## Designing for Ajax

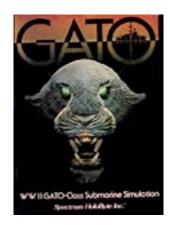
Principles and Patterns for Designing Rich Internet Applications



#### Background

- Games, research, science, military, biz
- Apps, frameworks, widget sets
- Developer, designer
- Object-oriented background
- Software architect, user experience manager
- Current: Yahoo! Ajax Evangelist







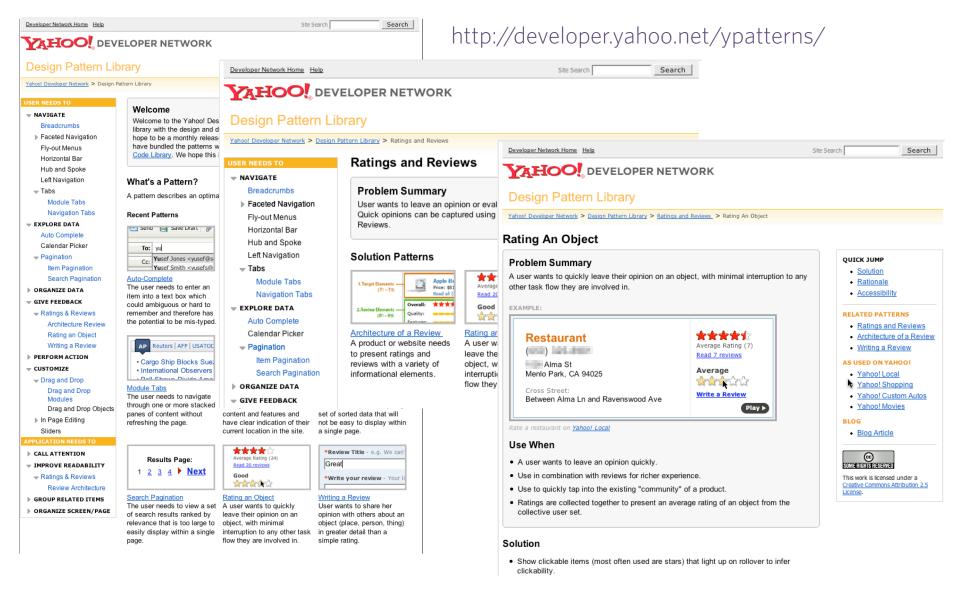




# Ajax @ Yahoo



## Yahoo! Pattern Library Release





#### http://yuiblog.com



#### Yahoo! Design Pattern Library Released

February 13, 2006 on 7:54 am by Bill Scott | In Design |

I'm excited to announce that today we are releasing the Yahoo! Design Pattern Library to the public under a friendly Creative Commons License. The goal in releasing this library is for us to share the common patterns that we see emerging at Yahoo! It is hoped that by opening up our design patterns we can share our current thinking as well as solicit your valuable feedback.

We believe design patterns are powerful. First, they offer a solution in context of a problem. Second, they provide a name for the solution. Taken together as a set, pattern libraries form a solution language that can enhance our ability to communicate design ideas. Lastly, they provide us a context in which to discuss a number of associated issues: the thinking behind a solution; issues around accessibility, and de-gradeablity; other related patterns; examples of usage; and code samples to name a few.

In case patterns are a new concept to you, here's a little history to get you up to speed.

Background on Patterns

#### SYNDICATE

#### All Entries:



All Comments:



#### RECENT POSTS

Developing a JavaScript Library for Yahoo!

Welcome to the Yahoo! User Interface Blog

The Yahoo! User Interface Library

Yahoo! Design Pattern Library Released

Search Pagination Design Pattern

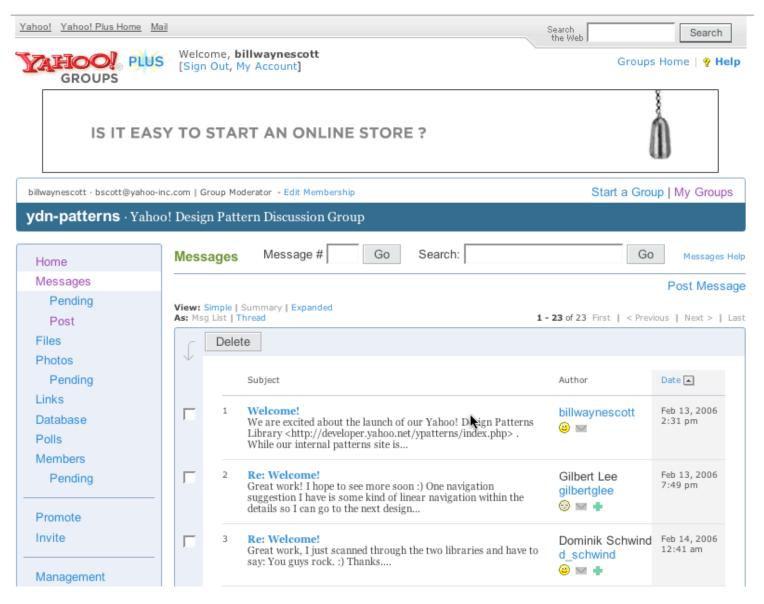
Item Pagination Design Pattern

Rating an Object Pattern



#### Yahoo! Patterns Discussion Group

http://groups.yahoo.com/group/ydn-patterns/





Breadcrumbs. Module Tabs.
Navigation Tabs. Auto Complete.
Pagination. Item Pagination.
Search Pagination. Ratings and
Reviews. Architecture of a Review.
Rating an Object. Writing a
Review. Drag and Drop. Drag and
Drop Modules.



**Drag and Drop. Drag and Drop Modules. In Page Editing.** In Page Custom Editing. Direct State Editing. Grid Cell Editing. Inline Custom Editing. Inline Tag Editing. Popup **Custom Editing. Slide-out Custom Editing. Inline Text Editing. Persistent Portals. Inline Reordering. Indication. Busy Indication. Cursor Busy. In Context Busy. In Context Progress. Inline Status. Auto Complete. Balloon Error Tip. Deferred Content Loading. Dynamic Goal. Narrowing Choices. Refining Search. Live Search. Dynamic Filter.** Invitation. Cursor Invitation. Drop Invitation. Tool Tip Invitation. Hover Invitation. Detail Zoom. Opacity Focus. **Configurable Module - Faceplate. Configurable Module -**Flip It. Configurable Module - Inline Configure. **Configurable Module - Slide Out Drawer. Slide Out. Flip. Opacity Fade. Endless Scrolling. Expandable Paging Boundary. Fresh Content. Hover Detail. In Place Drill** Down. Inline Assistant. Inline Validation. Validate Then Suggest. On Demand Refresh. Periodic Refresh. Resizable **Modules. Scrolling Modules. Auto Save. In Context Tools.** Remembered Collection. Remembered Preferences. Auto Form Fill. Rating an Object. Transition. Brighten Transition. Cross Fade Transition. Dim Transition. Expand Transition. Fade In Transition. Fade Out Transition. Flip **Transition. Move Transition. Self-Healing Transition. Collapse Transition. Slide Transition. Rich Internet Object. Available. Selected. Identifiable Object.** 



### Yahoo! UI Library

- Normalization (Event Utility)
- Messaging (Connection Manager for AJAX)
- Direct Representation (Animation and Position)
- Direct Manipulation (Drag and Drop)
- Rich Interactive Widgets (Slider, TreeView, Calendar, AutoComplete



## Designing for Ajax

- RichnessWhat is richness?
- Ajax Patterns
   DNA of an Ajax Pattern
- Principles
   Principles for Ajax Design



# Richness

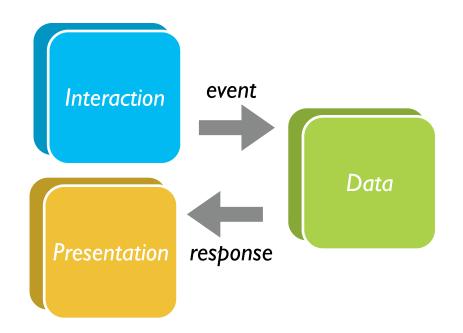


### Defining Richness: Web in 3D

Interaction Dimension

Data Dimension

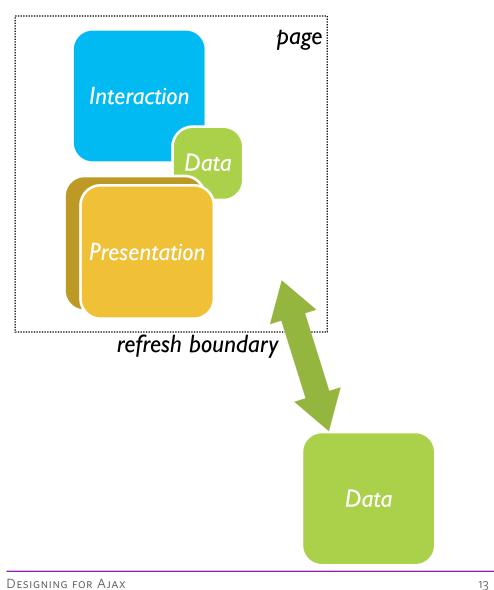
Presentation Dimension





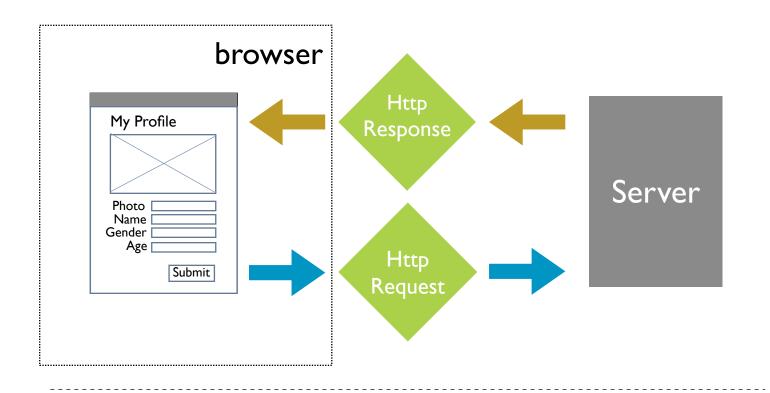
#### Classic Web

- Interaction course-grained
- Data loaded with the page or obtained via refresh
- Presentation: page-based updates





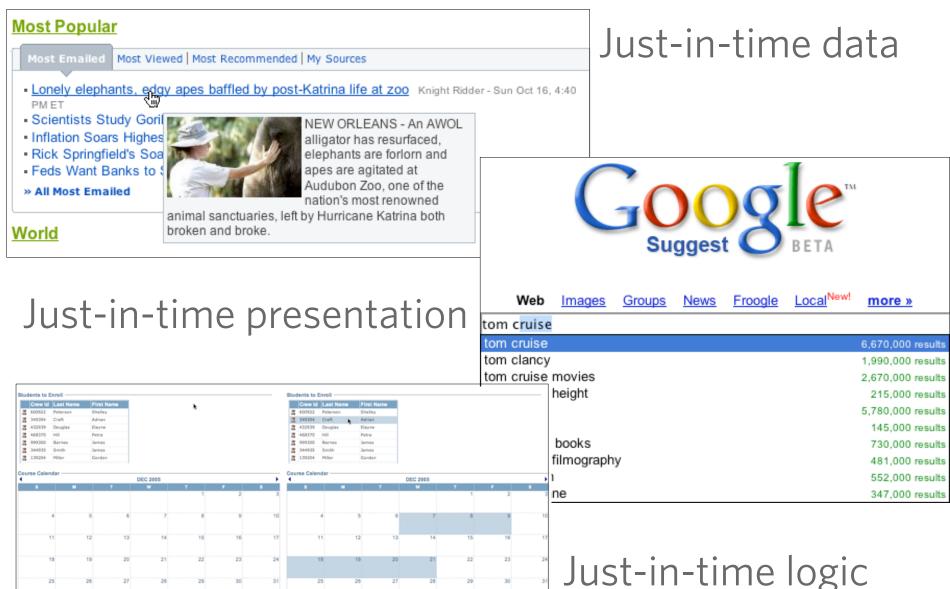
#### Classic Web Illustrated







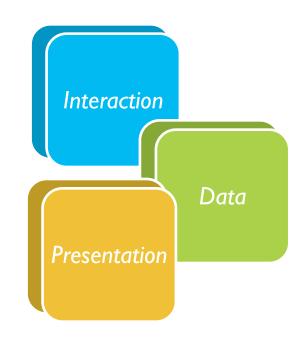
### Ajax = Just-in-Time. Immediacy.





### Ajax Model - New & Improved!

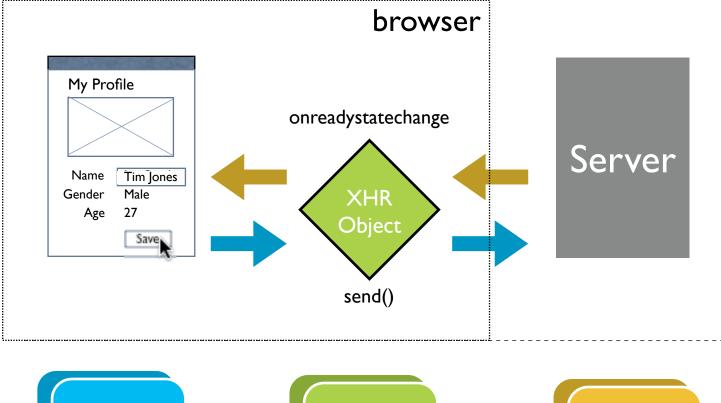
- Now with Deeper Interaction!
- Now with Just-in-Time Data & Just-in-Time Logic!
  - ★ XMLHttpRequest (XHR) is the secret sauce!
- Now with Richer Interface!



All dimensions are closer



### Ajax Illustrated







#### AJAX vs Ajax

- AJAX = Asynchronous JavaScript and XML
  - Strict definition is using XMLHttpRequest (XHR) to retrieve XML within a web page
- Ajax = The set of technologies that allow web applications to provide rich interaction, just-in-time information and dynamic interfaces without required page refresh
- The Secret Sauce XHR
  - Ajax = XHR + DHTML (HTML, CSS, JavaScript) + Rich design



### Other Remote Scripting Techniques

- Hidden IFrame
- <img> src
- <script> src hack
- CSS href hack
- JS to faceless Java applets
- JS to faceless Flash
- NO CONTENT Response
- Cookies



# Ajax Patterns



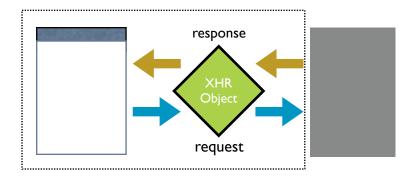
Drag and Drop. Drag and Drop Modules. In Page Editing. In Page Custom Editing. Direct State Editing. Grid Cell Editing. Inline Custom Editing. Inline Tag Editing. Popup Custom **Editing. Slide-out Custom Editing. Inline Text Editing.** Persistent Portals. Inline Reordering. Indication. Busy **Indication. Cursor Busy. In Context Busy. In Context Progress.** Inline Status. Auto Complete. Balloon Error Tip. Deferred **Content Loading. Dynamic Goal. Narrowing Choices. Refining** Search. Live Search. Dynamic Filter. Invitation. Cursor Invitation. Drop Invitation. Tool Tip Invitation. Hover **Invitation. Detail Zoom. Opacity Focus. Configurable Module -**Faceplate. Configurable Module - Flip It. Configurable Module -Inline Configure. Configurable Module - Slide Out Drawer. Slide **Out. Flip. Opacity Fade. Endless Scrolling. Expandable Paging Boundary. Fresh Content. Hover Detail. In Place Drill Down.** Inline Assistant. Inline Validation. Validate Then Suggest. On Demand Refresh. Periodic Refresh. Resizable Modules. Scrolling Modules. Auto Save. In Context Tools. Remembered Collection. Remembered Preferences. Auto Form Fill. Rating an **Object. Transition. Brighten Transition. Cross Fade Transition.** Dim Transition. Expand Transition. Fade In Transition. Fade **Out Transition. Flip Transition. Move Transition. Self-Healing Transition. Collapse Transition. Slide Transition. Rich Internet Object. Available. Selected. Identifiable Object.** 



#### But What Can XHR Do?

- Make a request
- Return a response

And do it asynchronously





#### Anatomy of a Pattern

- Ajax design patterns contain three steps
  - **Trigger** (event or timer)
  - Operation (Ajax, remote scripting)
  - Update (presentation)

\_\_\_\_\_\_









### **Trigger**

- Every pattern starts with
  - a user event
  - a timer event

mouseout hover keypress keydown mousedown drop filter choices mouseup drag click mousedown select focus blur resize move timeout









#### **Operation**

Ajax patterns open the door to immediacy

- Lookup I can get information when I need it
- Persist I can save in real-time
- Validate I can prevent errors early
- Invoke I can make things happen now
- Message I can communicate instantly









#### Operation. Lookup

#### I can get information when I need it

Auto Complete. Deferred Content Loading. Dynamic Goal. Narrowing Choices. Refining Search. Live Search. Dynamic Filter. Detail Zoom. Endless Scrolling. Expandable Paging Boundary. Fresh Content. Hover Detail. In Place Drill Down. On Demand Refresh. Periodic Refresh. Resizable Modules. Scrolling Modules. Auto Form Fill.

\_\_\_\_\_







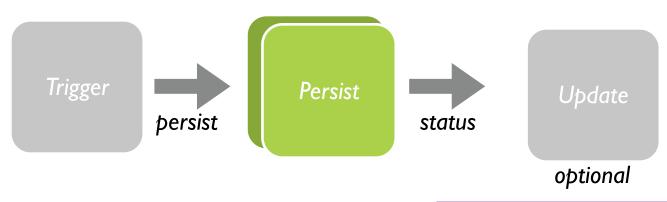


#### **Operation.** Persist

#### I can save in real-time

Drag and Drop Modules. In Page Editing. In Page Custom Editing. Direct State Editing. Grid Cell Editing. Inline Custom Editing. Inline Tag Editing. Popup Custom Editing. Slide-out Custom Editing. Inline Text Editing. Inline Reordering. Auto Save. Remembered Collection. Remembered Preferences. Rating an Object.

\_\_\_\_\_\_

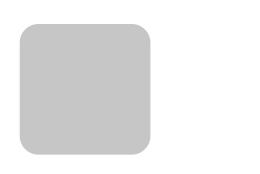




#### **Update**

Finally, patterns reflect a visual change

Indication. Busy Indication. Cursor Busy. In Context Busy. In Context Progress. Inline Status. Transition. Brighten Transition. Cross Fade Transition. Dim Transition. Expand Transition. Fade In Transition. Fade Out Transition. Flip Transition. Move Transition. Self-Healing Transition. Collapse Transition. Slide Transition. Rich Internet Object. Available. Selected. Identifiable Object. Slide-out. Popup Balloon.









#### Pattern-O-Matic





# Principles



### Principles for Ajax Design

- 1. Keep it direct
- 2. Provide live feedback
- 3. Offer an invitation
- 4. Cross borders reluctantly
- 5. Leave a light footprint
- 6. Show transitions
- 7. Think in objects



#### submit hyperlink

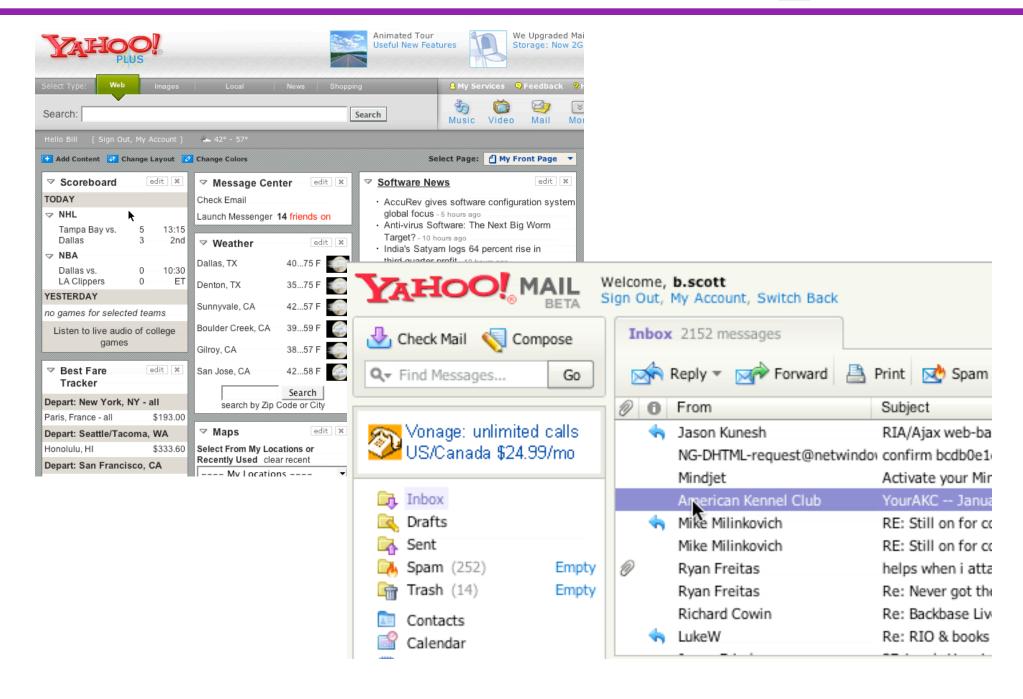


mouseout hover keypress keydown mousedown drop filter choices mouseup drag click select focus blur resize move timeout



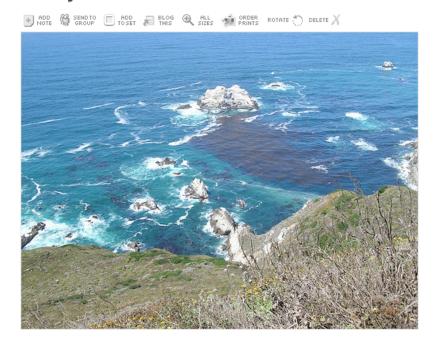
# 1 Keep it Direct



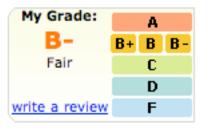


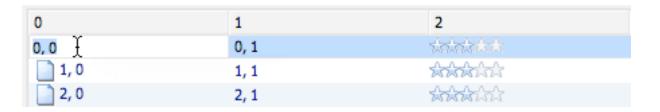


#### **Rocky Waters**

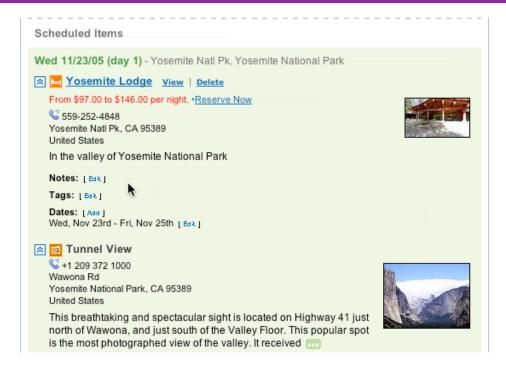




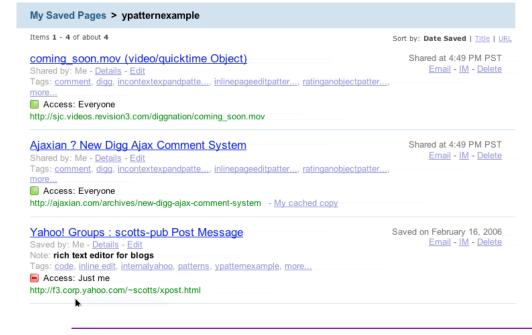








6 0	From	Subject
5	reter boersma	No. [10 Di
	Yahoo! Toolbar	Welcome t
	Weekend Extra	5 Tips for





Drag and Drop. Drag and Drop Modules. In Page Editing. In Page **Custom Editing. Direct State Editing. Grid Cell Editing. Inline Custom Editing. Inline Tag Editing. Popup Custom Editing. Slide-out Custom Editing. Inline Text Editing. Inline** Reordering.



What about discoverability?



State park near our home in San Jose

Click to edit

5 photos | Add a comment?

Photos are from 22 Oct 05.



What about discoverability?

# **Use direct editing on page content**

What about save/cancel? **Avoid page jitter** Reduce the feeling of modes



State park near our new home in San Jose (next to Milpitas)

OR CANCEL



What about discoverability?

# 

# **Use direct editing on page content**

What about save/cancel?
Avoid page jitter
Reduce the feeling of modes

Create a home page for the VisDe to make findability easier

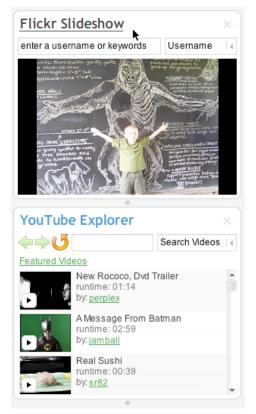
Account for experimental patterns as well as established patterns

# **Provide in-context tools**

Only good for single operations Can actually slow you down



What about discoverability?

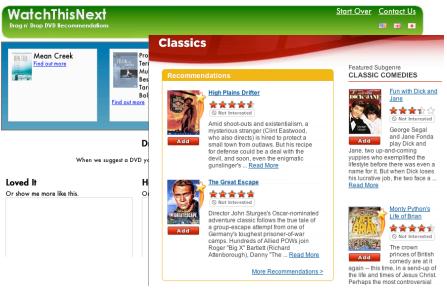


### Pick Up at the Store

- ☐ DRAG Chips
- ☐ DRAG Milk
- ☐ DRAG Bread
- 🔲 📭 Orange Juice 2
- ☐ DRAG Tomatoes
- DRAG Lettuce
- What is spam?
- · Can I transfer my message credits?
- How do I delete my HandyPay account?
- What if I didn't receive my full message package?
- I need to contact customer care regarding the Compose Text Message service.

# **Use direct editing on page content**

What about save/cancel?
Avoid page jitter
Reduce the feeling of modes



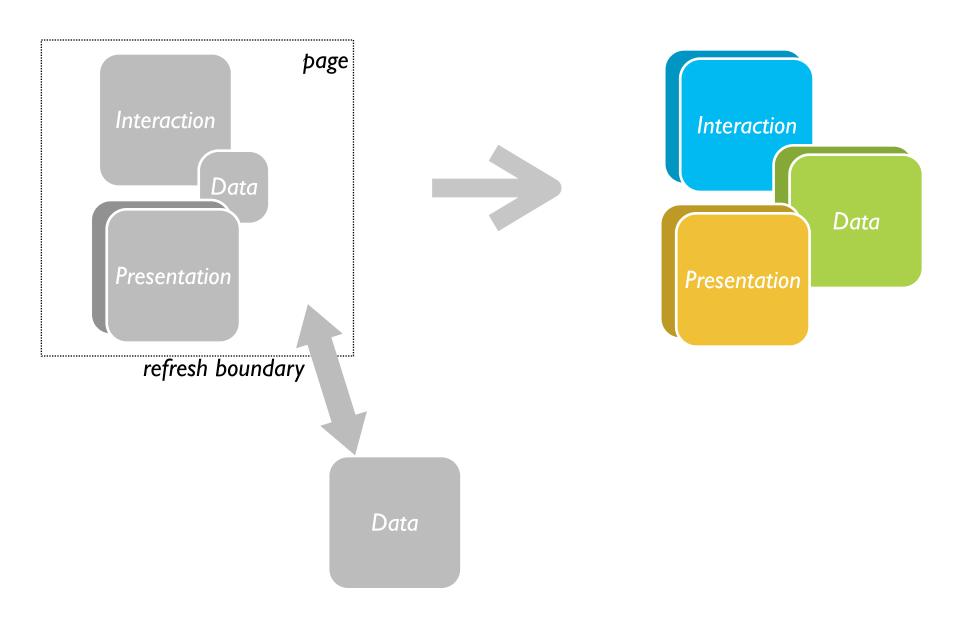
# Use drag and drop where appropriate

Not for simply setting an attribute Good for layout changes or containment Needs transitions

# **Provide in-context tools**

Only good for single operations
Can actually slow you down







# 2 Provide live feedback





### Instant Search BETA

Search the Web

### Instant Search gives you answers as you type -- no more waiting!

Why feel lucky when you can be right? With Instant Search, results instantly appear for <a href="Yahoo! Shortcuts">Yahoo! Shortcuts</a> and common searches. Give it a spin! Type in these examples below, or try your own searches:

- · boston weather
- wikipedia
- nfl

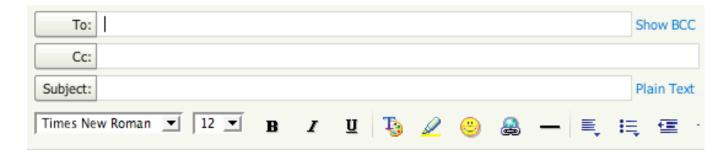
- 22 5th ave new york ny
- san francisco coffee shops
- dmv



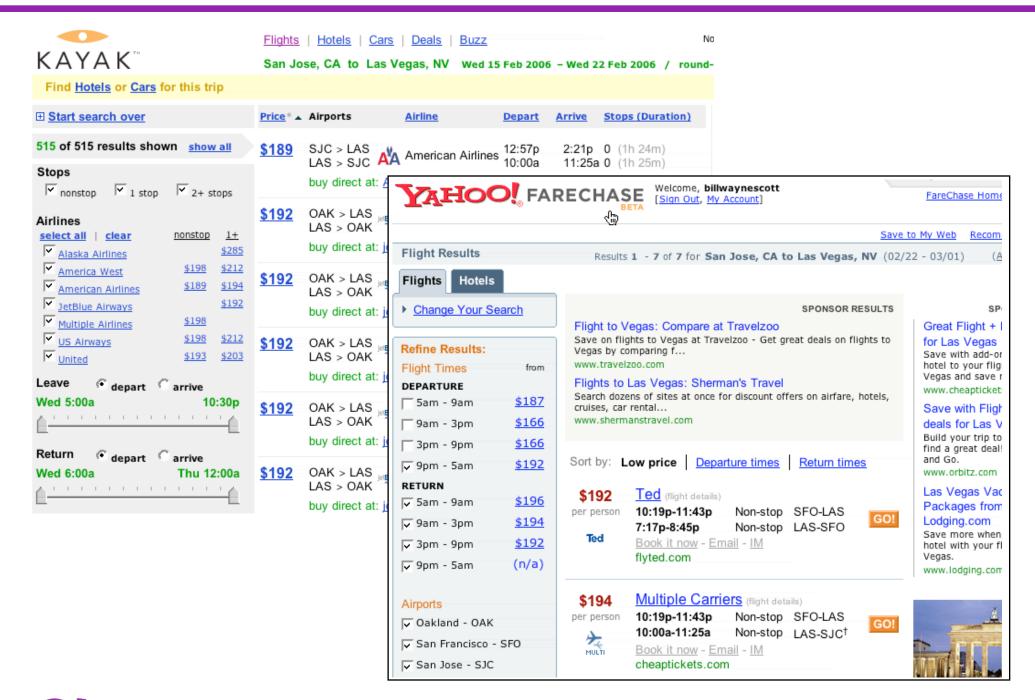




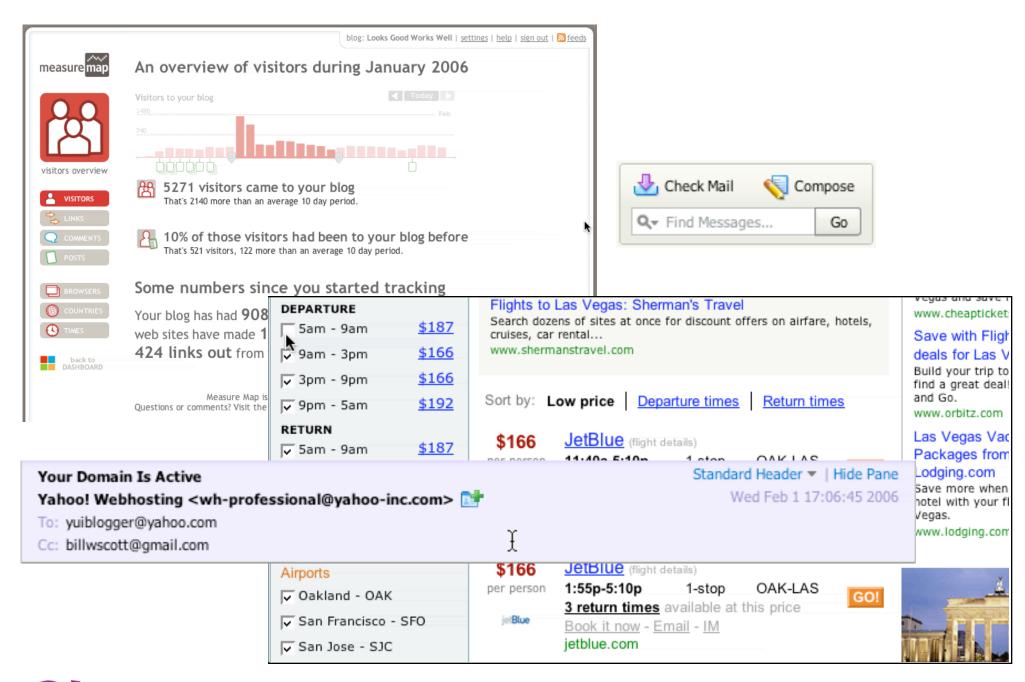




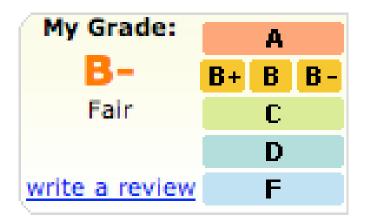










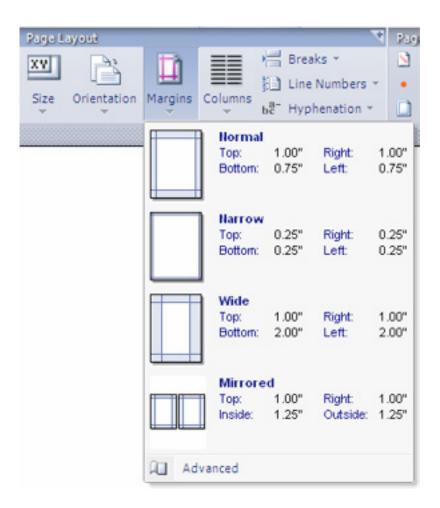




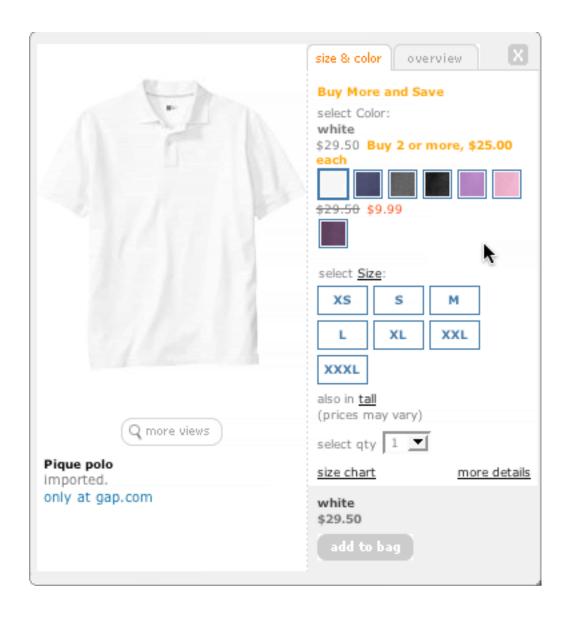




- Microsoft Vista/Office 12
  - Hover over gallery item
  - Shows live preview without committing
  - Only on click is the preview accepted
    - At which point the menu goes away and selection is retained
    - Otherwise mouse out returns to normal view









Indication. Busy Indication. **Cursor Busy. In Context Busy. In Context Progress. Inline Status. Auto** Complete. Balloon Error Tip. **Deferred Content Loading. Dynamic Goal. Narrowing Choices. Refining Search. Live Search. Live Preview** 

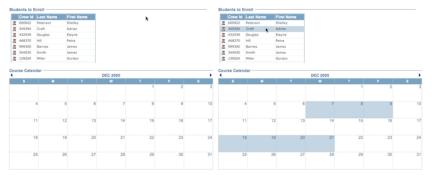


Design for immediacy
Is it narrowing or is it distracting
Use feedback to boost confidence
Let the user iterate where possible

### **Most Popular**



Just-in-time data



Just-in-time logic



### Instant Search BETA

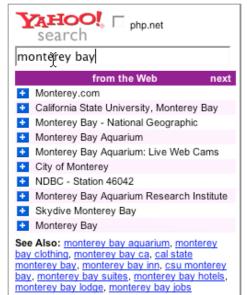
Search the Web

### Instant Search gives you answers as you type -- no more waiting!

Why feel lucky when you can be right? With Instant Search, results instantly appear for Yahoo! Shortcuts and common searches. Give it a spin! Type in these examples below, or try your own searches:

- boston weather
- wikipedia
- nfl

- · 22 5th ave new york ny
- · san francisco coffee shops
- dmv





Feedback - Discuss - Terms of Use - FAQ

©2006 Google



Design for immediacy
Is it narrowing or is it distracting
Use feedback to boost confidence
Let the user iterate where possible

# Keep the user engaged

Time passes faster Look for engaging moments







Design for immediacy
Is it narrowing or is it distracting
Use feedback to boost confidence
Let the user iterate where possible

# Keep the user engaged

Time passes faster Look for engaging moments

Find a domai	n name:			
www. billsportfol	io.com	£	Search	
(ex. widgetdes	signs.com)			
Required information fo	r Google acco	unt		
Your current email address:	someone@some e.g. myname@ex		be your username and sig	gn-in.
Choose a password:	Minimum of 6 ch	racters in length.	Password strength:	Too short

# **Use live-previews**

Look before you leap

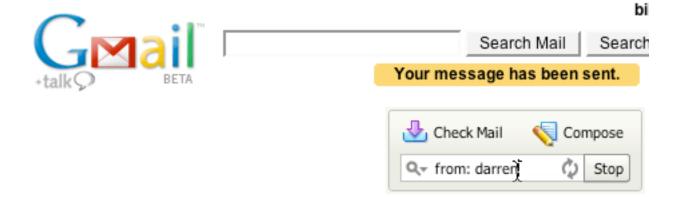


**Design for immediacy** Is it narrowing or is it distracting Use feedback to boost confidence Let the user iterate where possible

# **Keep the user engaged**

Keep feedback focused

Time passes faster Look for engaging moments



# **Use live-previews**

Look before you leap

**Keep it in context Updating too many areas at once will be confusing** Show dynamically what is relevant **Avoid creating feedback noise/jitter** 





hover blur focus Click key
shiftclick doubleclick
drag dragdrop dragflipdrop
shiftdoubleclick tripleclick shifttripleclick

hover blur focus Click key shiftclick doubleclick drag dragdrop dragflipdrop shiftdoubleclick tripleclick shifttripleclick



hover blur focus Click

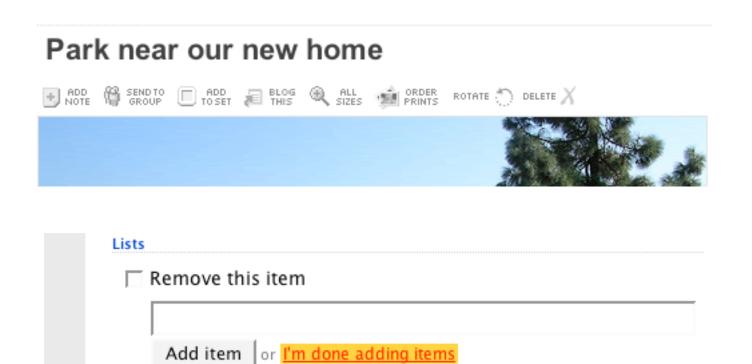
Key shiftclick doubleclick dragdragdrop

hover blur focus Click key shiftclick doubleclick drag dragdrop



# **Offer an invitation**





My Grade:	A		
B-	B+	В	В-
Fair		C	
		D	
write a review		F	

Make a new list



### classic



\$9.99-\$29.50 Buy More and Save



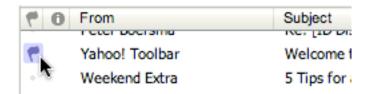
double mini striped pique polo \$29.50 Buy 2 or more, \$25.00 each See All



polo \$29.50 Buy 2 or more, \$25.00 each See All



rugby stripe pique polo \$29.50 Buy 2 or more, \$25.00 each See All





To see a product preview in action, hover over the link below.

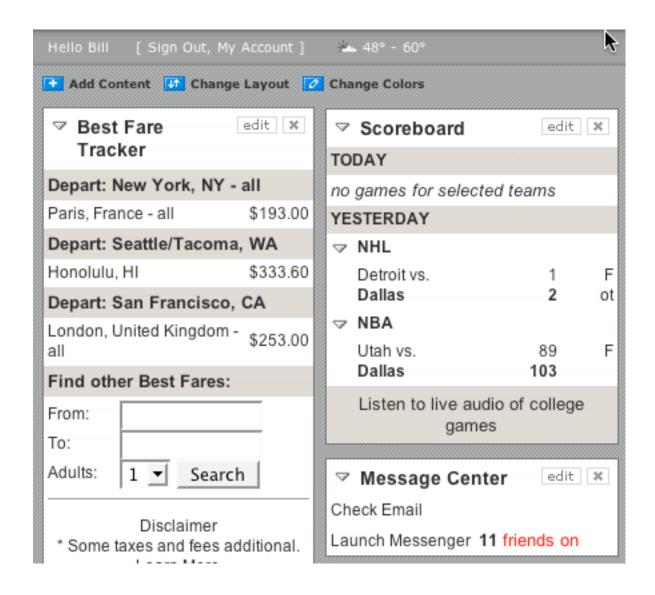


Forty Associates recently added product previews to their Web site as part of a small beta program. During the beta, visitors to Associate sites who viewed a product preview clicked through to Amazon.com over 4% of the time; those clicks resulted in a purchase nearly 6% of the time.

Now we're opening the beta up to all Associates to further improve product previews. The first 500 Associates who refer a sale through a product preview-enhanced link will receive a \$5 Amazon gift certificate. Click here to join your fellow Associates in beta testing product previews.

Don't worry if you don't already have Basic Display Product Links on your Web site. You can create them as part of the sign-up process. <u>Click here</u> for answers to questions you might have about the beta program.







### Students to Enroll -

	Crew Id	Last Name	First Name
1	349394	Craft	Adrian
3	432939	Douglas	Elayne
-	468370	Hill	Petra

ar ———		DEC 2005			<u> </u>
M	T		T	F	S
			1	2	3
5	6	7	8	9	10
600922/Peterson		999300/Barnes			
		344935/Smith			
					· · · · · · · · · · · · · · · · · · ·
12	13	R 14	15	16	17
19	20	21	22	23	24
26	27	28	29	30	31
	12	5 6 600922/Peterson 12 13	5 6 7 600922/Peterson 999300/Barnes 344935/Smith 139204/Miller 12 13 14	M     T     W     T       5     6     7     8       600922/Peterson     999300/Barnes       344935/Smith     139204/Miller       12     13     14     15       19     20     21     22	M     T     W     T     F       1     2       600922/Peterson     999300/Barnes     344935/Smith 139204/Miller     139204/Miller       12     13     14     15     16       19     20     21     22     23

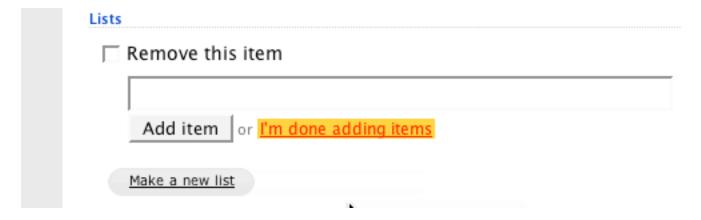


# Invitation. Cursor Invitation. Drop Invitation. Tool Tip Invitation. Hover Invitation.



Use lightweight events as a welcome mat Rediscover the hover







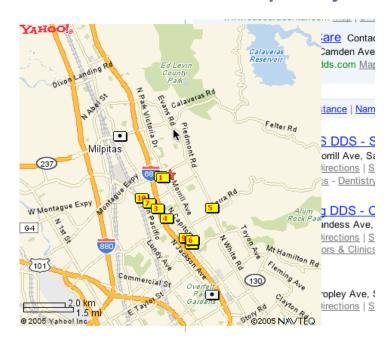
# Make it engaging

Use lightweight events as a welcome mat Rediscover the hover

To see a product preview in action, hover over the link below.

## .

# Keep actions out of it Don't make the user afraid to explore Don't proselytize



Forty Associates recently added product previews to their Web site as part of a small beta program. During the beta, visitors to Associate sites who viewed a product preview clicked through to Amazon.com over 4% of the time; those clicks resulted in a purchase nearly 6% of the time.

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# Make it engaging

Use lightweight events as a welcome mat Rediscover the hover

# **Keep actions out of it**

Don't make the user afraid to explore Don't proselytize

## Park near our new home



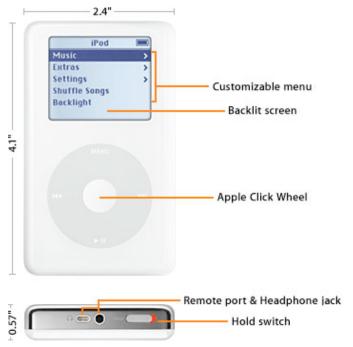
# **Get the actors involved**

**Hover Invitation Cursor Invitation Tooltip Invitation** 



# Make it engaging

Use lightweight events as a welcome mat Rediscover the hover



# Keep actions out of it

Don't make the user afraid to explore Don't proselytize



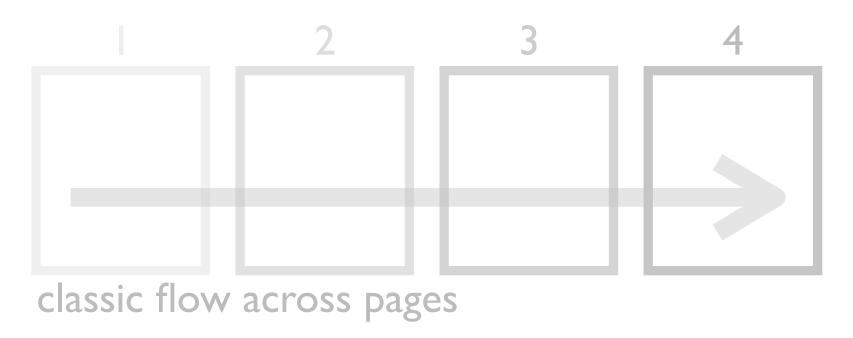
# **Get the actors involved**

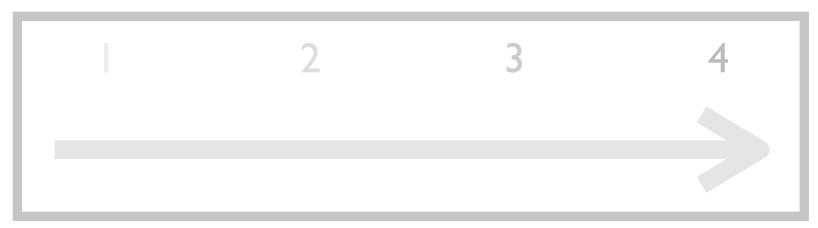
Hover Invitation Cursor Invitation Tooltip Invitation

# Use invitations to aid discoverability

Two challenges: idiom & feature Adding signposts, always-on clues doesn't scale Add tours, help pedals, tips, spotlights







rich flow within page



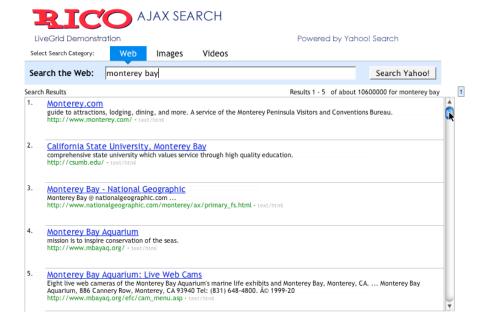
69

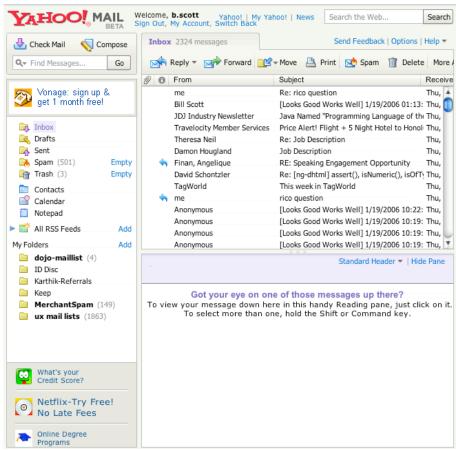
4

# **Cross borders reluctantly**



# Rico LiveGrid

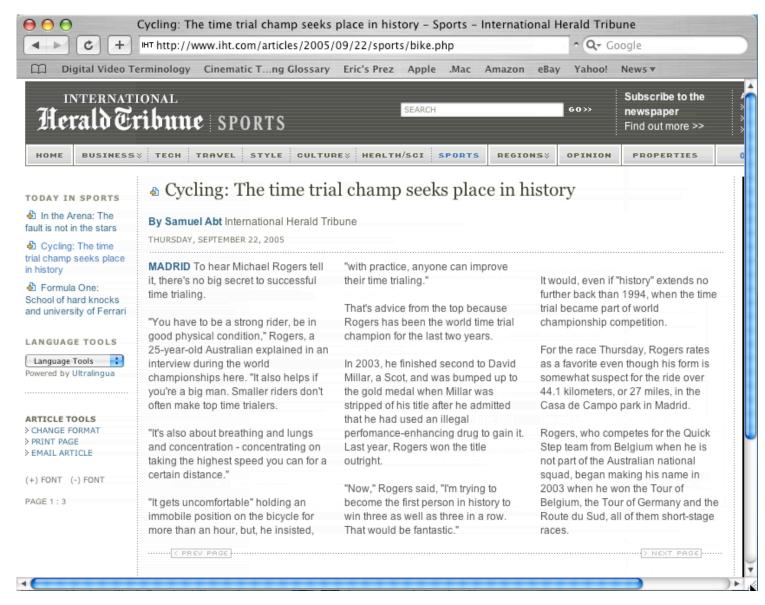




Yahoo! Mail Beta (Oddpost)



# At the very least make your paging fast







Does it look OK to you? If not, then fix details.



Signed in as billwscott | Send Feedback | Help | My

#### kaboodle Select Page: or Create new page Web 2.0 Companies Review Item: VideoEgg About Videoligg Added by billwscott (12/1/05) from www.videoegg.com It mean's internet video publishing as simple as it ought to be-like posting a photo or frying an egg. VideoEgg, Inc. is an innovative, venture-backed company committed to...



Submit Cancel



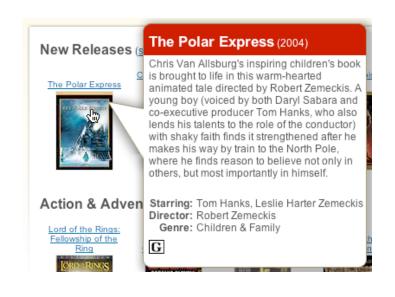


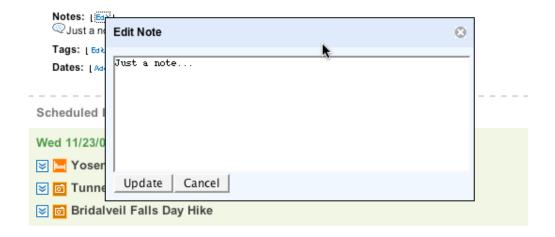
Required information for	r Google account	
Your current email address:	someone@somewhere.com	
	e.g. myname@example.com. This will be y	our username and sign-in.
Choose a password:		Password strength: Too short
	Minimum of 6 characters in length.	

Find a domain name:		
www. billsportfolio.com	£	Search
(ex. widgetdesigns.com)		



- For introduction of features
- For giving instruction
- For revealing information
- For interrogative feedback
- For obtaining input
- For important interruptions
- For indication of status or progress
- For offering an invitation







Wired News: Top Stories

edit X

Christians Code Heavenly Games

Cloning the Best in Show

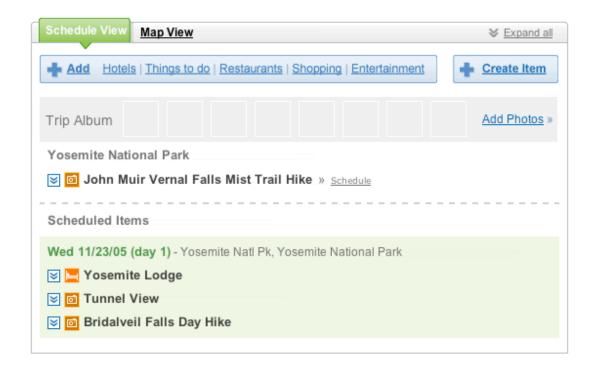
Brain Workouts May Tone Memory

Movies

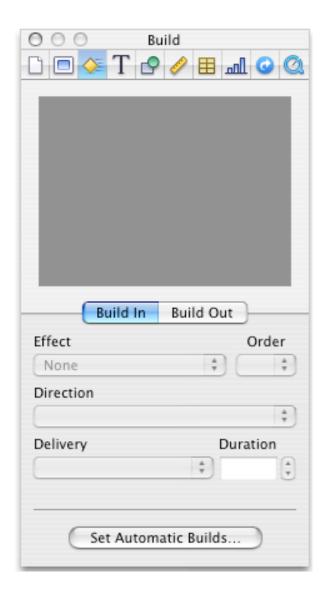
edit X

Showtimes for 76208 »

Must Love Dogs 1hr 30min - Rated PG-13

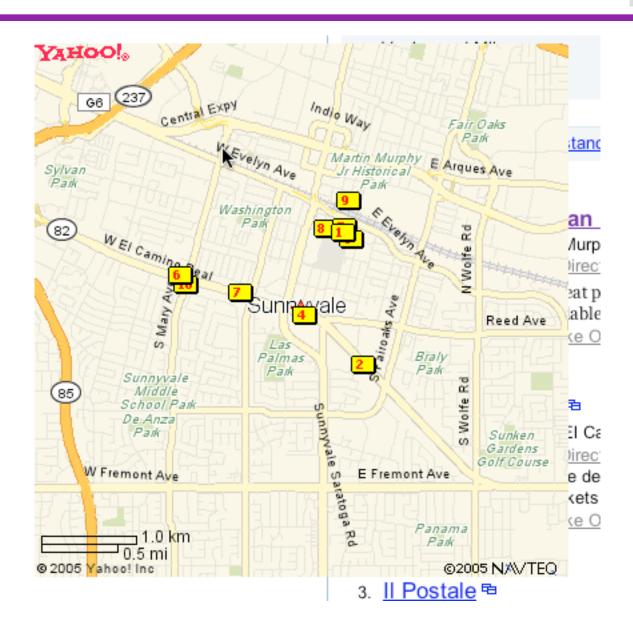














**Endless Scrolling. Expandable Paging Boundary. Fresh Content. Hover Detail.** In Place Drill Down. Inline Assistant. **Inline Validation. Validate Then Suggest.** On Demand Refresh. Resizable Modules. Scrolling Modules. Detail Zoom. Opacity Focus. Configurable Module-Faceplate. **Configurable Module-Flip It. Configurable Module-Inline Configure. Configurable Module-Slide Out Drawer.** Slide Out. Flip. Opacity Fade.



# **Rethink process flows**

Its the user's model, not the page model Every page jump is a mental speed bump







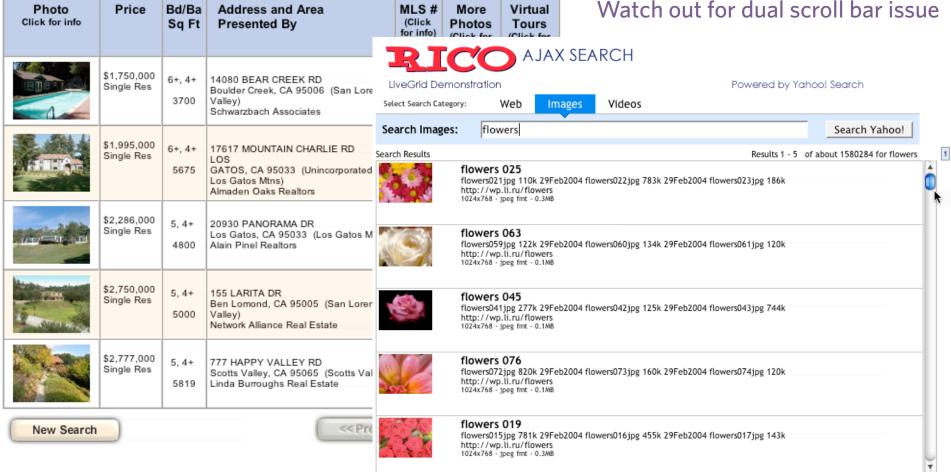
# **Rethink process flows**

Its the user's model, not the page model Every page jump is a mental speed bump

# **Rethink paging**

Its the user's model, not the paging model
Use scrolling for "owned" data

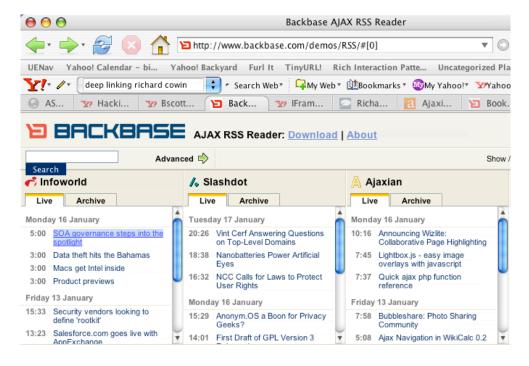
Watch out for dual scroll bar issue





# **Rethink process flows**

Its the user's model, not the page model Every page jump is a mental speed bump



# **Rethink paging**

Its the user's model, not the paging model Use scrolling for "owned" data Watch out for dual scroll bar issue

# Plan for linking, crawling and back button

Not everything is a single page application What will the user think the back button does?



Leam more...

### **Use overlays**

For momentary interruption
Replace page transition
When editing an individual, more complex item
Be symmetrical
Not disturb the page

#### · Starter Web Page

Publish basic information on a placeholder web page — until you're ready to upgrade to a full web site.

View a sample.

#### Domain Locking

Safeguard your domain from hijacking and unauthorized transfers with domain locking. Yahoo! Domains secures your domain for you — and only you.



#### · Domain Forwarding

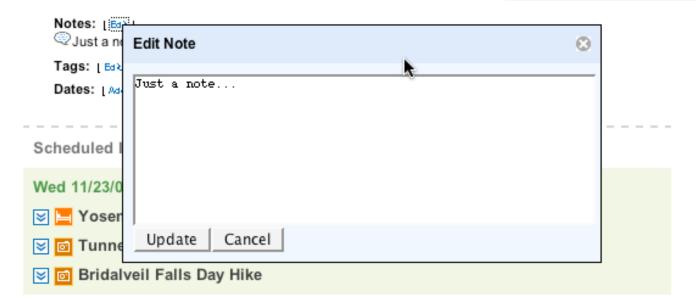
Point your new domain name to a web site you already have with domain forwarding. This is a useful feature if you own multiple domain names.

#### · Complete Domain (DNS) Control

Advanced users: You can easily edit your name servers and MX, A, and CNAME records for complete control over your domain.

#### · Email Forwarding

Unlimited <u>forwarding</u> of messages sent to your new domain name into your free Yahoo! email account.





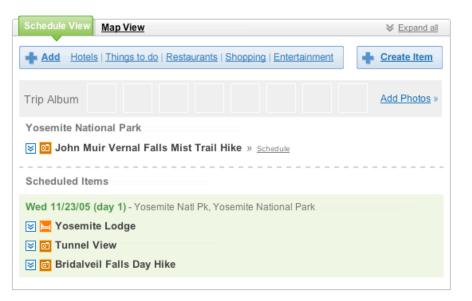
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# Wired News: Top Stories Christians Code Heavenly Games Cloning the Best in Show Brain Workouts May Tone Memory Movies Showtimes for 76208 » Must Love Doos 1hr 30min - Rated PG-13

### **Use in-context expands**

For editing part of a collection Need to see surrounding context For managing content modules





### **Use overlays**

For momentary interruption
Replace page transition
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Be symmetrical
Not disturb the page

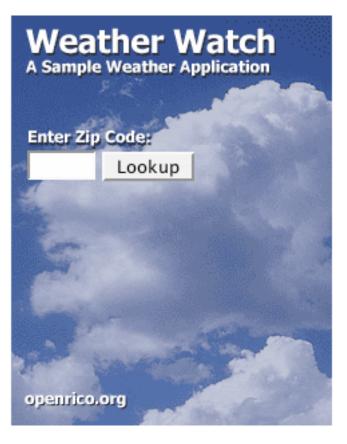


# **Use space creatively**

Slide, zoom, flip, lens, fade Think of your backstage

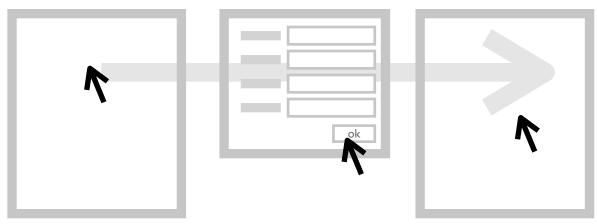
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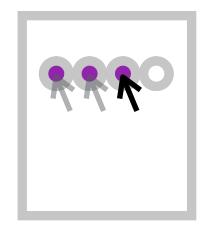


# Shift. **Lightweight Actions.**



heavy click-weight





light-weight actions



# Leave a light footprint



#### 1234>> See All

#### straight fit



loose staight fit (sandblasted vintage) \$49.50



straight fit corduroy pants \$44.50 Buy 1 or more, save \$14.55 each See All



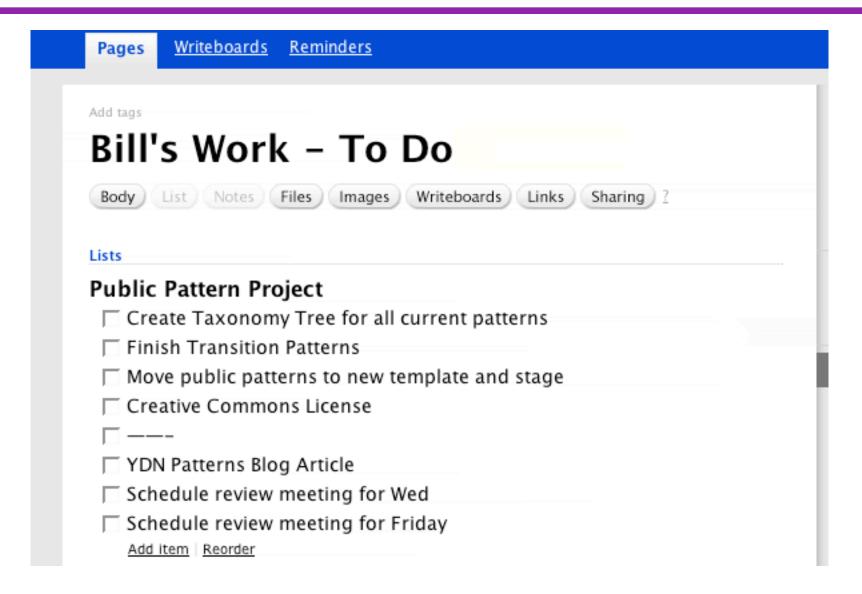
straight fit (blasted black) \$49.50



straight fit (dark authentic) \$44.50

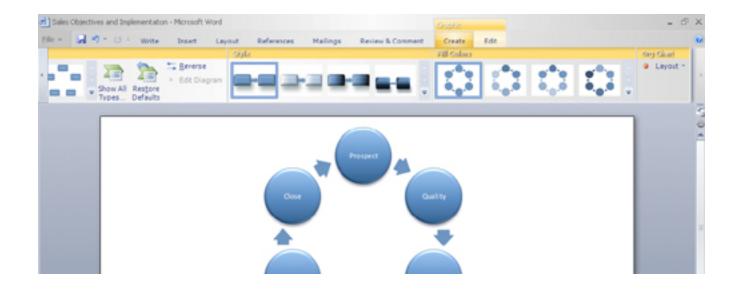








# Microsoft Vista, Office 12 Contextual Command Tabs





#### RECOMMEND THIS STORY

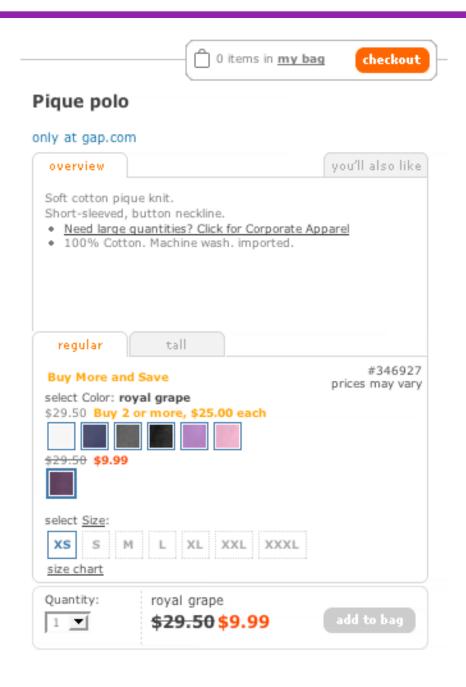












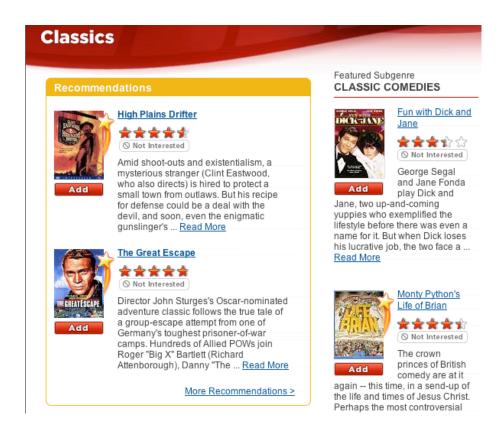


Auto Save. In Context
Tools. In Page Action.
Remembered Collection.
Remembered
Preferences. Auto Form
Fill. Live Ratings.



# Watch your click weight

Keep actions immediate and light Count "clicks"





# Watch your click weight

Keep actions immediate and light Count "clicks"

# **Design for engaging moments**

The Critics: My Grade: A Rate this В Movie! 14 reviews C Select grade Yahoo! Users: to the right D B+write a review F 13199 ratings

Use invitations Keep it fun, exciting and light Treat it like an impulse aisle







# Watch your click weight

Keep actions immediate and light Count "clicks"

#### RECOMMEND THIS STORY





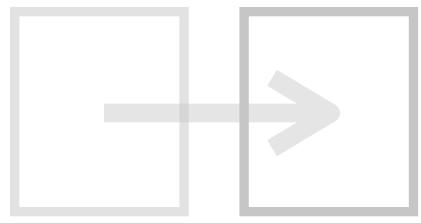
# **Use lightweight events**

Hover
Blur, focus
Click. Avoid double-click

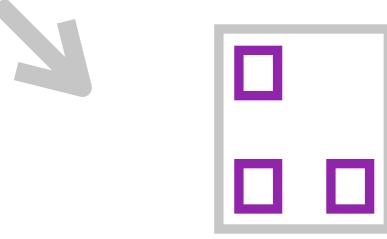


# **Design for engaging moments**

Use invitations Keep it fun, exciting and light Treat it like an impulse aisle



page-based transitions



multiple transitions, single page



# **Show transitions**



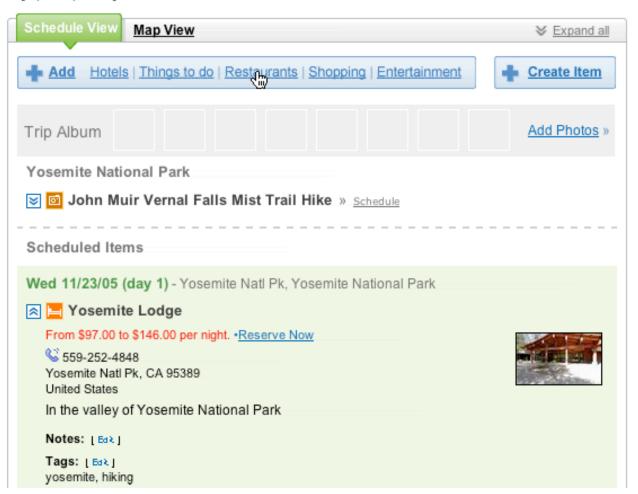


#### Yosemite Thanksgiving [Edit]

A trip to YOSEMITE NATIONAL PARK Fun in Yosemite with Daniel & Kids

This trip is public \*Sharing settings \*Email this trip

[ Update photos ]









Premium canvas duffle bag \$49.50



urban nylon sling \$34.50

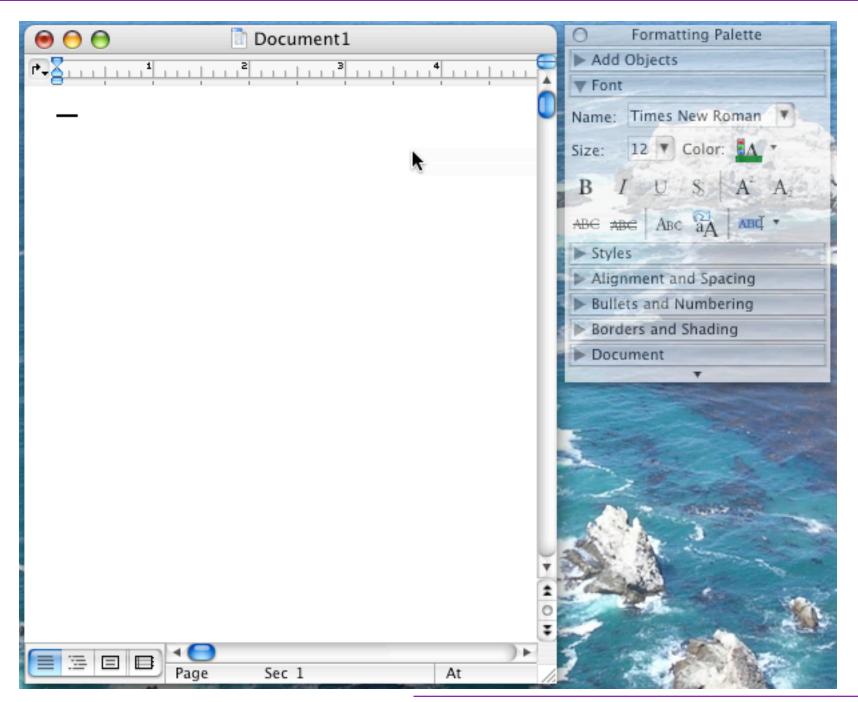


urban nylon backpack \$29.50

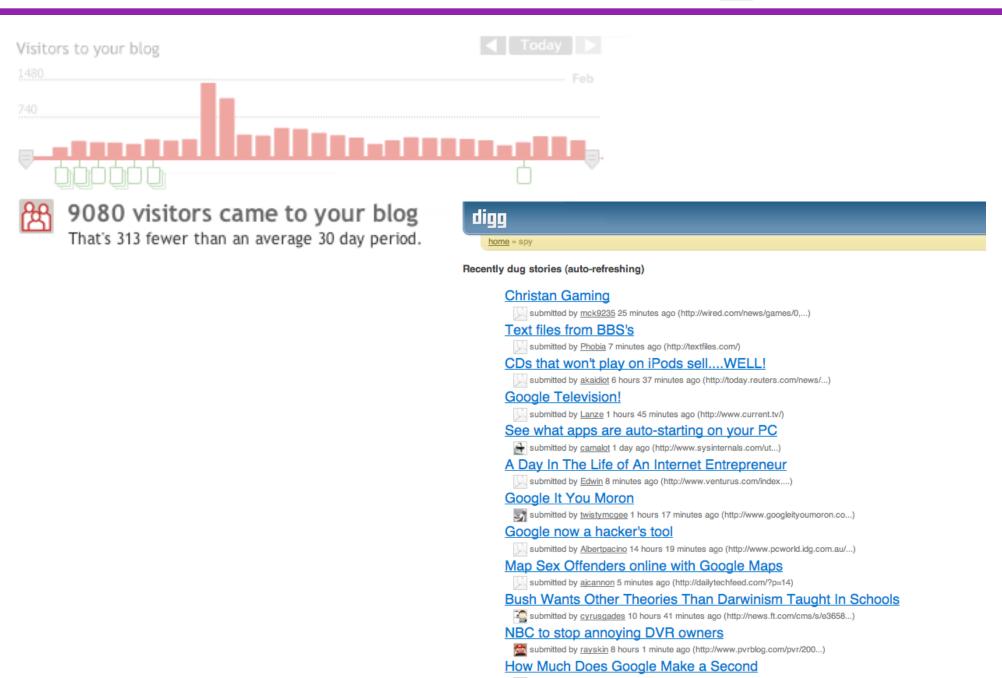


nylon commuter bag \$68.00

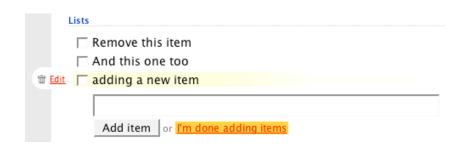














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- Brighten. Raise importance
- Cross Fade. One leaves, another enters
- Dim. Lower importance
- Expand. Open in context of others
- Fade In. Good for adds
- Fade Out. Good for deletes
- Flip. Edit configuration
- Animate. Change relationship, tweening
- Self-Healing. After delete or "yank"
- Collapse. Close in context of others
- Slide. Similar to expand but child window



Transition. Brighten Transition.
Cross Fade Transition. Dim
Transition. Expand Transition.
Fade In Transition. Fade Out
Transition. Flip Transition.
Animate Transition. SelfHealing Transition. Collapse
Transition. Slide Transition.



# **Speak to the BRAIN**

Understanding attention processing Sending the wrong message

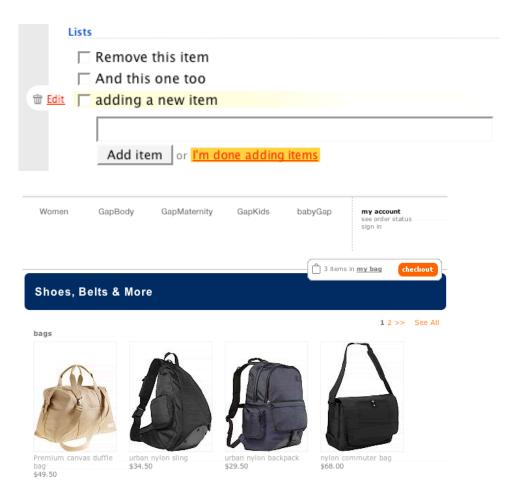






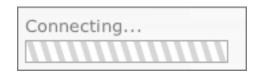
# **Speak to the BRAIN**

Understanding attention processing Sending the wrong message



# What you can communicate

Speed up time Slow down time Show state change Show relationships between objects



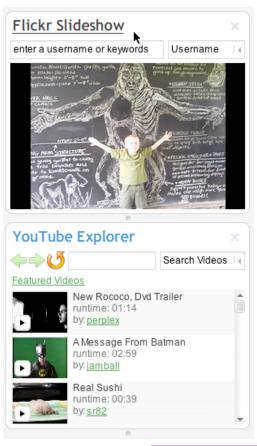




### **Speak to the BRAIN**

Understanding attention processing Sending the wrong message





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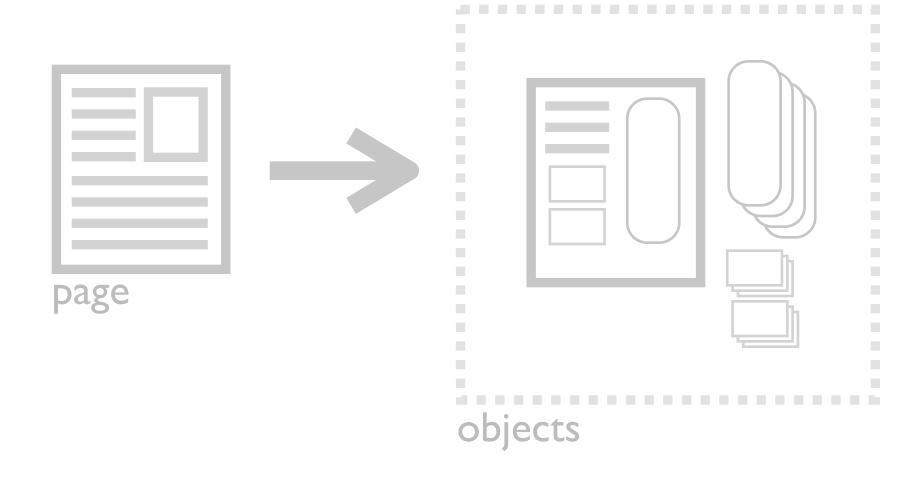
### **Keep it sane**

"Cut in half" rule of thumb Use a "contrast knob" approach Don't overuse



- The more rapid the change the more important the event.
- Rapid movement is seen as more important than rapid color change.
- Movement toward the user is seen as more important than movement away from the user.
- Very slow change can be processed without disrupting the user's attention.
- Animation can be used to communicate where an object was and now is





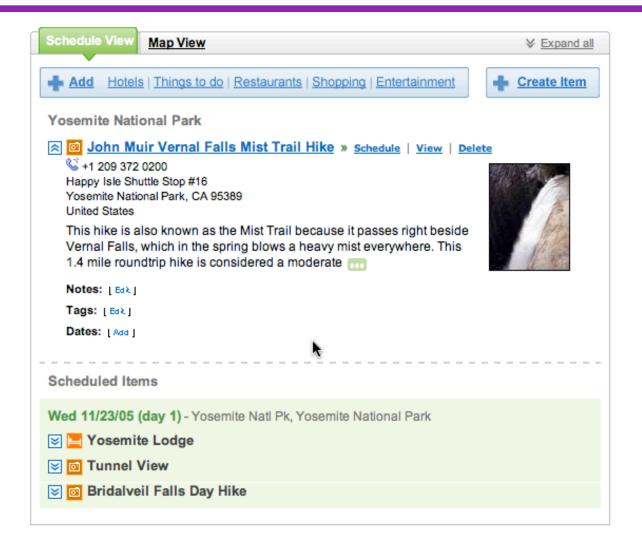


### Think in objects



	Page-Based Web	Rich Internet App
Richer Model	Document	Rich Internet Object
Longer Lifecycle	Transient	Permanent
Community/ Sharing	Bookmark	Content, properties, and behaviors







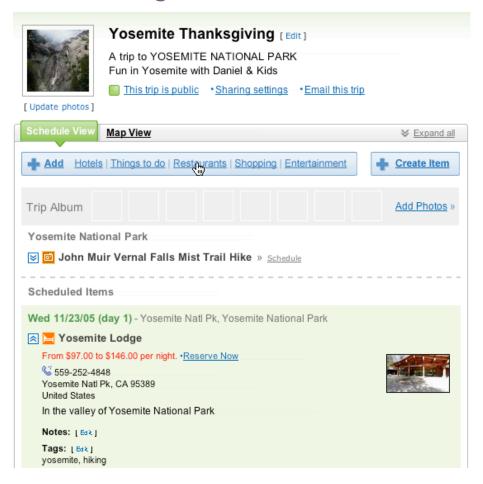


### Rich Internet Object. Available. Selected. Identifiable Object.



### **Rethinking the model**

What is the user's mental model? How to distinguish from content?



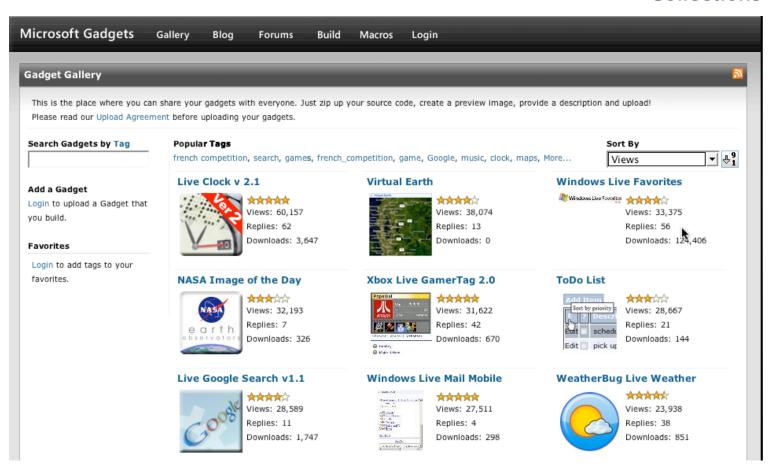


### **Rethinking the model**

What is the user's mental model? How to distinguish from content?

### The power of sharing

Bloggable, shareable, findable How to dial-in community Collections





### **Rethinking the model**

What is the user's mental model? How to distinguish from content?



### Web 2.0 as a platform

Rich objects fit the SOA model Creates a good separation of concerns Mashups

### The power of sharing

Bloggable, shareable, findable How to dial-in community Collections



See your friends on a mobile map. Anywhere. Outside or inside.



## Questions?





# Participate?



### Have You Seen a Cool Example?

### Tag It!

- Use 'ypatternexample' tag in either delicious or Yahoo! My Web2
- Use additional tags to identify the pattern name you think it belongs to
- Write a comment about what is interesting about the example or how to see the interaction

