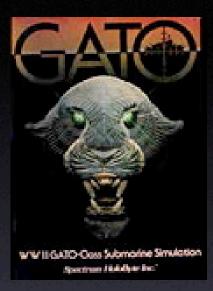
designing for ajax

Bill Scott Yahoo! Ajax Evangelist b.scott@yahoo.com



background.





JavaScript for Rich Internet Applications

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

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

OPEN SOURCE

Rico is provide free and open-source (Apache 2.0 License) for either your personal or commercial use. <u>Sabre Airline Solutions</u> retains the copyright on the Rico code produced at Sabre.

BROWSER SUPPORT

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

AJAX SUPPORT

Ajax is the term that describes a set of web development techniques for creating interactive web applications. One of the key ingredients is the JavaScript object MinittpRequest. Rico provides a very simple interface for registering Ajax request handlers as well as IrML elements or JavaScript objects as Ajax response objects. Multiple elements and onlycts this yeb updated as the recitot of one Ajax request. Want to get started learning? Check out our demos and then read our two Ajax tutorials on the Documentation page.

Desktop applications have long used drag and drop in their Desktop appications have long used orige and origin their interfaces to simplify user interaction. Rico provides one of the simpler interfaces for enabling your welface application to support day a trion jour, but register any HTML element or JavaScript object as a draggable and any other HTML element or JavaScript object as a drop zone and Rico handles the rest.

CINEMATIC EFFECTS

When actions are no longer occurring just at the page level but within the page itself, more clues are required to clue the user on what has transpired. Cinematic effects such as scaling and smooth size intransitions can communicate change in richer ways than traditional war 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 <u>Accordion</u> component like those found in Macromedia Flex and Laszlo. Just nest some DIVs and with one line of JavaScript turn your div panels into an accordion. And the latest behavior is the LiveGrid. LiveGrid allows you to connect an Html table up to a stream of Ajax responses. Ajax requests are automatically called during table scrolling. The result is now Html tables can hold an unlimited amount of data scrolled into view on the fly as needed! More





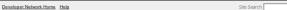
NEW! LiveGrid Behavior!

Check out the Alternative to Paging!

The same in in the same

State State





YAHOO! DEVELOPER NETWORK

Yahoo! Developer Network > Design Pattern Library

- NAVIGATE

▶ Faceted Navigation Fly-out Menus Horizontal Bar Hub and Spoke Left Navigation

Module Tabs Navigation Tabs

▼ EXPLORE DATA

Auto Complete Calendar Picker To: vu Pagination

Item Pagination Search Pagination

▶ ORGANIZE DATA

▼ GIVE FEEDBACK - Ratings & Reviews

Rating an Object Writing a Review

▶ PERFORM ACTION

■ CUSTOMIZE

Drag and Drop Drag and Drop Modules

Drag and Drop Objects

▶ In Page Editing

Sliders

CALL ATTENTION

■ IMPROVE READABILITY

- Ratings & Reviews Review Architecture

GROUP RELATED ITEMS

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



The 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.

AP Reuters | AFP | USATOR

· Cargo Ship Blocks Sue



International Observers - Dall Chaus Divide Am

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

Results Page: 1 2 3 4 Next

Search Pagination

▶ ORGANIZE SCREEN/PAGE

Travel > Guides > North Amer ica > United States > New Yor New York City > Things to do

Breadcrumbs

User needs to navigate potentially large quantities of information efficiently. without becoming lost.



Thursday, Februa

re-arrange the layout of modules on a web page directly with the mouse



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.



The user needs to view data

items from a potentially large

Object Pagination

Read 20 reviews **全量量量**

Rating an Object

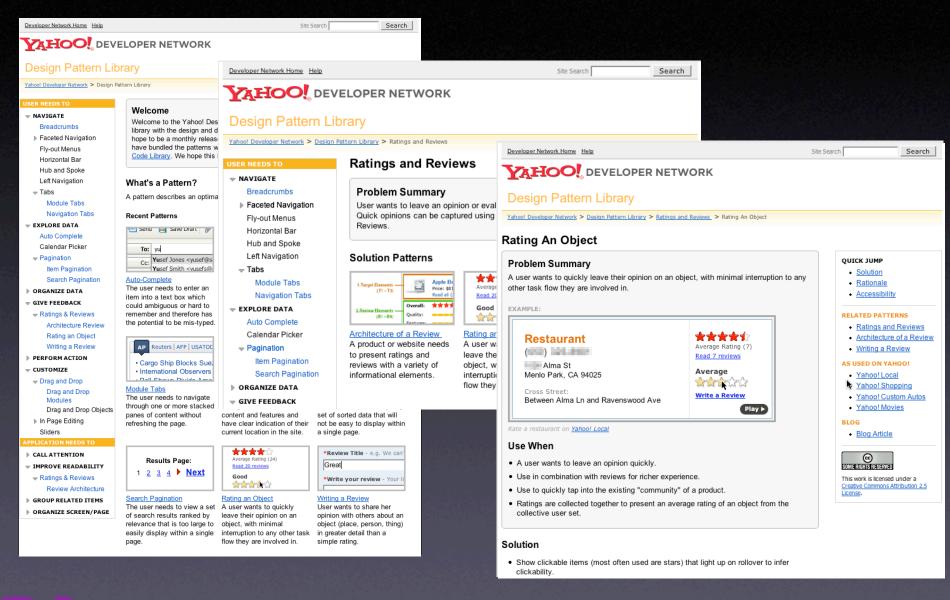
The user needs to view a set A user wants to quickly of search results ranked by leave their opinion on an relevance that is too large to object, with minimal easily display within a single interruption to any other task in greater detail than a flow they are involved in.



Writing a Review User wants to share her opinion with others about an object (place, person, thing) simple rating.



developer.yahoo.com/ypatterns





current 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. Transition. Dim. Brighten. Cross Fade. Contract. Expand. Fade In. Fade Out. Move. Self-Healing. Slide. Highlight. Invitation. Cursor Invitation. Drop Invitation. Tool Tip Invitation. Hover Invitation.

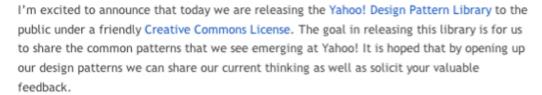


yuiblog.com



Yahoo! Design Pattern Library Released

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



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:

MY YAHOO! RSS

its:

All Comments:

MY YAHOO! RSS

RECENT POSTS

Developing a JavaScript Library for Yahoo!

Welcome to the Yahoo! User Interface Blog

The Yahoo! User Interface Library

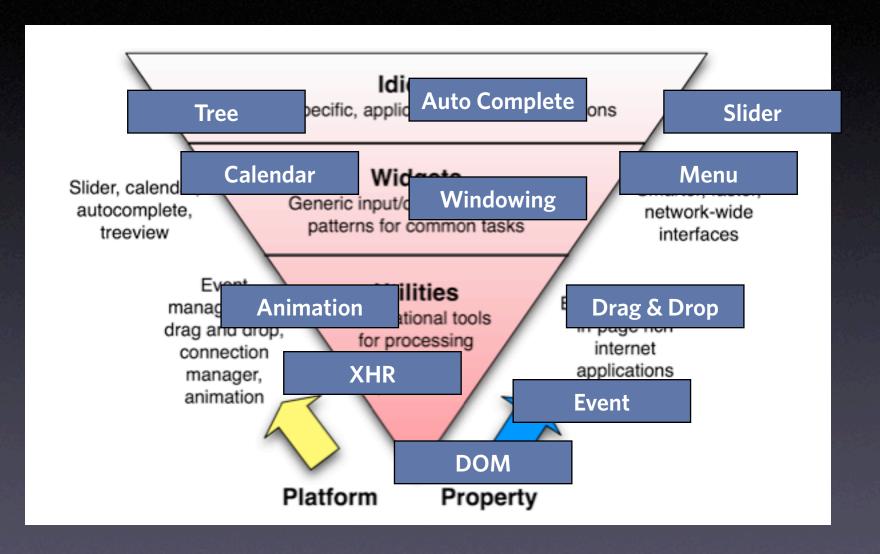
Yahoo! Design Pattern Library Released

Search Pagination Design Pattern

Item Pagination Design Pattern

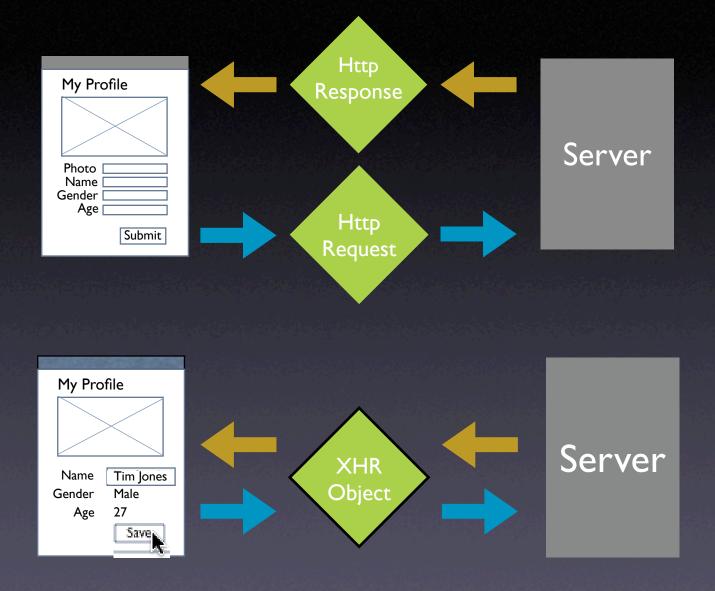
Rating an Object Pattern





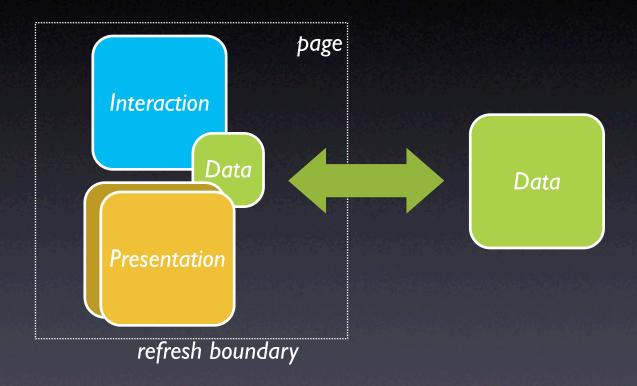


classic model. rich model.



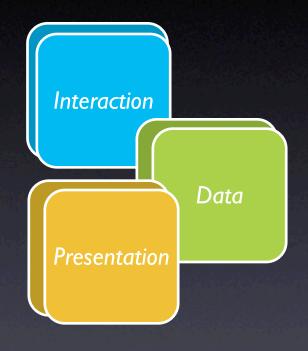


interaction. presentation. data.





data near. interaction rich.





surfacing a vocabulary.



vocabulary. patterns.

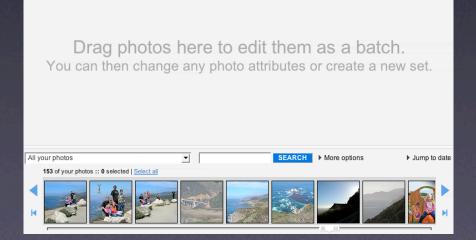
Drag and Drop. Drag and Drop Modules. In Page Editing. In Page Custom Editing. Direct State Editing. Grid Cell Editing. Inline Custom Editing. Inline Tag Editing. Popup Custom Editing. Slide-out Custom Editing. Inline Text Editing. Persistent Portals. Inline Reordering. Indication. Busy Indication. Cursor 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.



principle. make it direct.



pattern. Drag and Drop.





pattern. Inline Editing.



pattern. In Context Tools.



What about discoverability?



State park near our home in San Jose

Click to edit

5 photos | Add a comment?

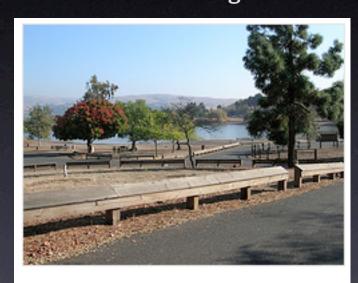
Photos are from 22 Oct 05.



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)

SAVE

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



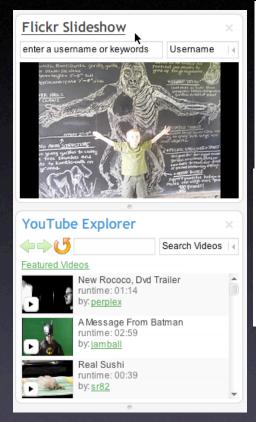
Account for experimental patterns as well as established patterns

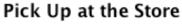
Provide in-context tools

Only good for single operations Can actually slow you down



What about discoverability?





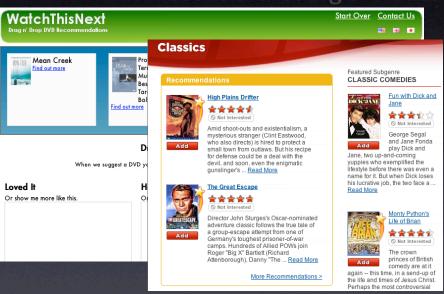
- ☐ DRAG Chips
- DRAG Milk
- ☐ DRAG Bread
- □ DRAG Orange Juice2
- ☐ DRAG Tomatoes
- □ DRAG Lettuce
- · What is spam?
- Can I transfer my message credits?
- How do I delete my HandyPay account?
- What if I didn't receive my full message package?
- I need to contact customer care regarding the Compose Text Message service.

Use direct editing on page content

What about save/cancel?

Avoid page jitter

Reduce the feeling of modes



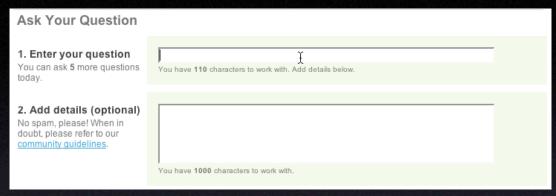
Use drag and drop where appropriate

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

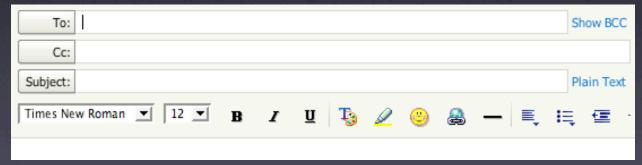
Provide in-context tools
Only good for single operations
Can actually slow you down



principle. give live feedback.



pattern. Live Suggest.



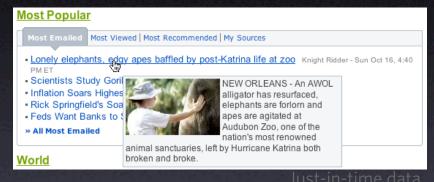
Find Athletes and Countries PRESENTED BY CHEVROLET **Medal Count** GERMANY 11 29 UNITED 9 25 STATES CANADA 10 24 AUSTRIA 23 RUSSIA 22 MY YAHOO! RSS » Full Medal Count

pattern. Auto Complete.



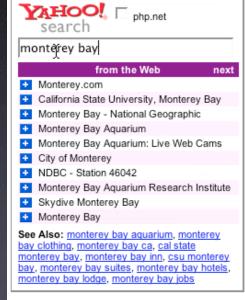
Keep the goal in mind

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

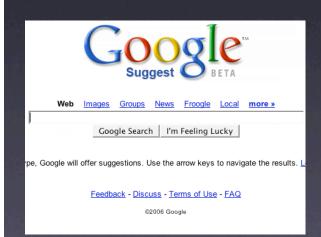


Just-in-time logic





nfl



dmv



give live feedback.

Keep the goal in mind

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

Connecting...





give live feedback.

Keep the goal in mind

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 domain name:						
www. billsportfol	io.com	Search				
(ex. widgetdesigns.com)						
Jacobsky St. St. 1888, S.		od reken i i i i i ka i Ai				
Required information for Google account						
Your current email address:	someone@somewhere.com		CANDO DE SENA			
	e.g. myname@example.com. This will be yo		and the second second			
Choose a password:	Minimum of 6 characters in length.	Password strength: T	oo short			

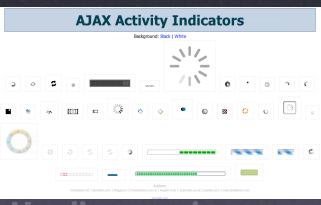
Use live-previews

Look before you leap



Keep the goal in mind

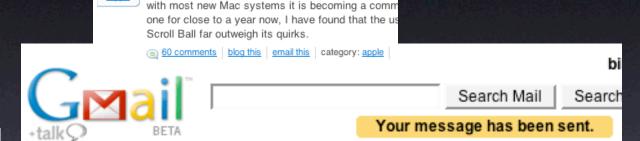
Design for immediacy
Is it narrowing or is it distracting
Use feedback to boost confidence
Let the user iterate where possible



Use live-previews Look before you leap

Keep the user engaged

Time passes faster Look for engaging moments



Fixing the Mighty Mouse

submitted by <u>usedmac</u> 1 day 1 hour ago (via http://mac The Apple Mighty Mouse brings a slew of great feat

282

digg it

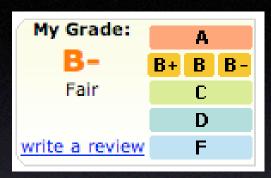


Keep feedback focused

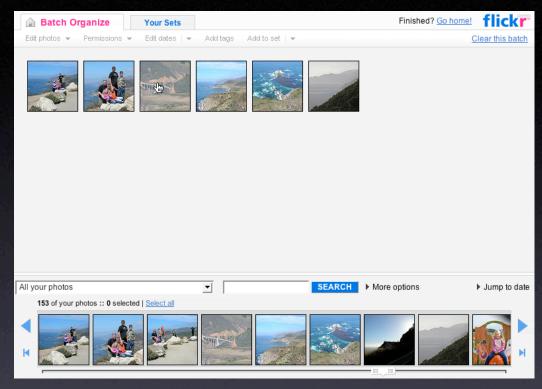
Keep it in context Updating too many areas at once will be confusing Show dynamically what is relevant Avoid creating feedback noise/jitter



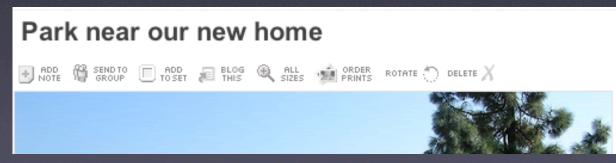
principle. offer an invitation.



pattern. Hover Invitation.



pattern. Drop Invitation.



pattern. Tooltip Invitation + Hover Invitation.

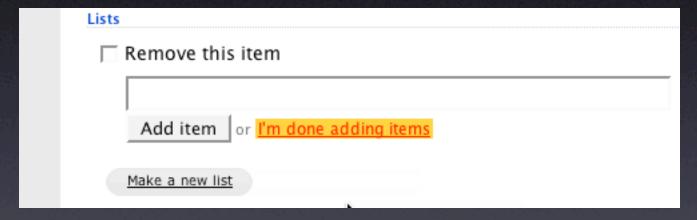


offer an invitation.

Make it engaging

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.

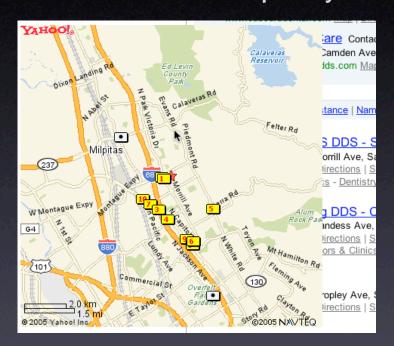
Forty Associates recently added product previews to their Web site as part of a small beta program. During the beta, visitors to Associate sites who viewed a product preview clicked through to Amazon.com over 4% of the time; those clicks resulted in a purchase nearly 6% of the time.

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.

Keep actions out of it

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



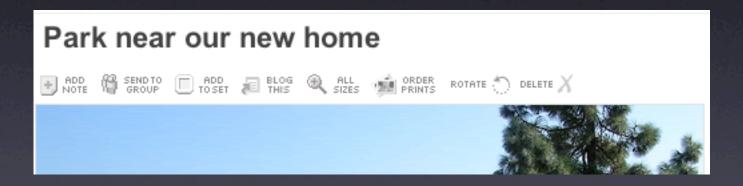


Make it engaging

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

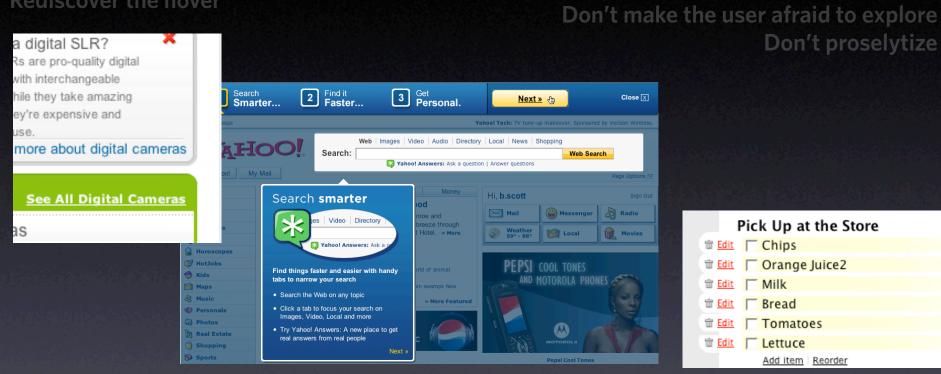
Hover Invitation Cursor Invitation Tooltip Invitation



Keep actions out of it

Make it engaging

Use lightweight events as a welcome mat Rediscover the hover



Get the actors involved

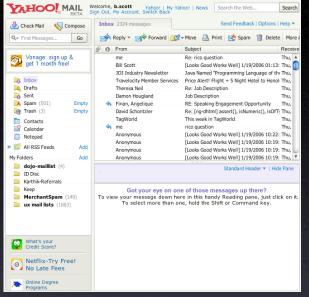
Hover Invitation
Cursor Invitation
Tooltip Invitation

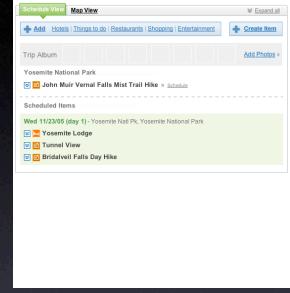
Use invitations to aid discoverability

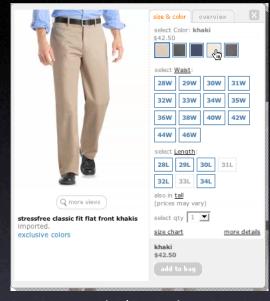
Two challenges: idiom & feature Adding signposts, always-on clues doesn't scale Add tours, help pedals, tips, spotlights



principle. cross borders reluctantly.



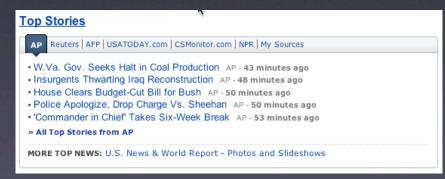




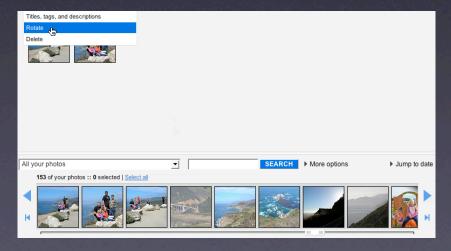
pattern. Endless Scrolling.

pattern. In Context Expand.

pattern. Inline Assistant.



pattern. Hover Details.

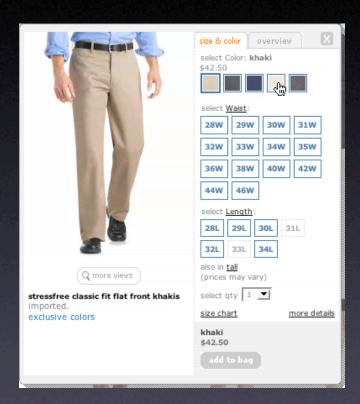


pattern. Lightweight Popup + Lightbox



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

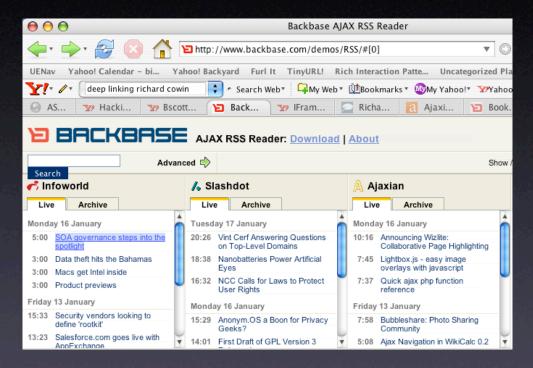
Its the user's model, not the paging model
Use scrolling for "owned" data
Watch out for dual scroll bar issue

Photo Click for info	Price	Bd/Ba Sq Ft	Address and Area Presented By	(Click P	More Photos Tours (Click for Click f
				TO T	AJAX SEARCH
	\$1,750,000 Single Res	6+, 4+ 3700	14080 BEAR CREEK RD Boulder Creek, CA 95006 (San Lore Valley) Schwarzbach Associates	LiveGrid Demo	nonstration Powered by Yahoo! Search gary: Web Images Videos
	\$1,995,000		47047 MOUNTAIN OUADUE DD	Search Images	
Single Res		6+, 4+ 17617 MOUNTAIN CHARLIE RI LOS 5675 GATOS, CA 95033 (Unincorpol Los Gatos Mins) Almaden Oaks Realtors	LOS	Search Results	Results 1 - 5 of about 1580284 for flowers
				0.0	flowers 025 flowers021jpg 110k 29Feb2004 flowers022jpg 783k 29Feb2004 flowers023jpg 186k http://wp.li.ru/flowers 1024x768 - jpeg fmt - 0.3MB
\$2,286,000 Single Res	5, 4+ 20930 PANORAMA DR Los Gatos, CA 95033 (Los Gatos M		flowers 063		
		4800 Alain Pinel Realtors		flowers059jpg 122k 29Feb2004 flowers060jpg 134k 29Feb2004 flowers061jpg 120k http://wp.li.ru/flowers 1024x768 - Jpeg fmt - 0.1MB	
\$2,750,000 Single Res		5, 4+ 155 LARITA DR Ben Lomond, CA 95005 (San Lorer		ACOL	flowers 045
		5000	Valley) Network Alliance Real Estate		flowers041jpg 277k 29Feb2004 flowers042jpg 125k 29Feb2004 flowers043jpg 744k http://wp.li.ru/flowers 1024x768 - jpeg fmt - 0.1MB
\$2,777,000		5, 4+	777 HAPPY VALLEY RD		flowers 076
	Single Res	5819	Scotts Valley, CA 95065 (Scotts Val Linda Burroughs Real Estate	000	flowers072jpg 820k 29Feb2004 flowers073jpg 160k 29Feb2004 flowers074jpg 120k http://wp.li.ru/flowers 1024x768 - jpeg fmt - 0.1MB
New Search << Pre		@69/6	flowers 019		
			flowers015jpg 781k 29Feb2004 flowers016jpg 455k 29Feb2004 flowers017jpg 143k http://wp.li.ru/flowers 1024x768 - jpeg fmt - 0.3MB		



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?



cross borders reluctantly.

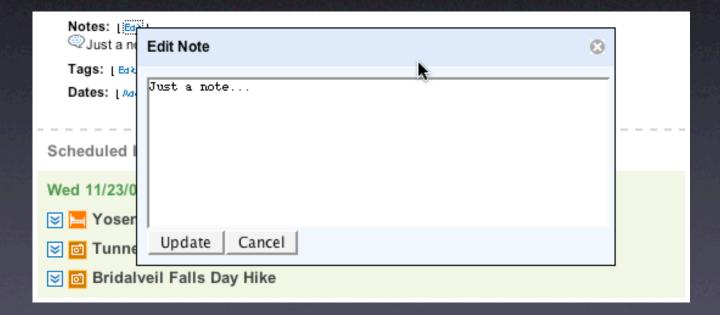
Use overlays

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



Unlimited forwarding of messages sent to your new domain name into your free Yahoo! email

Email Forwarding





Use overlays

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





Use in-context expands

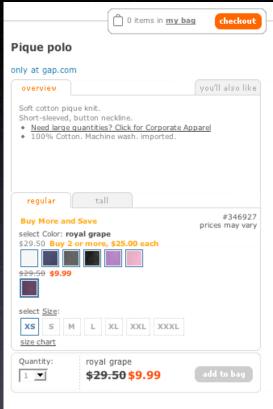
For editing part of a collection Need to see surrounding context For managing content modules

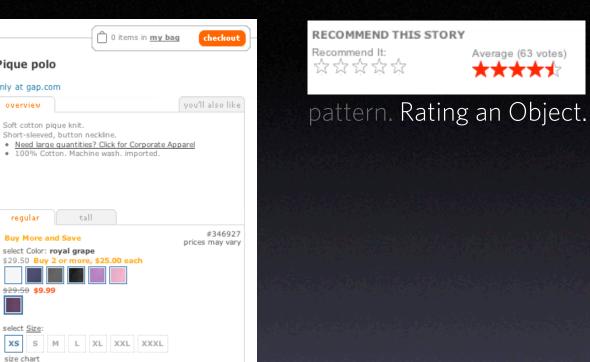




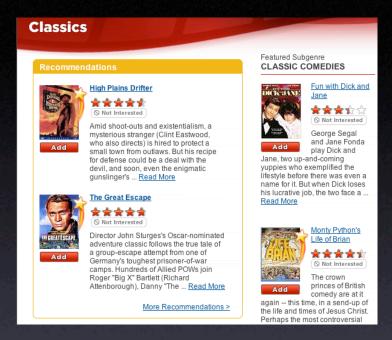


principle. keep a light footprint.





pattern. Remembered Collection.





digg it

Fixing the Mighty Mouse

submitted by usedmac 1 day 1 hour ago (via http://mac

The Apple Mighty Mouse brings a slew of great feat with most new Mac systems it is becoming a comm one for close to a year now, I have found that the us Scroll Ball far outweigh its quirks.

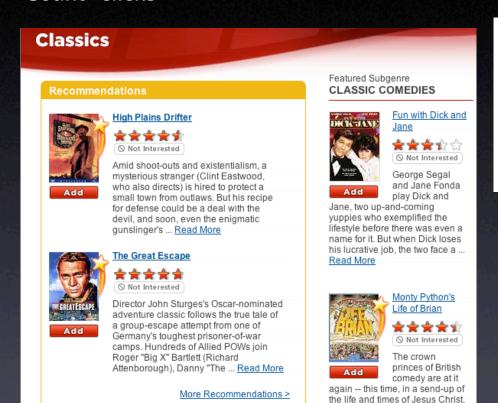
60 comments blog this email this category: apple

pattern. In Page Action.



Watch your click weight

Keep actions immediate and light Count "clicks"



Perhaps the most controversial

Fixing the Mighty Mouse

282

diggs

digg it

submitted by usedmac 1 day 1 hour ago (via http://mac

The Apple Mighty Mouse brings a slew of great feat with most new Mac systems it is becoming a comm one for close to a year now, I have found that the us Scroll Ball far outweigh its guirks.

60 comments blog this

email this category: apple



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





keep a light footprint.

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

principle. show transitions.

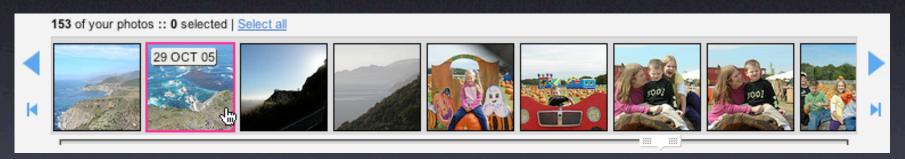
```
Lists

Remove this item
And this one too

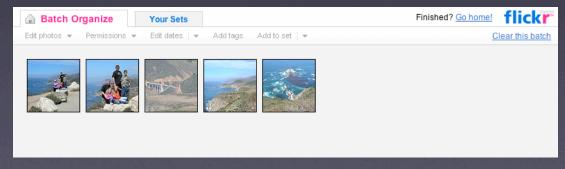
Color adding a new item

Add item or I'm done adding items
```

pattern. Fade Transition + Self-Healing Transition.



pattern. Slide + Animate.



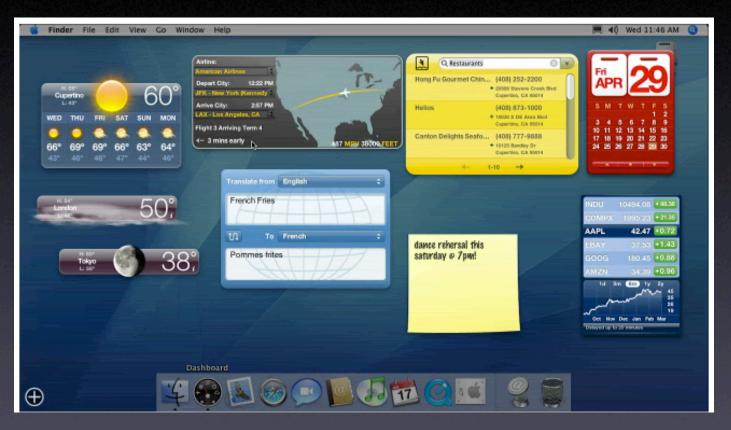


pattern. Spotlight.

show transitions.

Speak to the BRAIN

Understanding attention processing Sending the wrong message

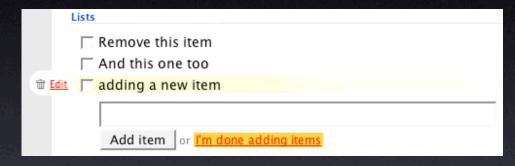


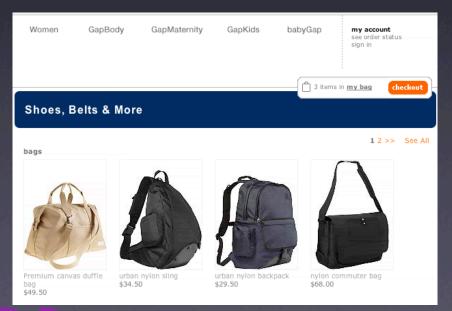




Speak to the BRAIN

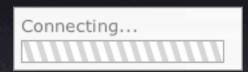
Understanding attention processing Sending the wrong message





What you can communicate

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







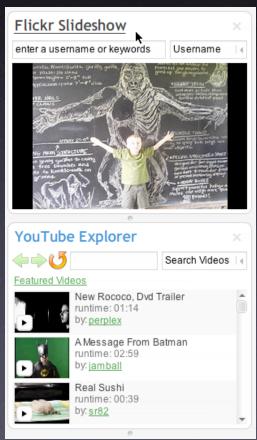
Speak to the BRAIN

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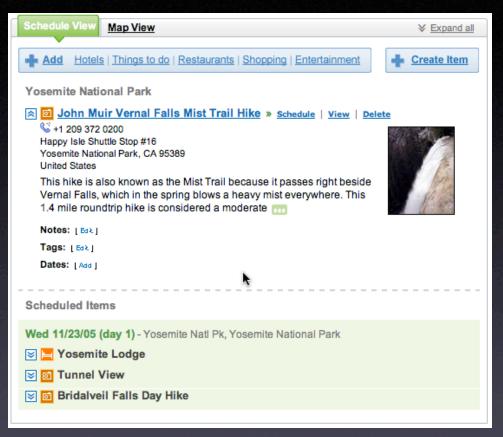


Keep it sane

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



principle. think in objects.



pattern. Shareable Object.

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think in objects.

Rethinking the model

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



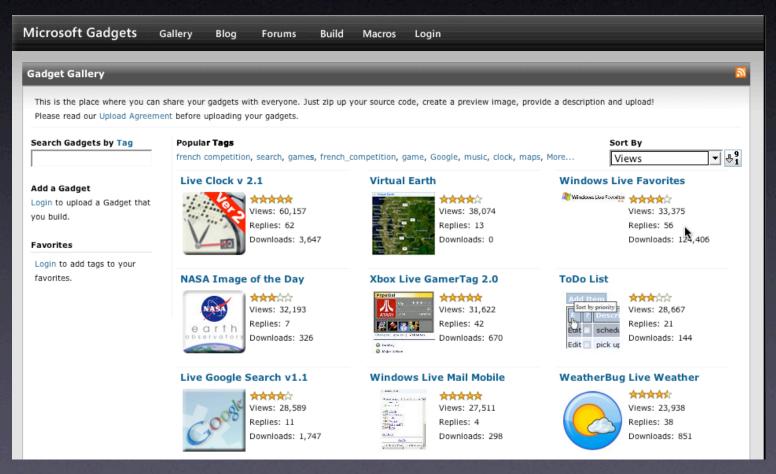


Rethinking the model

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





think in objects.

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

rich 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.



surfacing a vocabulary.

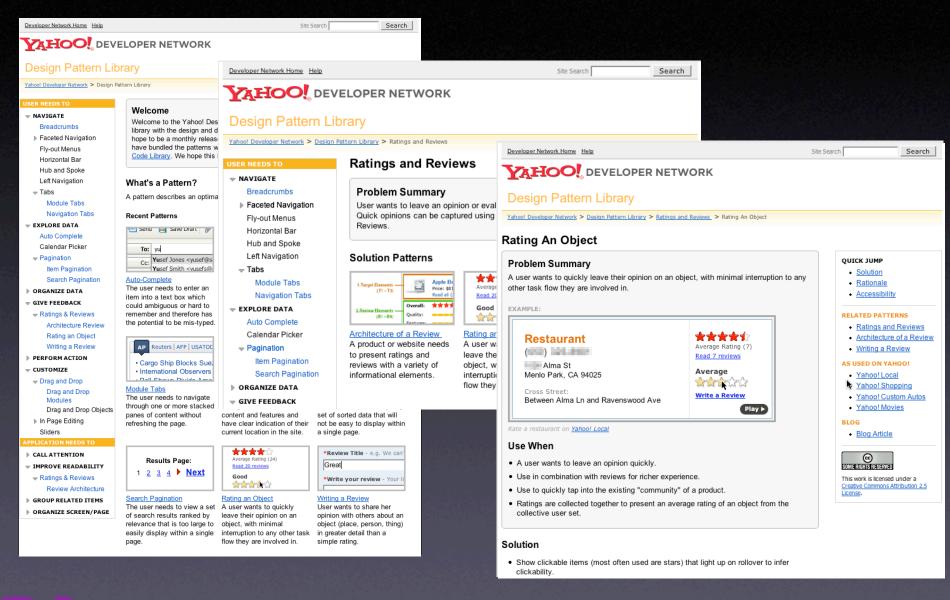


surfacing a vocabulary.

code. accessibility. examples.
rationale. solutions. articles.
discussion. etc.

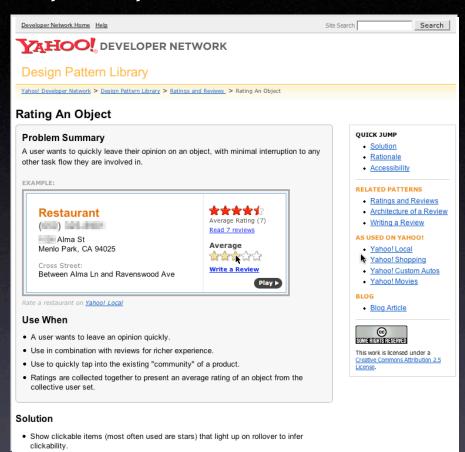


developer.yahoo.com/ypatterns





open patterns.



Yahoo! service
responds with a JSON
representation of a pattern.
Allows anyone to mashup the
patterns into a corporate
pattern library

Pattern Service

Corporate Branded
Pattern Site
(mashup)



questions?



Y! UI Blog - http://yuiblog.com

Y! Patterns - http://developer.yahoo.com/ypatterns

Y! Patterns Group - http://groups.yahoo.com/group/ydn-patterns/

My Blog - http://looksgoodworkswell.com

Y! UI Library - http://developer.yahoo.com/yui

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