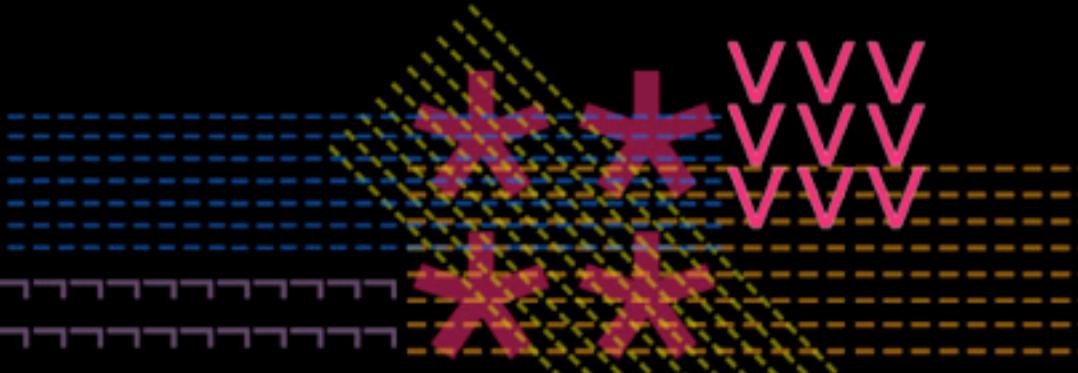


Microsoft



THE
NEXT
WEB
NOW



<3 //
YOUR
WEB //

Interactive Prototyping with DHTML

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

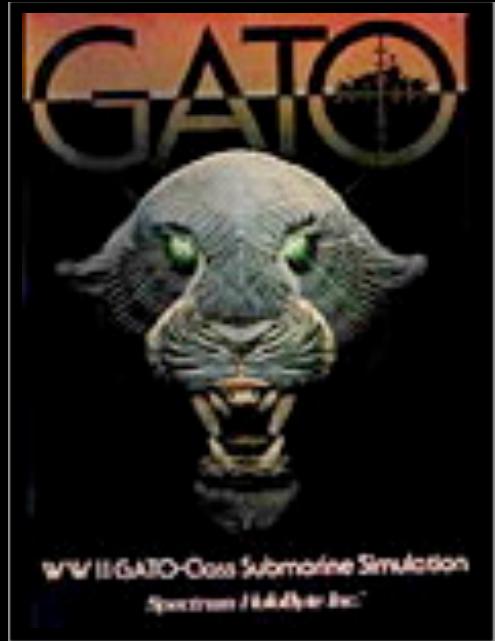
Mix 09

Bill Scott

Mar. 19th, 2009



My Background



Developer Network Home Help Site Search Search

YAHOO! DEVELOPER NETWORK

Design Pattern Library

Yahoo! Developer Network > Design Pattern Library

USER NEEDS TO

- NAVIGATE
 - Breadcrumbs
 - Faceted Navigation
 - Fly-out Menus
 - Horizontal Bar
 - Hub and Spoke
 - Left Navigation
- Tabs
 - Module Tabs
 - Navigation Tabs

EXPLORE DATA

- Auto Complete
- Calendar Picker
- Pagination
 - Item Pagination
 - Search Pagination

ORGANIZE DATA

GIVE FEEDBACK

- Ratings & Reviews
 - Architecture Review
 - Rating an Object
 - Writing a Review

PERFORM ACTION

CUSTOMIZE

- Drag and Drop
 - Drag and Drop Modules
 - Drag and Drop Objects
- In Page Editing
- Sliders

APPLICATION NEEDS TO

- CALL ATTENTION
- IMPROVE READABILITY
 - Ratings & Reviews
 - Review Architecture
- GROUP RELATED ITEMS
- ORGANIZE SCREEN/PAGE

Welcome

Welcome to the Yahoo! Design Pattern Library. We are very happy to be sharing our library with the design and development community. This is our first drop of what we hope to be a monthly release cycle for the publication of patterns. In many cases we have bundled the patterns with pointers to related code from the [Yahoo! User Interface Code Library](#). We hope this is a useful resource and look forward to your [feedback](#).

What's a Pattern?

A pattern describes an optimal solution to a common problem within a specific context. [more...](#)

Recent Patterns

Auto-Complete
User needs to enter an item into a text box which could ambiguous or hard to remember and therefore has the potential to be mis-typed.

Drag and Drop Modules
The user needs to re-arrange the layout of modules on a web page directly with the mouse.

Module Tabs
The user needs to navigate through one or more stacked panes of content without refreshing the page.

Navigation Tabs
The user needs to navigate through a site to locate content and features and have clear indication of their current location in the site.

Object Pagination
The user needs to view data items from a potentially large set of sorted data that will not be easy to display within a single page.

Results Page
The user needs to quickly leave their opinion on an object, with minimal interruption to any other task they are involved in.

Search Pagination
A user wants to share her opinion with others about an object (place, person, thing) in greater detail than a simple rating.

Rating an Object

Writing a Review

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, behavioral objects 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 community.

DRAg AND DRoP
Desktop applications have long used drag and drop in their interfaces to simplify user interaction. Rico provides an interface 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
Web pages are no longer occurring just at the page level, but within the page itself, more clues are required to tell 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 Lazarus. Just have some DIVs, add one or two script tags to your div elements into an accordion. And the next 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!

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.

Current Conditions: San Jose, California
77°F

See Rico in Action!

NETFLIX

Bill Scott | Your Account | Buy / Redeem Gift | Help

Browse DVDs Watch Instantly Your Queue Movies You'll Love Friends & Community DVD Sale \$39.99

Home Genres New Releases Previews Netflix Top 100 Critic's Picks Award Winners Search

Because you enjoyed:
ERON: The Smartest Guys in the Room
Who Killed the Electric Car?
Iraq for Sale: The War Profiteers

We think you'll enjoy:
GLOBAL WARMING: The Signs and the Science

OPUS HOME VIDEO
GLOBAL WARMING: THE SIGNS AND THE SCIENCE

Average Rating (24)
Read 20 reviews
Good
Bad

YOUR RECENT ACTIVITY
10/19 You watched Superbad
10/18 You watched I Remember Me
10/18 You watched The Office: Season 2 - Performance Review
10/18 You watched 21 Up
10/17 You watched The Whipping Boy

SUGGESTIONS FOR YOU
You have new suggestions in Movies You'll Love

TV Sci-Fi & Fantasy
Based on your interest in:
Jenicho: Season 2
Battstar Galactica: Season 1
Heroes: Season 3

Get this game
TV Sci-Fi & Fantasy
Add All
★ ★ ★ ★ ★
Not Interested

Eleventh Hour
StarGate: Atlantis: Season 1
New: Season 1
The 4400: Season 1

See all >

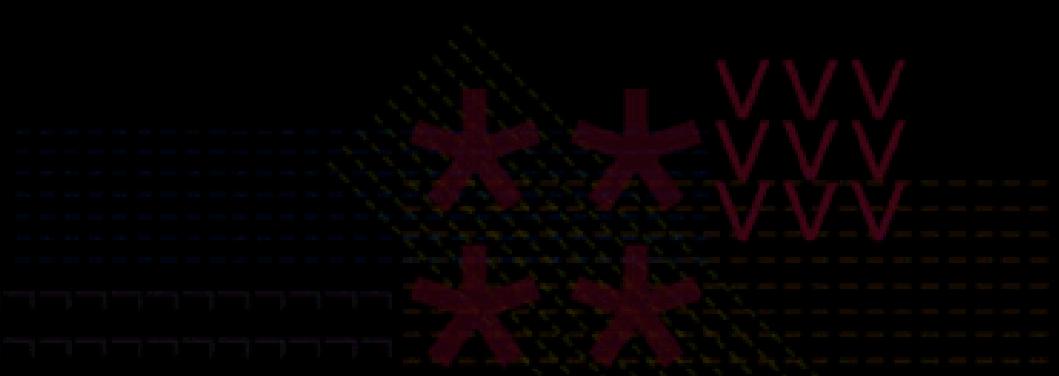
House, M.D.: Season 1
Desperate Housewives: Season 1
The Closer: Season 1
The Wire: Season 2

See all >

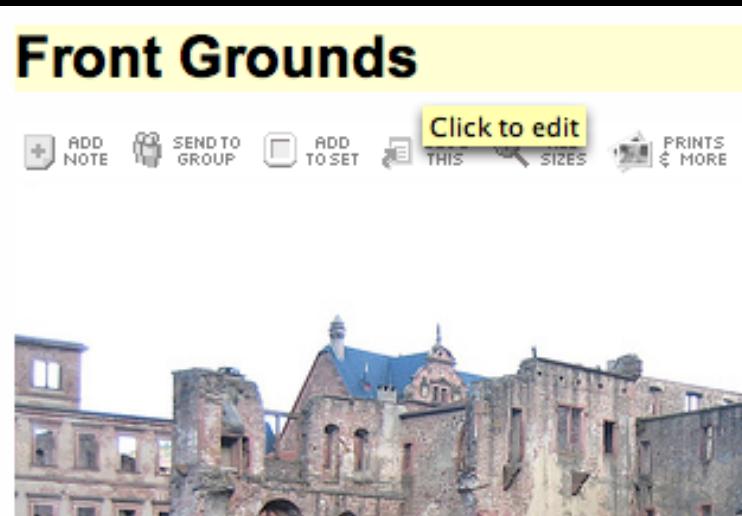
HOUSE
DESPERATE HOUSEWIVES
THE CLOSER
THE WIRE

the challenge

interaction is dynamic



Interaction is Nuanced



A screenshot of a mobile application interface titled "backpackit. contextual tools". It displays a list of items with checkboxes: Milk, Orange Juice, Tomatoes, Lettuce, Bread, and Chips. The background features a grid pattern.

backpackit. contextual tools

A screenshot of a Gap product page for a "Pique polo". The page includes a "my bag" button with "0 items" and a "checkout" button. The product description states: "Soft cotton pique knit. Short-sleeved, button neckline." It also mentions "Need large quantities? Click for Corporate Apparel" and "100% Cotton. Machine wash. imported." Below the description, there are options for "regular" and "tall" sizes, a "Buy More and Save" section, color swatches, and a size chart. The price is listed as \$29.50, with a promotional offer of \$9.99 for two or more. A "size chart" button is also present.

the gap. inline assistant

A screenshot of the USGS Hawaiian Volcano Observatory website. The main content features a photograph of a lava flow entering the ocean. To the left, there is a sidebar with links for Kilaua, Mauna Loa, Earthquakes, Other Volcanoes, Volcanic Hazards, Types - Lava Zones, and About HVO. A "Volcanic Hazards" section is highlighted. Below the main image, there is a caption: "When Lava Enters the Sea: Growth & Collapse of Lava Deltas". A photograph by C. Heliker on November 12, 1992, is shown. A note below the image states: "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". To the right of the main content, there is a sidebar titled "YAHOO! GOBBLER" which lists "Projects (8)" such as "Geography: Land...", "Birds' Nests", and "Scratchpad".

y! teachers. drag & drop

Interaction is Nuanced

The Gap's inline assistant for stressfree classic fit flat front khakis. It shows a model wearing the pants, a color swatch for khaki, size charts for waist (28W-46W) and length (28L-46L), and a price of \$42.50. Buttons for 'add to bag' and 'more views' are present.

stressfree classic fit flat front khakis
imported.
exclusive colors

size & color overview X

select Color: khaki \$42.50

select Waist: 28W 29W 30W 31W 32W 33W 34W 35W 36W 38W 40W 42W 44W 46W

select Length: 28L 29L 30L 31L 32L 33L 34L

also in tall (prices may vary)

select qty 1

size chart more details

khaki \$42.50

add to bag

the gap. inline assistant

Broadmoor hotel. one page checkout

Click buttons below to select check-in date, check-out date, rooms, adults and children.

Choose a room below and availability will be displayed on the calendar.

Total (all room nights)

Superior South Superior Main Intermediate Main Intermediate West Standard Suite

July 2008 - August 2008

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Check-in: Check-out: Room Type: Nights: 0 Rooms: 1 Adults: 1 Children: 0

Amount: Taxes: Total:

*First Name *Last Name

*Address

*City *State/Province

*Country *Postal Code

*Email

*Phone Fax

VISA MASTERCARD DISCOVER AMERICAN EXPRESS

Cardholder Expiration (MM/YY)

Card Number Arrival Information

Comments/Requests

* Fields with an asterisk are required

Include me in future email campaigns

Finish Reservation

microsoft live. paged scrolling

Live Search Home Hotmail Spaces OneCare Sign in

flowers Search Images Web Options · SafeSearch Moderate

All image sizes ▾ Scratchpad

Image results 1-10 of 23,400,000

See also: Web, Video, News, Maps, MSN, More ▾

© 2008 Microsoft | Privacy | Legal | Images are scaled down and may be copyrighted

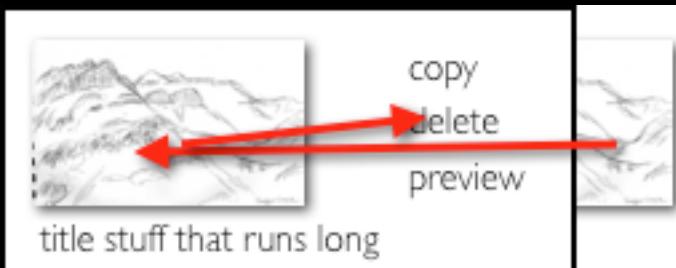
Advertiser | For Webmasters | Help Central | Account | Feedback



Devils in the Details

National Mapping - F... http://www.ga.gov.au...	National Mapping - F... http://www.ga.gov.au...	National Mapping - F... http://www.ga.gov.au...
National Mapping - F... http://www.ga.gov.au...	Volcano World - The ... http://volcano.und.e...	Hawai'i Volcanoes National Park - The ... http://www.nps.gov/a...
National Mapping - F... http://www.ga.gov.au...	Copy of Plateau - Wi... http://en.wikipedia....	Copy of Gobble Image... http://beta.teachers...
Copy of Gobble Image... http://beta.teachers...	Copy of Gobble Image... http://beta.teachers...	Copy of Alaska Volca... http://www.avo.alask...
National Mapping - F... http://www.ga.gov.au...		

y! teachers. anti-pattern. hover & cover



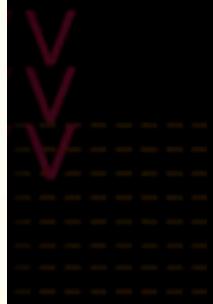
Three-dimensional Ca... http://volcano.und.n...	Three-dimensional Ca... http://volcano.und.n...	Howstuffworks "... http://www.howstuffw...
Internet Geography - ... http://www.geography...	Dictionary image: vo... http://education.yah...	Operation Montserrat... http://emissionhq.co...
<p>Copy Delete</p>		

Web sites (21)

How Volcanoes Work http://www.geology.s...	Operation Montserrat... http://emissionhq.co...	Howstuffworks "... http://www.howstuffw...
SPACE.com -- http://www.space.com...	Volcanoes: Principal... http://volcano.und.e...	Vic Camp - Volcano T... http://www.viccamp.c...

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

Internet Geography - ... http://www.geography...	Dictionary image: vo... http://education.yah...	Operation Montserrat... http://emissionhq.co...
<p>Copy Delete</p>		



Devils in the Details

YAHOO! PHOTOS Welcome, b.scott [Sign Out, My Account] All My Photos

Home Prints & Gifts View Cart Settings Help Search My Tag

Upload Photos

All My Photos Slideshow Create Share Drag photos

Sort by: Date

Sunset Eiffel Pulley

Friendly advice for photo sharing.

From S...

2.0 km
1.5 mi
© 2005 Yahoo! Inc © 2005 NAVTEQ

are Contact Camden Ave
ids.com Map
istance | Name
S DDS - S
orill Ave, Sa
irections | S
ics - Dentistry
g DDS - C
andess Ave,
irections | S
ors & Clinics
ropley Ave, S
irections | S

y! photos. anti-pattern. idiot boxes

y! maps. anti-pattern. mouse trap

Timing Concerns

A screenshot of a web-based application interface. At the top left, there's a "Lists" section with three checkboxes: "Remove this item", "And this one too", and "adding a new item". The third checkbox is highlighted with a yellow background. Below this is a red "Edit" button. In the center, there's a large input field with the placeholder "Add item" and a message "or I'm done adding items" in red. At the bottom right of the input field, there's a small progress bar.

A screenshot of the Gap website. At the top, there are navigation links for Women, GapBody, GapMaternity, GapKids, and babyGap. On the right, there's a "my account" link. Below the navigation, a "Shoes, Belts & More" section is shown. Further down, a "bags" section displays four items: "Premium canvas duffle bag" (\$49.50), "urban nylon sling" (\$34.50), "urban nylon backpack" (\$29.50), and "nylon commuter bag" (\$68.00). A shopping bag icon at the top right shows "3 items in my bag" with a "checkout" button. A progress bar is overlaid on the shopping bag icon.

A screenshot of the Flickr interface. At the top, there are buttons for "Batch Organize" and "Your Sets". Below that, a message says "Finished? Go home! flickr". There are buttons for "Edit photos", "Permissions", "Edit dates", "Add tags", "Add to set", and "Clear this batch". Below these, there are five thumbnail images of landscapes. A progress bar is overlaid on the right side of the interface.

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

A screenshot of the Yahoo! Plus homepage. At the top, it says "Connecting...". The main content area includes a "Scoreboard" section with "TODAY" and "YESTERDAY" tabs, a "Message Center" for checking email, a "Weather" section for Dallas, TX, a "Best Fare Tracker" for New York, NY, and a "Software News" section. Progress bars are visible in the "Scoreboard" and "Weather" sections.

Timing Concerns

The image displays three side-by-side screenshots of the Yahoo! interface, illustrating the evolution of the service over time:

- my yahoo!. version 1**: The top screenshot shows the Yahoo! PLUS homepage. It features a large search bar at the top with the placeholder "Search:" and a "Search" button. Below the search bar, there's a "Hello Bill" greeting and weather information (42° - 57°). The main content area includes a "Scoreboard" section for NHL and NBA games, a "Best Fare Tracker" for flights from New York, Seattle, and San Francisco, and a "Weather" section for various locations like Dallas, TX, and Sunnyvale, CA.
- my yahoo!. version 2**: The middle screenshot shows a more refined version of the interface. The "Scoreboard" and "Best Fare Tracker" sections remain, but the "Weather" section is simplified, displaying only zip codes and temperatures. The overall layout is cleaner and more organized.
- my yahoo!. version 3**: The bottom screenshot shows the final evolution. The "Scoreboard" and "Best Fare Tracker" sections are still present. The "Weather" section has been replaced by a "Local" map for San Jose, CA. The right side of the screen is dominated by the "eHub" (Personal Assistant) which contains links to "Mail", "Music", "News", "Weather", "Travel", and "Finance". It also features a large advertisement for "BIONIC WOMAN" and a news feed from "Yahoo! News" with articles about Microsoft, T-Mobile, and IBM.

my yahoo!. version 3

prototyping with DHTML

Prototyping with DHTML

Benefits

Start simple & add complexity

Higher fidelity

Closer to final solution

Living example

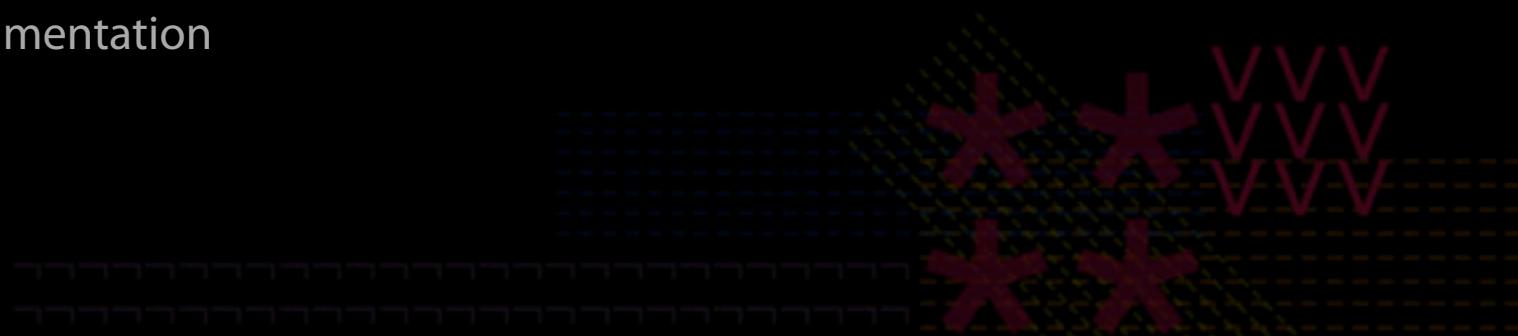
Disadvantages

Requires technical savvy

Bugs can suck down time

Too much time spent 'messing with code'

Hard to extract into documentation



Button Prototypes

NOTE: Prototypes have only been tested 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
- TODD: On Click Instant Options Flyout

Queue Options on Add Click

- Member Home
- Watch Instantly Home
- TODD: On Click Queue Options Flyout

Eye Boxshot Overlay

- Member Home
- Watch Instantly Home

• T000: This should be the prototype that Adds to Instant Queue and offers big Play promo on Quad

Alternate Explorations of above

Bottom Buttons

- Alternate Flyout Test

Old Designs: Evaluate for Qual

Left Buttons

- Member Home
- Watch Instantly Home
- Starter Not Interested Hidden
- Show instant options on click
- Hover in boxset area of that button activates button hover

Side-by-Side Buttons

- Member Home
- Watch Instantly Home
- Starter Not Interested Hidden
- Disc-only movie button full-width
- No flyout on disc-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

Splits Add

- Member Home
- Watch Instantly Home

Additional Explorations of above

Left Buttons

- Remove Boxshot at M0/Click
- Only icon in 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

- Show Text w/ Verbose Tooltips
- Member Home
- Watch Instantly Home
- Starter Not Interested Hidden
- Tooltip 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 isn't common

Bottom Buttons

- Flyout on disc-only full-width button

Play Overlay

Queue Actions on Add Click

- Show All Icon

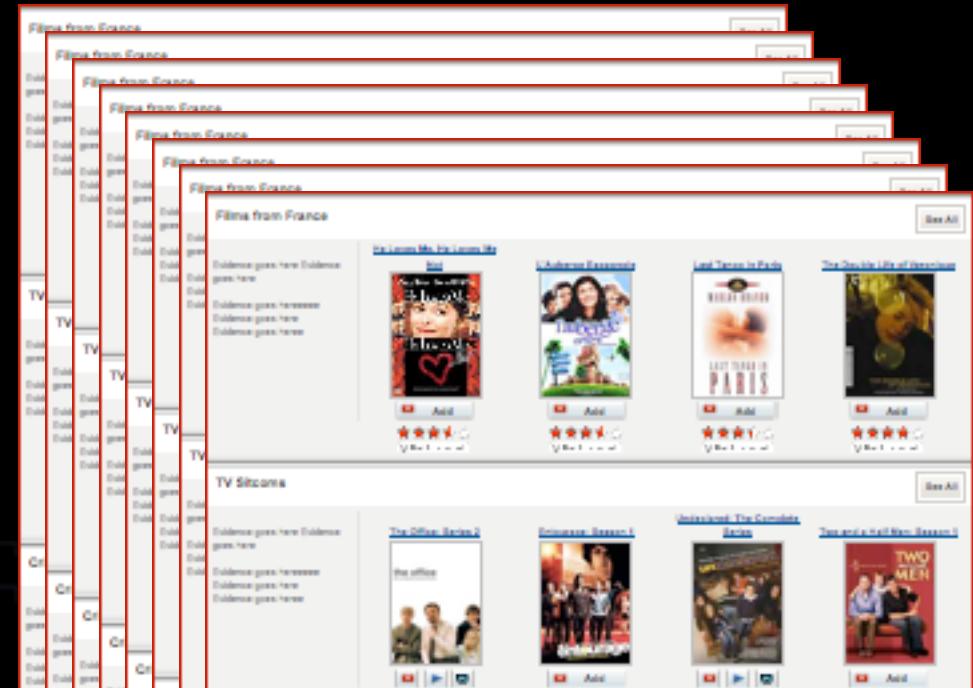
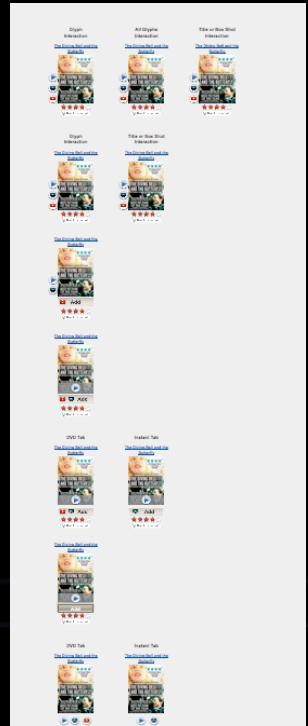
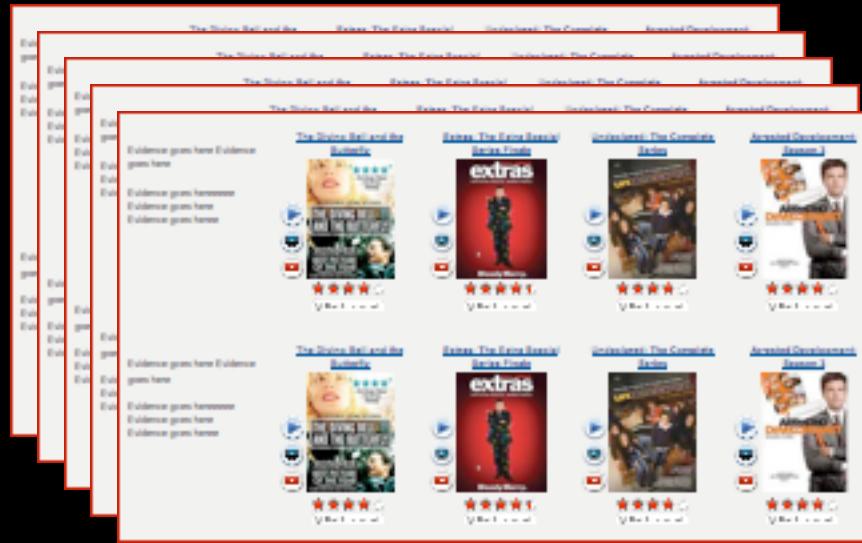
Initial Quick Explorations

- Lots of Quick Prototypes
- Evacuating Movie Lookups 1
- Evacuating Movie Lookups 2 (mini bob-lets)
- Respective BOB
- Respective BOB: Smaller Posters
- Respective BOB: Greater Title and Truncated Synopsis
- Respective BOB: Wide

100+ variations prototyped over 1 week

Winnowed down between PMs, Design & Eng.

Put before users the next week & again 2 weeks later

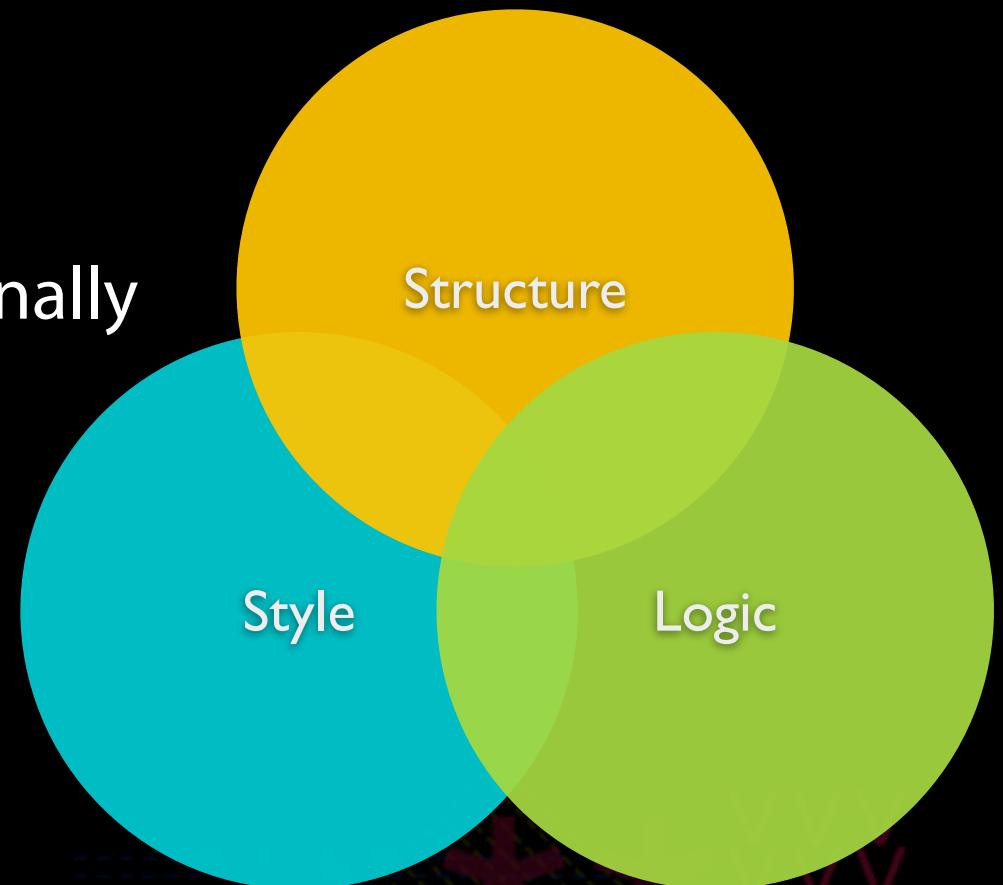


Separation of Concerns

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

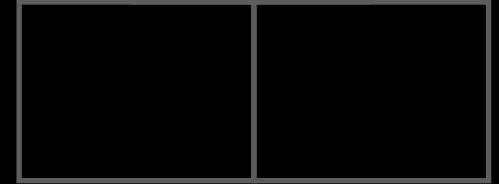
Adding interactivity to the page



Data

Populating the prototype with fake or semi-realistic data

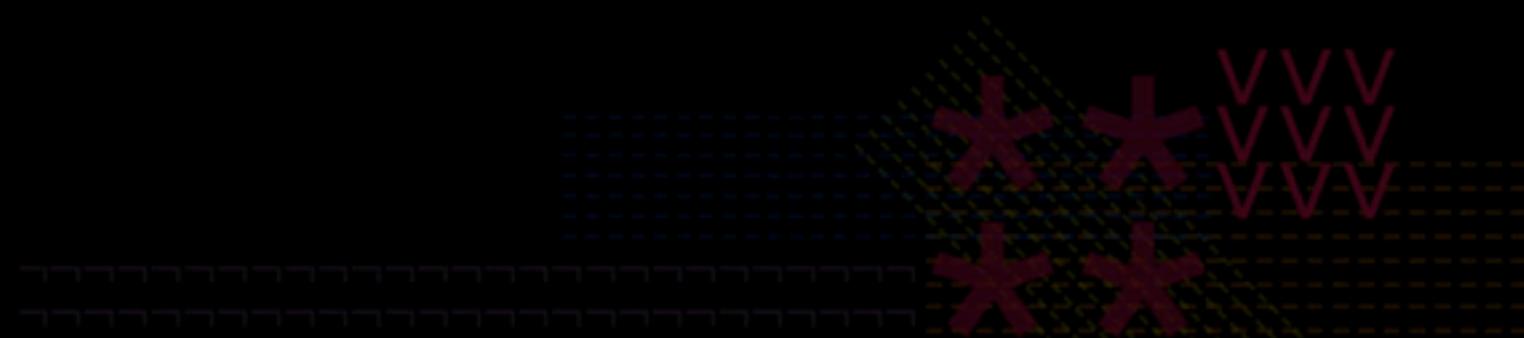




Layout

Putting everything where it should be as quickly as possible*

**with minimal hacking*



It's Not That Easy

14 IE 6 layout bugs

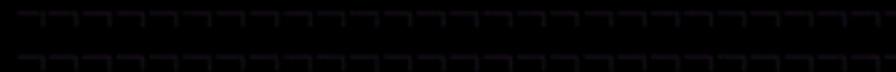
5 ways to layout elements

3 rendering engines

6+ ways to vertically align

9 ways to layout columns

8 major browsers

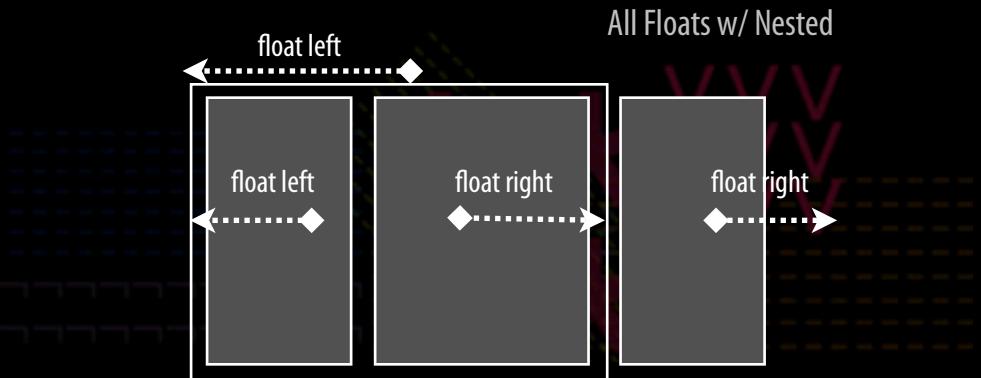
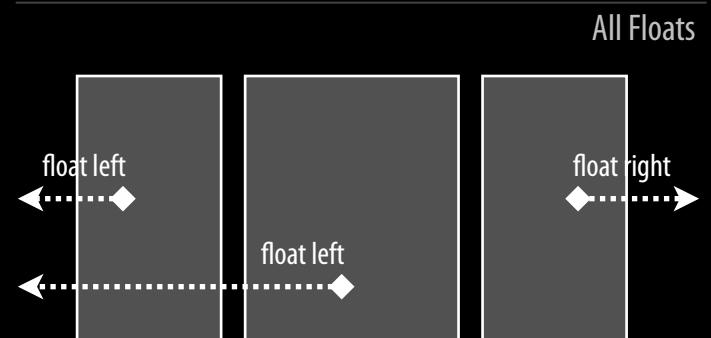
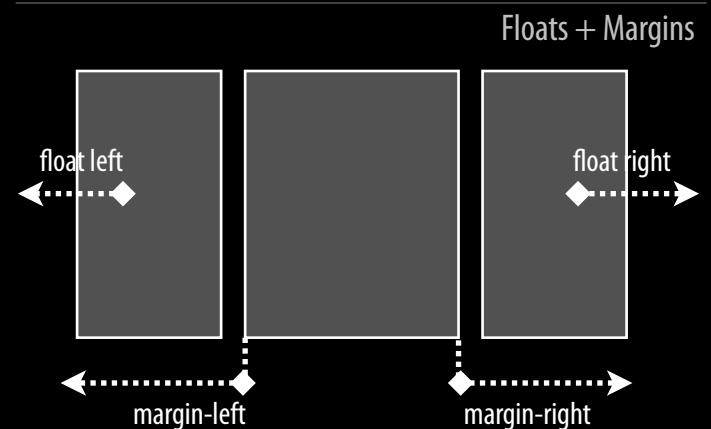
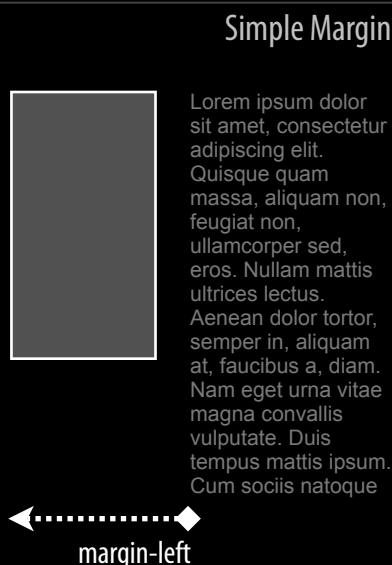


This Should Not Be Hard... But It Is

Confronted with many techniques

Slows prototyping

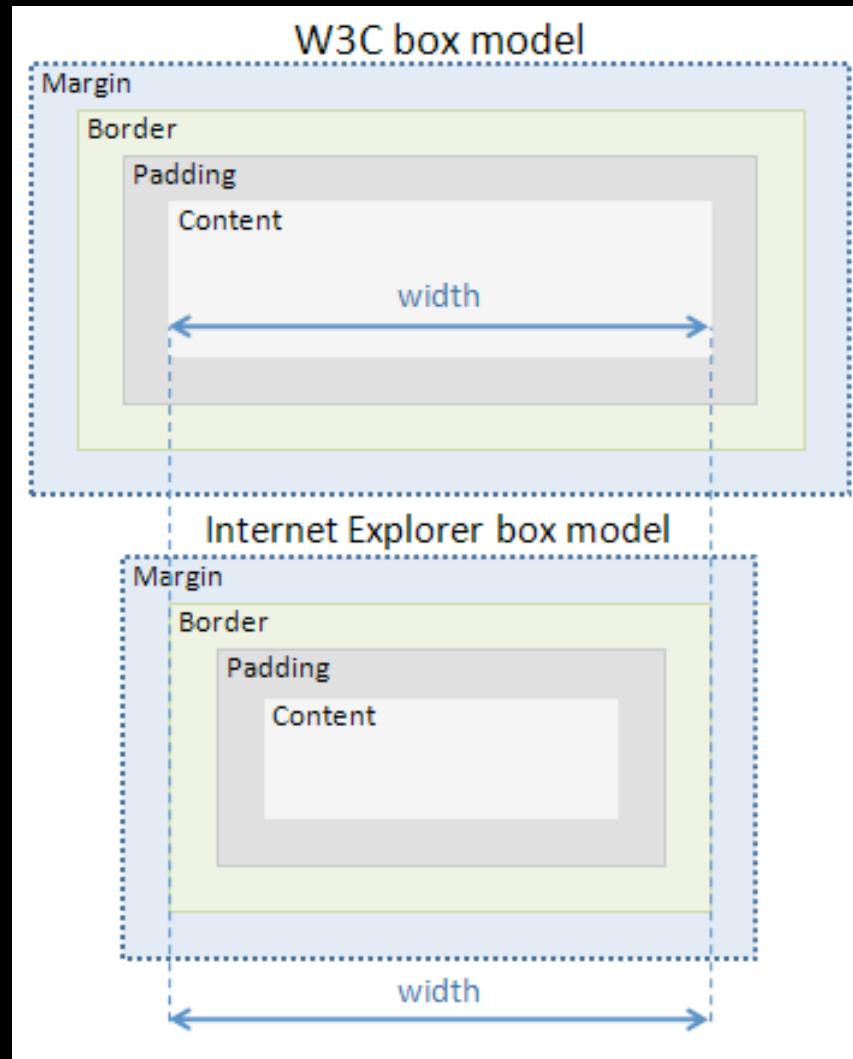
Problem: Laying out against the flow



Box Model

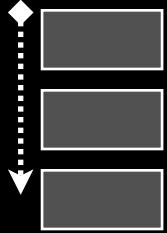
IE6 Quirks mode (and earlier IE) have different handling

Use strict mode to eliminate this concern

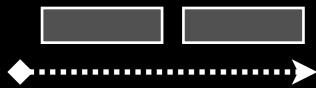


Understanding Floats

Flow of block elements



Flow of inline elements



Flow of block elements

float left

```
graph LR; A[ ] --- B[ ] --- C[ ]
```

Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Quisque quam massa, aliquam non, feugiat non, ullamcorper sed, eros.
Nullam mattis ultrices lectus. Aenean dolor tortor, semper in, aliquam at, faucibus a, diam. Nam eget urna vitae magna convallis vulputate. Duis tempus mattis ipsum. Cum sociis natoque

block
element
flows around
block above

Floating block elements

float left

```
graph LR; A[ ] --- B[ ] --- C[ ]
```

float left
float left
float left

flow left to right

third block
element
wraps

Clearing floats

float left

```
graph LR; A[ ] --- B[ ] --- C[ ]
```

float left
float left

flow left to right

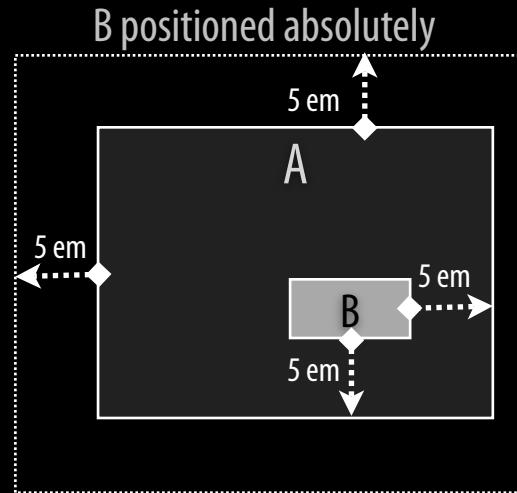
[clear]

after clear,
flow returns
to vertical
for blocks

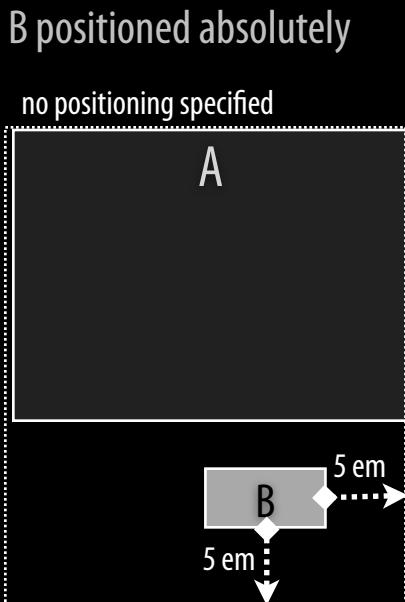


Absolute Positioning

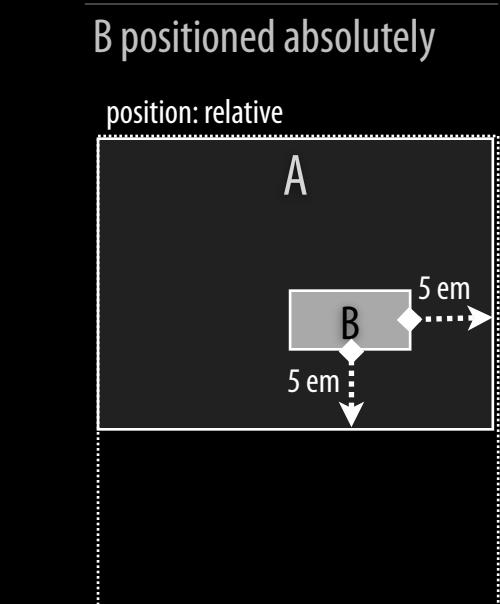
It is actually *relative* to its closest positioned ancestor



B is positioned
relative to A, not
the document



B is positioned
relative to
document, not A



B is positioned
relative to A, not
the document



Layout Techniques

Choose positioning over floats

Use a grid layout system

Use a CSS framework to simplify life

The screenshot shows a dark-themed website for 'Black Estate'. At the top right is a large bottle of wine. The main title 'Estate Black' is in a large serif font. Below it is a sub-headline: 'Black Estate is a remarkable place for wine.' A large image of a vineyard is on the right. On the left is a sidebar with links: Top, Vineyard, Wine, Bottles, Black List, Contact, and Region. The central content area features a large image of a sunflower, a paragraph about the vineyard's location, and another paragraph about their wine-making process. At the bottom is a section titled 'Vineyard' with the subtitle 'Omahi, Waipara, New Zealand.'



CSS Frameworks

Building on the work of others

Hide complexity

Simplify the layout process

Express layout

Define templates and/or grids

Normalize browsers

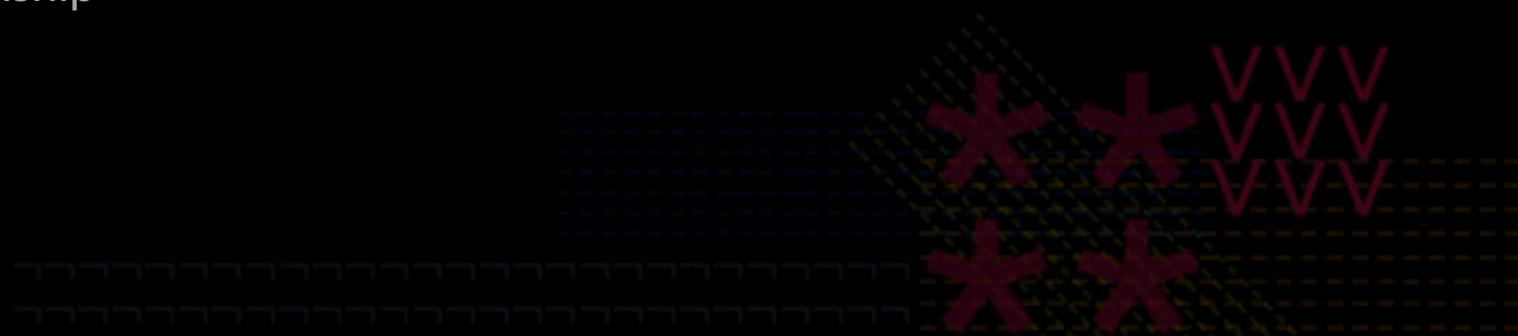
CSS Reset

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

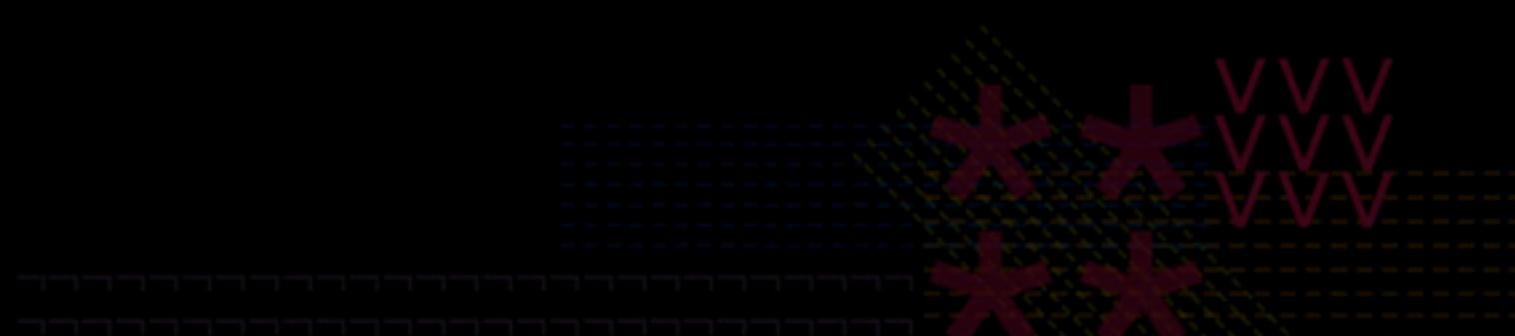
CleverCSS

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

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Blueprint CSS

960 Grid

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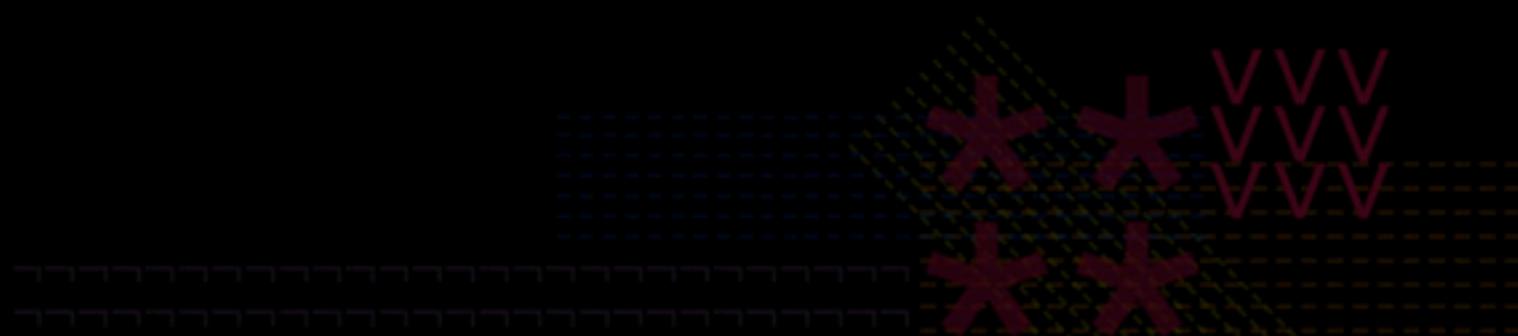
CleverCSS

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 adipisicing 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 adipisicing 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 adipisicing 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.



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

Nullam mattis, odio ut tempus facilisis, metus n
mauris. Vestibulum odio erat, fermentum at, commo
sagittis condimentum, sem nulla aliquam velit, sed in
Aenean aliquet magna eget orci. Class aptent taciti s

Vivamus euismod. Cum sociis natoque penatibus
mus. Suspendisse vel nibh ut turpis dictum sagittis,
neque lacinia pretium. Quisque nunc erat, venenatis
Pellentesque habitant morbi tristique senectus et net
Morbi dignissim sollicitudin libero. Nulla lorem.

Integer cursus ornare mauris. Praesent nisl arcu,
sagittis erat sed velit tempus Imperdiet. Ut tristique
quis rutrum mauris lorem quis sem. Vestibulum lis
suscipit placerat odio. Class aptent taciti socios
hymenaeos. 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 nisl. Phasellus congue neque a lorem.

This is a nested column

Lorem ipsum dolor sit amet, consectetur
adipisicing 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.

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.

The screenshot shows the browser's developer tools with the "Inspect" tab selected. It highlights a specific element in the DOM tree: a `<div>` with the class `span-7 colborder`. This element contains an `<h2>` and a `<p>` tag. The `<h2>` contains the text "This sample page demonstrates a tiny fraction of what you get with Blueprint.". The `<p>` tag contains placeholder text about labor rights.

```
Inspect Edit : div.span-7 <div>
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">
  <h2>Here's a box</h2>
  <p>Lorem ipsum dolor sit amet, consectetur adipisicing 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.</p>
</div>
<div class="span-8 colborder">
  <p>orci eu imperdiet malesuada, nisl purus fringilla odio, odio tincidunt nulla. Cras in libero. Aenean rutrum, m  
convallis est tortor blandit ligula. Nulla id augue.  
 Nullam mattis, odio ut tempus facilisis, metus n  
mauris. Vestibulum odio erat, fermentum at, commo  
sagittis condimentum, sem nulla aliquam velit, sed in  
Aenean aliquet magna eget orci. Class aptent taciti s  
 Vivamus euismod. Cum sociis natoque penatibus  
mus. Suspendisse vel nibh ut turpis dictum sagittis,  
neque lacinia pretium. Quisque nunc erat, venenatis  
Pellentesque habitant morbi tristique senectus et net  
Morbi dignissim sollicitudin libero. Nulla lorem.  
  
 Integer cursus ornare mauris. Praesent nisl arcu,  
sagittis erat sed velit tempus Imperdiet. Ut tristique  
quis rutrum mauris lorem quis sem. Vestibulum lis  
suscipit placerat odio. Class aptent taciti socios  
hymenaeos. 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 nisl. Phasellus congue neque a lorem.
```

This box is aligned with the sidebar

Lorem ipsum dolor sit amet, consectetur
adipisicing 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.

The screenshot shows the browser's developer tools with the "Style" tab selected. It displays the CSS rule for the `colborder` class defined in `screen.css` (line 176). The rule sets a border-right of 1px solid #EEEEEE, a margin-right of 25px, and a padding-right of 24px.

```
div.colborder {
  border-right: 1px solid #EEEEEE;
  margin-right: 25px;
  padding-right: 24px;
}

.column, div.span-1,
div.span-2, div.span-3,
div.span-4, div.span-5,
div.span-6, div.span-7,
div.span-8, div.span-9,
div.span-10, div.span-11
```

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

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

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	

GRID

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

950px (24 columns)

750px (19 columns)

790px (20 columns)

830px (21 columns)

870px (22 columns)

910px (23 columns)

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 mark-up 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 f10 (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:

 - +

« Fit

Column Width:

 px

« Fit

Margin Width:

 px

« Fit

Total Page Width:

Desired Page Width:

 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 Motte   [minkshoe.com]
```

||| |||| ||~|||~||| ||||
|| ||__||_||| |||| |||| |||

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

The screenshot shows the Plumb application window. At the top left are two small icons: a cursor-like icon and a square icon with a double border. Below the title bar is a large area containing a grid of vertical columns. The columns are light gray with thin white borders between them. At the bottom of this grid area are three buttons with rounded corners and thin borders:

- 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](#)

Header

role: banner ▾

Order 1

main

role: main ▾

Order 2

contentinfo

role: contentinfo ▾

Footer

Order 3

YUI Grid Cheat Sheet



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. doc 750px, doc2 950px, doc3 100%, doc4 974px,
.yui-t1 – .yui-t6	Six preset template for secondary column size & side. (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-gbyui-gf) are for three-unit and uneven two-unit space sharing. (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; /* 610/13.333 */
}
```

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

A screenshot of the Black Estate Wine website. The header features the text "Estate Black". A navigation menu on the left includes links for Top, Vineyard, Wines, Block, Block List, Contact, and Register. The main content area has a dark background. It features a large image of a bottle of Chardonnay wine next to a vineyard scene. A text block describes the vineyard's location on the Waipara Valley slopes and its focus on Pinot Noir, Chardonnay, and Riesling. A "Latest News" section shows a thumbnail of a Riesling vine. A footer at the bottom left reads "Vineyard Omahi, Waipara, New Zealand."

Black Estate is a remarkable place for wine.

A family owned vineyard on the warm, sunny slopes of the Waipara Valley, where the vines grow through clay and limestone soils to produce intense wines completely expressive of this site.

Our wines are hand crafted using artisan techniques and a dedication to creating exceptional Waipara Pinot Noir, Chardonnay and Riesling.

This year we were able to extend the Black Estate family with a Riesling.

Vineyard
Omahi, Waipara, New Zealand.

A screenshot of the OneHub website. The header features the "onehub" logo and a search bar. The main navigation bar includes links for HOME, TOUR, FEATURES, PRICING, SUPPORT, BLOG, and ABOUT. A prominent green banner on the right side says "Create a free Hub" and "Share files and collaborate with others in a matter of minutes." It includes fields for email and password, and a "SIGN UP" button. Below this, there are sections for "A Masterpiece in Usability and Design" (with a quote from Douglas Karr), "Customize" (create a fully branded secure extranet in minutes), "Share Video" (embed videos in your hub to share with others), "Collaborate" (work smarter with tasks, calendars and contacts), and "Share Files" (easily send and receive large files up to 2 GB). The footer includes a "LEARN MORE ABOUT ONEHUB" button and a "FROM OUR BLOG" section with links to articles like "Add a OneHub Login Form to Your Website!", "How To Setup a Client Extrant with OneHub", and "Top 10 Reasons to Use OneHub as an SFTP Replacement".

Create a free Hub

Share files and collaborate with others in a matter of minutes.

Enter your email address Choose a password

SIGN UP

A Masterpiece in Usability and Design »

"It's not often that every once in a while, you get your hands on something special. Software should be simple, easy-to-navigate, with functionality that anticipates what the user wishes to do next, much like it's a breath of fresh air and has exactly what a user needs in building out a project site that they would be proud to invite their clients to."

– Douglas Karr

Customize Create a fully branded secure extranet in minutes.

Share Video Embed videos in your hub to share with others.

Collaborate Work smarter with tasks, calendars and contacts.

Share Files Easily send and receive large files up to 2 GB.

LEARN MORE ABOUT ONEHUB

FROM OUR BLOG

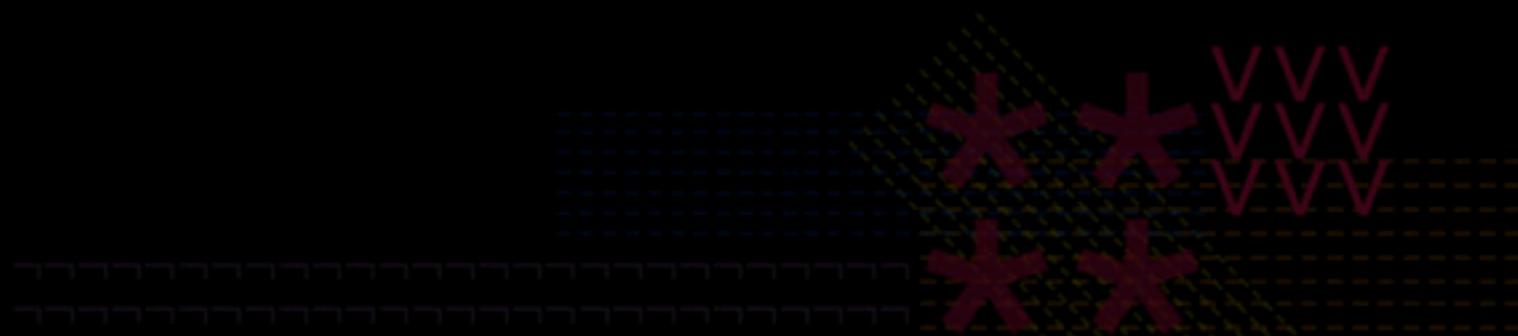
Add a OneHub Login Form to Your Website! How To Setup a Client Extrant with OneHub Top 10 Reasons to Use OneHub as an SFTP Replacement

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

Fluid 960 Grid System

Menu 1 Menu 2 Menu 3 Menu 4 Secondary Menu Item

Page Heading

12-COLUMN GRID

MOOTOOLS FX.ELEMENTS

One Two Three

PARAGRAPHS

AJAX CONTENT

SECTION MENU

MENU 1

- Submenu 1
- Submenu 2
- Submenu 3
- Submenu 4
- Submenu 5

MENU 2

MENU 3

MENU 4

LIST ITEMS

Lorem ipsum dolor sit amet,

ACCORDIAN

Design Process

The Value of Design

Design is based on the inspiration of past accomplishments. On that foundation, we can build upon those achievements to shape the future. Design is about life — past, present and future — and the learning process that happens between birth and death. It is about community and shared knowledge and experience. It is the passion to build on what we've learned to create something better.

Design Influences

Inspiration

Contribution

BLOCKQUOTE

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation

Done  YSlow 1.532s 1531 ms 

A decorative graphic in the bottom right corner consisting of a grid of red asterisks and checkmarks on a dark background. The pattern is composed of repeating 'V' and 'X' shapes in red, set against a dark gray or black background.

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

Semantify

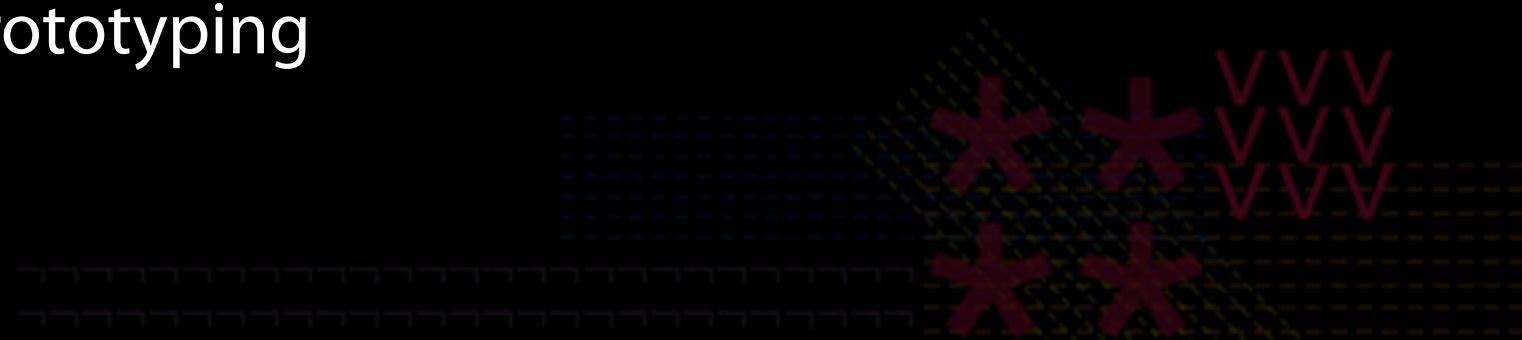
<http://lab.christianmontoya.com/read/>

<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

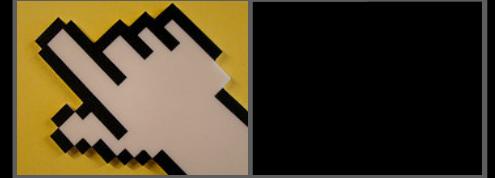
Keep DIV elements to a minimum

Use px for font-sizes (avoids nesting difficulties)

Minimize selectors

Extend objects by applying multiple classes to an element

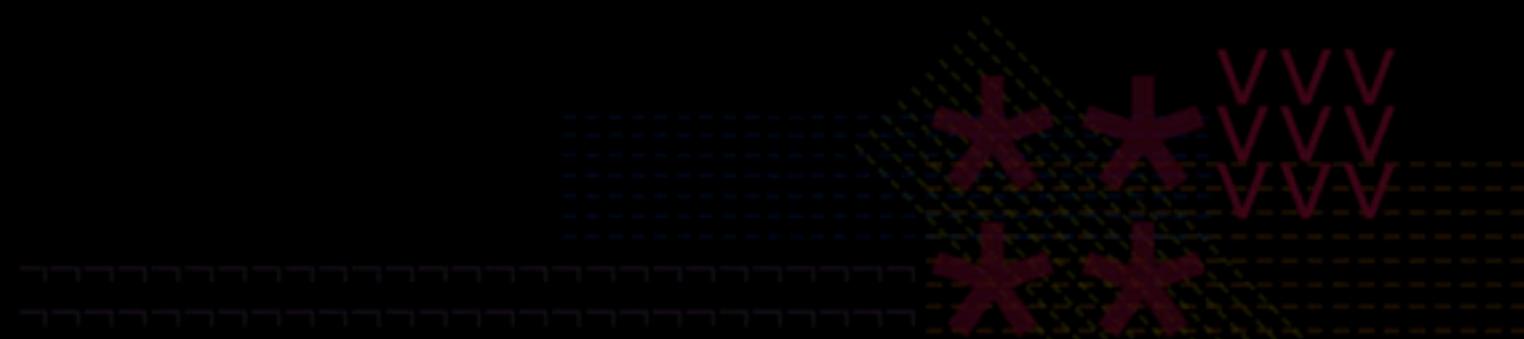




Behavior

Making the page come alive*

**as quickly as possible*



Anatomy of an Interaction

Page Element

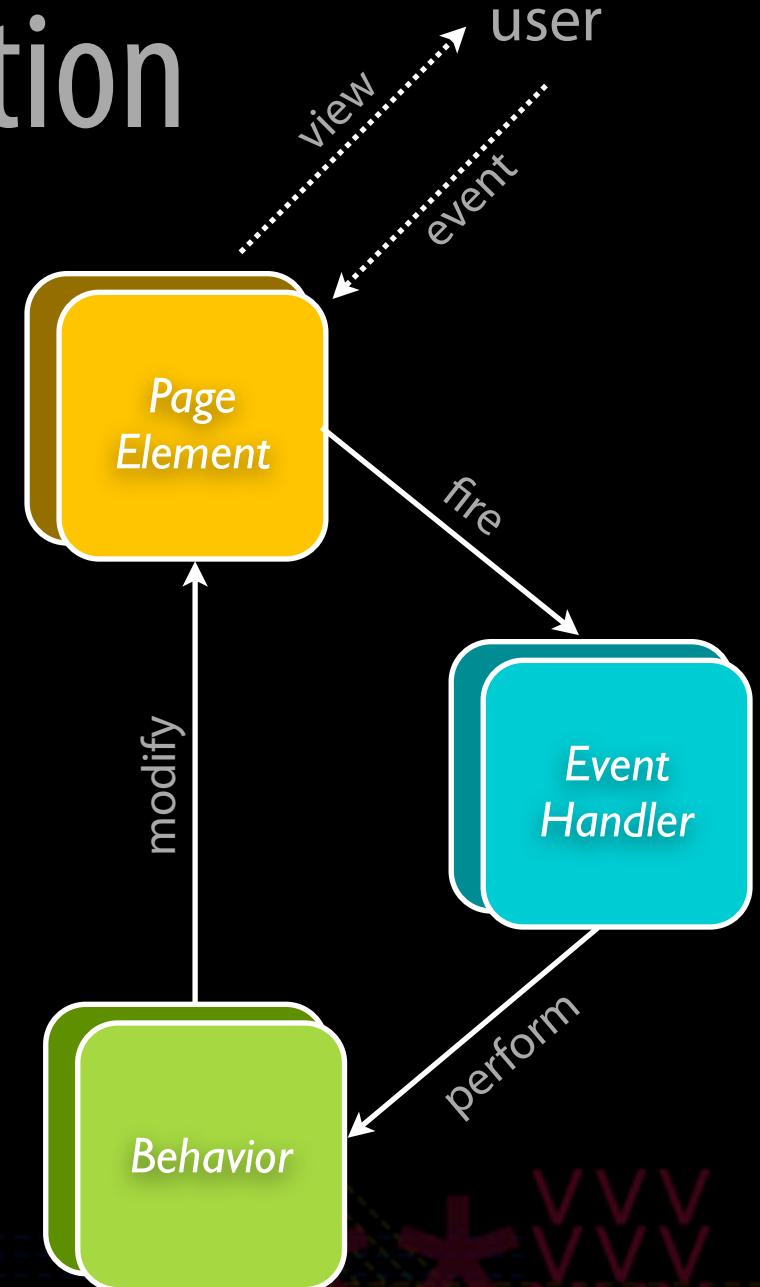
Target an element or elements for attaching events & behaviors.

Event Handler

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

Behavior

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



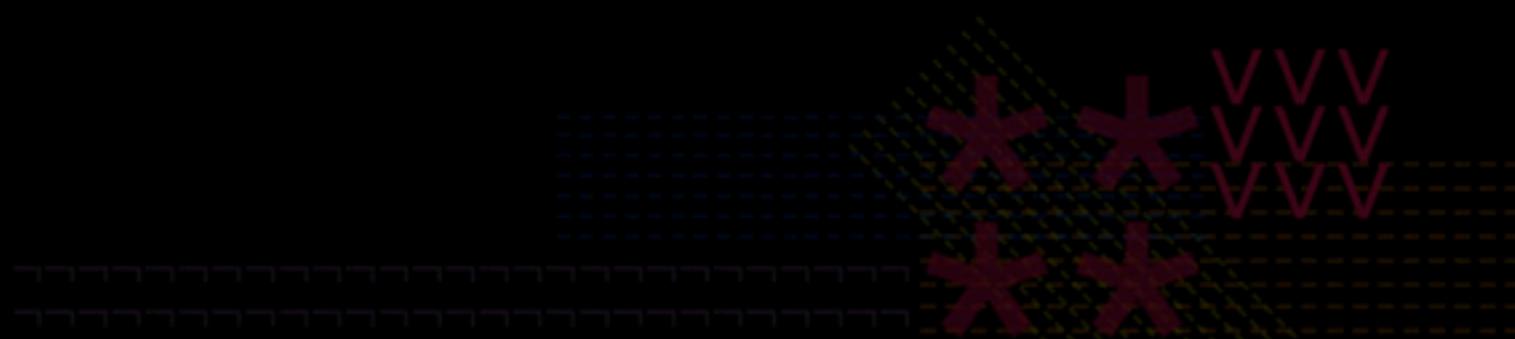
“Keep interaction, objects and behavior separate”

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

The image shows a website interface with a header containing "Menu 1", "Menu 2", "Menu 3", and "Menu 4". A yellow speech bubble points to the ".nav & .main" class in the following CSS code:

```
<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>
```

A yellow speech bubble also points to the ".box" class in the following CSS code:

```
.box {
  border: 1px solid #ccc;
  padding: 10px;
  width: 300px;
  height: 200px;
}
```

Below the header, there are several menu items: "Secondary Menu Item", "PARAGRAPHS", "AJAX CONTENT", "SECTION MENU", "MENU 1", "Submenu 1", "Submenu 2", "Submenu 3", and "Submenu 4". A yellow speech bubble points to the ".menu" class in the following CSS code:

```
.menu {
  list-style-type: none;
  padding-left: 0;
}
```

The main content area contains text about past accomplishments and future goals, followed by sections for "Design Influences" and "Inspiration".

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

Lorem ipsum dolor sit amet, consectetuer 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.

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

▼ Project Two

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

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

Scratchpad



My Portfolio

Sort by: Recent | Alpha | Points

▼ Project One

Lorem ipsum dolor sit amet, consectetuer 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.

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

▼ Project Two

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.

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

Anatomy of Self-Healing Delete

DOM elements

[X]

[X] oldmove.mov



Events

Click

onClick (callback)

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.



Behaviors

Fade

Close

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

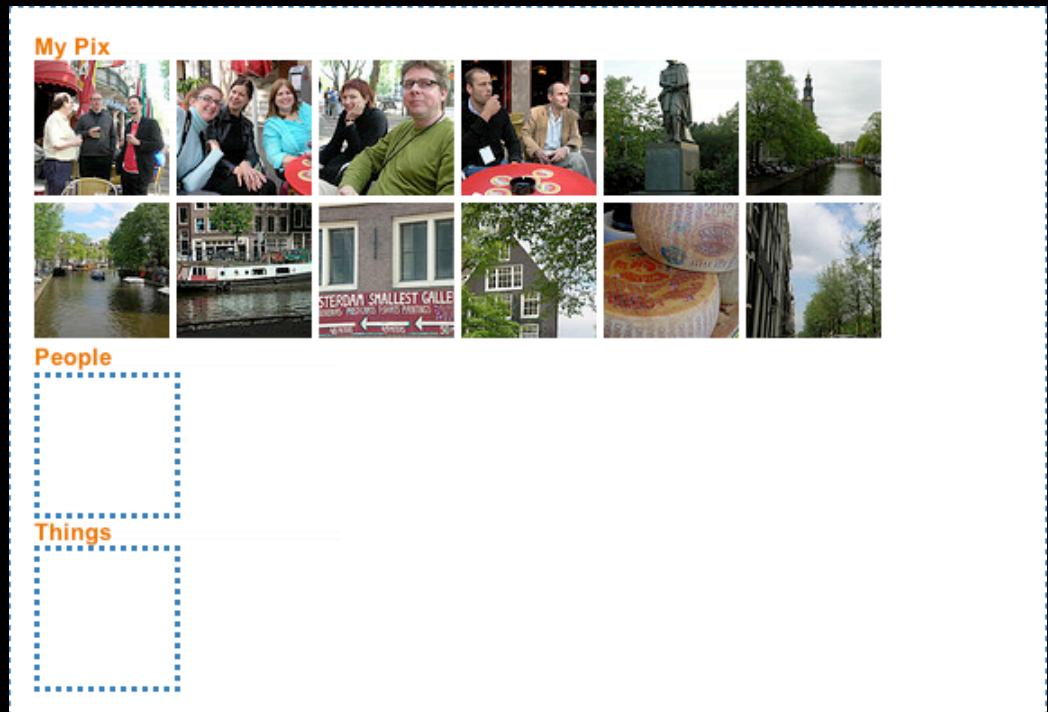
Event

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. onDblClick. 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

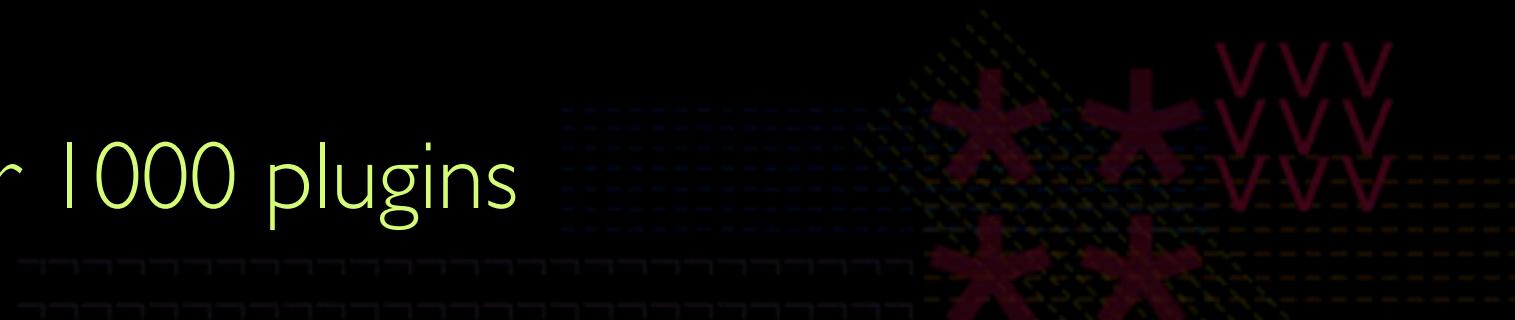


jQuery Behaviors

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.

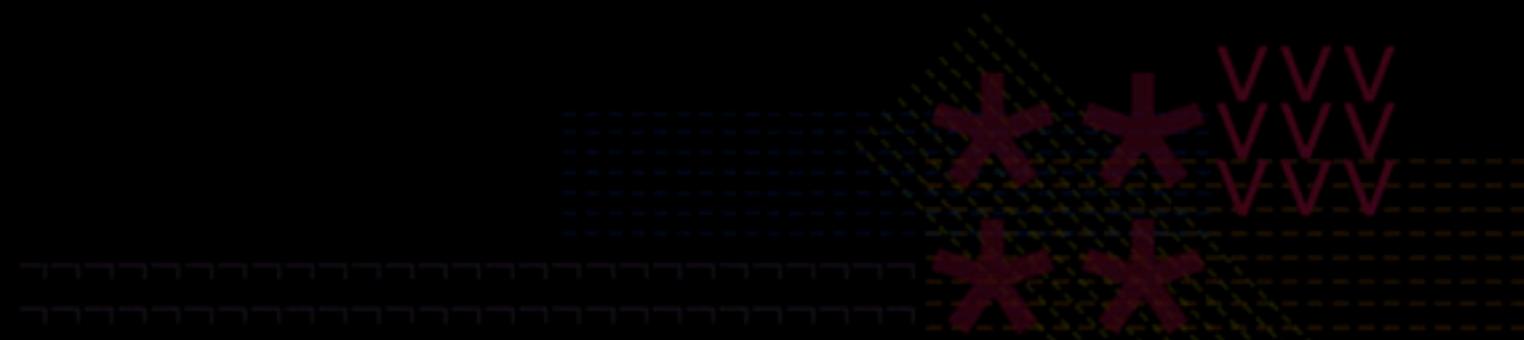
+ over 1000 plugins



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*: --- pick a type --- --- pick a type first ---

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>
```

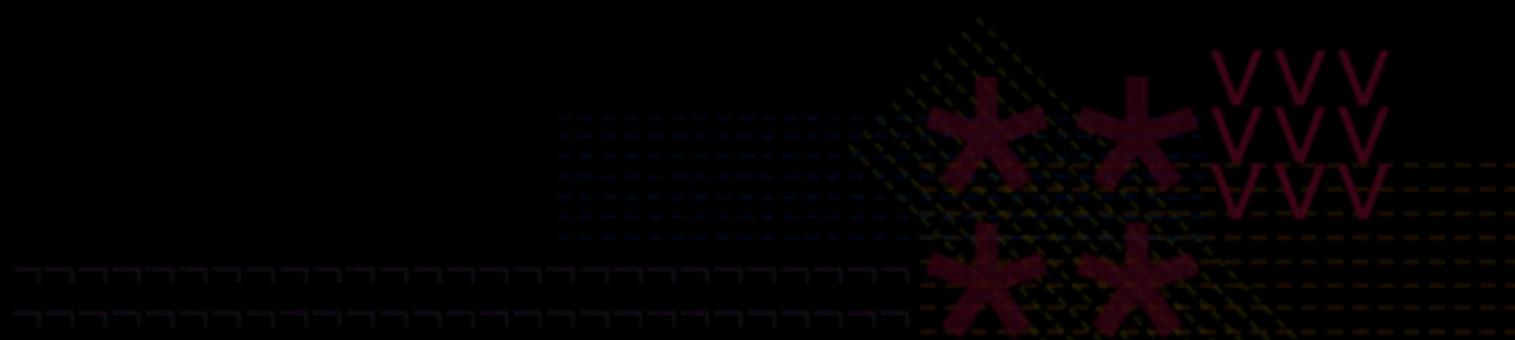
Style Class Switching

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

```
// ==UserScript==  
// @name          prototyping-experiment  
// @namespace     http://ui.e.netflix.com/bscott/  
// @include        http://localhost/~bscott/  
// @version       0.0.1  
// ==/UserScript==  
  
// ---- function with jQuery enabled Greasemonkey  
var startPrototype = function() {  
    // Add your behaviors with jQuery here  
}  
  
// ---- Add jQuery to Greasemonkey  
var GMJQ_loadScript = function(url) {  
    var GMJQ_script = document.createElement('script');  
    GMJQ_script.src = url;  
    GMJQ_script.type = 'text/javascript';  
    document.getElementsByTagName('body')[0].appendChild(GMJQ_script);  
}  
  
function GMJQ_wait() {  
    if(typeof unsafeWindow.jQuery == 'undefined') { window.setTimeout(GMJQ_wait,1); }  
    else { $ = unsafeWindow.jQuery; startPrototype(); }  
}  
  
// Check to see if jQuery is already loaded  
if(typeof unsafeWindow.jQuery != 'undefined') {  
    startPrototype();  
} else {  
    GMJQ_loadScript('http://ajax.googleapis.com/ajax/libs/jquery/1.2.6/jquery.min.js');  
    GMJQ_wait();  
}
```

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

Firebug

```
==> contentInner2
lass=> contentInner3
iv class=> contentInner
<h1 class=> siteTitle
<div class=> subTitle
software and life.</
<div class=> pageHead
<div id=> post000170"
```

Edit HTML

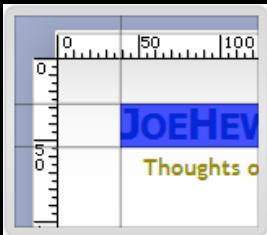
For quick adding of html or modifying html during a prototype review

```
ox .features h3 a {
ding: 2px Opt 6px 35p
kground: transparent
play: block;
t-decoration: blink

ox .features p {
gin: Opt 50px 1em 32p
```

Edit CSS

Change behaviors, layout or style on the fly



Layout issues

Visualize the box model & page layout

```
>>> $$("h1")
[ h1.siteTitle, h1.bl
h1.blogPostDate, h1.t
>>> var hi = $$("h1")
>>> hasClass(h1, "sit
true
>>> rootNod
#post000170
```

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

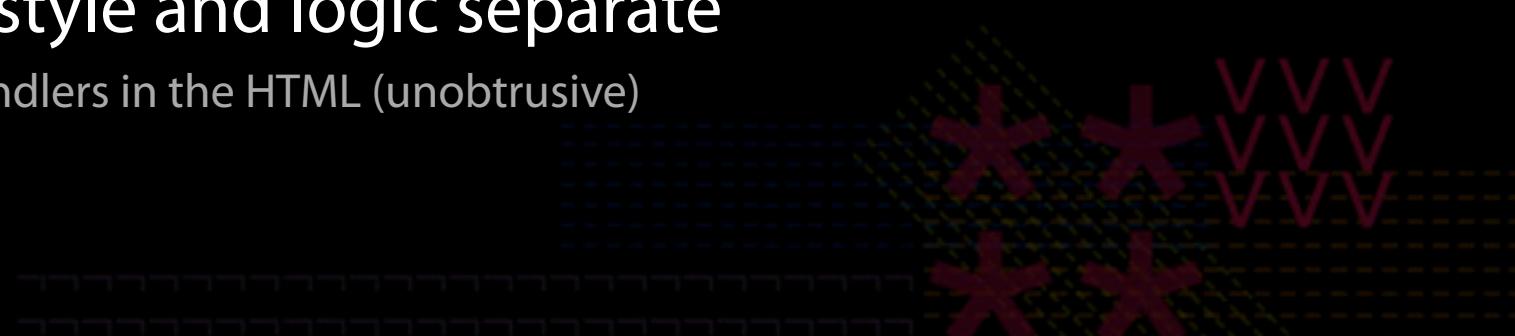
Use innerHTML for content changes

Anchors as basic navigation/action hooks

Keep structure, style and logic separate

Avoid adding onclick handlers in the HTML (unobtrusive)

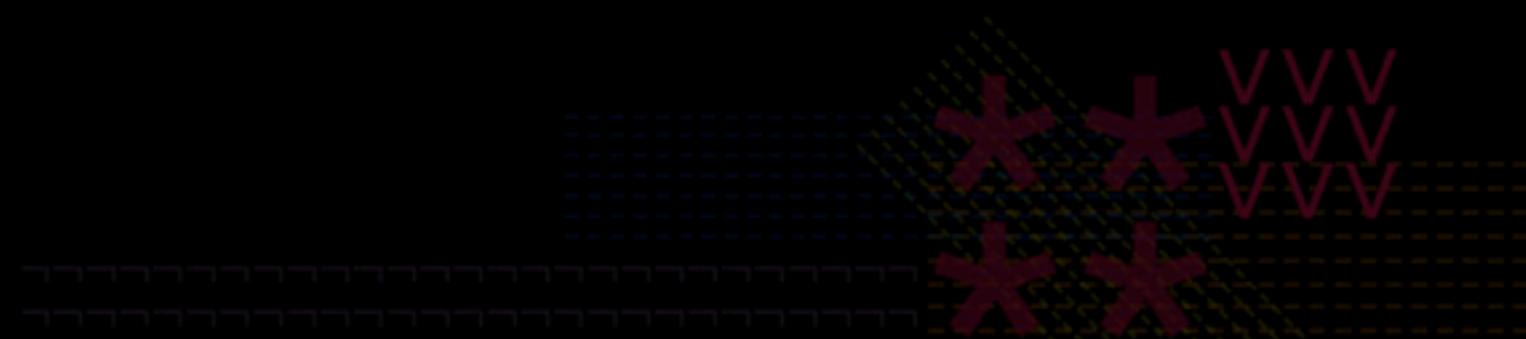
Use Firebug





Data/Content

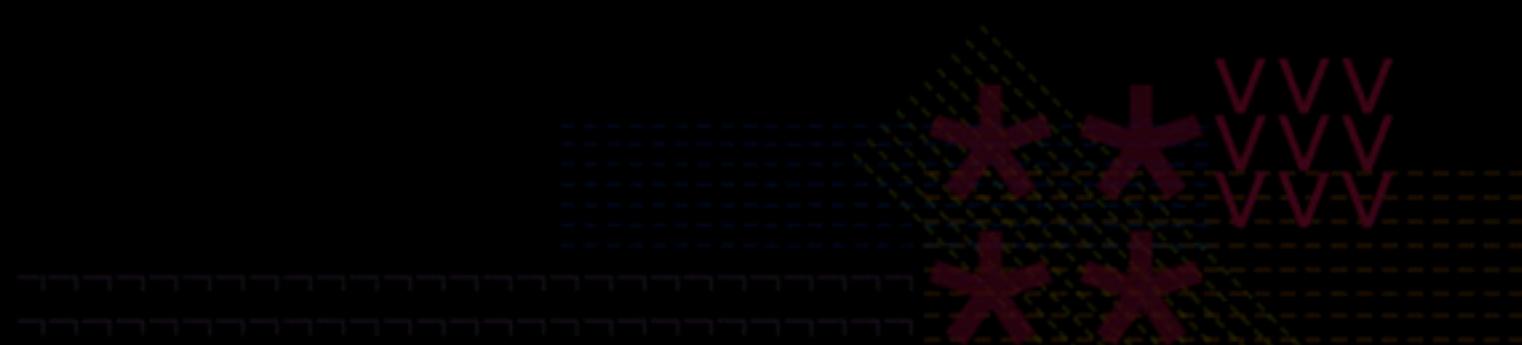
Approximating reality



jQuery Data Binding

jQuery.ajax(options)

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



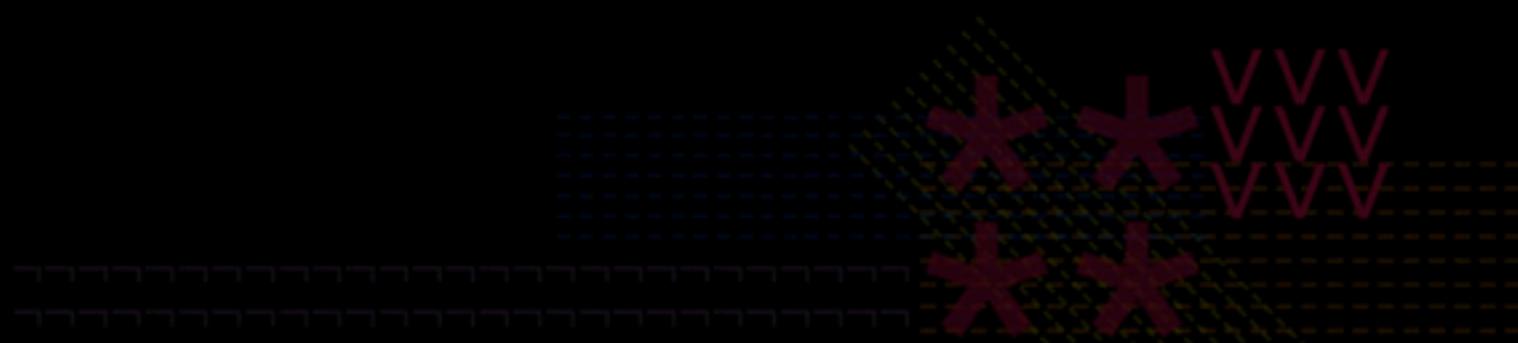
Use Public APIs

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

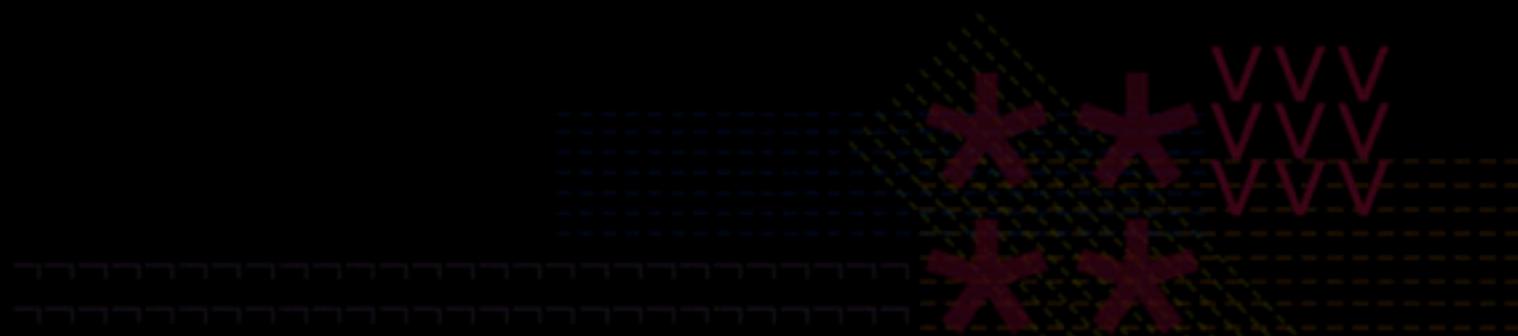


JSON: Arrays

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

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

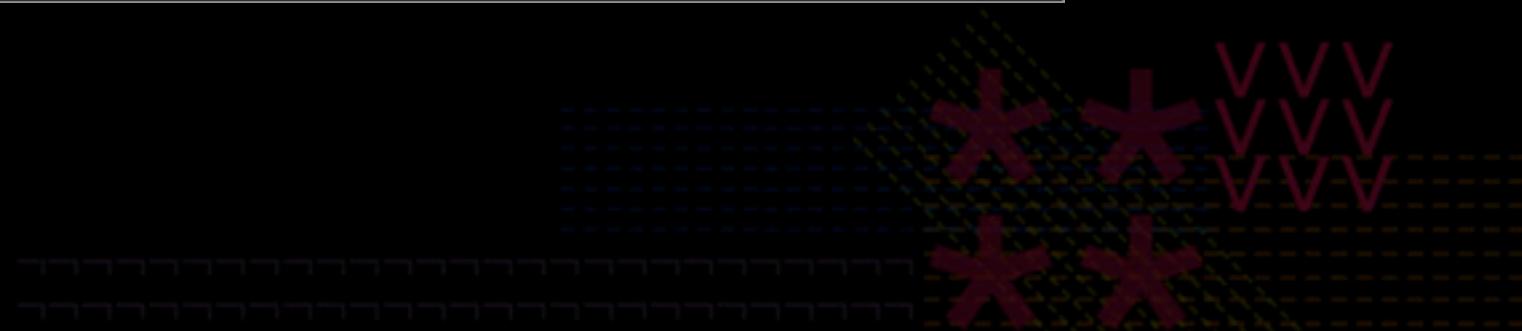
3x3 array



JSON in jQuery

jQuery.getJSON(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){
      $("<img/>").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/>

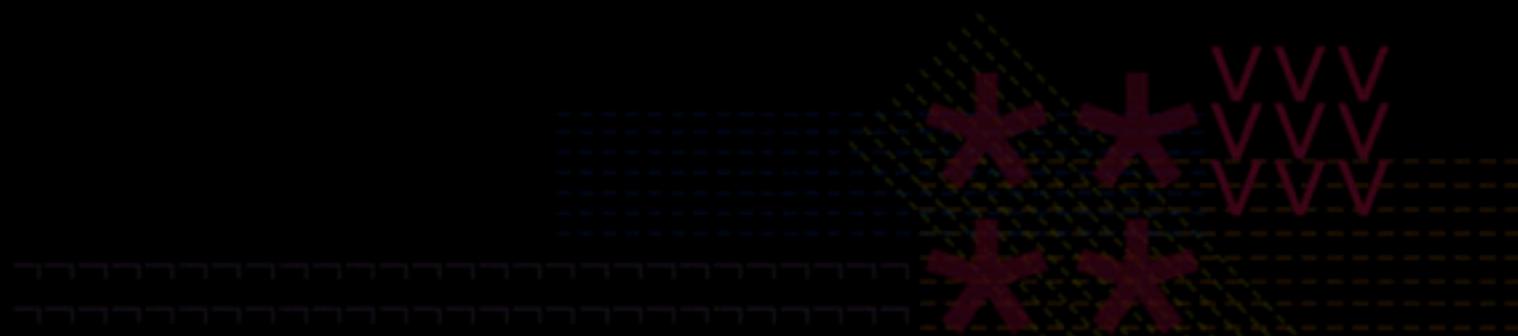
<http://www.scribd.com/doc/3592303/Blueprint-CSS-framework-version-071-cheat-sheet>

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

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

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>

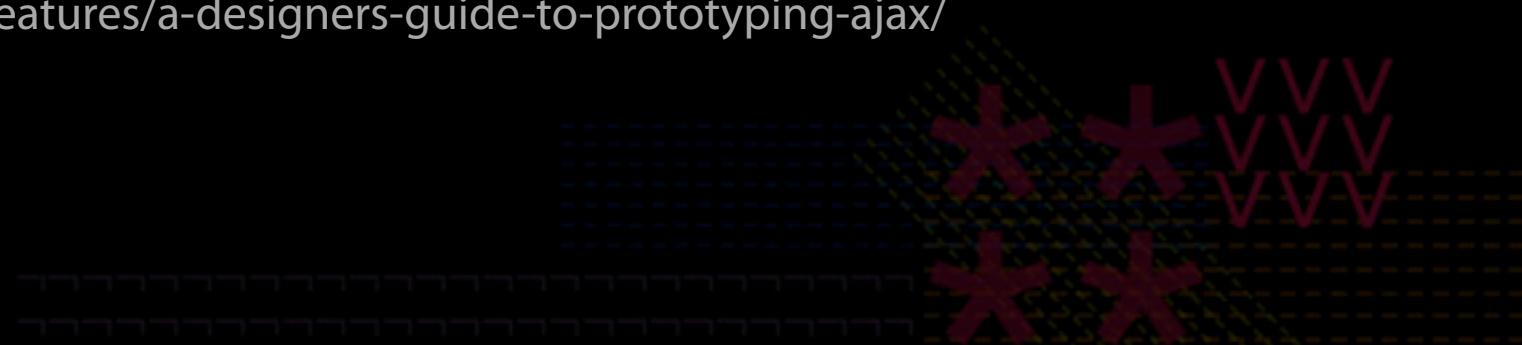


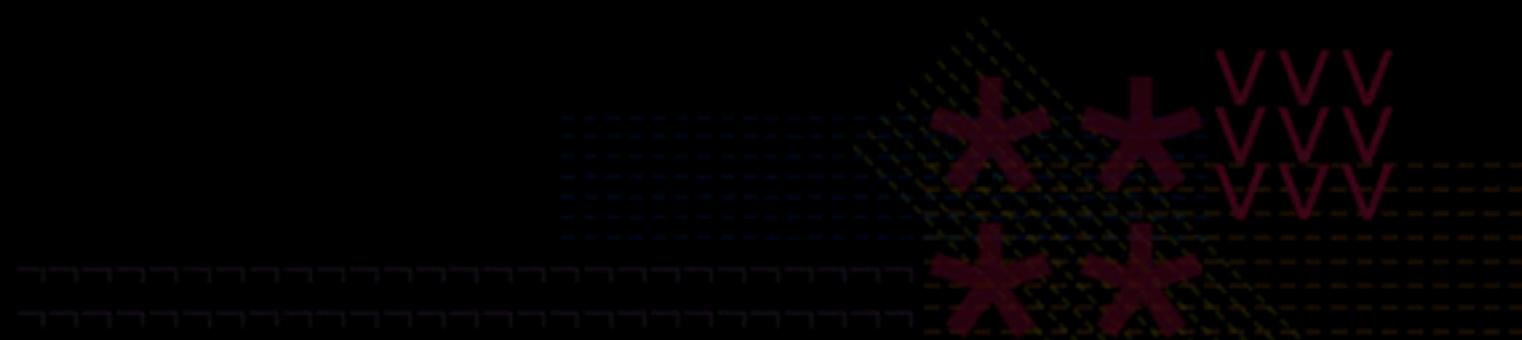
Photo Credits

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

http://flickr.com/photos/totoro_zine/2341347265/

<http://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?

