-7 < div.container
Console HTML CSS Script DOM Net
<hr/>
<h2 class="alt">This sample page demonstrates a tiny fraction of what you get with Blueprint.</h2>
<hr/>
<div class="span-7 colborder">
  <h3>Here's a box</h3>
  <p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip.</p>
</div>
<div class="span-8 colborder">
```

### This box is aligned with the sidebar

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip.

```
Style Layout DOM Options
div.colborder { screen.css (line 176)
  border-right: 1px solid #EEEEEE;
  margin-right: 25px;
  padding-right: 24px;
}
.column, div.span-1, screen.css (line 79)
div.span-2, div.span-3,
div.span-4, div.span-5,
div.span-6, div.span-7,
div.span-8, div.span-9,
```

*You may pick and choose amongst these and many more features, so be bold.*

| SPAN CLASSES                                   |         |
|------------------------------------------------|---------|
| Use these classes to set the width of a column |         |
| span-1                                         | span-13 |
| span-2                                         | span-14 |
| span-3                                         | span-15 |
| span-4                                         | span-16 |
| span-5                                         | span-17 |
| span-6                                         | span-18 |
| span-7                                         | span-19 |
| span-8                                         | span-20 |
| span-9                                         | span-21 |
| span-10                                        | span-22 |
| span-11                                        | span-23 |
| span-12                                        | span-24 |

| APPEND CLASSES                                 |           |
|------------------------------------------------|-----------|
| Add these to a column to append empty columns. |           |
| append-1                                       | append-13 |
| append-2                                       | append-14 |
| append-3                                       | append-15 |
| append-4                                       | append-16 |
| append-5                                       | append-17 |
| append-6                                       | append-18 |
| append-7                                       | append-19 |
| append-8                                       | append-20 |
| append-9                                       | append-21 |
| append-10                                      | append-22 |
| append-11                                      | append-23 |
| append-12                                      |           |

| PREPEND CLASSES                                 |            |
|-------------------------------------------------|------------|
| Add these to a column to prepend empty columns. |            |
| prepend-1                                       | prepend-13 |
| prepend-2                                       | prepend-14 |
| prepend-3                                       | prepend-15 |
| prepend-4                                       | prepend-16 |
| prepend-5                                       | prepend-17 |
| prepend-6                                       | prepend-18 |
| prepend-7                                       | prepend-19 |
| prepend-8                                       | prepend-20 |
| prepend-9                                       | prepend-21 |
| prepend-10                                      | prepend-22 |
| prepend-11                                      | prepend-23 |
| prepend-12                                      |            |



# Blueprint

v.0.7.1

Blueprint CSS version 0.7.1 (<http://code.google.com/p/blueprintcss/>)  
 Copyright © 2007-2008 Olav Bjorkoy (<http://bjorkoy.com>)  
 Cheat sheet v.1.1 by Gareth J M Saunders, based on Help Sheet v.0.3 by Alejandro Vasquez

## STYLESHEET LINK

Download the latest version from <http://code.google.com/p/blueprintcss/> and add these lines into the <head> of your page. Check that your href path is correct.

```
<link rel="stylesheet" href="blueprint/screen.css" type="text/css"
      media="screen, projection">
<link rel="stylesheet" href="blueprint/print.css" type="text/css"
      media="print">
<!--[if IE]>
<link rel="stylesheet" href="blueprint/ie.css" type="text/css"
      media="screen, projection">
<![endif]-->
```

## USAGE

```
<body>
  <div class="container">
    <div class="span-15">
      <p>Column 1</p>
    </div>
    <div class="span-6 last">
      <p>Column 2</p>
    </div>
  </div>
</body>
```

div.span-x now implies a column. Remember to use "last" for the last column of the row to avoid it jumping to the next row. Columns can be nested inside one another.

## TYPOGRAPHY

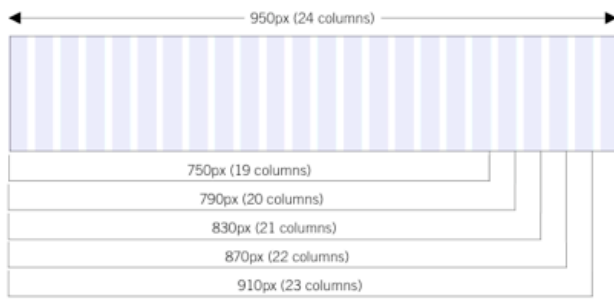
typographic.css sets up some sensible default typography. The font-size percentage is of 16px (0.75 \* 16px = 12 px). Line-heights and vertical margins are automatically calculated from this in ems.

The base line-height is 18px (1.5ems). This means that every element, from line-heights to images have a height that is a multiple of 18 (or 1.5 if you use ems).

Color is #222 (dark grey); font-family is "Helvetica Neue", "Helvetica", "Arial", sans-serif; Also defines tables, lists and misc. classes.

## GRID

If you need more or fewer columns use this formula to find the new total width:  
 total width = (columns \* 40) - 10



## GRID CLASSES

|            |                                                                  |
|------------|------------------------------------------------------------------|
| .container | A container should group all your columns; use on <div>.         |
| .showgrid  | Use this on any div.span / container to see the grid.            |
| .border    | Shows a border on the right hand side of a column; use on <div>. |

|                |
|----------------|
| html           |
| reset.css      |
| grid.css       |
| typography.css |
| forms.css      |
| ie.css         |

## RESET

Blueprint CSS resets all browsers' default tags to:

- margin, padding, border: 0
- font-size: 100%
- font-weight: normal
- other font values: inherit
- image borders: 0

Tables still need "cellspacing="0" in the markup though.

## TYPOGRAPHY CLASSES

These classes are defined in the typography.css file. Other typographic tags as also redefined in this file.

|            |                   |
|------------|-------------------|
| .small     | 0.8em; line 1.875 |
| .large     | 1.2em; line 2.5   |
| .hide      | display: none     |
| .quiet     | color 666 (grey)  |
| .loud      | color 000 (black) |
| .highlight | bg #ff0 (yellow)  |
| .added     | bg 060 (green)    |
| .removed   | bg 900 (red)      |
| .first     | mL 0; pL 0        |
| .last      | mR 0; pR 0        |
| .top       | mT 0; pT 0        |
| .bottom    | mB 0; pB 0        |

## FORMS

These are defined in the forms.css file.

|             |                   |
|-------------|-------------------|
| .error      | red framed box    |
| .notice     | yellow framed box |
| .success    | green framed box  |
| input.text  | w 300px pad 5px   |
| input.title | font-size 1.5em   |
| textarea    | w 390px h 250px   |
| select      | w 200px           |
| label       | bold              |
| fieldset    | padding 1.4em     |
| legend      | font-size 1.2em   |

# Blueprint Grid CSS Generator

Version: v.0.7.1 (2008-02-25)

## INTRODUCTION:

This tool will help you generate more flexible versions of [Blueprint's](#) `grid.css` and `compressed.css` and `grid.png` files. Whether you prefer 8, 10, 16 or 24 columns in your design, this generator now enables you that flexibility with [Blueprint](#).

**Updated to version 0.7.1!** Please Note! The default Blueprint CSS files are already generated for you to copy below.

## USAGE:

1. Enter your desired **number of columns**.
2. Your **column width**.
3. Enter the width of your **margin**.
4. Enter the desired **page width**.
5. Click '**Generate CSS**' button and copy the results from the **Generated Code** section.

### Generator Form:

Number of Columns:

24 - +

« Fit

Column Width:

30 px

« Fit

Margin Width:

10 px

« Fit

Total Page Width:

---

Desired Page Width:

950 px

Generate CSS

Reset

## Generated Code:

Click in the text area below to copy all the CSS code and save your versions of `grid.css`, `compressed.css` and `grid.png`. Click tabs below to switch between files.

Grid.css

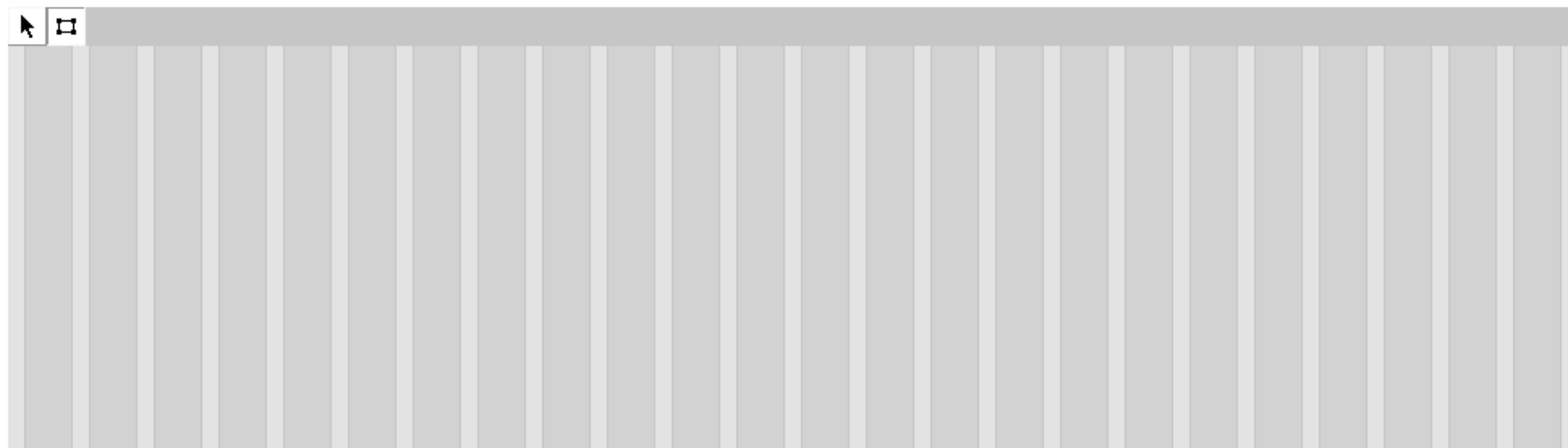
Compressed.css

Grid.png

```
/* -----  
  
BLUEPRINT CSS  
* Filename:      grid.css  
* Version:      0.7.1 (2008-02-25) YYYY-MM-DD  
* Website:      http://code.google.com/p/blueprintcss/  
  
Generated by:  
* Blueprint CSS Grid Generator (2009-02-24) [http://kematzy.com  
/blueprint-generator/]  
  
Based on work by:  
* Olav Bjorkoy [bjorkoy.com]  
* Nathan Borror [playgroundblues.com]  
* Jeff Croft [jeffcroft.com]  
* Christian Metts [mattmoo.com]
```

11)) 11 11 11 11~11~11 11))  
11 11\_\_ 11\_11 11 11 11 11))

This is **Plumb**, a tool for composing web layouts for use with the [Blueprint CSS framework](#).



Recognize & test

Get HTML

Get debugging info

Plumb was made by [Michael Daines](#). The code is hosted at [GitHub](#).



# YUI Grid Builder

YUI CSS Grid Builder

Body Size

750px

Body Columns

No Columns

Split Content

Row:

1 Column (100)

Add Row

Accessibility

☒Use ARIA Landmark Roles

☒Show Reading Order

Set Header Content

Set Footer Content

Show Code

Reset

Return to Docs

role: banner

Header

Order 1

role: main

Order 2

role: contentinfo

Order 3

Footer

Header

role: main

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas sit amet metus. Nunc quam elit, posuere nec, auctor in, rhoncus quis, dui. Aliquam erat volutpat. Ut dignissim, massa sit amet dignissim cursus, quam lacus feugiat.

Footer



# YUI Grid Cheat Sheet

## Y! YUI Library: CSS Reset, Base, Fonts, and Grids

2009-2-6

v2.7

### Recommended Doctype and Render Mode

YUI works in both "Quirks" and "Standards/Strict" browser-rendering modes, but we suggest using Standards mode by specifying this Doctype:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
"http://www.w3.org/TR/html4/strict.dtd">
```

### YUI CSS Reset + YUI CSS Base

YUI CSS Reset neutralizes browser CSS styles for HTML elements, creating a normalized platform. YUI CSS Base then rebuilds a consistent style foundation for common HTML elements. YUI CSS Base is also useful as a snippets library, for instance to see how to put bullets back on UL LIs.

### YUI CSS Fonts: Setting Font Size and Family

**Font-size:** While still allowing users to zoom their font sizes, the YUI Fonts package renders all text at 13px by default. To preserve users' ability to zoom their fonts, specify other sizes using percentages only (see top chart in right column).

```
selector {font-size:123.1%;} /*16px*/
```

**Font-family:** The YUI Fonts package defines Arial as the default font and provides a degradation path through several alternate fonts down to the generic "sans-serif." When specifying other font families, provide your own degradation path as needed.

```
<style>selector {font-family:verdana,sans-
serif;}</style>
```

### Base Page Format

We find it useful to build a page in three stacked horizontal regions:

```
<body>
  <div id="doc"><!--overall document wrapper-->
    <div id="hd"><!--header / masthead--></div>
    <div id="bd"><!--body--></div>
    <div id="ft"><!--footer--></div>
  </div>
</body>
```

Inside #bd, if two blocks (.yui-b) exist, designate a main block by wrapping it with <div id="yui-main">:

```
<div id="yui-main">
  <div class="yui-b"><!--primary--></div>
</div>
<div class="yui-b"><!--secondary--></div>
```

### YUI CSS Grids: Nomenclature

|                   |                                                                                                                                  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------|
| #doc – #doc4      | Define the overall width of the page.<br>doc 750px, doc2 950px, doc3 100%, doc4 974px,                                           |
| .yui-t1 – .yui-t6 | Six preset template for secondary column size & side.<br>(see right column, bottom chart)                                        |
| .yui-g            | Basic grid (.yui-g) tells two units (.yui-u) to share.                                                                           |
| .yui-gb – .yui-gf | Special grids (.yui-gb ... .yui-gf) are for three-unit and uneven two-unit space sharing.<br>(see right column, middle chart)    |
| .yui-u            | A unit inside a grid; generic; obeys parent grid.                                                                                |
| .first            | Overload the class attribute with "first" to indicate first of a series of grids or units. (This facilitate floats and margins.) |

### Customize Page Width

Pixels / 13 = width in ems. For IE, pixels / 13.333. Use star-property filter to target IE. For example, this sets 610px:

```
#custom-doc {
  width:46.923em; /* 610/13 */
  *width:45.750em; /* 610/13.3333 */
}
```

### The Basic Grid Pattern

```
<div class="yui-g">
  <div class="yui-u first"></div>
  <div class="yui-u"></div>
</div>
```

### The Nested Grid Pattern

```
<div class="yui-g">
  <div class="yui-g first">
    <div class="yui-u first"></div>
    <div class="yui-u"></div>
  </div>
  <div class="yui-g">
    <div class="yui-u first"></div>
    <div class="yui-u"></div>
  </div>
</div>
```

### Fonts Sizing Chart

| For this PX | Use this percentage: |
|-------------|----------------------|
| 10          | 77                   |
| 11          | 85                   |
| 12          | 93                   |
| 13          | 100                  |
| 14          | 108                  |
| 15          | 116                  |
| 16          | 123.1                |
| 17          | 131                  |
| 18          | 138.5                |
| 19          | 146.5                |
| 20          | 153.9                |
| 21          | 161.6                |
| 22          | 167                  |
| 23          | 174                  |
| 24          | 182                  |
| 25          | 189                  |
| 26          | 197                  |

### Grids: Nesting Grids (yui-g's)

|         |               |
|---------|---------------|
| .yui-g  | 1/2, 1/2      |
| .yui-gb | 1/3, 1/3, 1/3 |
| .yui-gc | 2/3, 1/3      |
| .yui-gd | 1/3, 2/3      |
| .yui-ge | 3/4, 1/4      |
| .yui-gf | 1/4, 3/4      |

Other configurations, such as 1/4, 1/4, 1/4, 1/4 can be rendered by nesting yui-g's inside other "yui-g" grids.

### Grids: Templates (yui-t's)

|         |              |
|---------|--------------|
| .yui-t1 | 160 on left  |
| .yui-t2 | 180 on left  |
| .yui-t3 | 300 on left  |
| .yui-t4 | 180 on right |
| .yui-t5 | 240 on right |
| .yui-t6 | 300 on right |

# 960 Grid

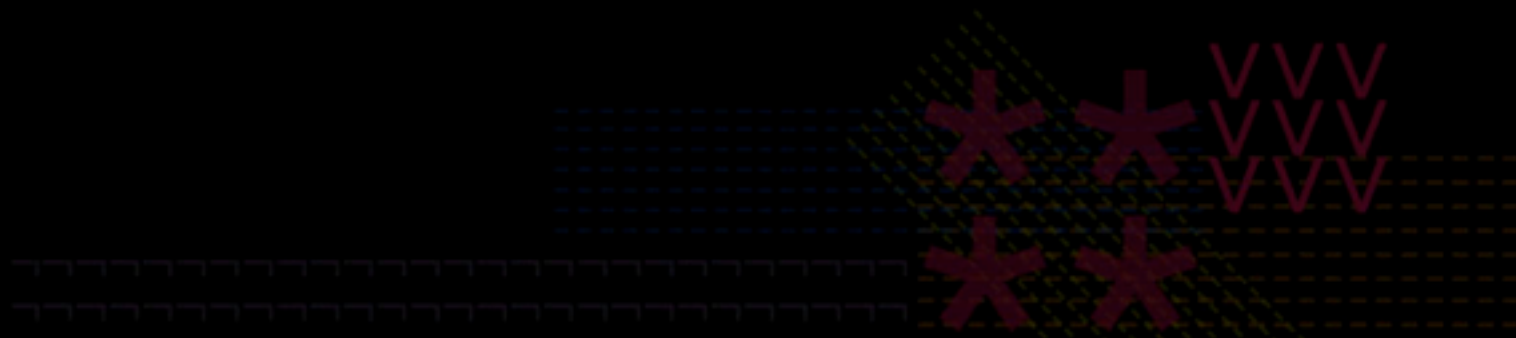


# Why 960?

960 is divisible by 2, 3, 4, 5, 6, 8, 10, 12, 15, 16, 20, 24, 30, 32, 40, 48, 60, 64, 80, 96, 120, 160, 192, 240, 320 and 480.

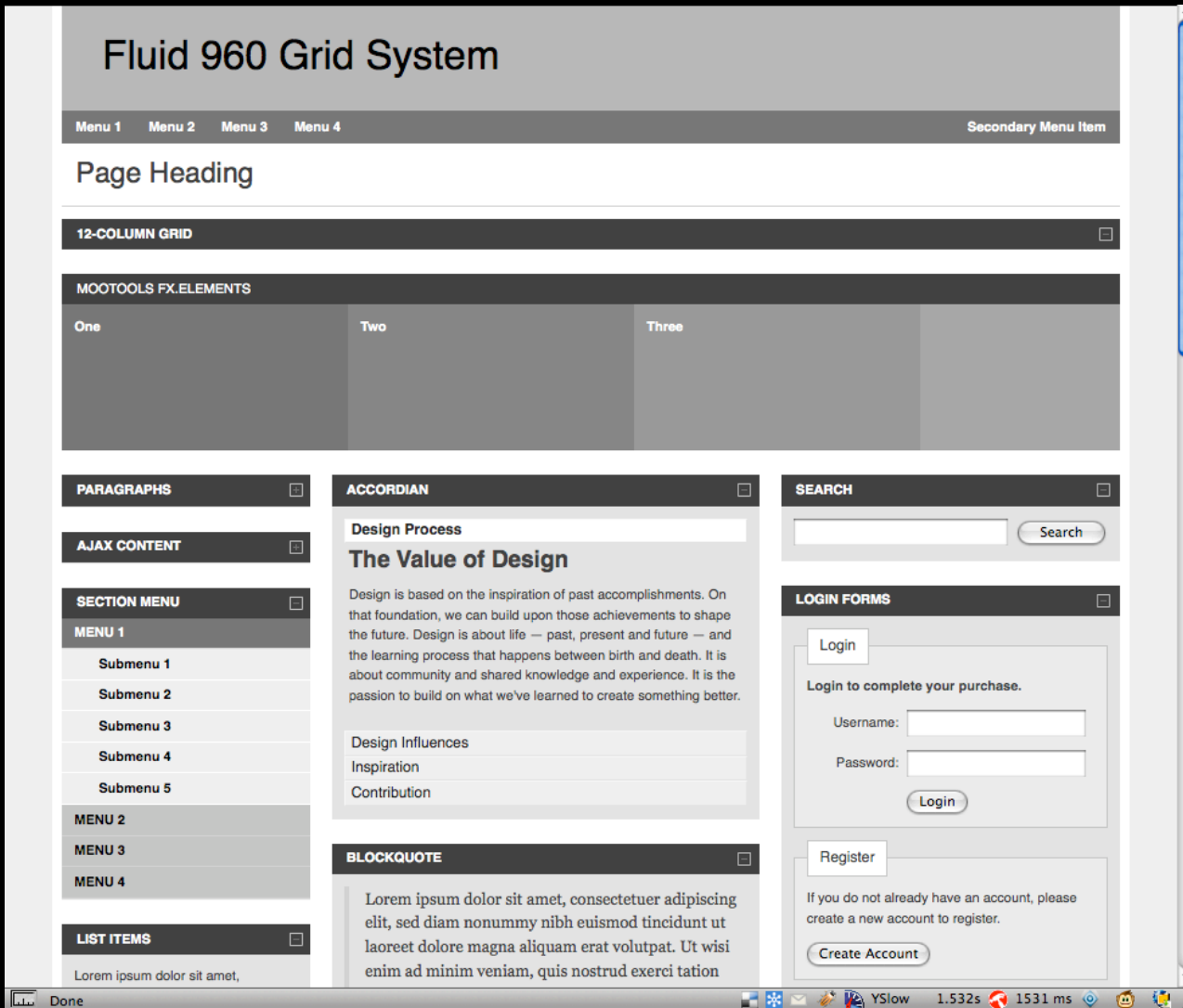
This makes it a highly flexible base number to work with

You can also make Blueprint a 960 grid system as well



# 960 gs Fluid

A derivative that supports fluid layout



# Making it Semantic

## Criticism: non-semantic naming

## There are tools for making blueprint semantic

Boilerplate

<http://code.google.com/p/css-boilerplate/>

Blueprint's compress.rb

[http://jdclayton.com/blueprints\\_compress\\_a\\_walkthrough.html](http://jdclayton.com/blueprints_compress_a_walkthrough.html)

Semantify

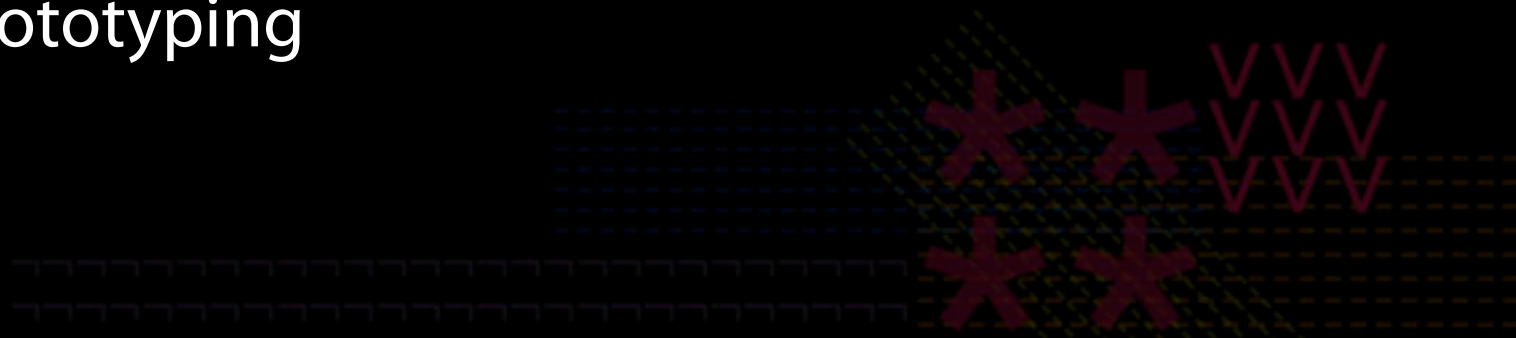
<http://lab.christianmontoya.com/read/>

<http://www.christianmontoya.com/2007/11/10/semantify-and-css-tools-based-on-blueprint/>

CSS Mixin for PHP

<http://habilis.net/cssmixin/>

## Non-issue for prototyping



# Style Techniques

Use CSS Reset

Keep structure, style and logic separate

Avoid any direct styles or html style tags (font, etc.)

Appropriate Markup

H1 Does Not Mean "Big, Bold, and Ugly"

A Paragraph Is a Paragraph

List Mania

Keep DIV elements to a minimum

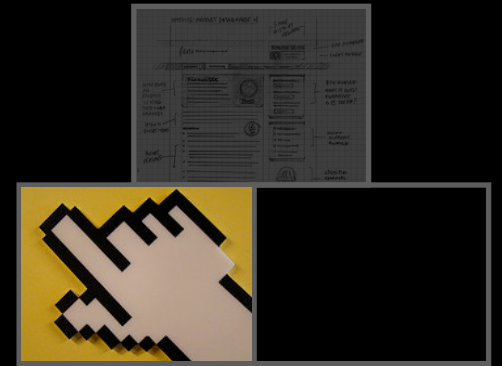
Use px for font-sizes (avoids nesting difficulties)

Minimize selectors

Extend objects by applying multiple classes to an element



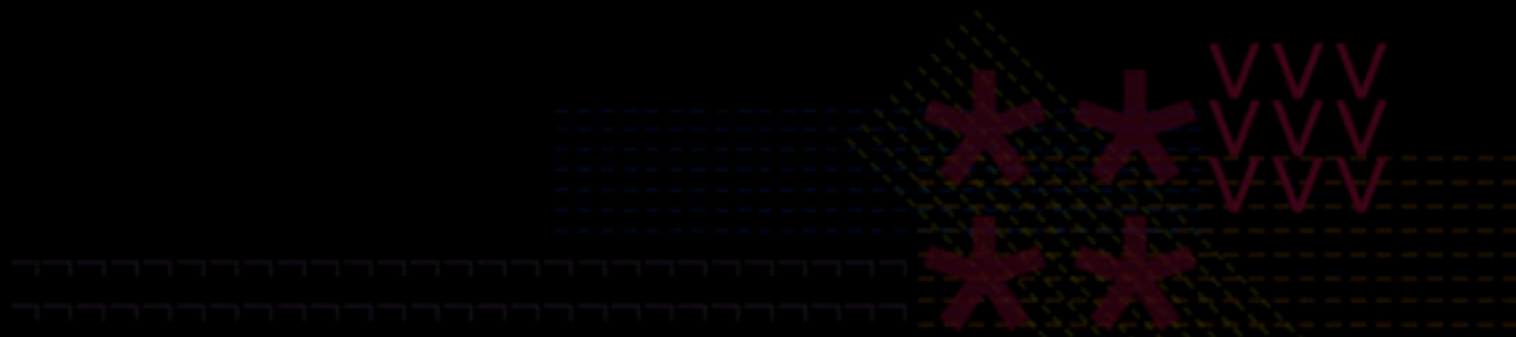




# Behavior

Making the page come alive\*

*\*as quickly as possible*



# Anatomy of an Interaction

## Page Element

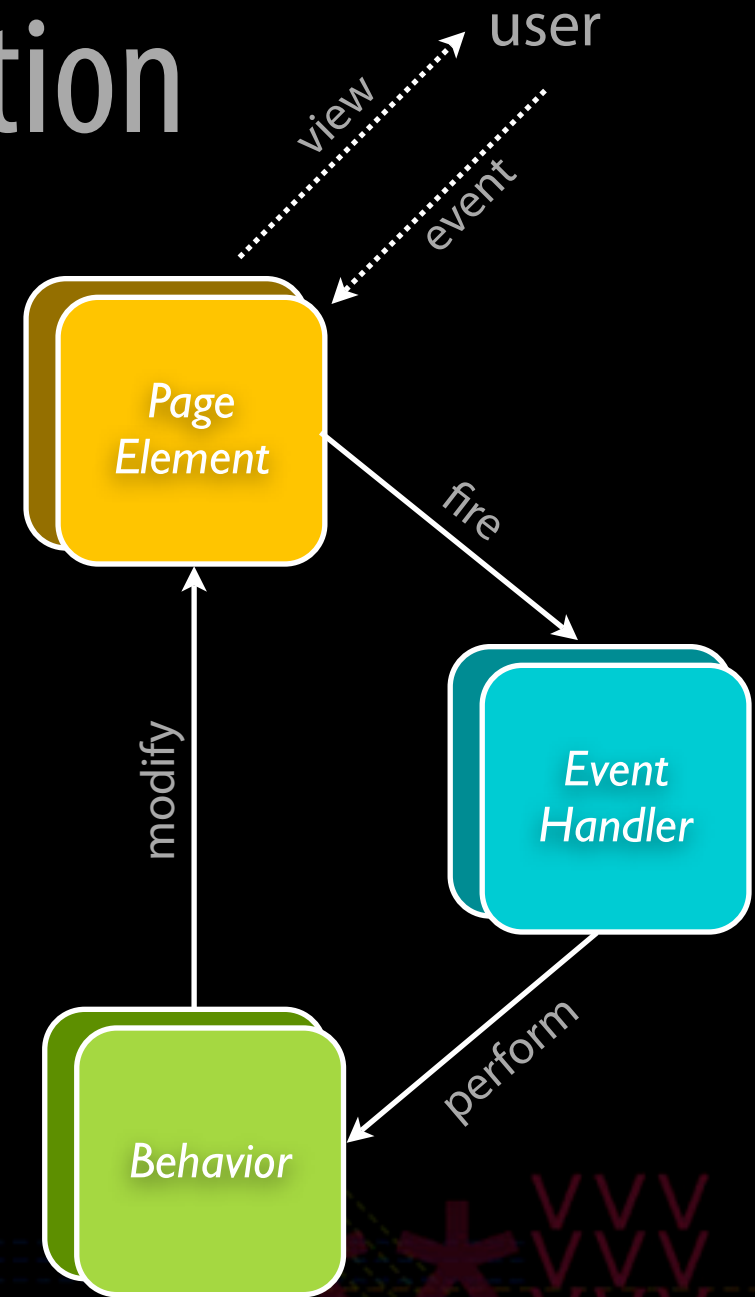
Target an element or elements for attaching events & behaviors.

## Event Handler

Events are the glue between the user and behaviors. They start behaviors.

## Behavior

Blocks of logic, patterns, actions that operate on elements.



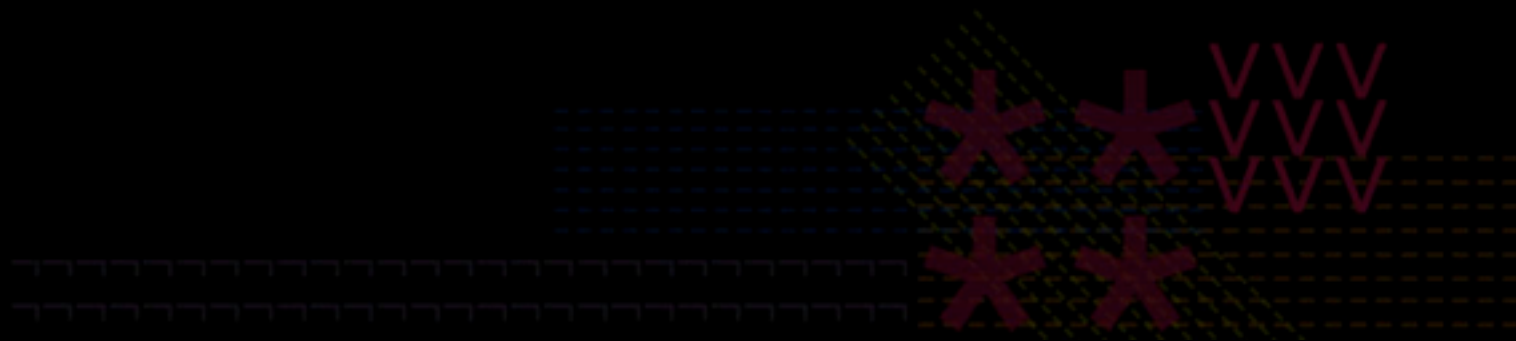
“Keep interaction, objects and behavior separate”

# Behavior Injection

Tying behavior to class names tightly couples behavior into the markup (non-semantic)

Avoid `onclick="someAction()"`

Instead associate actions with matched elements



# Behavior Injection

.noerrors, .errors, .forgotten:  
{display:none;}

By rendering all panels hidden & showing with JS

```
<form id="login" action="">
  <!-- Without Errors-->
  <div class="noerrors">
    <p><label>Username: </label><input type="text" name="username"/></p>
    <p><label>Password: </label><input type="password" name="password"/></p>
    <input type="submit"
  </div>

  <!-- With Errors-->
  <div class="errors">
    <p class="error">Password doesn't match.</p>
    <p><label>Username: </label><input type="text" name="username"/></p>
    <p><label>Password: </label><input type="password" name="password"/></p>
    <input type="submit" value="Submit" />
  </div>

  <!-- Forgot Password-->
  <div class="forgotten">
    <p>Provide your email and we'll send you a new password.</p>
    <p><label>Email Address: </label><input type="text" name="email"/></p>
    <input type="submit" value="Send New Password" />
  </div>
</form>
```

`$(".errors").show();`

Example courtesy Kevin Hale's article on [Ajax Wireframing Approaches](#)

# Behavior Injection: 960gs Fluid

## 960 Grid System

menu behavior tied to  
.nav & .main

Menu 1 Menu 2 Menu 3 Menu 4

Secondary Menu Item

```
<ul class="nav main">
  <li><a href="#">Menu 1</a>
    <ul>
      <li><a href="#">Submenu 1</a></li>
      <li><a href="#">Submenu 2</a></li>
      <li><a href="#">Submenu 3</a></li>
      <li><a href="#">Submenu 4</a></li>
      <li><a href="#">Submenu 5</a></li>
    </ul>
  </li>
  <li><a href="#">Menu 2</a>
    <ul>
```

toggle open/close tied  
to .box

PARAGRAPHS

ACCORDIAN

SEARCH

AJAX CONTENT

SECTION MENU

MENU 1

Submenu 1

Submenu 2

Submenu 3

Submenu 4

menu behavior tied  
to .menu

LOGIN FORMS

Login

Login to complete your purchase.

Username:

# Protoscript

Experimental framework for behavior injection



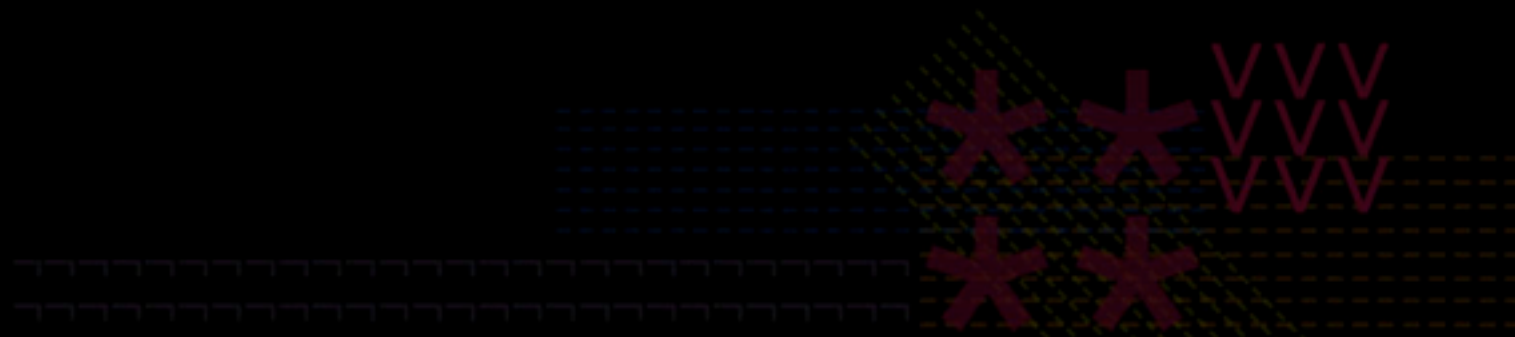
# Example

Here's an example that fades & closes the image when the user clicks on it. (It's live, so go ahead and try it!)



```
$proto('img#avatar', {  
  Click: {  
    onClick: {  
      Fade: {  
        opacity: {to: 0},  
        onComplete: {Close : {} }  
      }  
    }  
  }  
});
```

The protoscript above says: *for an image with id **avatar**, fade it out when the user clicks on it and close it when the fade completes.*



# Protoscript: Sprinkling in Behaviors



Bill Scott

Total Projects 12

Total Points 24

## My Portfolio

Sort by: Recent | Alpha | Points

### ▼ Project One

[view](#) | [delete](#)

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin tempor, lectus aliquet ornare suscipit, diam turpis suscipit velit, rhoncus feugiat purus metus gravida turpis. Nam nisl. Nulla et est in neque laoreet consequat. Quisque quis pede. Curabitur pretium. Etiam varius. Suspendisse tempus nisl eu lectus. Integer et velit. Quisque quis magna. Nunc pellentesque pharetra ligula. Morbi semper.

### ▼ Project Two

[view](#) | [delete](#)

Quisque nunc. In ac urna egestas arcu egestas imperdiet. Donec id erat id nulla molestie venenatis. Nam a

## Scratchpad



## My Portfolio

Sort by: Recent | Alpha | Points

### ▼ Project One

[view](#) | [delete](#)

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Proin tempor, lectus aliquet ornare suscipit, diam turpis suscipit velit, rhoncus feugiat purus metus gravida turpis. Nam nisl. Nulla et est in neque laoreet consequat. Quisque quis pede. Curabitur pretium. Etiam varius. Suspendisse tempus nisl eu lectus. Integer et velit. Quisque quis magna. Nunc pellentesque pharetra ligula. Morbi semper.

### ▼ Project Two

[view](#) | [delete](#)

Quisque nunc. In ac urna egestas arcu egestas imperdiet. Donec id erat id nulla molestie venenatis. Nam a quam. Nulla ornare. Fusce dignissim ultricies turpis. Fusce molestie odio ac eros. Nunc auctor massa in metus. Etiam mollis lorem in eros. Aliquam mi. Nam feugiat ante et felis.

# Anatomy of Self-Healing Delete

## DOM elements

[X]

<LI>[X] oldmove.mov</LI>

## Events

Click  
onClick (callback)

## Behaviors

Fade  
Close

### Handling Click for Multiple Elements

Files

[X] mystuff.tmp

[X] bigfile.tmp

[X] oldmovie.mov

[X] scrap.txt

Let's say you want to delete files from a list. You would like to embed the delete control with the filename.

You can target two sets of objects: delete controls and list of file names.

We select the '[X]' with 'span:contains([X])' and associate with it the hand cursor and click event.

The Fade & Close target the list of file names with '#multiple li' (all LI items in our multiple example). When you click on an individual delete control it knows the corresponding LI item and operates on it correctly. You can [click here](#) to restart the example.

DOM  
Element

Event

Behavior

# Protoscript Code

```
<div id="multiple" class="example-live">
<p>Files</p>
<ul>
  <li><span><strong>[X]</strong></span><span>mystuff.tmp</span></li>
  <li><span><strong>[X]</strong></span><span>bigfile.tmp</span></li>
  <li><span><strong>[X]</strong></span><span>oldmovie.mov</span></li>
  <li><span><strong>[X]</strong></span><span>scrap.txt</span></li>
</ul>
</div>
```

Files

[X] mystuff.tmp  
[X] bigfile.tmp  
[X] oldmovie.mov  
[X] scrap.txt

```
$proto('span:contains([X])', {
  SetStyle: {cursor: 'pointer'},
  Click: {
    onClick: {
      Fade: {
        target: '#multiple li',
        opacity: {to: 0},
        onComplete: {Close : {} }
      }
    }
  },
});
```

Element

Behavior

Event

# Selecting DOM Elements

```
<div id="multiple" class="example-live">
  <p>Files</p>
  <ul>
    <li><span><strong>[X]</strong></span><span>mystuff.tmp</span></li>
    <li><span><strong>[X]</strong></span><span>bigfile.tmp</span></li>
    <li><span><strong>[X]</strong></span><span>oldmovie.mov</span></li>
    <li><span><strong>[X]</strong></span><span>scrap.txt</span></li>
  </ul>
</div>
```

```
$proto('span:contains([X])', {
  SetStyle: {cursor: 'pointer'},
  Click: {
    onClick: {
      Fade: {
        target: '#multiple li',
        opacity: {to: 0},
        onComplete: {Close : {} }
      }
    }
  },
});
```

Element

Behavior

Event

# Selecting DOM Elements

```
<div id="multiple" class="example-live">
  <p>Files</p>
  <ul>
    <li><span><strong>[X]</strong></span><span>mystuff.tmp</span></li>
    <li><span><strong>[X]</strong></span><span>bigfile.tmp</span></li>
    <li><span><strong>[X]</strong></span><span>oldmovie.mov</span></li>
    <li><span><strong>[X]</strong></span><span>scrap.txt</span></li>
  </ul>
</div>
```

```
$proto('span:contains([X])', {
  SetStyle: {cursor: 'pointer'},
  Click: {
    onClick: {
      Fade: {
        target: '#multiple li',
        opacity: {to: 0},
        onComplete: {close: {} }
      }
    }
  },
});
```

Element

Behavior

Event

# Behaviors

Animate. ColorAnimate. Fade.  
Move. Spotlight. Close.  
DragDrop. Hide. Open.  
Popup. ReplaceClass. Script.  
SetClass. SetStyle. Show.  
ToggleClass. ToggleOpenClose.  
ToggleShowHide. FetchHtml.  
SetHtml.

Element

Behavior

Event

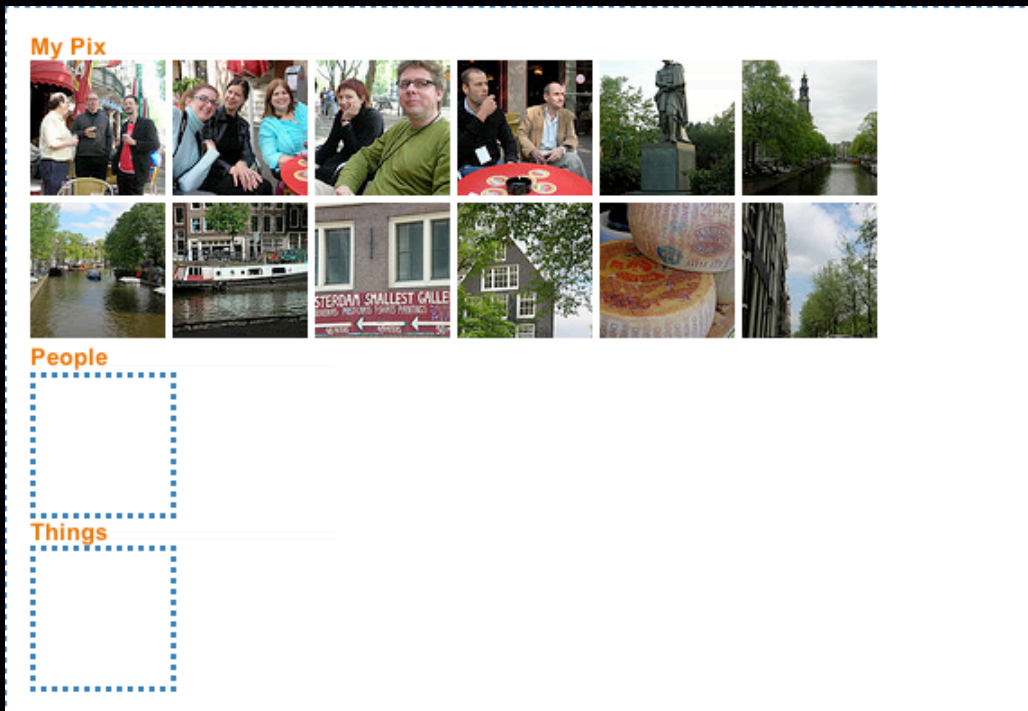


# Behavior Demo

Site has a demo page for each behavior

<http://protoscript.com/demos.php>

Site has a wiki with documentation page for each behavior



Element

Behavior

Event

# Events

Blur. Click. Dblclick. Focus.  
Keypress. Mousedown.  
Mousemove. Mouseout.  
Mouseover. Mouseup. Timer.

Element

Behavior

Event

# Callbacks

onComplete. onTween. onStart. onClose.  
onStartDrag. onDrag. onDragEnter. onDragOver.  
onDragDrop. onDragOut. onEndDrag. onMouseUp.  
onInvalidDrop. onBlur. onClick. onDbClick. onFocus.  
onKeypress. onMousedown. onMousemove.  
onMouseout. onMouseover. onMouseup. onTimer.  
onHide. onOpen. onReplaceClass. onSetClass.  
onSetStyle. onShow. onToggleClass.  
onToggleOpenClose. onToggleShowHide.  
onSuccess. onFailure. onSetHtml.

Element

Behavior

Event

# jQuery

Easy to layer in behavior

Easy to keep behavior separate

Simple, quick, terse syntax

```
$("#div").addClass("highlighted");
```

*Element*

*Behavior*

```
<div class="module">  
  <h2>Some Header</h2>  
  <div class="bd">  
    <p>Some content</p>  
  </div>  
  <div class="ft">  
    <p>Footer content</p>  
  </div>  
</div>
```

```
$(".ft").click(function () { $(this).addClass("highlighted"); });
```

*Element*

*Events*

*Behavior*

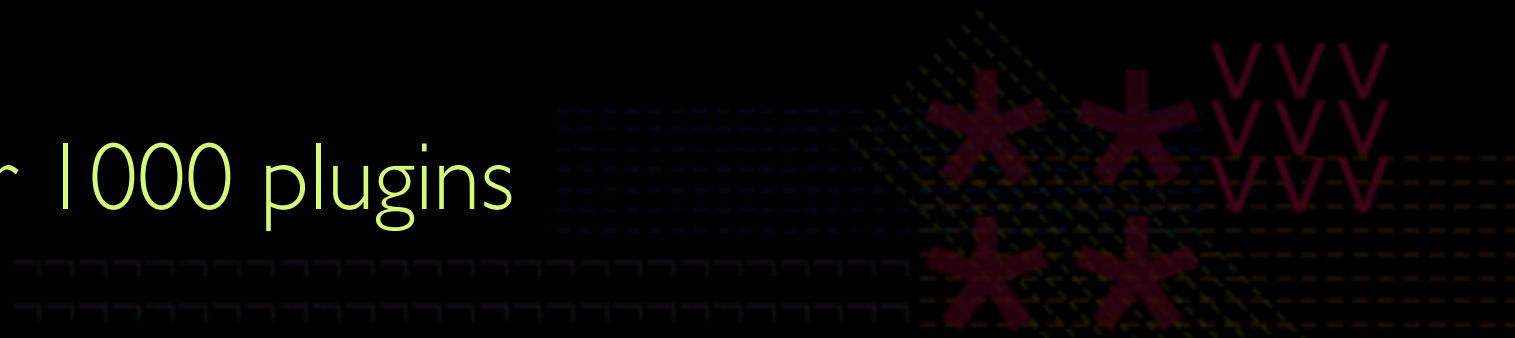


# jQuery Behaviors

Behavior

html. append. prepend. before. after.  
wrap. show. hide. toggle. slideDown.  
slideUp. fadeIn. fadeOut. animate.  
css. offset. position. height. width.  
addClass. attr. removeClass.  
toggleClass. val.

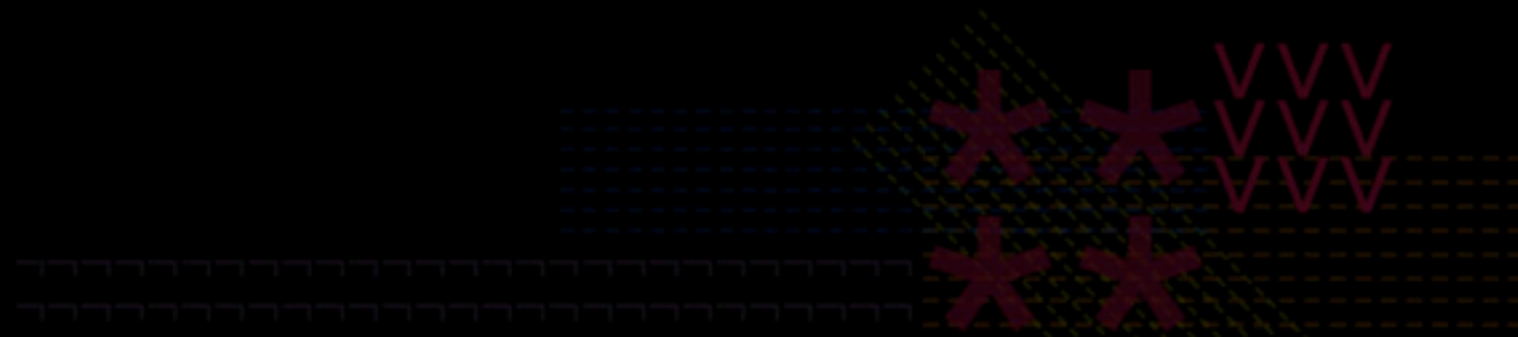
+ over 1000 plugins



# jQuery Events

Event

bind. trigger. hover. toggle. blur.  
change. click. dblclick. error.  
focus. keydown. keypress.  
keyup. load. mousedown.  
mousemove. mouseout.  
mouseover. mouseup. resize.  
scroll. select. submit. unload.



# Class Behaviors

## Adding classes that represent behavior

Javascript code implements behavior for specific classes

```
<a id="option" class="false">
  
  
  Option
  <span class="ifTrue">(On)</span>
  <span class="ifFalse">(Off)</span>
</a>
```

```
.ifTrue, .ifFalse{
  display:none;
}
.true .ifTrue{
  display:inline;
}
.false .ifFalse{
  display:inline;
}

#option{
  font-size:.8em;
  color:#444;
}
#option .ifTrue{
  color:green;
}
#option .ifFalse{
  color:red;
}
```

See Kevin Hale's article on [Ajax Wireframing Approaches: CSS Boolean](#)



# ClassBehaviors jQuery Library

<http://www.woollymittens.nl/default.php?id=classbehaviour-examples&cat=classbehaviour&mod=category>

Select Anything\*:

The second list gets updated, on the fly, using AJAX requests.

## How to Implement These Examples

The "linkedSelects"s scripted behaviour is part of the ["Classbehaviours"](#) jQuery Addons Library. This library contains many scripts that assign functionality to html elements through their classnames. For this example, the JQuery plugins "linkedSelects" was used from the ClassBehaviours JQuery plugins on this site.

```
<fieldset class="border">
  <label for="myselect">Select Anything<em>*</em>:</label>
  <select id="myselect" name="myselect" class="linkedSelects id_myLinkedSelect">
    <option value="">--- pick a type ---</option>
    <option value="./xml/linkedSelects_fruit.xml">Fruit</option>
    <option value="./xml/linkedSelects_vegetables.xml">Vegetables</option>
    <option value="./xml/linkedSelects_fish.xml">Fish</option>
  </select>
  <select id="myLinkedSelect" name="myLinkedSelect">
    <option value="">--- pick a type first ---</option>
  </select>
</fieldset>
```

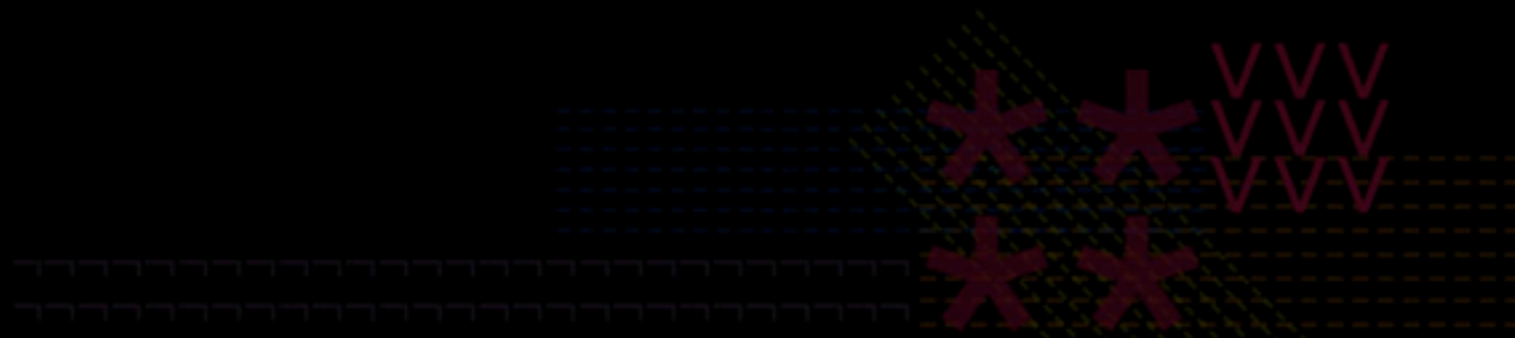
# Style Class Switching

Keep style details out of programming logic

Instead bundle style changes under a style class

Use class “mix-in”

Multiple class names for an element

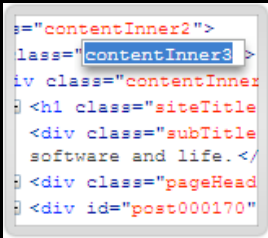


# Greasemonkey + jQuery

jquery code can  
be loaded for any web  
page allowing behaviors to  
be added

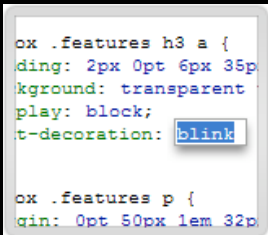
```
1 // ==UserScript==
2 // @name      prototyping-experiment
3 // @namespace  http://uie.netflix.com/bscott/
4 // @include   http://localhost/~bscott/
5 // @version   0.0.1
6 // ==/UserScript==
7
8 // ---- function with jQuery enabled Greasemonkey
9 var startPrototype = function() {
10     // Add your behaviors with jQuery here
11 }
12
13 // ---- Add jQuery to Greasemonkey
14 var GMJQ_loadScript = function(url) {
15     var GMJQ_script = document.createElement('script');
16     GMJQ_script.src = url;
17     GMJQ_script.type = 'text/javascript';
18     document.getElementsByTagName('body')[0].appendChild(GMJQ_script);
19 }
20 function GMJQ_wait() {
21     if(typeof unsafeWindow.jQuery == 'undefined') { window.setTimeout(GMJQ_wait,1); }
22     else { $ = unsafeWindow.jQuery; startPrototype(); }
23 }
24
25 // Check to see if jQuery is already loaded
26 if(typeof unsafeWindow.jQuery != 'undefined') {
27     startPrototype();
28 } else {
29     GMJQ_loadScript('http://ajax.googleapis.com/ajax/libs/jquery/1.2.6/jquery.min.js');
30     GMJQ_wait();
31 }
```

# Firebug



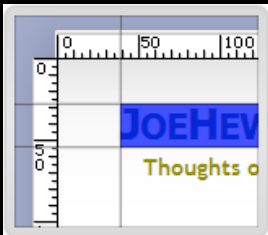
## Edit HTML

For quick adding of html or modifying html during a prototype review



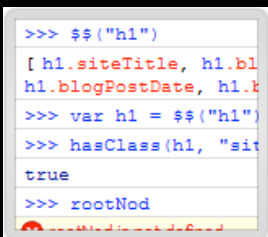
## Edit CSS

Change behaviors, layout or style on the fly



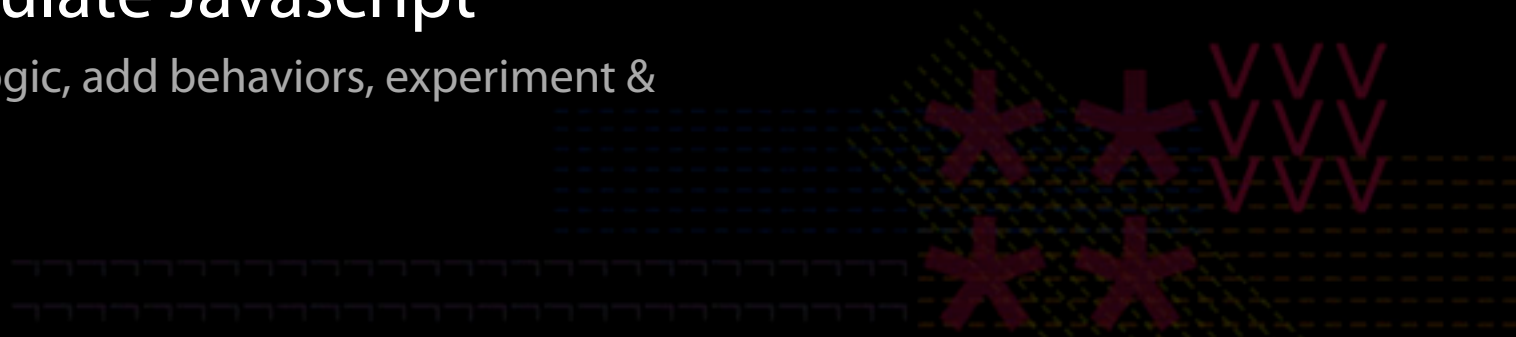
## Layout issues

Visualize the box model & page layout



## Manipulate Javascript

Change logic, add behaviors, experiment & tweak



# Behavior Techniques

Use CSS to simulate mouse hover actions

Use CSS selector syntax to inject behavior

ExtJS, jQuery, Dojo, Mootools, Prototype, cssQuery(), YUI 3.0

Understand CSS Specificity

Understand Class vs. ID

Use style class switching for visual changes

Use innerHTML for content changes

Anchors as basic navigation/action hooks

Keep structure, style and logic separate

Avoid adding onclick handlers in the HTML (unobtrusive)

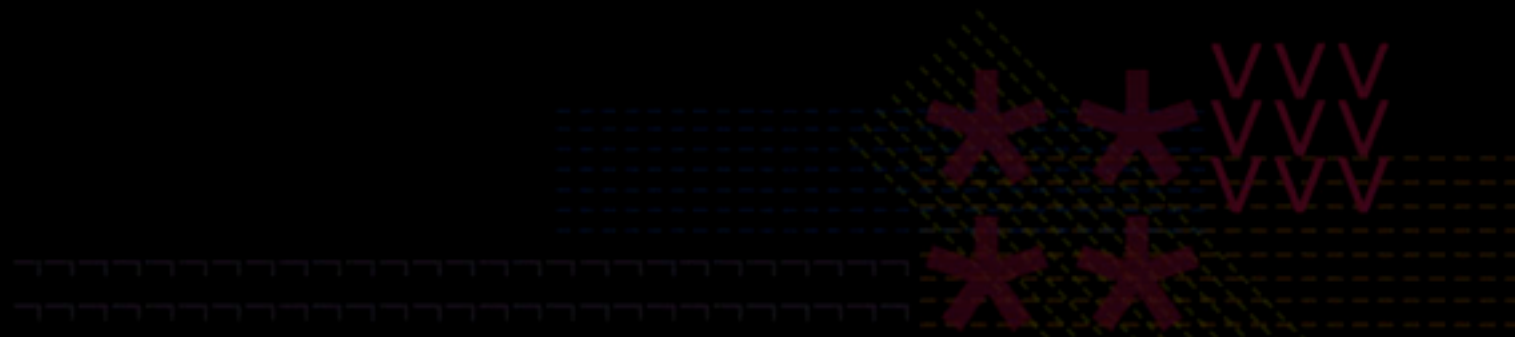
Use Firebug





# Data/Content

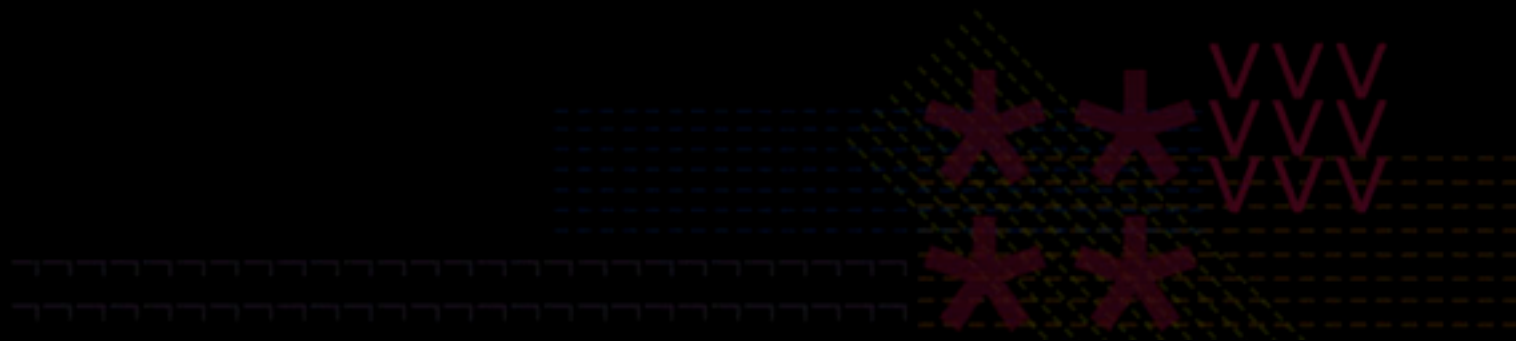
Approximating reality



# jQuery Data Binding

## jQuery.ajax(options)

```
$.ajax({  
  url: "test.html",  
  cache: false,  
  success: function(html){  
    $("#results").append(html);  
  }  
});
```





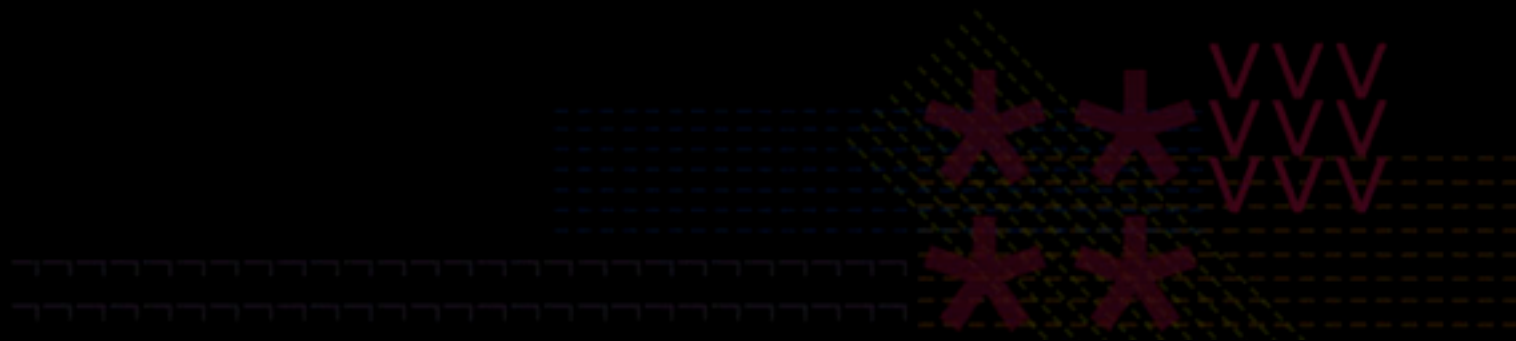
# Use Public APIs

Yahoo! Search

Google Search

Flickr images

Google Maps



# JSON

```
{"name": "Jack B. Nimble", "at large": true, "grade": "A",  
"level": 3}
```

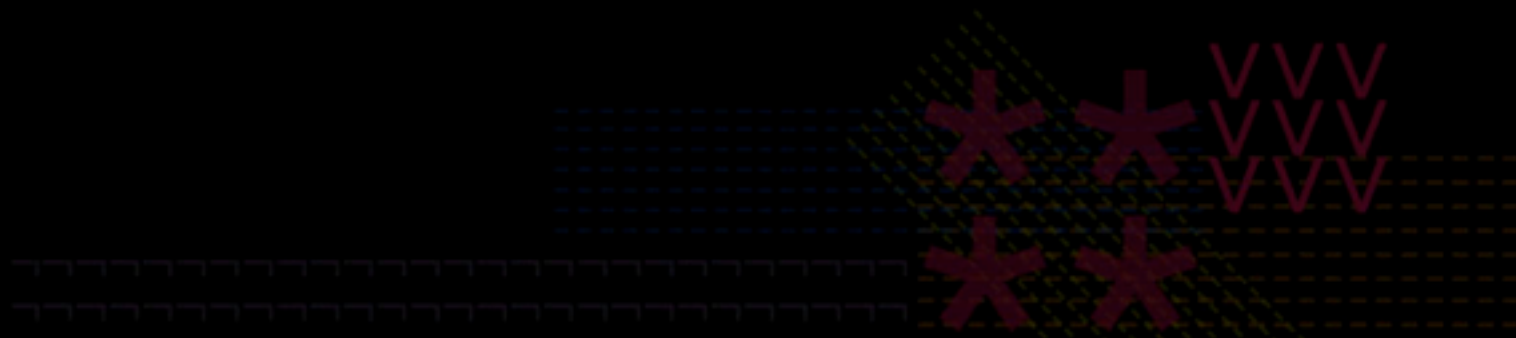
|          |                |
|----------|----------------|
| name     | Jack B. Nimble |
| at large | true           |
| grade    | A              |
| level    | 3              |

# JSON: Arrays

```
["Sunday", "Monday", "Tuesday", "Wednesday", "Thursday",  
"Friday", "Saturday"]
```

```
[  
[0, -1, 0],  
[1, 0, 0],  
[0, 0, 1]  
]
```

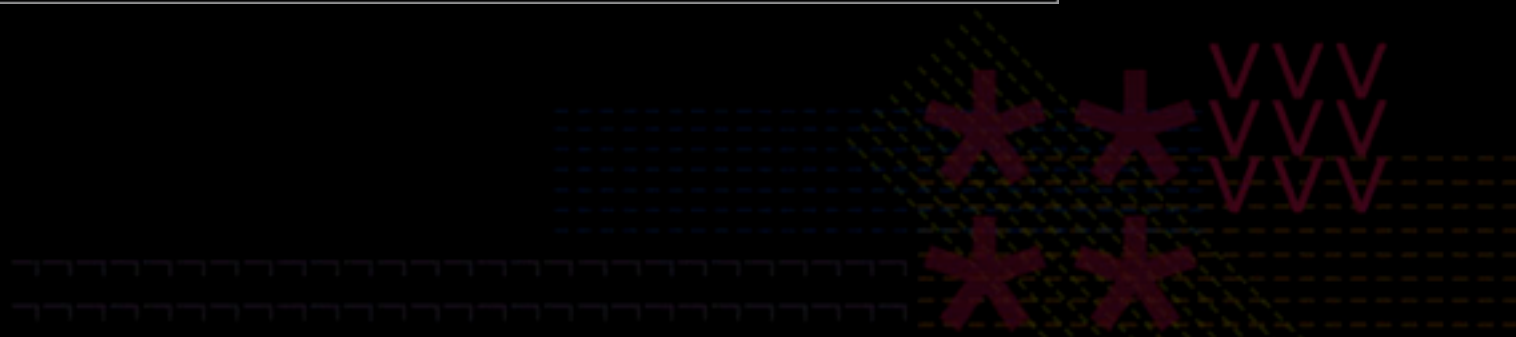
3x3 array



# JSON in jQuery

jQuerygetJSON(url, [data], [callback])

```
$.getJSON("http://api.flickr.com/services/feeds/photos_public.gne?  
tags=cat&tagmode=any&format=json&jsoncallback=?",  
function(data){  
    $.each(data.items, function(i,item){  
        $("<img/>").attr("src", item.media.m).appendTo("#images");  
        if ( i == 3 ) return false;  
    });  
});  
);
```

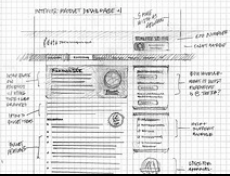


# JSON Example

```
$.getJSON("http://api.flickr.com/services/feeds/photos_public.gne?
tags=cat&tagmode=any&format=json&jsoncallback=?",
function(data){
    $.each(data.items, function(i,item){
        $("").attr("src", item.media.m).appendTo("#images");
        if ( i == 3 ) return false; // only get 4 images
    });
});
);
```

```
{
  "title": "Recent Uploads tagged cat",
  "link": "http://www.flickr.com/photos/tags/cat/",
  "description": "",
  "modified": "2009-03-09T02:00:41Z",
  "generator": "http://www.flickr.com/",
  "items": [
    {
      "title": "birthday 89",
      "link": "http://www.flickr.com/photos/gulshan/3340193322/",
      "media": {"m": "http://farm4.static.flickr.com/3405/3340193322_065facd48d_m.jpg"},
      "date_taken": "2009-03-08T03:11:50-08:00",
      "description": "<p><a href=\"http://www.flickr.com/people/gulshan/\">gulshan</a>
posted a photo:</p> <p><a href=\"http://www.flickr.com/photos/gulshan/3340193322/\" title=
\"birthday 89\"><img src=\"http://farm4.static.flickr.com/3405/3340193322_065facd48d_m.jpg\"
width=\"240\" height=\"160\" alt=\"birthday 89\" /></a></p> ",
      "published": "2009-03-09T02:00:41Z",
      "author": "nobody@flickr.com (gulshan)",
      "author_id": "88283245@N00",
      "tags": "birthday party me brooklyn cat photobooth marcus 2009"
    },
  ],
}
```

# Prototyping with DHTML



## Layout

Getting the page laid out correctly & quickly



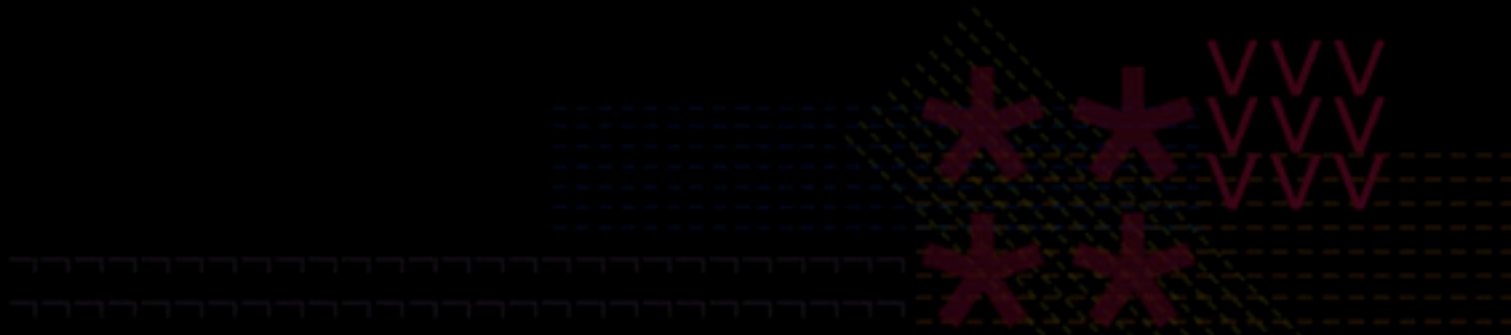
## Behavior

Adding interactivity to the page



## Data

Populating the prototype with fake or semi-realistic data



# Resources

Book: CSS:The Missing Manual

<http://css.maxdesign.com.au/floatutorial/>

<http://speckyboy.com/2008/03/28/top-12-css-frameworks-and-how-to-understand-them/>

<http://www.blueprintcss.org/>

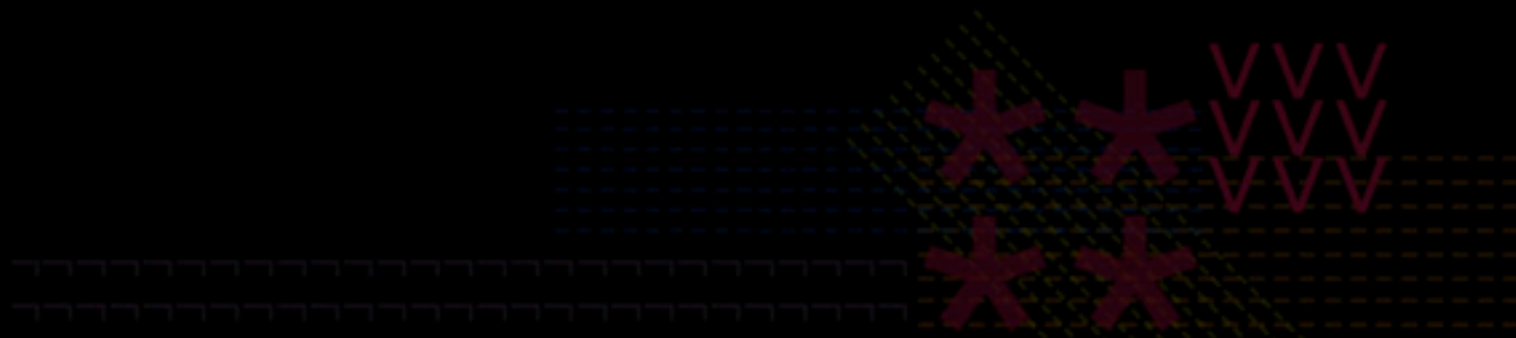
<http://www.scribd.com/doc/3592303/Blueprint-CSS-framework-version-071-cheat-sheet>

<http://kematzy.com/blueprint-generator/>

<http://mdaines.com/plumb/>

<http://developer.yahoo.com/yui/grids/>

<http://developer.yahoo.com/yui/grids/builder/>





# Resources

<http://yuiblog.com/assets/pdf/cheatsheets/css.pdf>

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

<http://www.divitodesign.com/2008/12/960-css-framework-learn-basics/>

<http://www.divitodesign.com/2009/01/tricks-to-solve-960-css-framework-problems/>

<http://www.mostinspired.com/blog/2009/01/28/rapid-interactive-prototyping/> (with jquery)

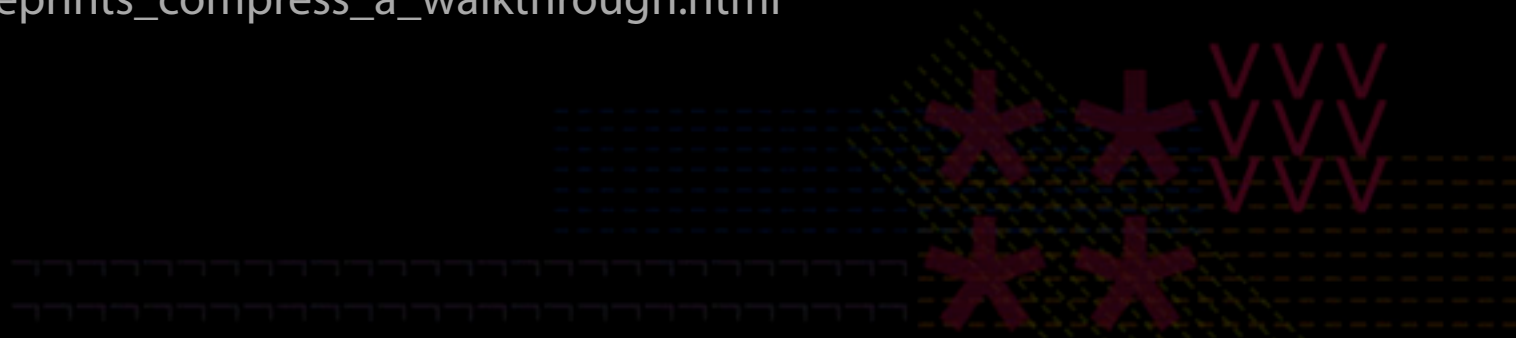
<http://www.domain7.com/WhoWeAre/StephenBau.html> (built the moo tools version of fluid)

[http://www.mostinspired.com/blog/wp-content/uploads/2009/rip/16\\_fluid\\_jquery/](http://www.mostinspired.com/blog/wp-content/uploads/2009/rip/16_fluid_jquery/)

<http://honeyl.public.iastate.edu/blueprint/>

<http://code.google.com/p/css-boilerplate/>

[http://jdclayton.com/blueprints\\_compress\\_a\\_walkthrough.html](http://jdclayton.com/blueprints_compress_a_walkthrough.html)



# Resources

<http://lab.christianmontoya.com/read/>

<http://www.christianmontoya.com/2007/11/10/semantify-and-css-tools-based-on-blueprint/>

<http://habilis.net/cssmixin/>

<http://particletree.com/features/ajax-wireframing-approaches/>

<http://designinfluences.com/fluid960gs/>

<http://www.protoscript.com>

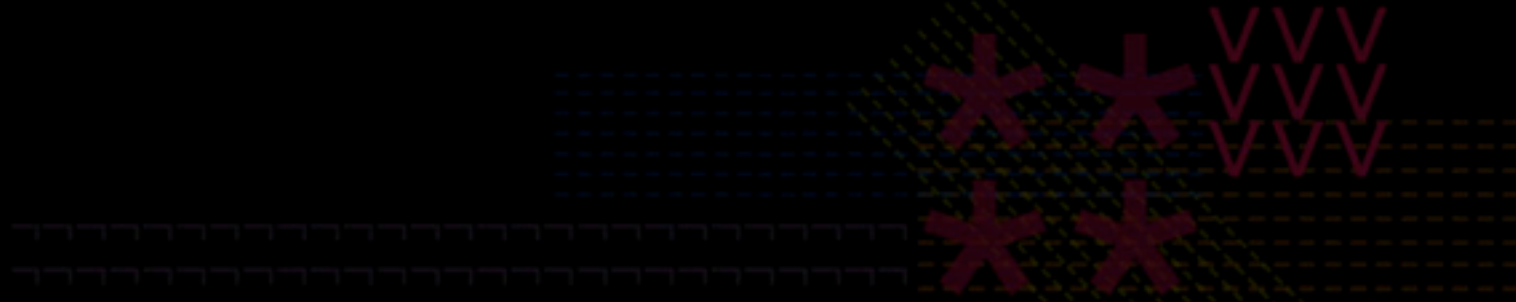
<http://www.woollymittens.nl/default.php?id=classbehaviour-examples&cat=classbehaviour&mod=category>

<http://joanpiedra.com/jquery/greasemonkey/>

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

<http://particletree.com/features/a-designers-guide-to-prototyping-ajax/>

<http://json.org>



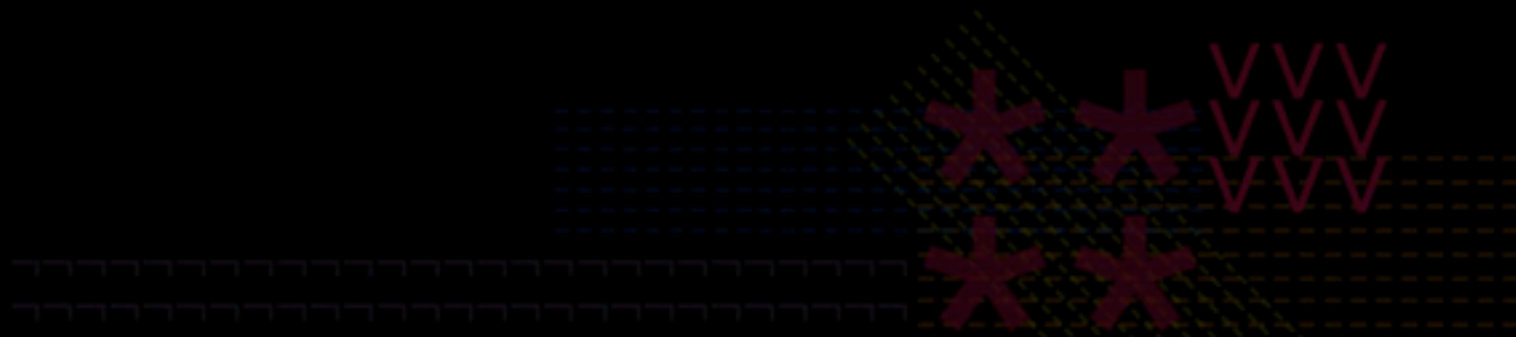
# Photo Credits

<http://www.flickr.com/photos/yerro/2310015018/>

[http://flickr.com/photos/totoro\\_zine/2341347265/](http://flickr.com/photos/totoro_zine/2341347265/)

<http://www.flickr.com/photos/rohdesign/2610114400/>

[http://en.wikipedia.org/wiki/  
Internet\\_Explorer\\_box\\_model\\_bug](http://en.wikipedia.org/wiki/Internet_Explorer_box_model_bug)



Questions?