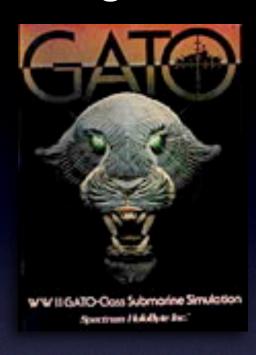
# Designing the Rich Web Experience

Principles and patterns for rich interaction design on the web

Bill Scott
Director, UI Engineering
netflix.com
b.scott@yahoo.com







### **JavaScript for Rich Internet Applications**

A A HIGHIO

Demos Documentation Downloads

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

#### BACKGROUND

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

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

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

#### **OPEN SOURCE**

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

#### **BROWSER SUPPORT**

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

#### AJAX SUPPORT

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

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

#### DRAG AND DROP

Desktop applications have long used drag and drop in their interfaces to simplify user interaction. Rico provides one of the simplest interfaces for enabling your web application to support drag and drop. Just register any HTML element or

JavaScript object as a draggable and any other HTML element or JavaScript object as a drop zone and Rico

#### CINEMATIC EFFECTS

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

#### BEHAVIORS

Take some raw HTML and sprinkle in some behaviors and what do you get? Well in Rico you can get an Accordion component like those found in Macromedia Flex and 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 behaviors are planned!

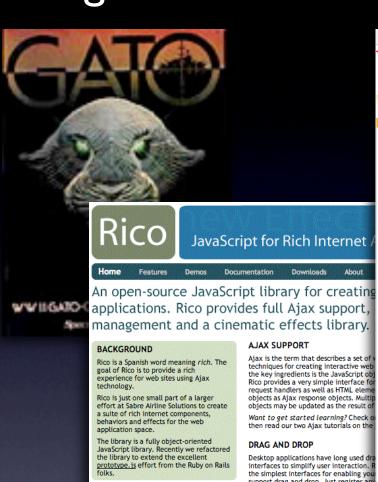


**NEW! LiveGrid Behavior!** 

Check out the Alternative to Paging!

RICO AJAK SEAR

See Rico in Action!



support drag and drop. Just register an JavaScript object as a draggable and ar

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Developer Network Home Help

Search

### YAHOO, DEVELOPER NETWORK

#### Design Pattern Library

Yahoo! Developer Network > Design Pattern Library

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

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

CALL ATTENTION

#### IMPROVE READABILITY

#### Ratings & Reviews

Review Architecture

#### GROUP RELATED ITEMS

▶ ORGANIZE SCREEN/PAGE

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?

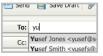
A pattern describes an optimal solution to a common problem within a specific context. more.

lew York City > Things to do

#### Recent Patterns

Auto-Complete

Module Tabs



#### Breadcrumbs

The user needs to enter an User needs to navigate item into a text box which potentially large quantities of could ambiguous or hard to information efficiently, remember and therefore has without becoming lost. the potential to be mis-typed



Drag and Drop Modules

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



#### Navigation Tabs

\*\*\*

Read 20 reviews

金金金金金

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.



#### Rating an Object Writing a Review

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

### Results Page:

The user needs to navigate

panes of content without

refreshing the page.

through one or more stacked

### 1 2 3 4 Next

#### Search Pagination

The user needs to view a set of search results ranked by relevance that is too large to easily display within a single

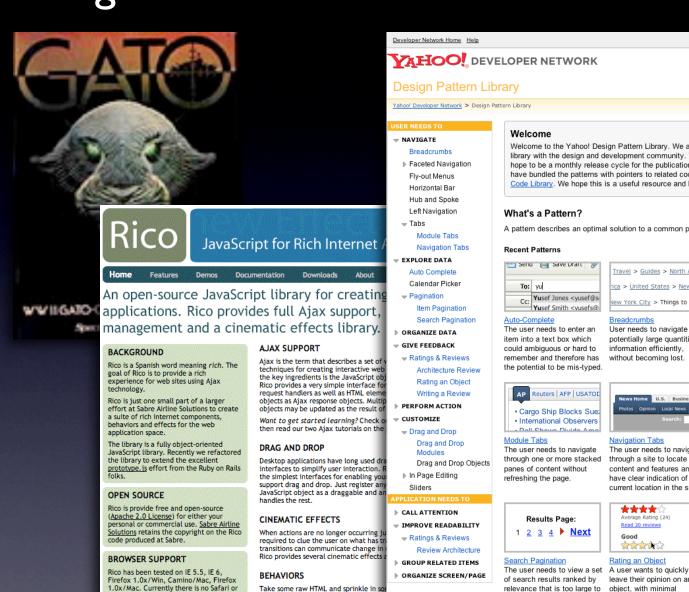
See Rico in Action!

#### A user wants to quickly leave their opinion on an object, with minimal

interruption to any other task flow they are involved in.

Mac IE 5.2 support. Support will be

provided in a near future release for



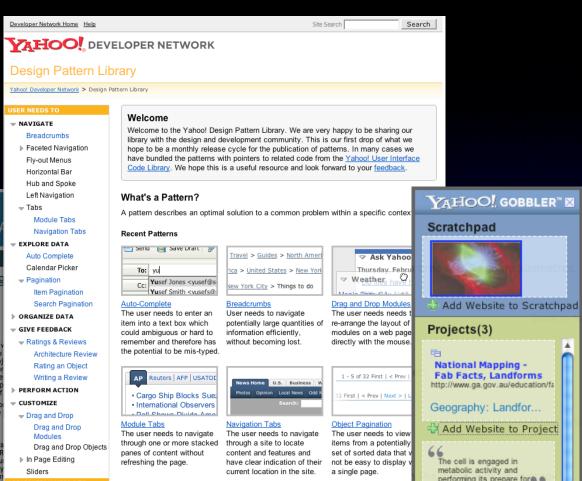
Rico you can get an Accordion component

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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

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Read 20 reviews

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See Rico in Action!

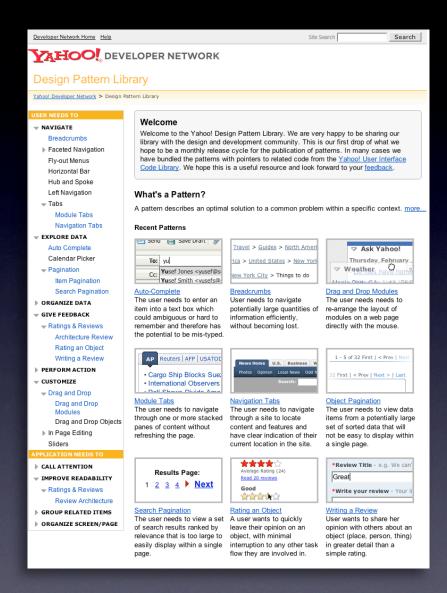
Great

Writing a Review

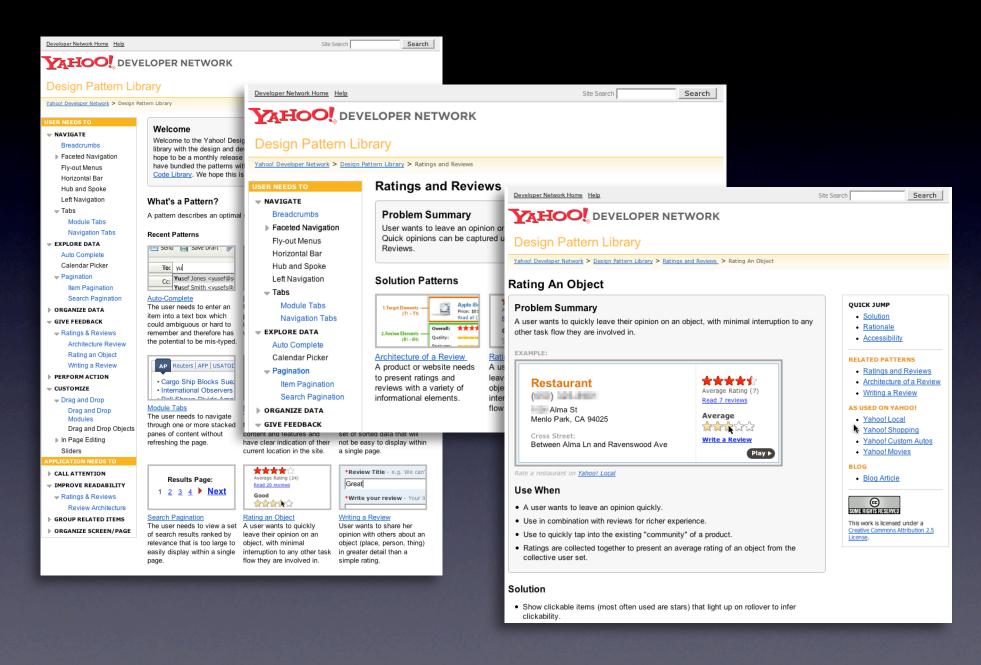
simple rating.



# developer.yahoo.com/ypatterns



# developer.yahoo.com/ypatterns



Home

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How to

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### Welcome to Yahoo! Teachers

A place for educators to find, create and share standards-based classroom materials- for FREE

# Flash Intro

### **Featured Projects**



### California Missions Social Studies

2 12 Teachers like it

9 Teachers copied



### Pyramids of Central Mexico

Social Studies

2 10 Teachers like it

4 Teachers copied



### What's in a candy bar...

Social Studies

2 6 Teachers like it

3 Teachers copied

(>>)

### Discover educators like you



### Anna Log

Grade 1, 2, 3 Generalist/Homeroom



Michael M Grade 4 Science/Mathematics



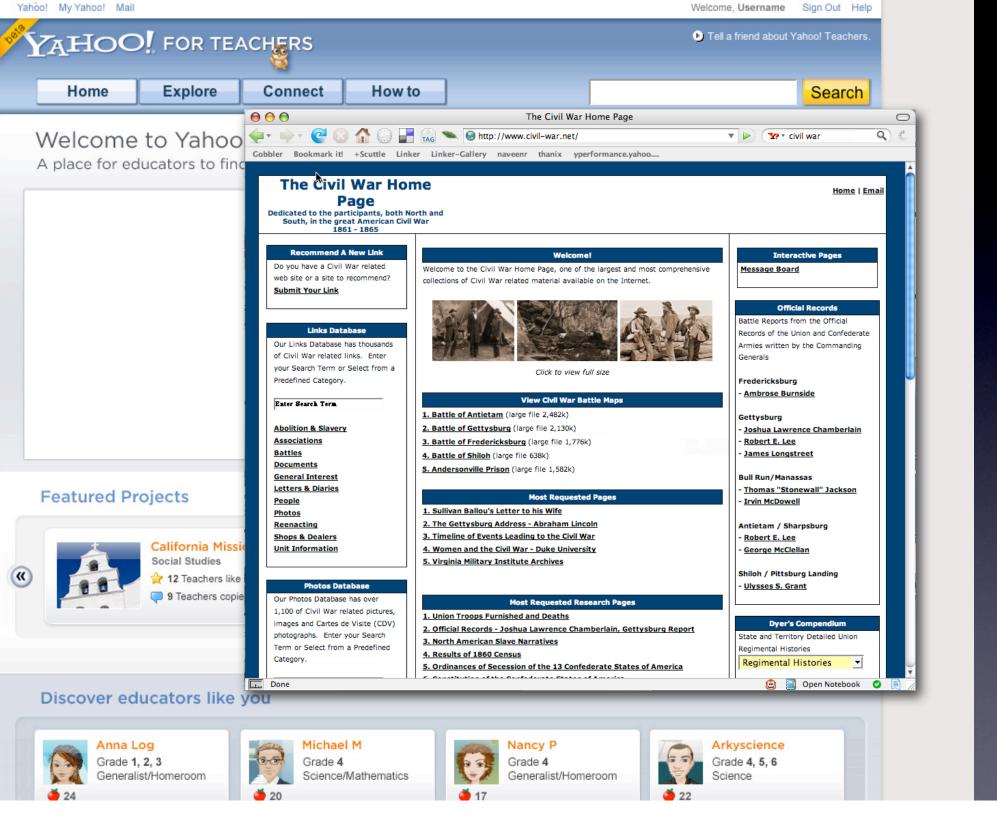
### Nancy P

Grade 4 Generalist/Homeroom



### Arkyscience

Grade 4, 5, 6 Science



# protoscript.com



Protoscript is a simplified scripting language for creating Ajax style prototypes for the Web. With Protoscript it's easy to bring interface elements to life. Simply connect them to behaviors and events to create complex interactions.

Here's an example that fades & removes 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 hide it when the fade completes.

Protoscript is for prototying. It's simple synt makes it easy to sprinkle behaviors onto an web page.

docs

download

foi

home

demos

Easy to query for interface elements
Uses jQuery. Plug-in architecture allows different selector plugins

Simple to express complex dependent behaviors Just nest behaviors within behaviors or callbacks.

Add new behaviors & events with plug-in architecture

Uses YUI library. Can be extended to use other Ajax frameworks

## NETFLIX

**Browse** DVDs

Watch Instantiv

Your Queue

Movies You'll 🥌

Community

DVD Sale \$5.99

Movies, actors, directo Search

BROWSE

You have 1347 Suggestions from 312 ratings.

Favorite Genres: (Edit)

Action & Adventure

Home

New Releases

Previews

Netflix Top 100

Critics' Picks

Award Winners

### Movies For You

Bill, the following movies were chosen based on your interest in: The Truman Show My Big Fat Greek Wedding The Office: Season 3 (4-Disc Series)



Add

### The Majestic

Set in the 1950s. this romantic drama is reminiscent of Frank Capra's classic films. Screenwriter Peter

Appleton (Jim Carrey) is on the verge of ... Read More



Add

### Under the Tuscan Sun

**○ ★★★**☆

In this movie loosely based on Frances Mayes's best-selling memoir of the same title, Diane Lane

stars as Frances, a newly divorced American writer ... Read More



### OTHER MOVIES YOU MIGHT ENJOY



The Hoax

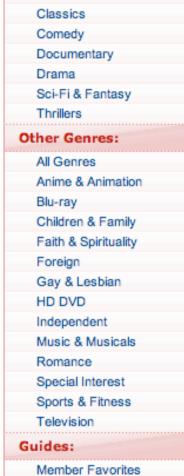






Planet Earth: The Complete Collection (5-Disc Series)

Blades of Glory

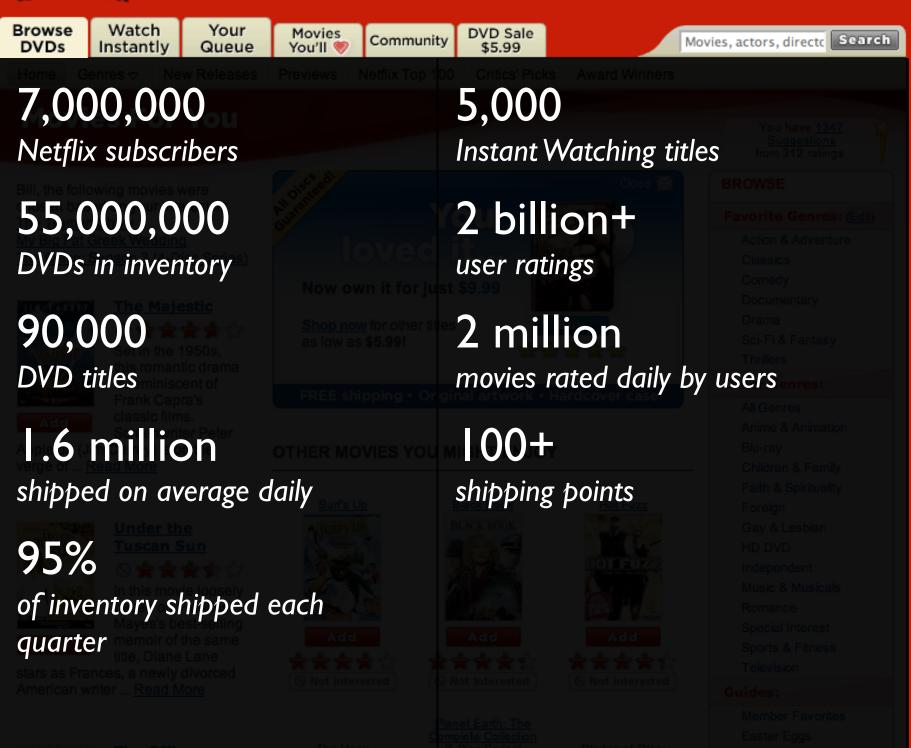


Easter Eggs

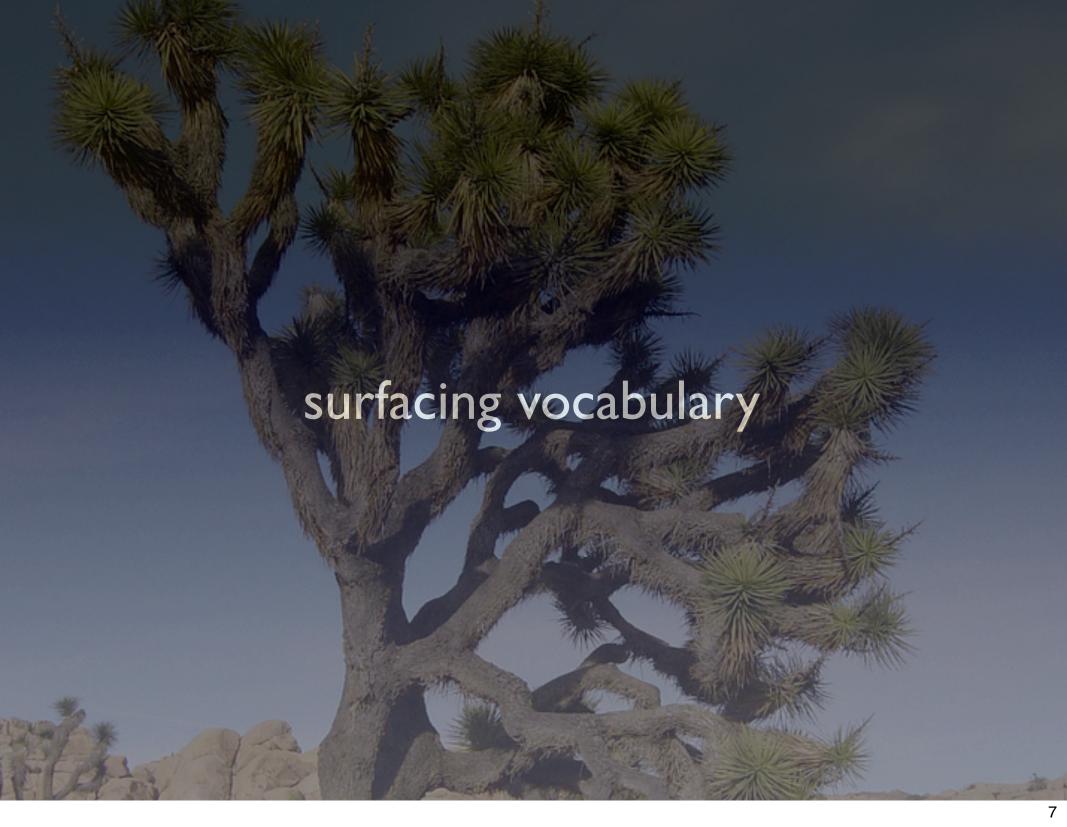
D. Danada



# NETFLIX







# current patterns. developer.yahoo.com/ypatterns

### **Design Pattern Library**

Yahoo! Developer Network > Design Pattern Library > Patterns from A to Z

### Patterns from A to Z



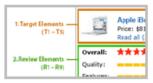
#### Alphanumeric Filter Links

The user needs the ability to look up information alphabetically within a large data set.



#### **Animate Transition**

The designer needs to communicate that an object is changing its spatial relationship within the page.



#### Architecture of a Review

A product or website needs to present ratings and reviews with a variety of informational elements.



#### Auto Complete

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.



#### Breadcrumbs

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



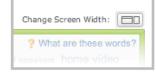
#### **Brighten Transition**

Designer wants to make a previously dimmed object a point of focus by making the object bright again.



#### Calendar Picker

User wants to find or submit a particular piece of information based on a date or between a date range.



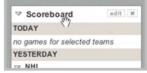
#### Collapse Transition

The designer needs to communicate that an object is no longer of primary importance, yet wants to keep it available in a smaller form.



#### Cross Fade Transition

Designer wants to communicate that a new view of an object is replacing the previous view.



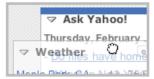
#### Cursor Invitation

Designer needs to cue the user that an object can be interacted with.



#### **Dim Transition**

Designer needs to communicate that an object is of secondary importance.



#### Drag and Drop Modules

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

# current patterns. developer.yahoo.com/ypatterns

### **Design Pattern Library**

Yahoo! Developer Network > Design Pattern Library > Patterns from A to Z

### Patterns from A to Z



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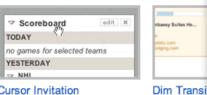
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#### Cursor Invitation

Designer needs to cue the user that an object can be interacted with.



#### Drop Invitation

1.Target Element

2. Review Elemen

Architectur

A product of

to present i

reviews wit

information

February 20

Mo Tu We

11 12 13 14

18 19 20 21

25 26 27 28

Calendar P

User wants

a particular

information

or between

Designer needs to indicate valid candidate drop sites during a drag and drop operation.



Designer needs to show the detail of an object in its context or reveal a previously collapsed object.



#### Fade In Transition

Designer needs to communicate that an object is being added to the page or application.



#### Fade Out Transition

Designer needs to communicate that an object is going away.



#### Hover Invitation

Designer needs to cue the user about what will happen when the mouse is clicked on the hovered object.



#### Item 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.



#### 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.



#### Page Grids

For consistent use of common page elements, page width, division of space, ad usage and code base.



#### Rating an Object

A user wants to quickly leave their opinion on an object, with minimal interruption to any other task flow they are involved in.



#### Search Pagination

The user needs to view a set of search results ranked by relevance that is too large to easily display within a single page.



#### Self Healing Transition

Designer wants to show that an object has been removed from a list of objects.



#### Slide Transition

The designer wants to bring new content into the page and would like to



#### Spotlight Transition

Designer needs to call attention to where a data value or content has



#### Tool Tip Invitation

Designer needs to cue the user about what will happen if they click the mouse on



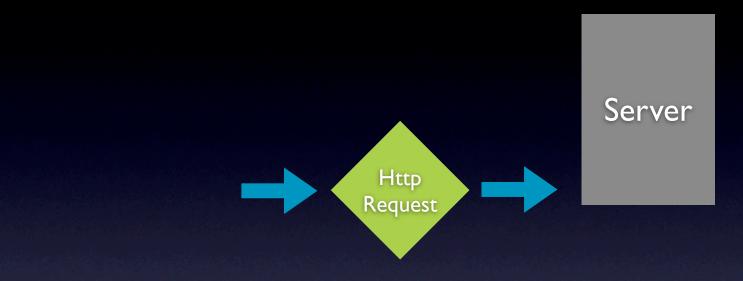
#### Writing a Review

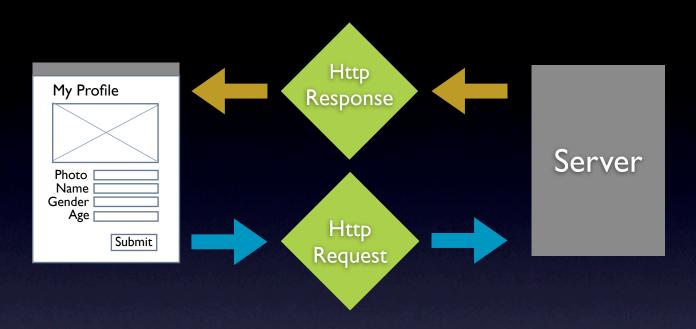
User wants to share her opinion with others about an object (place, person, thing)

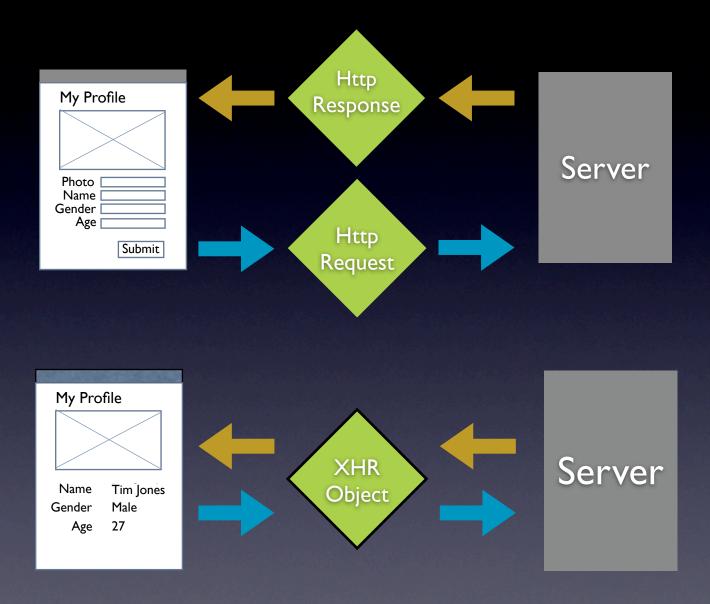
# rich patterns

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.

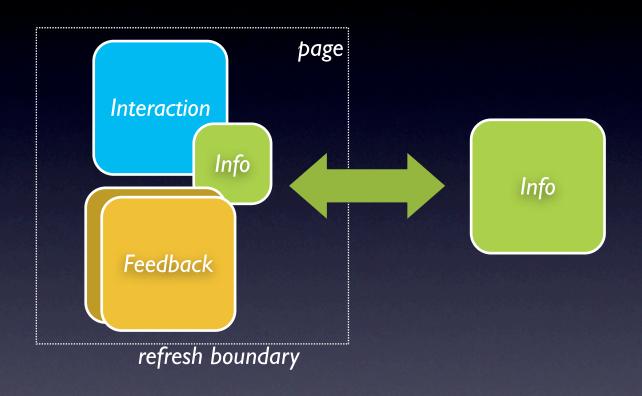








# interaction. feedback. information.



# interaction + feedback + information = richness



# interaction + feedback + information = richness

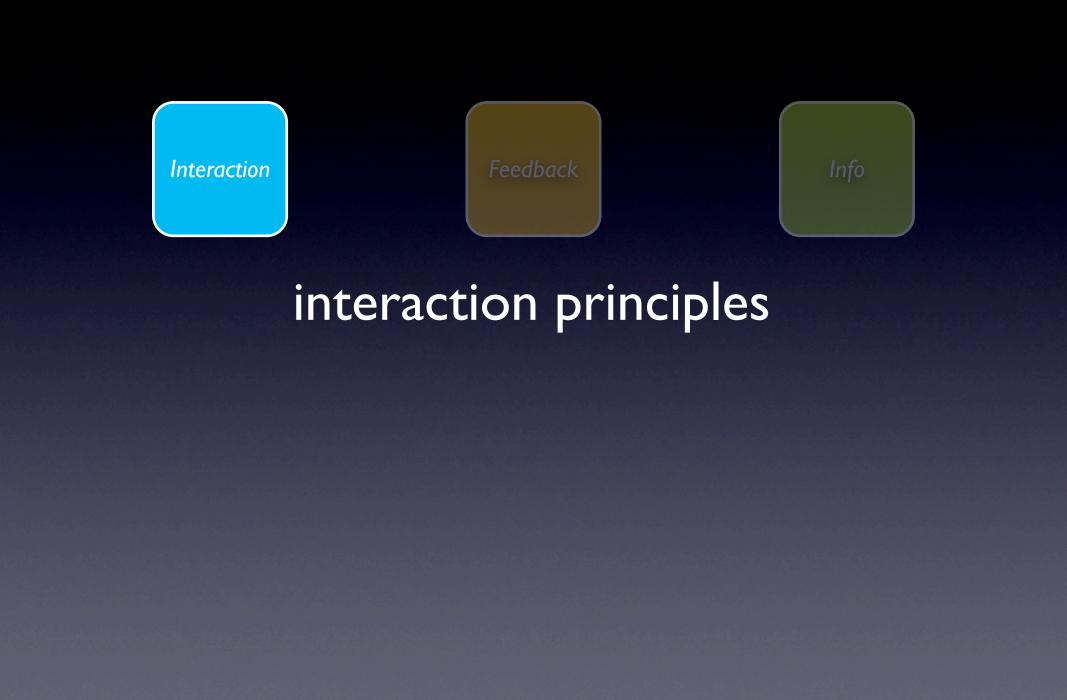


 Interaction

 Feedback

 Info

# design principles for richness

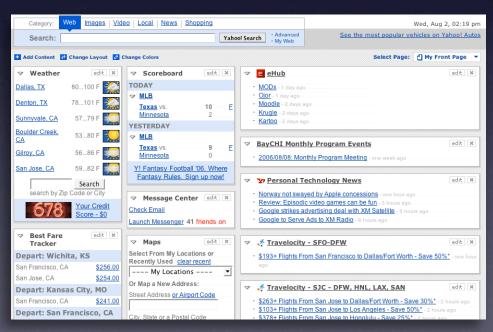




pattern. in-page action.

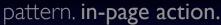


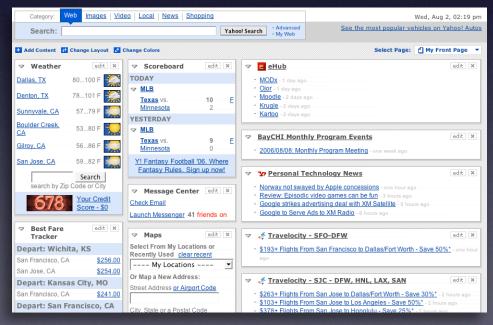
pattern. in-page action.



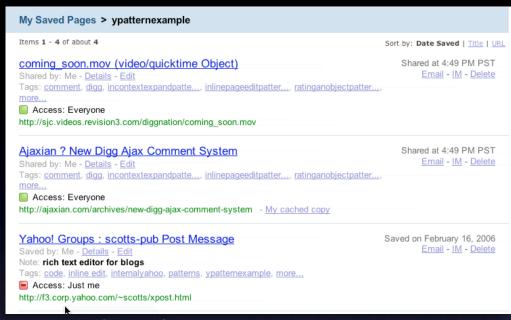
pattern. drag & drop.







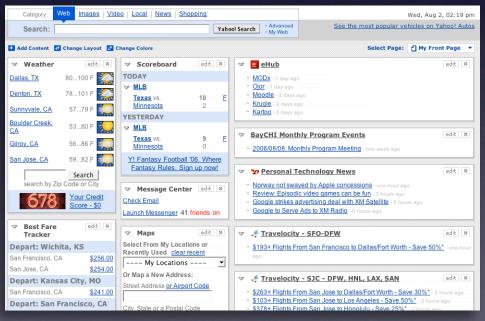
pattern. drag & drop.



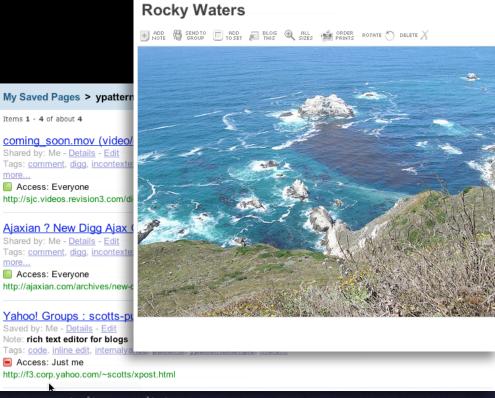
pattern. inline editing.



pattern. in-page action.

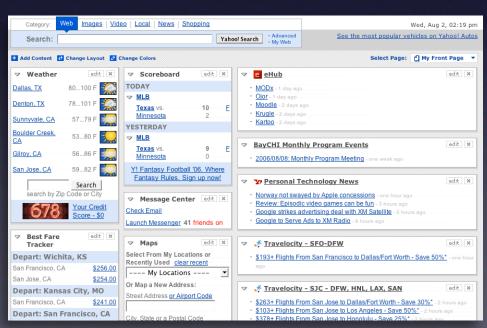


pattern. drag & drop.

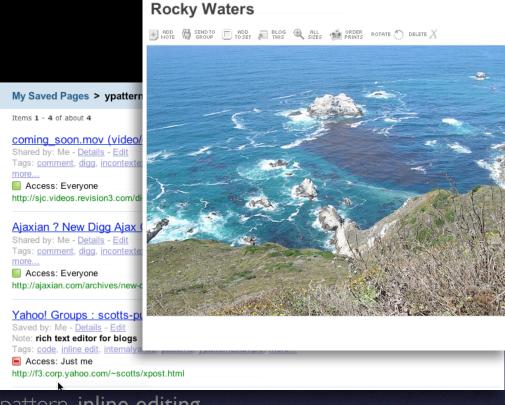


pattern. inline editing.





pattern. drag & drop.

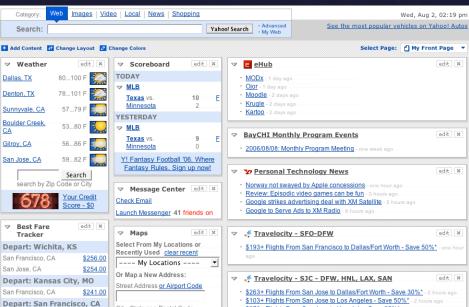


pattern. inline editing.

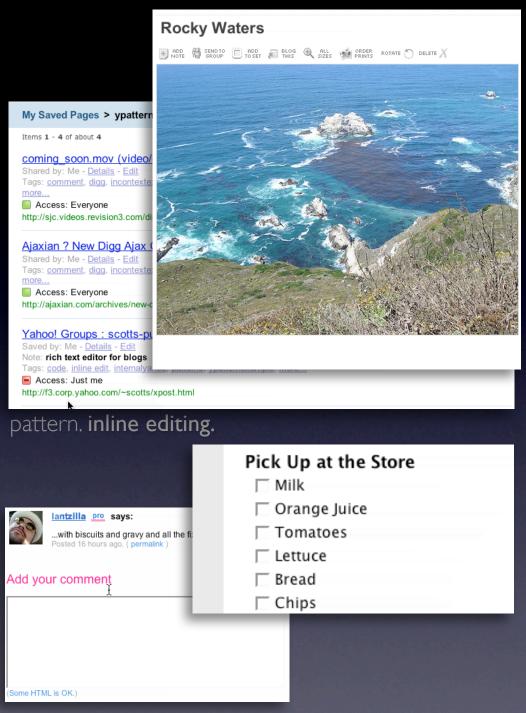


pattern. in-context tools.





pattern. drag & drop.



pattern. in-context tools.

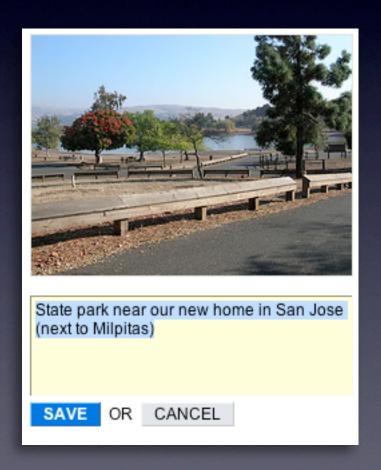
15

### make it direct

Inline Editing
Use inline forms where possible
Use lightweight popups for ancillary
information

### make it direct

**Inline Editing**Use inline forms where possible Use lightweight popups for ancillary information



### **Inline Editing**

Use inline forms where possible Use lightweight popups for ancillary information



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

SAVE

OF

CANCEL

#### My Saved Pages > ypatternexample

Items 1 - 4 of about 4

coming\_soon.mov (video/quicktime Object)

Shared by: Me - Details - Edit

Tags: comment, digg, incontextexpandpatte..., inlinepageeditpatter..., ratinganobjectpatter..., more...

Access: Everyone

http://sjc.videos.revision3.com/diggnation/coming\_soon.mov

### Ajaxian ? New Digg Ajax Comment System

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Tags: comment, digg, incontextexpandpatte..., inlinepageeditpatter..., ratinganobjectpatter..., more...

Access: Everyone

http://ajaxian.com/archives/new-digg-ajax-comment-system - My cached copy

### Yahoo! Groups : scotts-pub Post Message

Saved by: Me - Details - Edit

Note: rich text editor for blogs

Tags: code, inline edit, internalyahoo, patterns, ypatternexample, more...

Access: Just me

http://f3.corp.yahoo.com/~scotts/xpost.html

Sort by: Date Saved | Title | URL

Shared at 4:49 PM PST Email - IM - Delete

Shared at 4:49 PM PST

Saved on February 16, 2006 Email - IM - Delete

Email - IM - Delete

#### **Inline Editing**

Use inline forms where possible Use lightweight popups for ancillary information



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

SAVE

OF

CANCEL

#### Scheduled Items

Wed 11/23/05 (day 1) - Yosemite Natl Pk, Yosemite National Park



From \$97.00 to \$146.00 per night. •Reserve Now

S559-252-4848

Yosemite Natl Pk, CA 95389

United States

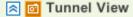
In the valley of Yosemite National Park

Notes: [ Eak ]

Tags: [ Edk ]

Dates: [ Add ]

Wed, Nov 23rd - Fri, Nov 25th [ Ed & ]



Wawona Rd

Yosemite National Park, CA 95389

United States

This breathtaking and spectacular sight is located on Highway 41 just north of Wawona, and just south of the Valley Floor. This popular spot

is the most photographed view of the valley. It received ....



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#### Ajaxian ? New Digg Ajax Comment System

Shared by: Me - Details - Edit

Tags: comment, digg, incontextexpandpatte..., inlinepageeditpatter..., ratinganobjectpatter...,

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Items 1 -

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http://ajaxian.com/archives/new-digg-ajax-comment-system - My cached copy

#### Yahoo! Groups : scotts-pub Post Message

Saved by: Me - Details - Edit
Note: rich text editor for blogs

Tags: code, inline edit, internalyahoo, patterns, ypatternexample, more...

Access: Just me

http://f3.corp.yahoo.com/~scotts/xpost.html

Saved on February 16, 2006 Email - IM - Delete

#### **In-context tools**

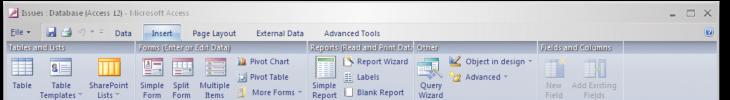
Same as context menus Only good for single objects Can actually slow you down



**In-context tools** 

Same as context menus Only good for single objects Can actually slow you down





Open Explore

Search...

make it direct

#### **In-context tools**

Same as context menus
Only good for single objects
Can actually slow you down

Or Ca

# Sharing and Security... Scan with AVG Free Format... Eject Cut Copy Create Shortcut Rename Properties Complete: Internet Strategy Group Talk − Webcast − Sep. 14 (Th) Try for webex; set up webex experiement Add an Item



#### **In-context tools**

Same as context menus
Only good for single objects
Can actually slow you down

Explore
Search...

Sharing and Security...
Scan with AVG Free

Format...
Eject

Cut
Copy

Create Shortcut
Rename

**O**pen

Properties

#### Complete: Internet Strategy Group Talk - Webcast - Sep. 14 (Th)

Add an Item





#### **In-context tools**

Same as context menus
Only good for single objects
Can actually slow you down

Complete: Internet Strategy Group Talk - Webcast - Sep. 14 (Th)

Add an Item



Open Explore

Search...

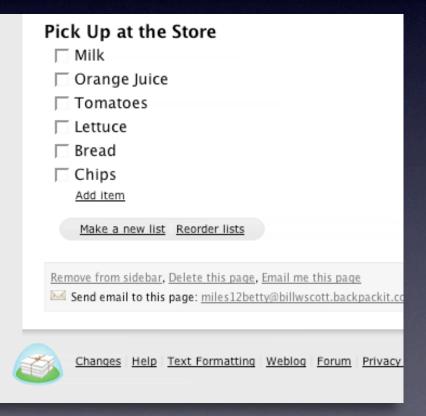
Form<u>a</u>t... Eject

Create <u>S</u>hortcut Rena<u>m</u>e

Properties

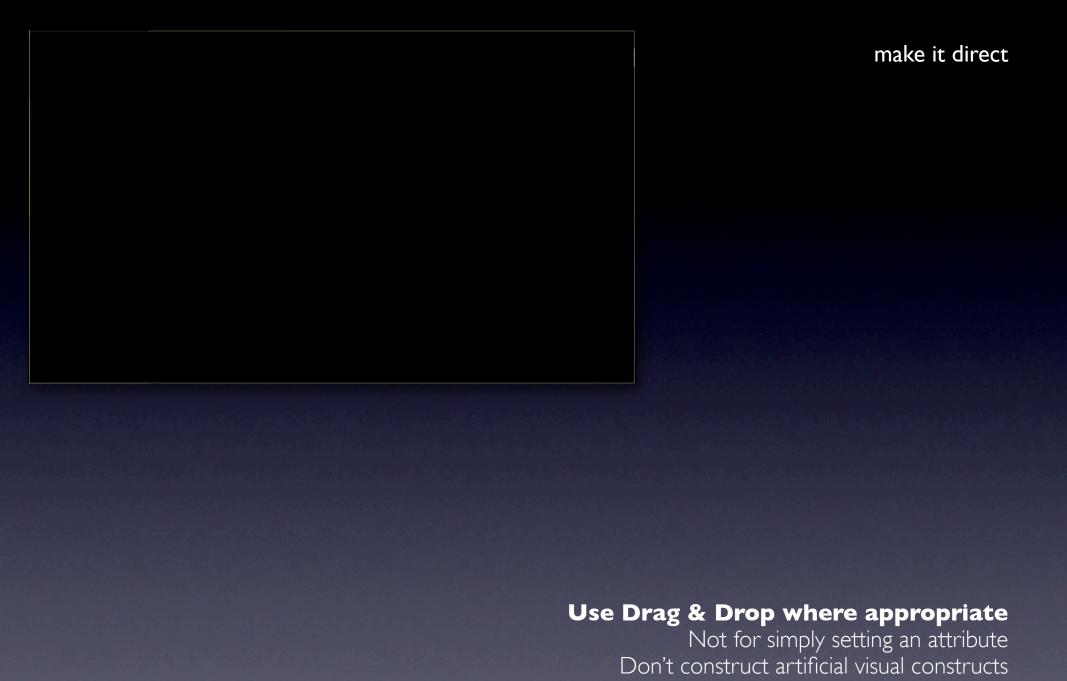
Cu<u>t</u> ⊆opy

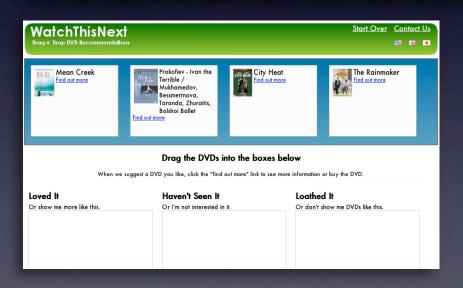
Sharing and Security... Scan with AVG Free



#### Use Drag & Drop where appropriate

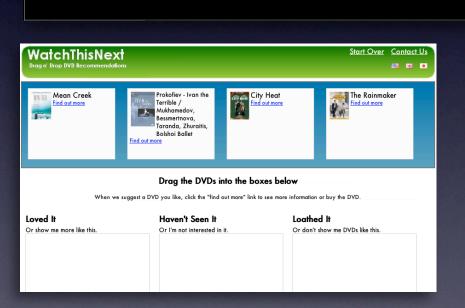
Not for simply setting an attribute Don't construct artificial visual constructs

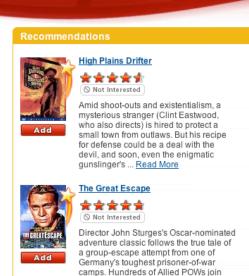




## Use Drag & Drop where appropriate Not for simply setting an attribute

Don't construct artificial visual constructs

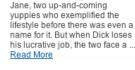




**Classics** 



More Recommendations >





The crown princes of British comedy are at it

again -- this time, in a send-up of the life and times of Jesus Christ Perhaps the most controversial

#### Use Drag & Drop where appropriate

Roger "Big X" Bartlett (Richard Attenborough), Danny "The ... Read More

Not for simply setting an attribute Don't construct artificial visual constructs

#### Use Drag & Drop where appropriate

Don't construct artificial visual constructs

Good for layout changes/re-organizing

Pick Up at the Store

CRAG Chips
CRAG Milk
CRAG Bread
CRAG Orange Juice2
CRAG Tomatoes
CRAG Lettuce

make it direct

#### Use Drag & Drop where appropriate

Don't construct artificial visual constructs

Good for layout changes/re-organizing

#### Pick Up at the Store

- RAG 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.

make it direct

#### Use Drag & Drop where appropriate

Not for simply setting an attribute Don't construct artificial visual constructs
Good for layout changes/re-organizing

#### Pick Up at the Store

- RAG Chips
- DRAG Milk
- □ DRAG Bread
- ☐ ORAG 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.

DVDs in Your Queue					Update Your Queue		
Priority	Movie Title	Star Rating	MPAA	Genre	Availability	Remove	Move to Top
1	SCTV Network 90: Vol. 2: Disc 1	****	NR	Television	Now		<b>x</b>
2	SCTV Network 90: Vol. 2: Disc 3	Series Disc	NR	Television	Now		<b>X</b>
3	SCTV Network 90: Vol. 2: Disc 4	Series Disc	NR.	Television	Now	Г	<b>X</b>
4	The Truman Show	<b>***</b>	PG	Comedy	Now		<b>X</b>
5	SCTV Network 90: Vol. 2: Disc 5	Series Disc	NR.	Television	Now		<b>T</b>
6	Take the Money and Run	****	R	Comedy	Now		<b>T</b>
7	The Gathering Storm	<b>***</b>	NR.	Drama	Now		<b>X</b>

#### Use Drag & Drop where appropriate

Don't construct artificial visual constructs

Good for layout changes/re-organizing

#### Pick Up at the Store

- RAG Chips
- DRAG Milk
- DRAG Bread
- ☐ DRAG Orange Juice2

**DVDs in Your Queue** 

SCTV Network 90: Vol. 2: Disc 1

SCTV Network 90: Vol. 2: Disc 3

SCTV Network 90: Vol. 2: Disc 4

SCTV Network 90: Vol. 2: Disc 5

Take the Money and Run

The Gathering Storm

The Truman Show

☐ DRAG Tomatoes

Movie Title

Priority

3

4

6

☐ 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.

Star Rating

Series Disc

Series Disc

Series Disc

MPAA

Genre

Television

Television

Television

Comedy

#### make it direct



## Use Drag & Drop where appropriate

 $\overline{\mathbf{A}}$ 

Move to

Top

lacksquare

Update Your Queue

Remove

Availability

Now

Now

Now

Good for layout changes/re-organizing



Kilauea

Mauna Loa

**Earthquakes** 

Other Volcanoes

Volcanio Hazards

Types
Lava
Zones

About HVO

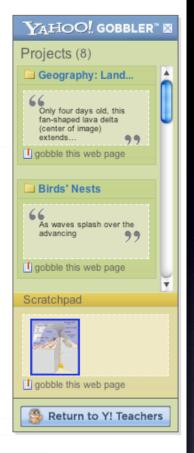
#### Volcanic Hazards

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



Photograph by C. Heliker on November 12, 1992.

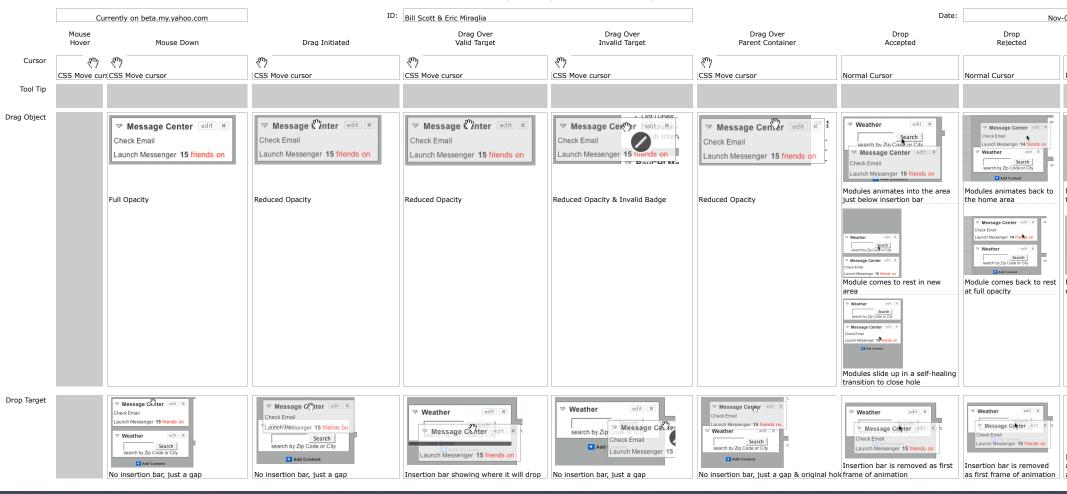
Only four days old, this fan-shaped lava delta (center of image) extends about 200 m into the ocean on the southeast coast of Kilauea Volcano, Hawai`i. The diffuse plume of white steam at the leading edge of the delta indicates that several small lava flows are pouring into the ocean. Countless deltas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



#### Use Drag & Drop where appropriate

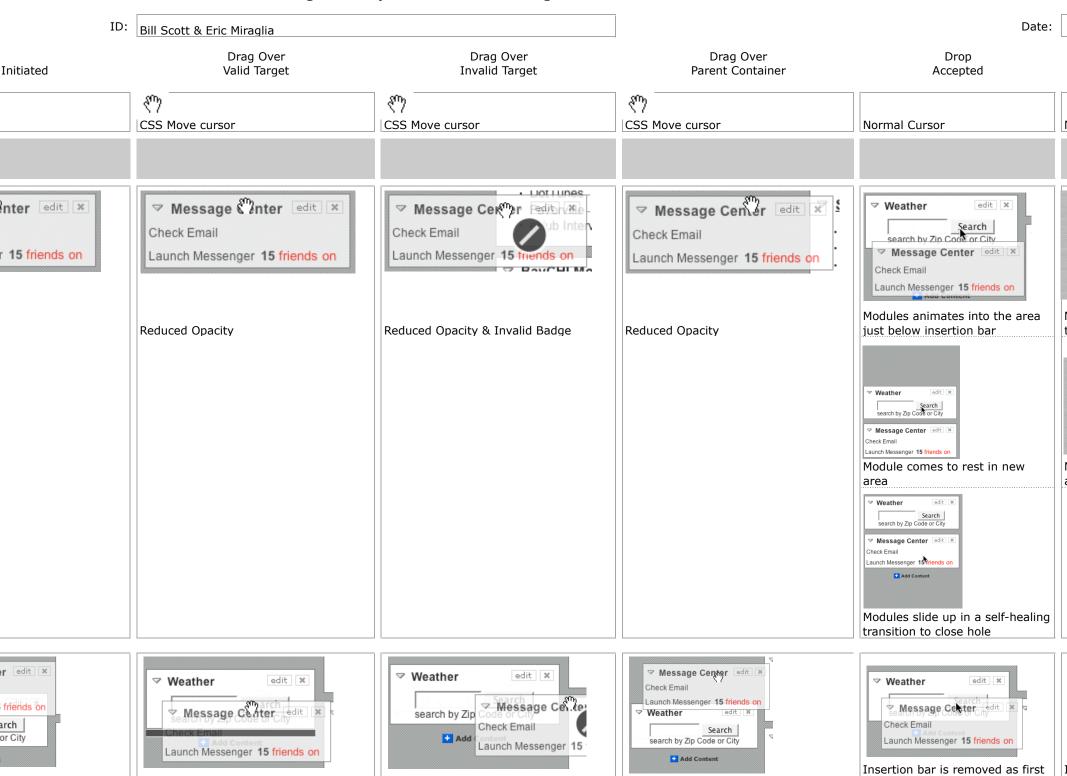
Not for simply setting an attribute Don't construct artificial visual constructs Good for layout changes/re-organizing Good for grabbing items

#### **Drag and Drop Modules - Interesting Moments Grid**



Take care of the interesting moments

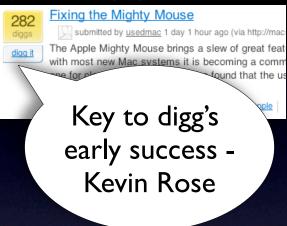
#### **Drag and Drop Modules - Interesting Moments Grid**



#### pattern. in page action.

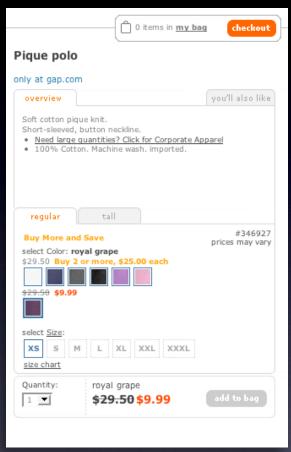


#### pattern. in page action.



#### pattern. in page action.

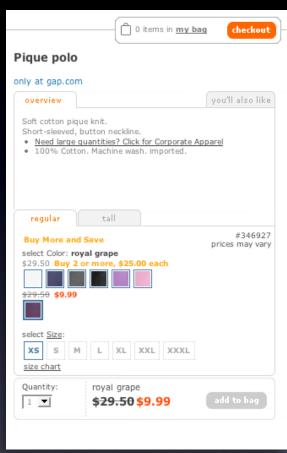




pattern. remembered collections.

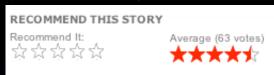
#### pattern. in page action.





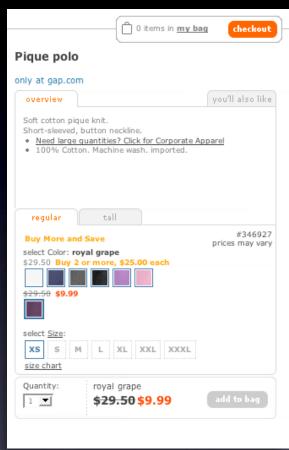
pattern. remembered collections.

pattern. rating an object.



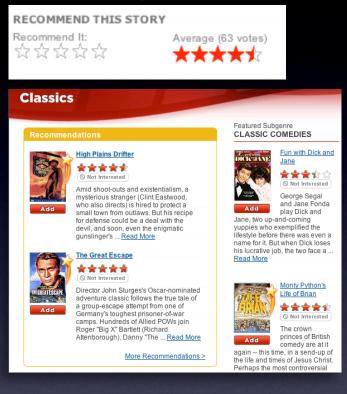
#### pattern. in page action.





pattern. remembered collections.

pattern. rating an object.

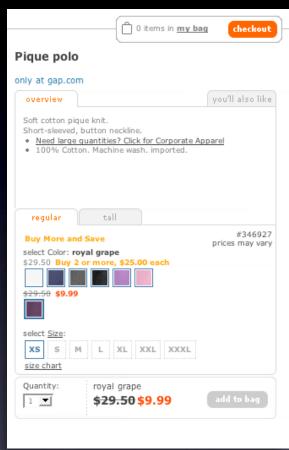




pattern. remembered collections.

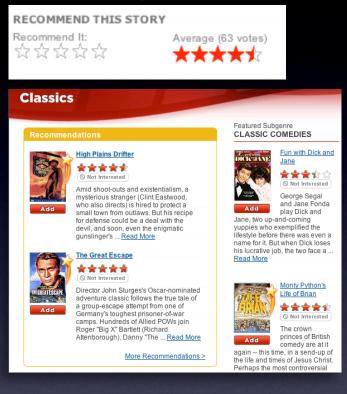
#### pattern. in page action.





pattern. remembered collections.

pattern. rating an object.

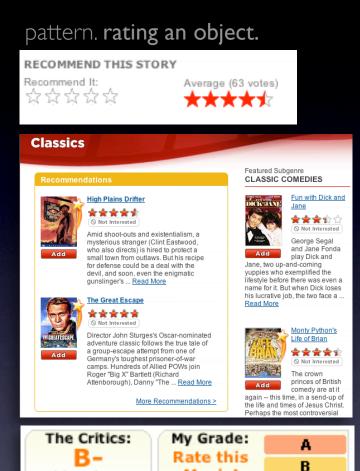


#### pattern. in page action.





pattern. remembered collections.



Movie!

Select grade

to the right

write a review

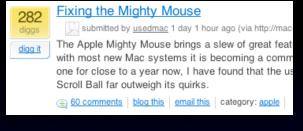
D

14 reviews

Yahoo! Users:

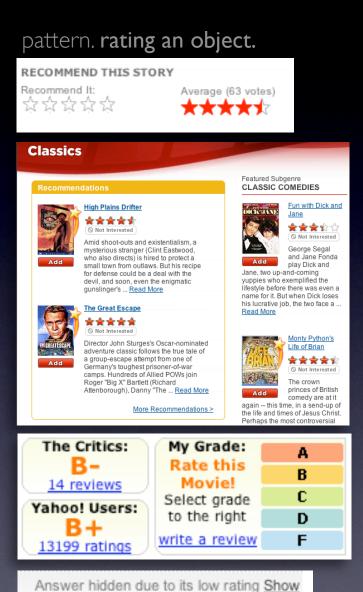
13199 ratings

#### pattern. in page action.





pattern. remembered collections.



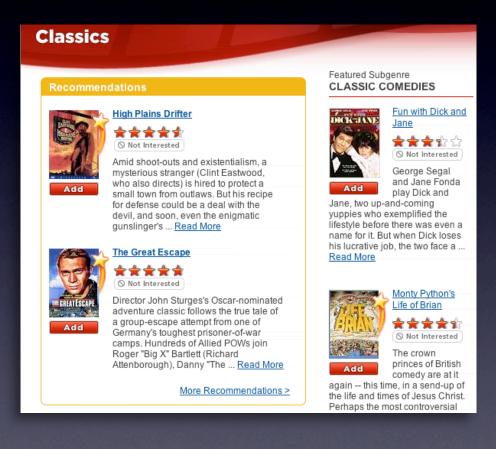
Total rating: -16

#### Remove the "pain points"

Shorten the path
Keep actions immediate and light
Use hover, blur, focus; avoid heavy events

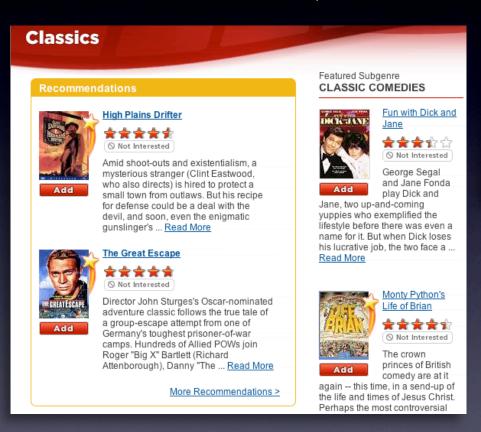
#### Remove the "pain points"

Shorten the path
Keep actions immediate and light
Use hover, blur, focus; avoid heavy events



#### Remove the "pain points"

Shorten the path Keep actions immediate and light Use hover, blur, focus; avoid heavy events





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.

(apple | 60 comments | blog this | email this | category: apple

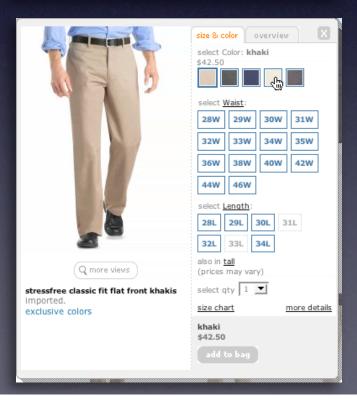
## **Design for engagement**Use invitations & feedback

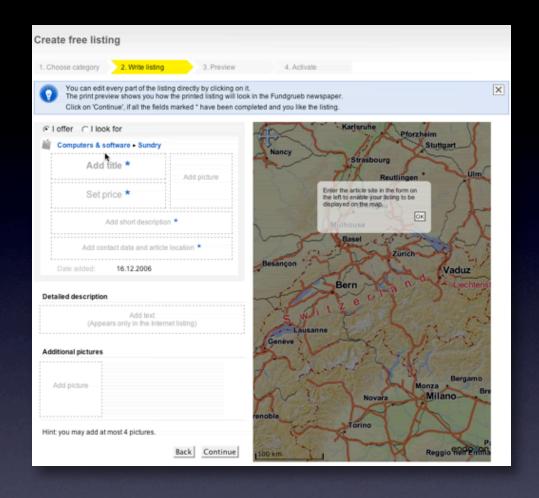
Use invitations & feedback
Treat it like an impusle aisle
Do it in context

#### Design for engagement

Use invitations & feedback Treat it like an impusle aisle Do it in context







#### **Design for engagement**

Use invitations & feedback Treat it like an impusle aisle Do it in context



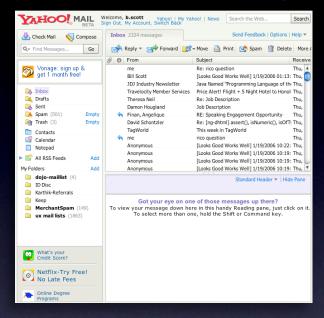


## principle. cross borders reluctantly.



## principle. cross borders reluctantly.

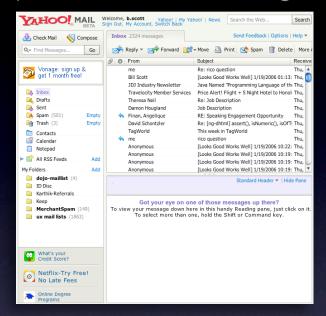
#### pattern. on-demand scrolling.



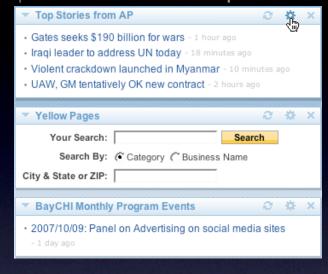
#### pattern. in-context expand.



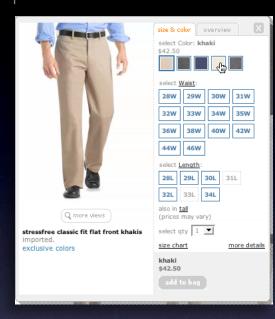
#### pattern. on-demand scrolling.



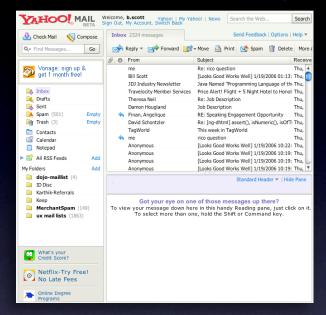
#### pattern. in-context expand.



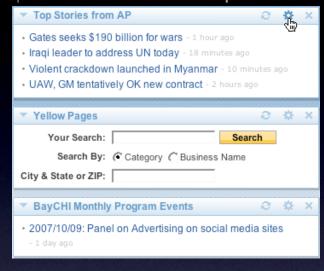
#### pattern. inline assistant.



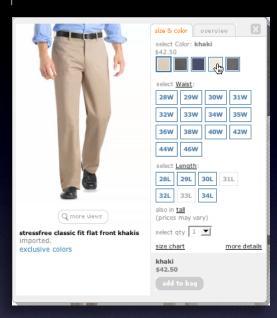
#### pattern. on-demand scrolling.



#### pattern. in-context expand.



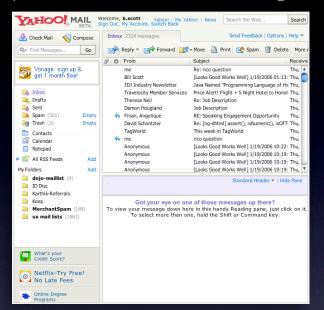
#### pattern. inline assistant.



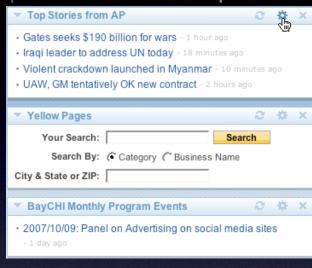
#### pattern. hover details.



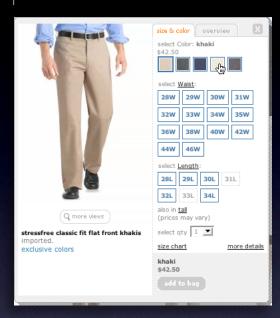
#### pattern. on-demand scrolling.

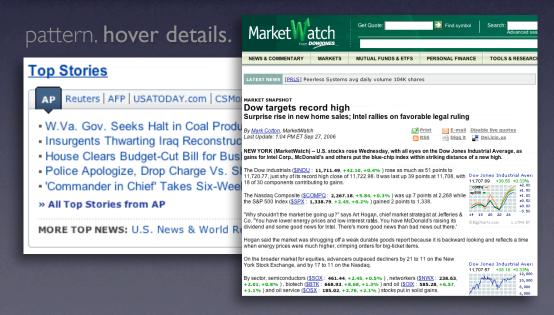


#### pattern. in-context expand.

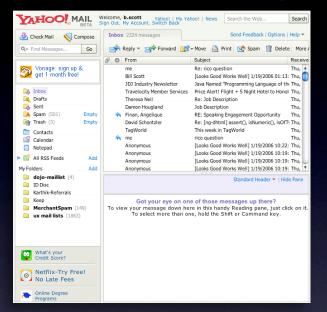


#### pattern. inline assistant.

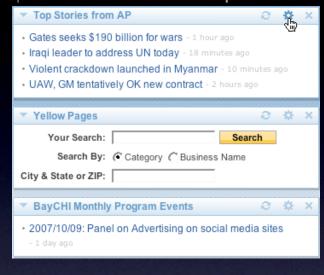




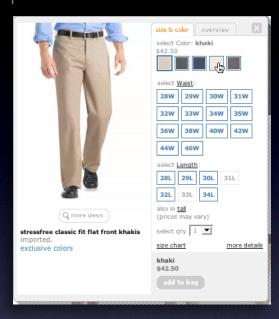
#### pattern. on-demand scrolling.



#### pattern, in-context expand.

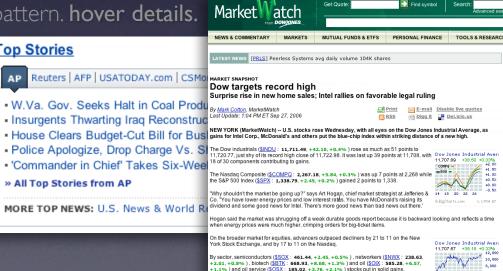


#### pattern. inline assistant.

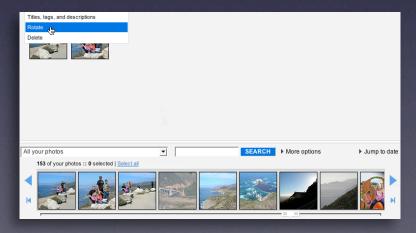


#### pattern. hover details.



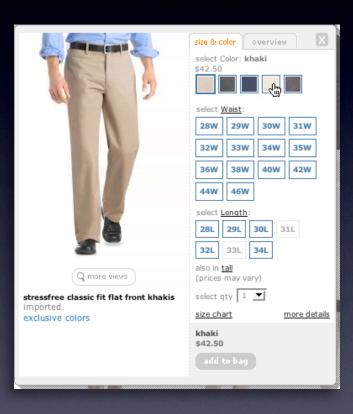


#### pattern. lightweight popup + lightbox.

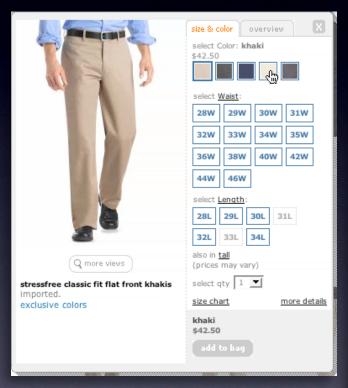


### **Rethink process flows**

#### **Rethink process flows**

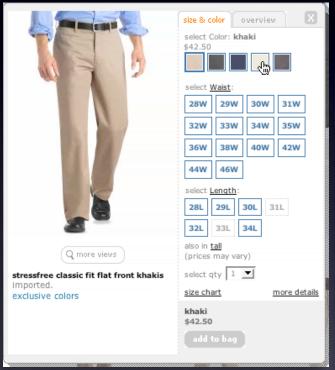


#### **Rethink process flows**

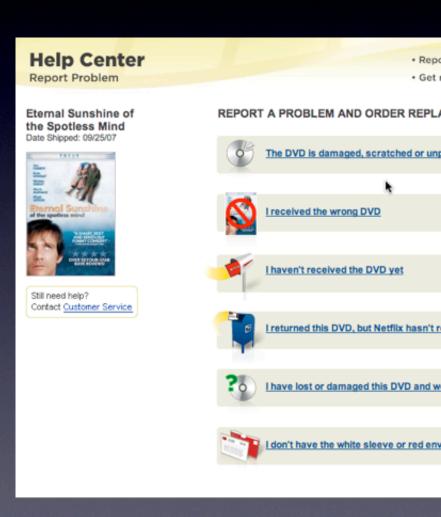




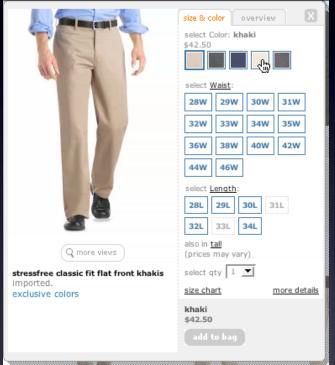
#### **Rethink process flows**



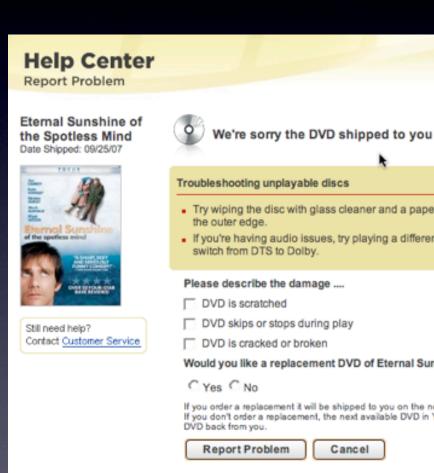




#### **Rethink process flows**





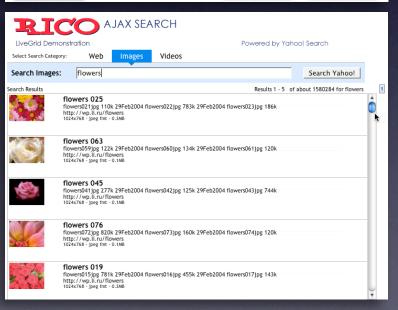


### **Re-think paging**

Photo Click for info	Price	Bd/Ba Sq Ft	Address and Area Presented By	MLS # (Click for info)	More Photos (Click for view)	Virtual Tours (Click for view)	
	\$1,750,000 Single Res	6+, 4+ 3700	14080 BEAR CREEK RD Boulder Creek, CA 95006 (San Lorenzo Valley) Schwarzbach Associates	<u>550701</u>	MULTI	TOUR	
	\$1,995,000 Single Res	6+, 4+ 5675	17617 MOUNTAIN CHARLIE RD LOS GATOS, CA 95033 (Unincorporated Los Gatos Mins) Almaden Oaks Realtors	608215	MULTI		
	\$2,286,000 Single Res	5, 4+ 4800	20930 PANORAMA DR Los Gatos, CA 95033 (Los Gatos Mtns) Alain Pinel Realtors	604907	MULTI	TOUR	
	\$2,750,000 Single Res	5, 4+ 5000	155 LARITA DR Ben Lomond, CA 95005 (San Lorenzo Valley) Network Alliance Real Estate	616947	MULTI		
	\$2,777,000 Single Res	5, 4+ 5819	777 HAPPY VALLEY RD Scotts Valley, CA 95065 (Scotts Valley) Linda Burroughs Real Estate	616474	MULTI	TOUR	
New Search << Previous					Next >>		

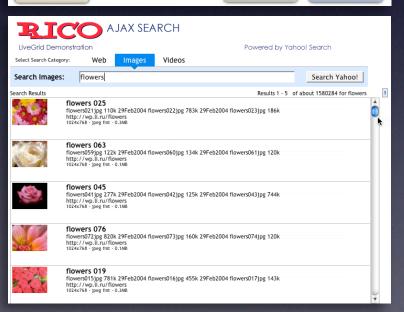
### **Re-think paging**

Photo Click for info	Price	Bd/Ba Sq Ft	Address and Area Presented By	MLS # (Click for info)	More Photos (Click for view)	Virtual Tours (Click for view)
	\$1,750,000 Single Res	6+, 4+ 3700	14080 BEAR CREEK RD Boulder Creek, CA 95006 (San Lorenzo Valley) Schwarzbach Associates	<u>550701</u>	MULTI	TOUR
HER?	\$1,995,000 Single Res	6+, 4+ 5675	17617 MOUNTAIN CHARLIE RD LOS GATOS, CA 95033 (Unincorporated Los Gatos Mitrs) Almaden Oaks Realtors	608215	MULTI	
	\$2,286,000 Single Res	5, 4+ 4800	20930 PANORAMA DR Los Gatos, CA 95033 (Los Gatos Mtns) Alain Pinel Realtors	604907	MULTI	TOUR
-	\$2,750,000 Single Res	5, 4+ 5000	155 LARITA DR Ben Lomond, CA 95005 (San Lorenzo Valley) Network Alliance Real Estate	616947	MULTI	
	\$2,777,000 Single Res	5, 4+ 5819	777 HAPPY VALLEY RD Scotts Valley, CA 95065 (Scotts Valley) Linda Burroughs Real Estate	616474	MULTI	TOUR
New Search << Previous Next >>						



### Re-think paging

Photo Click for info	Price	Bd/Ba Sq Ft	Address and Area Presented By	MLS # (Click for info)	More Photos (Click for view)	Virtual Tours (Click for view)
	\$1,750,000 Single Res	6+, 4+ 3700	14080 BEAR CREEK RD Boulder Creek, CA 95006 (San Lorenzo Valley) Schwarzbach Associates	<u>550701</u>	MULTI	TOUR
A PROPERTY.	\$1,995,000 Single Res	6+, 4+ 5675	17617 MOUNTAIN CHARLIE RD LOS GATOS, CA 95033 (Unincorporated Los Gatos Mins) Almaden Oaks Realtors	608215	MULTI	
	\$2,286,000 Single Res	5, 4+ 4800	20930 PANORAMA DR Los Gatos, CA 95033 (Los Gatos Mtns) Alain Pinel Realtors	604907	MULTI	TOUR
	\$2,750,000 Single Res	5, 4+ 5000	155 LARITA DR Ben Lomond, CA 95005 (San Lorenzo Valley) Network Alliance Real Estate	616947	MULTI	
	\$2,777,000 Single Res	5, 4+ 5819	777 HAPPY VALLEY RD Scotts Valley, CA 95065 (Scotts Valley) Linda Burroughs Real Estate	616474	MULTI	TOUR
New Search Next >>						



#### Re-think paging

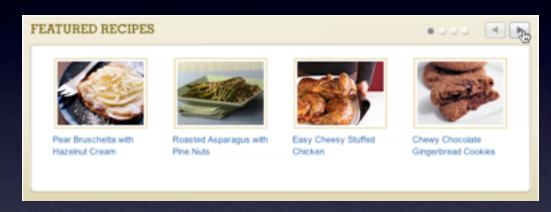
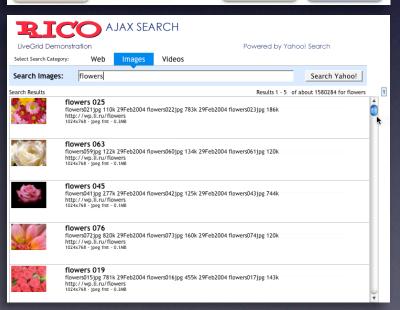


Photo Click for info	Price	Bd/Ba Sq Ft	Address and Area Presented By	MLS # (Click for info)	More Photos (Click for view)	Virtual Tours (Click for view)
	\$1,750,000 Single Res	6+, 4+ 3700	14080 BEAR CREEK RD Boulder Creek, CA 95006 (San Lorenzo Valley) Schwarzbach Associates	<u>550701</u>	MULTI	TOUR
	\$1,995,000 Single Res	6+, 4+ 5675	17617 MOUNTAIN CHARLIE RD LOS GATOS, CA 95033 (Unincorporated Los Gatos Mins) Almaden Oaks Realtors	608215	MULTI	
	\$2,286,000 Single Res	5, 4+ 4800	20930 PANORAMA DR Los Gatos, CA 95033 (Los Gatos Mtns) Alain Pinel Realtors	604907	MULTI	TOUR
-	\$2,750,000 Single Res	5, 4+ 5000	155 LARITA DR Ben Lomond, CA 95005 (San Lorenzo Valley) Network Alliance Real Estate	616947	MULTI	
	\$2,777,000 Single Res	5, 4+ 5819	777 HAPPY VALLEY RD Scotts Valley, CA 95065 (Scotts Valley) Linda Burroughs Real Estate	616474	MULTI	TOUR
New Search << Previous Next >>						



#### Re-think paging

Use scrolling for "owned" data Watch out for dual scroll bar issue Hybrid of paging & scrolling



Lonely elephants baffled by post-Katrina life
Scientists study gorilla habitat
Some birds stay aloft up to 10 years
Inflation soaring high
Fed wants banks to come into compliance
Life after death - is there proof?

\_

#### **Use Overlays**

For more information Replace page transition When editing an individual, more complex item Be symmetrical Try not to disturb the page

Bill, the following movies were chosen based on your interest in: Animal Crackers
Something the Lord Made
X2: X-Men United



#### Monkey Business



One of the Marx Brothers' funniest movies, the title of the film says it all as Groucho, Harpo,

Chico and Zeppo stow away on a luxury liner. Before ... Read More



- just **\$5.9**
- FREE shipping
- original artwork
- hardcover case

Shop now for o previously viewed title low as \$5

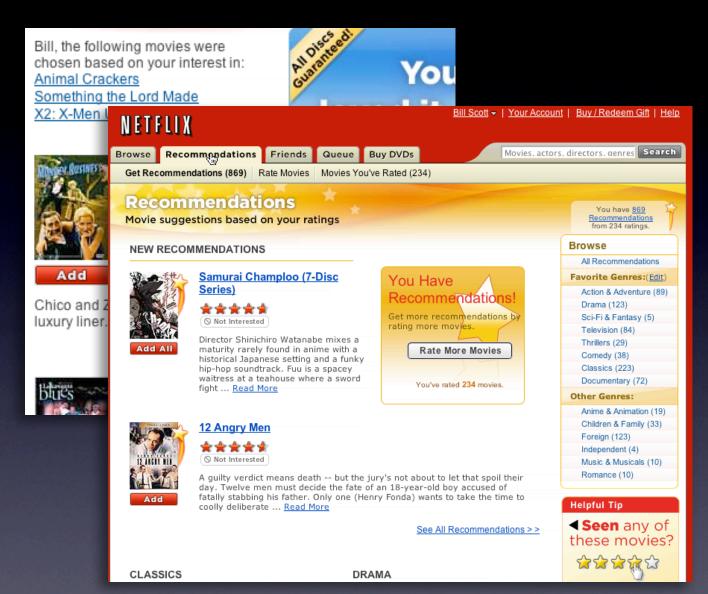


Lackawanna Blues

**Rate Your** 

### **Use Overlays**

For more information Replace page transition When editing an individual, more complex item Be symmetrical Try not to disturb the page



#### **Use Overlays**

For more information Replace page transition

When editing an individual, more complex item

Be symmetrical

Try not to disturb the page

Bill, the following movies were chosen based on your interest in Animal Crackers

Something the Lord Made

X2: X-Men L

NETFLIX

Browse Recommondation Get Recommendations (869

Not Into

historical fight ... Re



Micah Laaker Name:

Networks: Yahoo

Silicon Valley, CA

Details: You have worked at Yahoo! since 2005.

[ edit details.]

Micah is cruisin' for a snoozin.' Status:

Send Message

Poke Micah!

View Friends

Remove Friend

Add

Chico and 2 luxury liner. Recommend

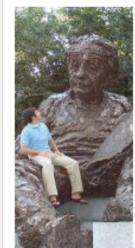
Movie suggestions bas

NEW RECOMMENDAT



Samura Series)

Director S maturity r hip-hop st waitress a



Mahmoud Lababidi Name:

Networks: Washington, DC UF Alum '06

George Mason Grad Student '09

Google

How do you know Mahmoud Lababidi? Details:

Send Message

Poke Mahmoud!

View Friends

Remove Friend



12 Angr

A guilty verdict means death -- but the jury's not about to let that spoil their day. Twelve men must decide the fate of an 18-year-old boy accused of fatally stabbing his father. Only one (Henry Fonda) wants to take the time to coolly deliberate ... Read More

DRAMA

See All Recommendations > >

Music & Musicals (10) Romance (10)

Helpful Tip

**Seen** any of these movies?



**Use Overlays** 

For more information Replace page transition

When editing an individual, more complex item Be symmetrical Try not to disturb the page



CLASSICS



[Sign Out, My Account]



Home



Prints & Gifts



View Cart



Settings



Help ▼

Search My Tag









My Friends' Photos

### All My Photos

Slideshow Cr

Create -

Share -

Edit -

Prints & Gifts -

Drag photos into this tray and choose a task above.

Sort by: Date -







Underneath



View from the Top



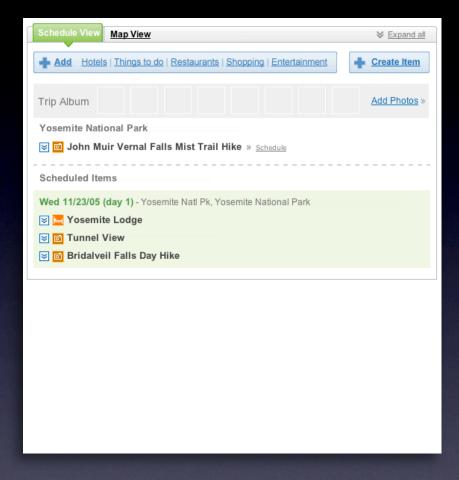




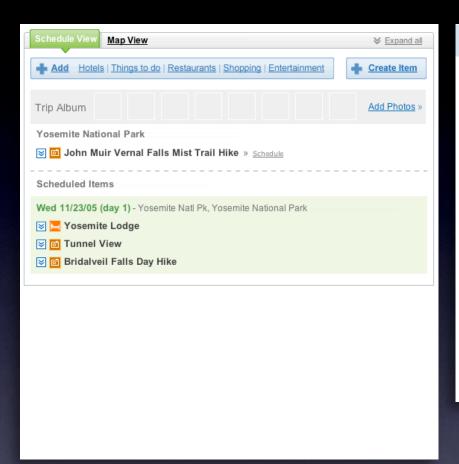




## Use in-context expands



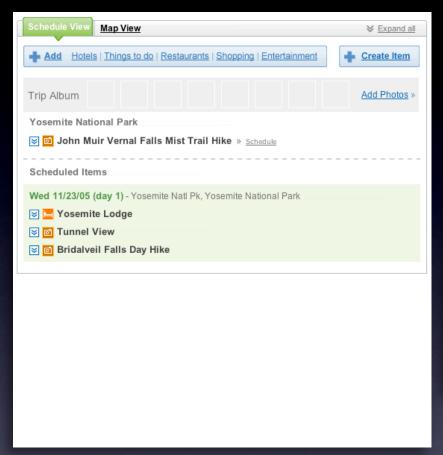
#### Use in-context expands



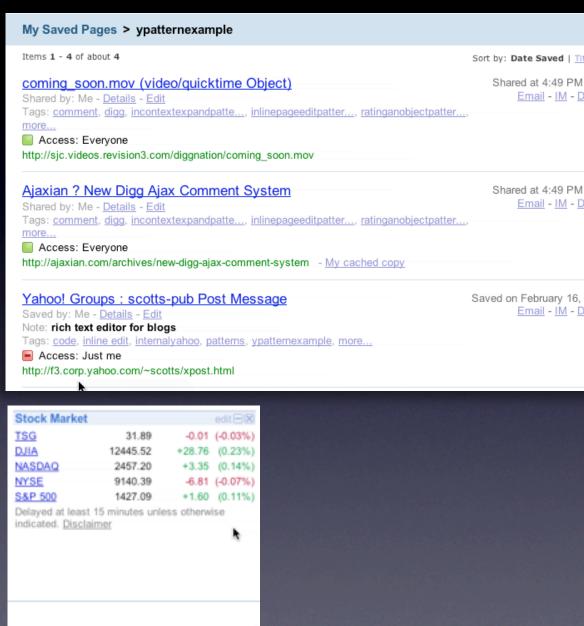
#### Items 1 - 4 of about 4 Sort by: Date Saved | Ti coming soon.mov (video/quicktime Object) Shared at 4:49 PM Email - IM - D Shared by: Me - Details - Edit Tags: comment, digg, incontextexpandpatte..., inlinepageeditpatter..., ratinganobjectpatter..., more... Access: Everyone http://sjc.videos.revision3.com/diggnation/coming\_soon.mov Ajaxian ? New Digg Ajax Comment System Shared at 4:49 PM Email - IM - D Shared by: Me - Details - Edit Tags: comment, digg, incontextexpandpatte..., inlinepageeditpatter..., ratinganobjectpatter..., more... Access: Everyone http://ajaxian.com/archives/new-digg-ajax-comment-system - My cached copy Yahoo! Groups: scotts-pub Post Message Saved on February 16, Email - IM - D Saved by: Me - Details - Edit Note: rich text editor for blogs Tags: code, inline edit, internalyahoo, patterns, ypatternexample, more... Access: Just me http://f3.corp.yahoo.com/~scotts/xpost.html

My Saved Pages > ypatternexample

#### Use in-context expands



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



### Use real-estate creatively

Use slideouts
Use in-place zoom
Remember the backstage

#### Use real-estate creatively

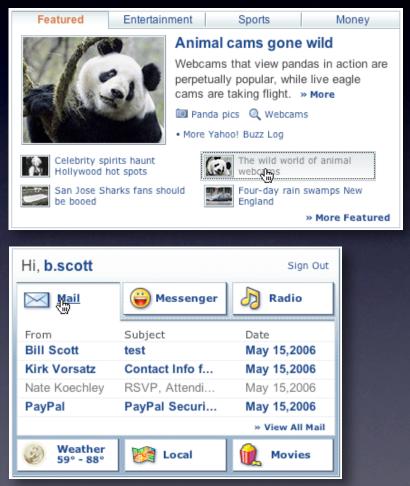
Use slideouts
Use in-place zoom
Remember the backstage





#### Use real-estate creatively

Use slideouts
Use in-place zoom
Remember the backstage

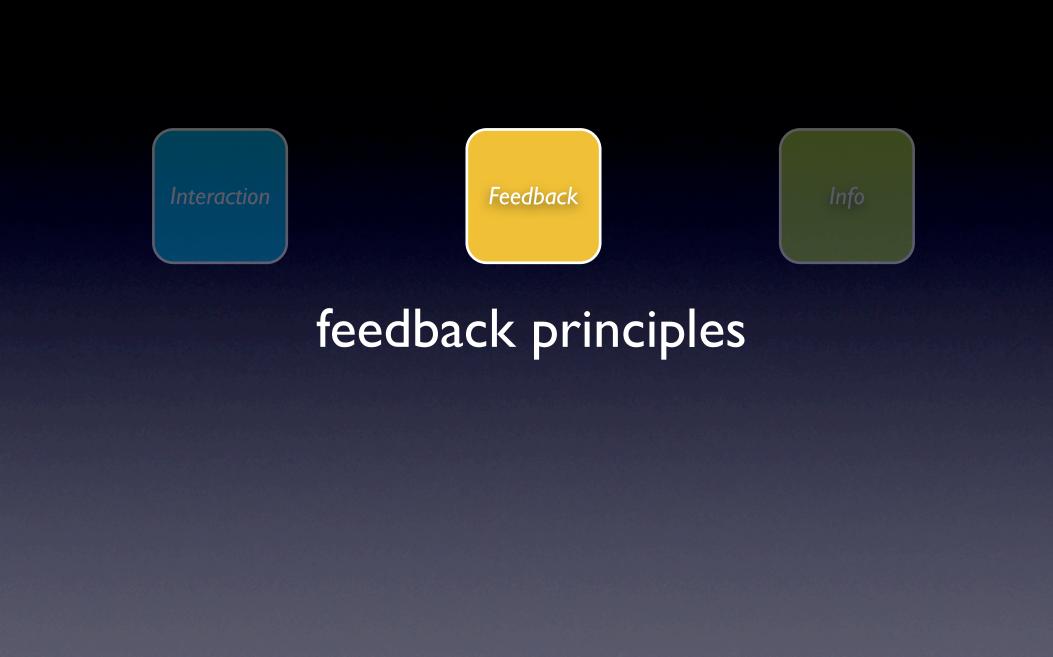


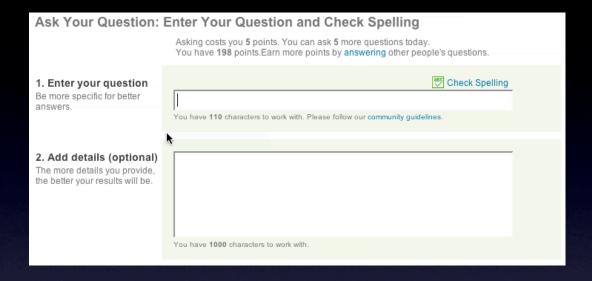


# key principle



prefer direct, lightweight, in-page interaction

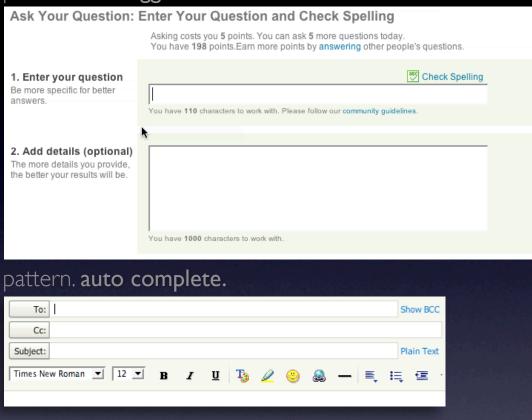




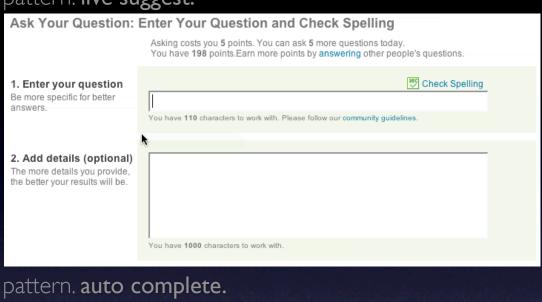
### pattern. live suggest.



#### pattern. live suggest.



#### pattern. live suggest.

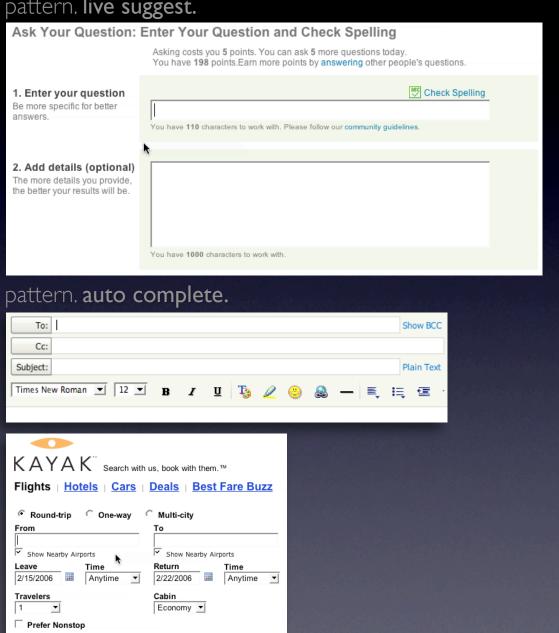




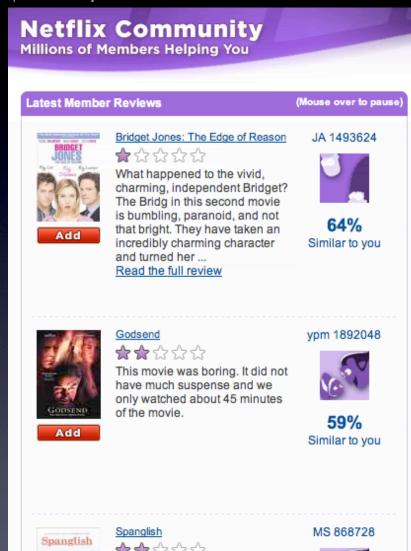


#### pattern. live suggest.

Search multiple sites for hundreds of airlines.



pattern. periodic refresh.



#### pattern. live suggest. Ask Your Question: Enter Your Question and Check Spelling Asking costs you 5 points. You can ask 5 more questions today You have 198 points. Earn more points by answering other people's questions. Check Spelling 1. Enter your question Be more specific for better answers. You have 110 characters to work with. Please follow our community guidelines. 2. Add details (optional) The more details you provide, the better your results will be. You have 1000 characters to work with. pattern. auto complete. To: Show BCC Cc: Plain Text Subject: Times New Roman ▼ 12 ▼ pattern. busy indicator. KAYAK search with us, book with them.™ Check Mail Flights | Hotels | Cars | Deals | Best Fare Buzz Compose Round-trip One-way ☐ Multi-city Q from: darren Stop From Show Nearby Airports

Return

Cabin Economy 💌

2/22/2006

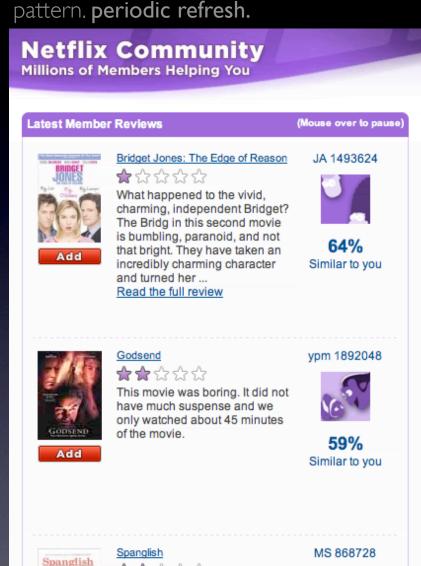
Leave

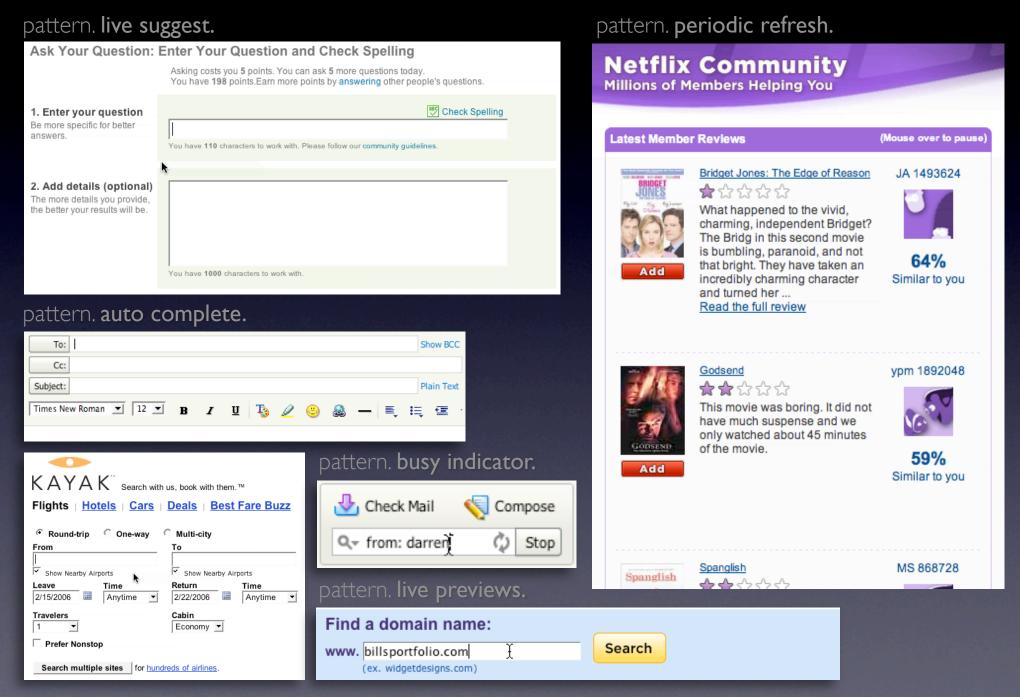
2/15/2006 Travelers

☐ Prefer Nonstop

Time

Search multiple sites for hundreds of airlines.



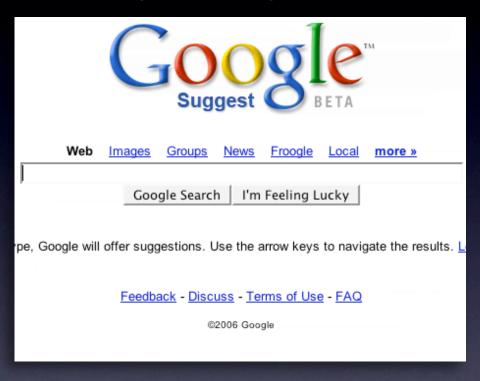


give live feedback

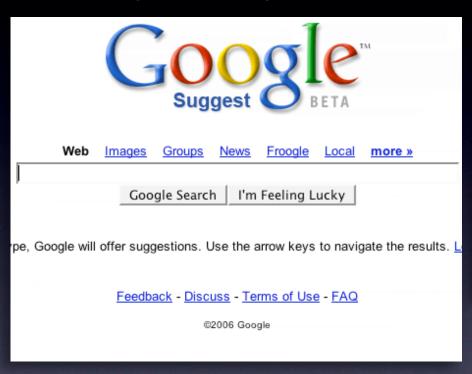
## Keep the goal in mind

Design for relevancy Is it narrowing or distracting

Design for relevancy Is it narrowing or distracting



Design for relevancy ls it narrowing or distracting





#### 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

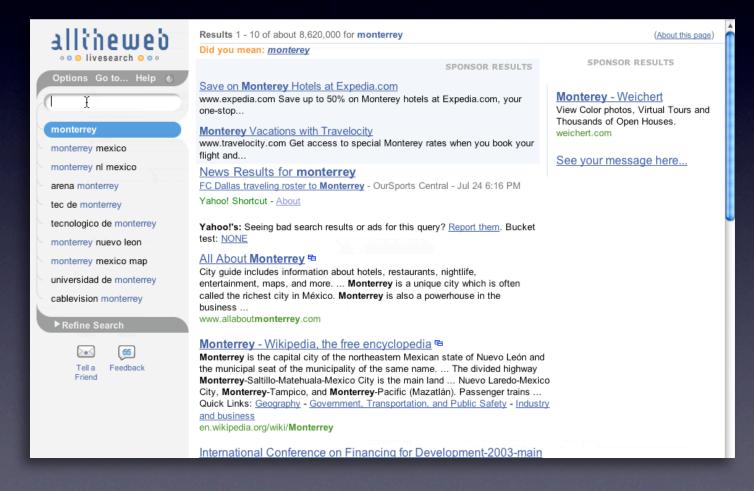
- · 22 5th ave new york ny
- · san francisco coffee shops
- dmv

Design for relevancy

Is it narrowing or distracting?
Use feedback to boost confidence
Let the user iterate where possible

Design for relevancy

Is it narrowing or distracting?
Use feedback to boost confidence
Let the user iterate where possible



Shape user perception

Make time pass faster

Make application feel more responsive

Shape user perception

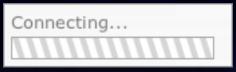
Make time pass faster

Make application feel more responsive

Connecting	

## Shape user perception

Make time pass faster Make application feel more responsive





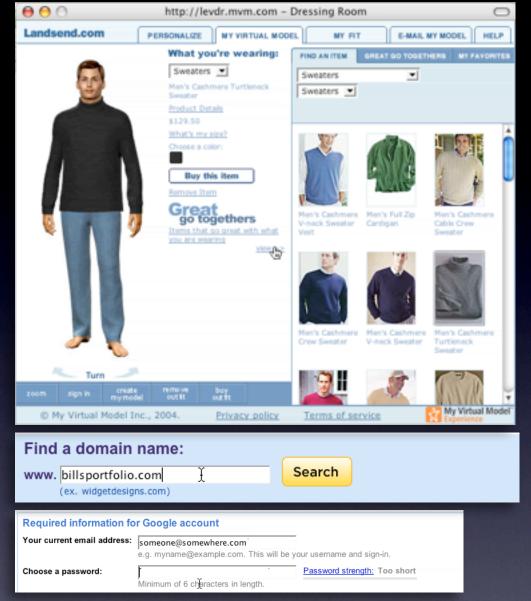
## **Prevent errors before-hand**

Required information fo	r Google account	
	someone@somewhere.com e.g. myname@example.com. This will be y	our uporname and sign in
Choose a password:	e.g. myname@example.com. This will be y	Password strength: Too short
	Minimum of 6 characters in length.	

## **Prevent errors before-hand**

Find a domain www. billsportfolio (ex. widgetdesig	o.com }
Required information for Your current email address:  Choose a password:	

## **Prevent errors before-hand**

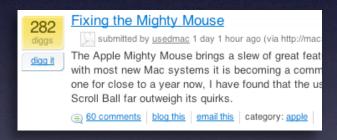


### Prevent errors before-hand

## **Keep feedback focused**

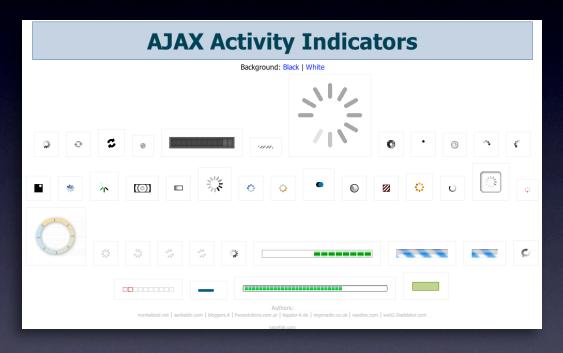
## **Keep feedback focused**

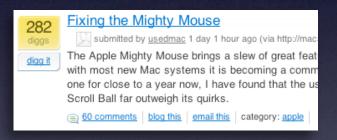




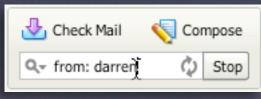
## Keep feedback focused





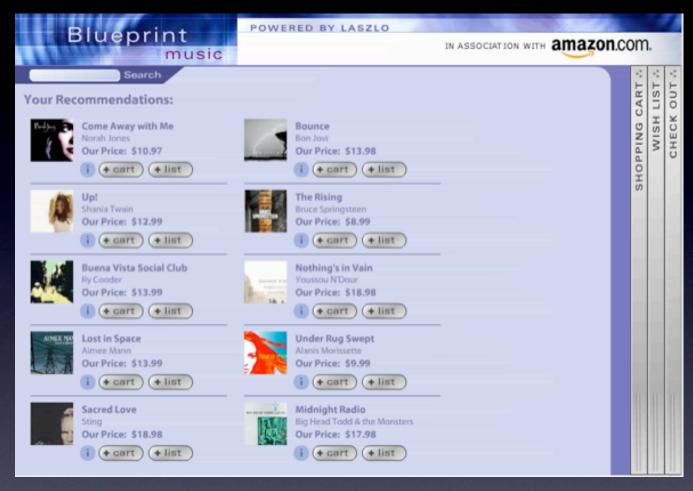


## Keep feedback focused



## **Keep feedback focused**

Use laws of proximity in context feedback Respect feedback bandwidth Avoid side-noise (periphial distractions) Use nuance



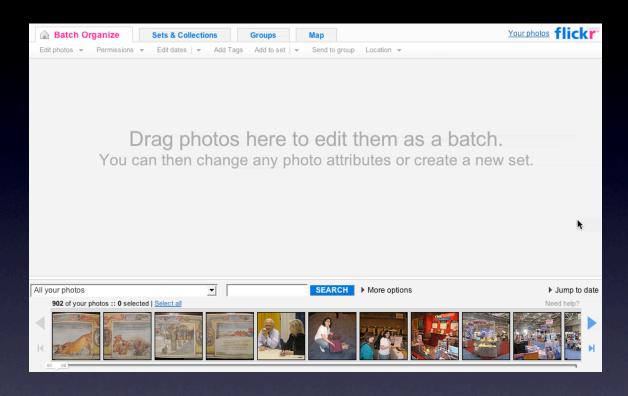
## Keep feedback focused

Use laws of proximity in context feedback Respect feedback bandwidth Avoid side-noise (periphial distractions) Use nuance

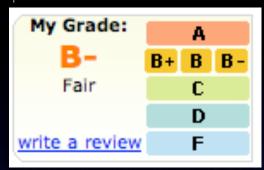


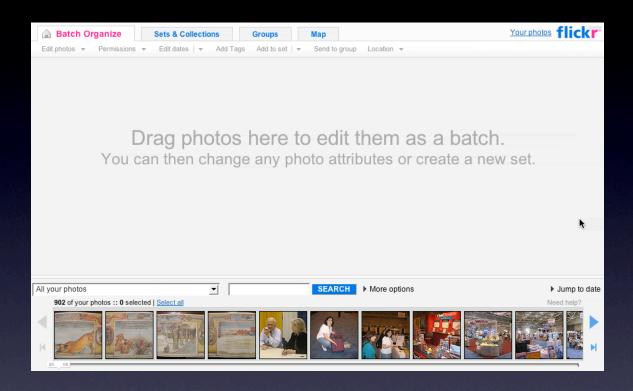
Use laws of proximity in context feedback Respect feedback bandwidth Avoid side-noise (periphial distractions) Use nuance

41

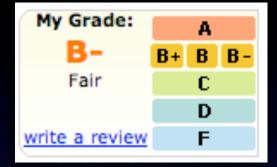


## pattern. hover invitation.





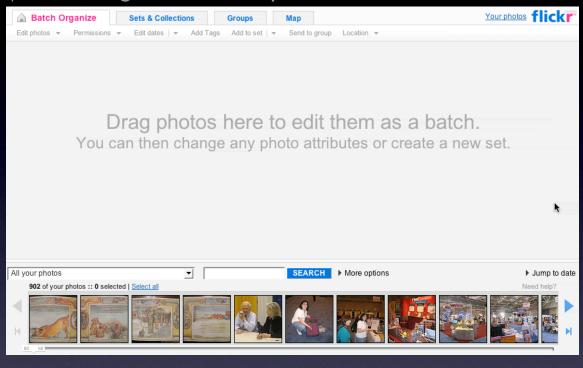
pattern. hover invitation.



pattern. tour invitation.



pattern. drag invitation. drop invitation.



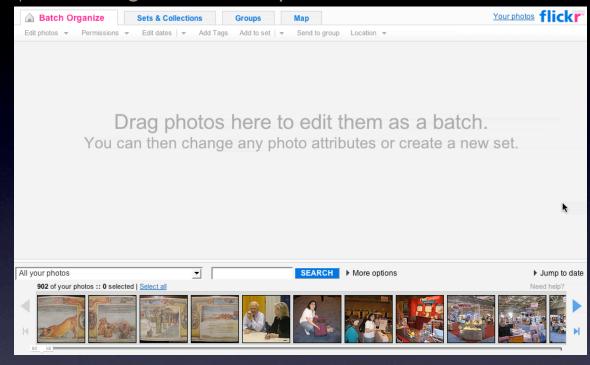
pattern. hover invitation.



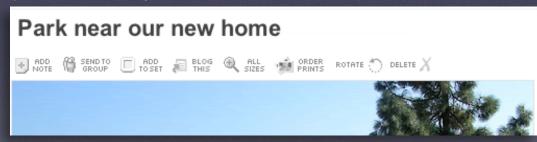
pattern. tour invitation.



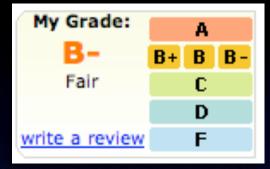
pattern. drag invitation. drop invitation.



pattern. tooltip invitation + hover invitation + cursor invitation.



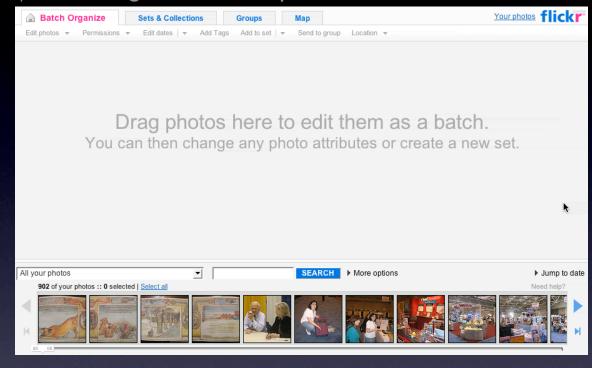
pattern. hover invitation.



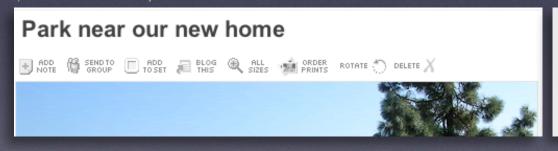
pattern. tour invitation.



pattern. drag invitation. drop invitation.



pattern. tooltip invitation + hover invitation + cursor invitation.



Lists
Remove this item
Add item   or   I'm done adding items
Make a new list

## **Discoverability**

No easy answer
Use the hover to reveal interaction
Use the familiar to teach the new
Tours are generally a band-aid
Can't flag all interactions

No easy answer
Use the hover to reveal interaction
Use the familiar to teach the new
Tours are generally a band-aid
Can't flag all interactions



State park near our home in San Jose

5 photos | Add a comment?

No easy answer
Use the hover to reveal interaction
Use the familiar to teach the new
Tours are generally a band-aid
Can't flag all interactions



State park near our home in San Jose

Click to edit

5 photos | Add a comment?

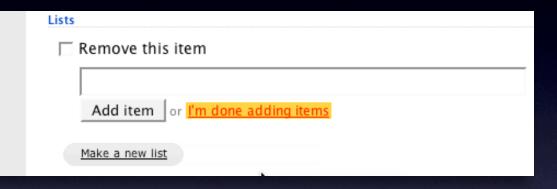
No easy answer
Use the hover to reveal interaction
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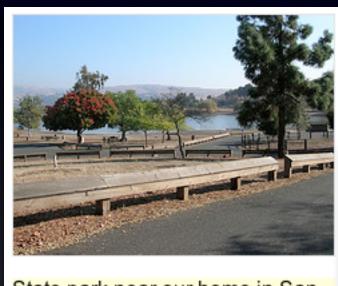
State park near our home in San Jose

Click to edit

5 photos | Add a comment?



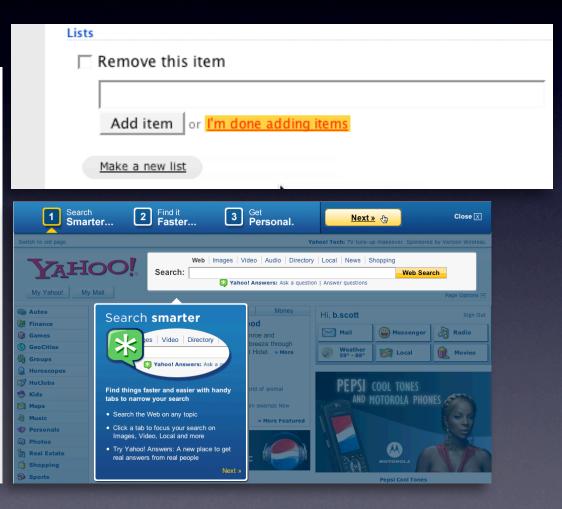
No easy answer
Use the hover to reveal interaction
Use the familiar to teach the new
Tours are generally a band-aid
Can't flag all interactions



State park near our home in San Jose

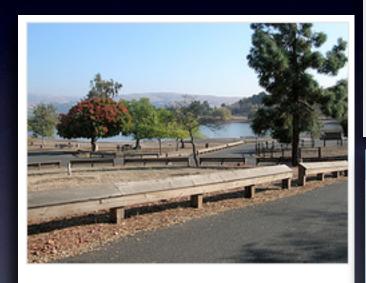
Click to edit

5 photos | Add a comment?



## **Discoverability**

No easy answer
Use the hover to reveal interaction
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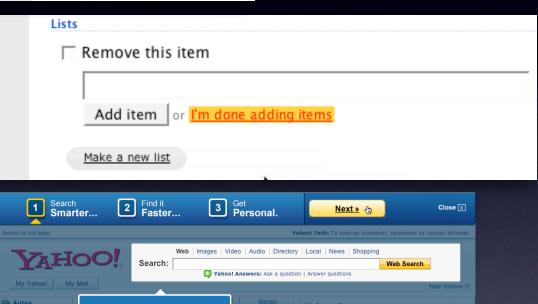


State park near our home in San Jose

Click to edit

5 photos | Add a comment?



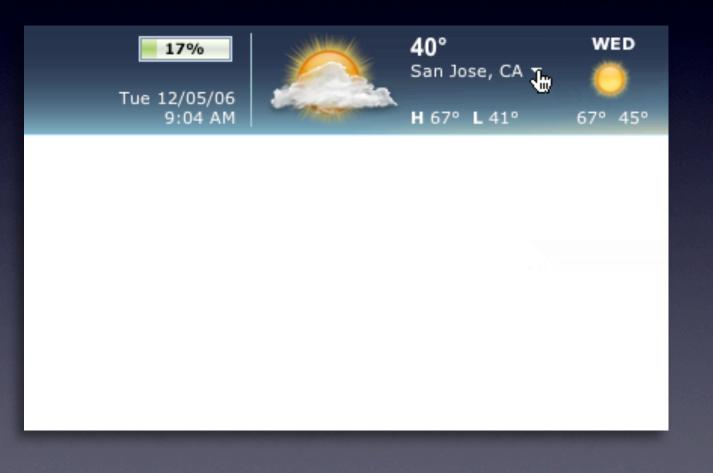


## Bridge the new with the old

Hyperlinks as actions Reveal with hovers Drop down clues

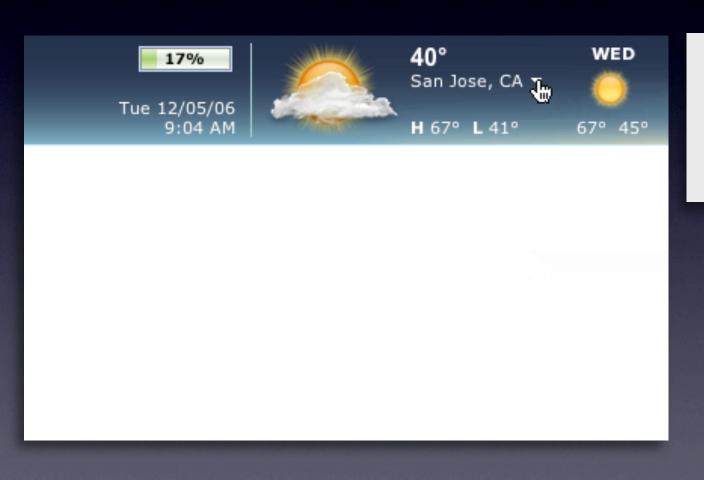
## Bridge the new with the old

Hyperlinks as actions Reveal with hovers Drop down clues



## Bridge the new with the old

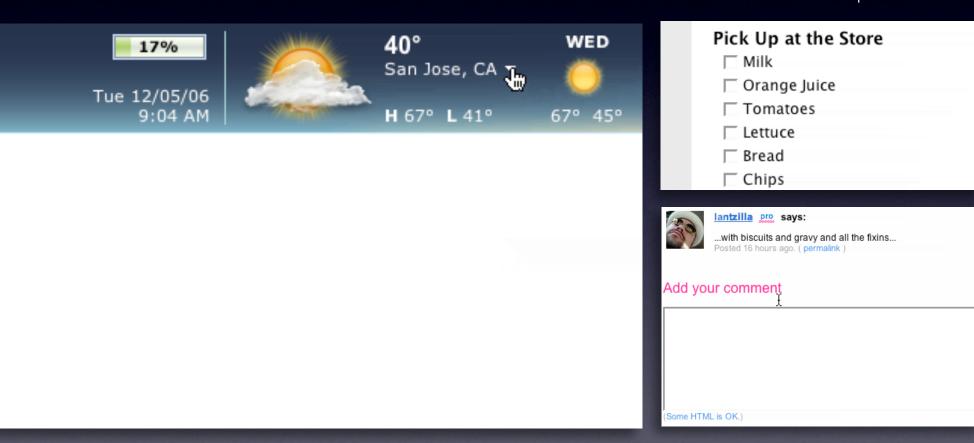
Hyperlinks as actions Reveal with hovers Drop down clues



# Pick Up at the Store Milk Corange Juice Tomatoes Lettuce Bread Chips

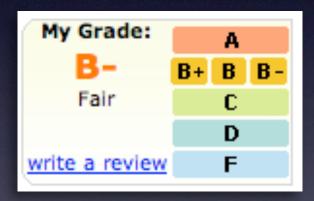
## Bridge the new with the old

Hyperlinks as actions Reveal with hovers Drop down clues



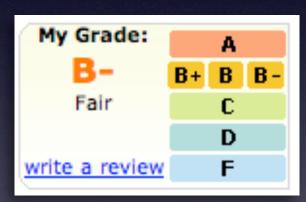
## Make it inviting

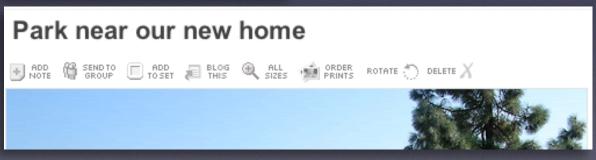
Treat it as a welcome mat Use hover, cursor, tooltip, and page Keep the noise down



## Make it inviting

Treat it as a welcome mat Use hover, cursor, tooltip, and page Keep the noise down

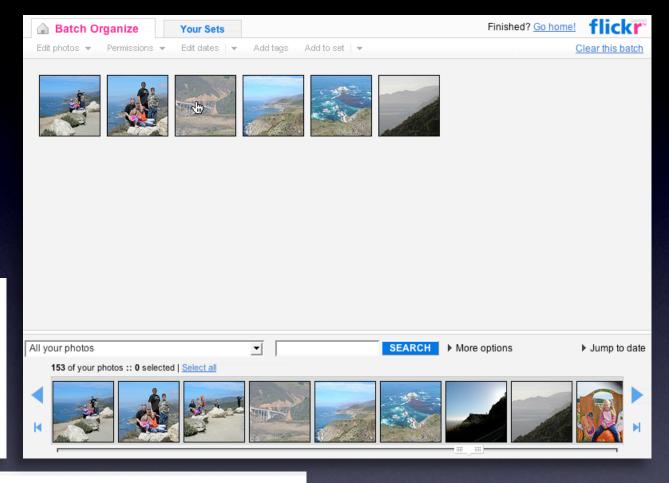


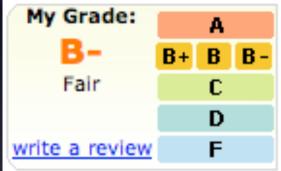


## Make it inviting

Treat it as a welcome mat Use hover, cursor, tooltip, and page Keep the noise down

#### offer an invitation





# Park near our new home ADD SENDTO TOSET BLOG ALL SIZES ORDER ROTATE DELETE X

#### Make it inviting

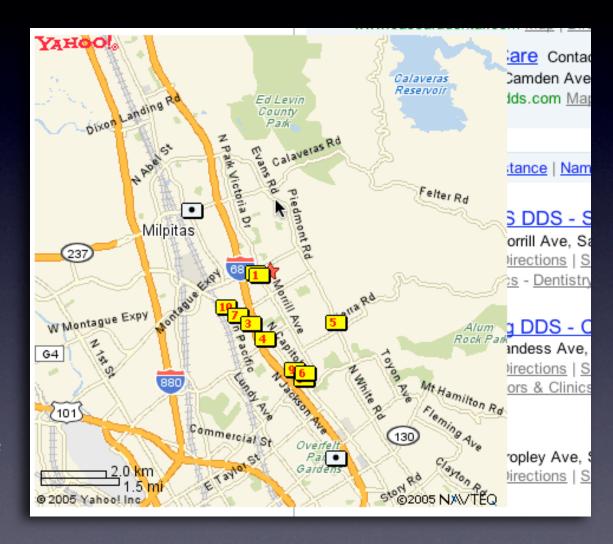
Treat it as a welcome mat Use hover, cursor, tooltip, and page Keep the noise down

offer an invitation

#### Keep actions out of it

Let the user feel free to explore Don't proselytize

#### offer an invitation



**Keep actions out of it**Let the user feel free to explore
Don't proselytize

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

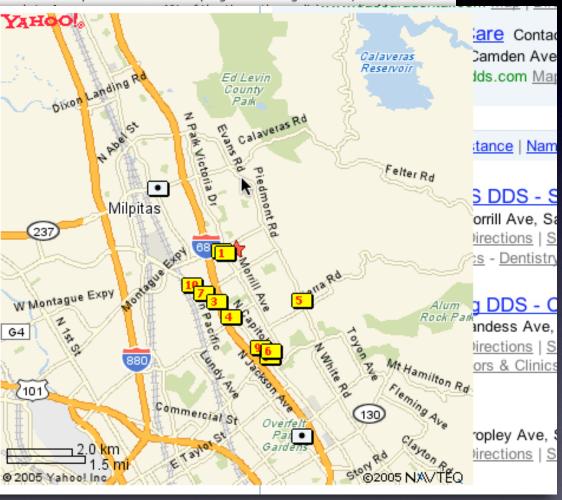
Forty Associates recently added product previews to their Web site as part of a small beta program. During the beta, visitors to

Associate sites who viewed a product preview clicked the purchase nearly 6% of the time.

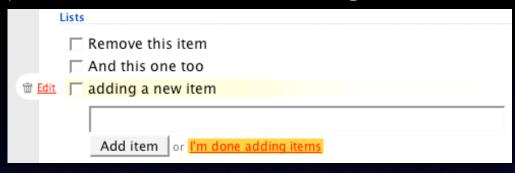
Now we're opening the beta up to all Associates to furth through a product preview-enhanced link will receive a <u>testing product previews.</u>

Don't worry if you don't already have Basic Display Proc process. <u>Click here</u> for answers to questions you might

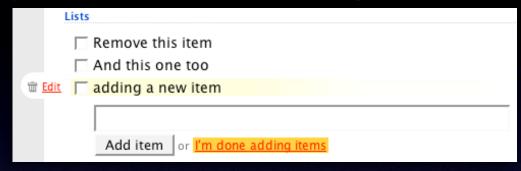
# **Keep actions out of it**Let the user feel free to explore Don't proselytize



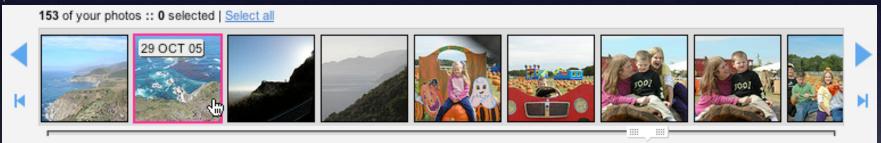
pattern. fade transition + self-healing transition.



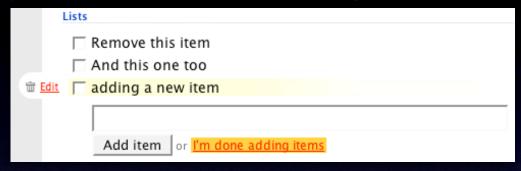
#### pattern. fade transition + self-healing transition.



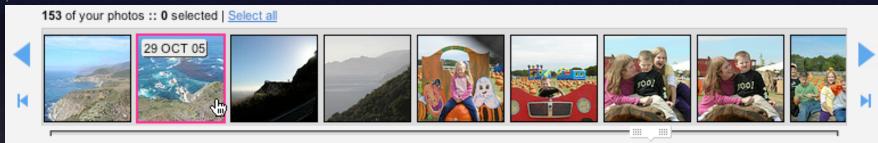
#### pattern. slide transition.



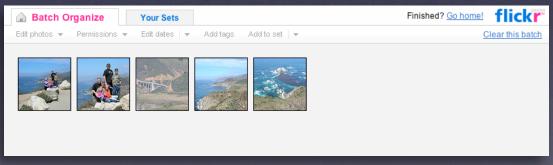
#### pattern. fade transition + self-healing transition.



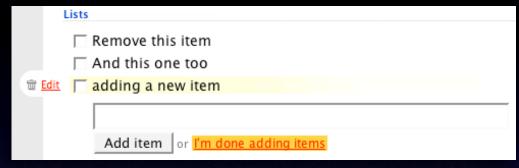
#### pattern. slide transition.

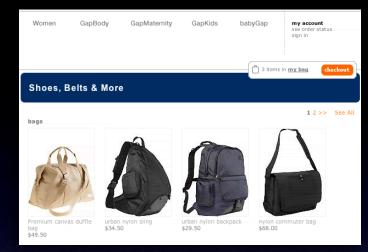


#### pattern. active spotlight.

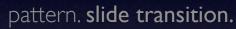


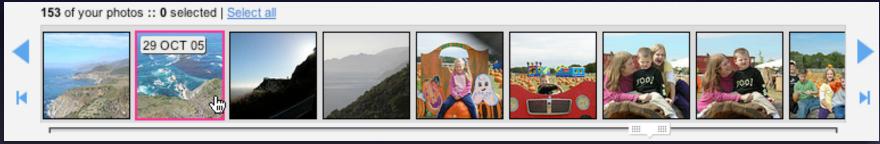
#### pattern. fade transition + self-healing transition.



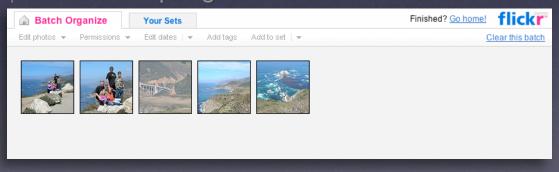


#### pattern. zoom box.



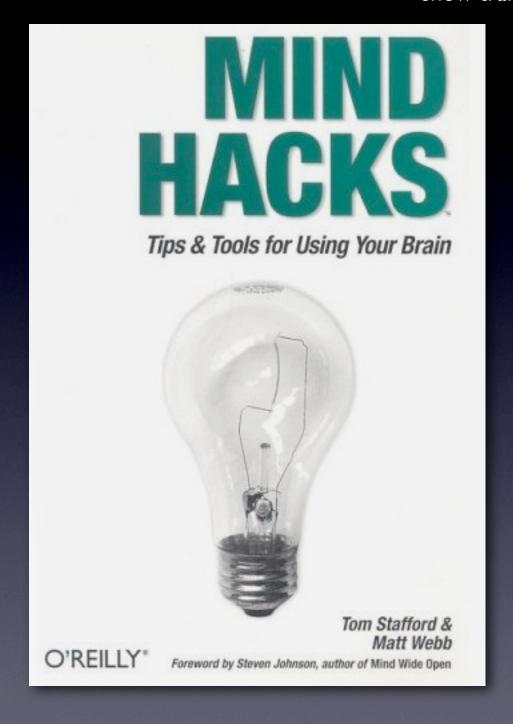


#### pattern. active spotlight.



**Speak to the brain**Understanding attention processing

**Speak to the brain**Understanding attention processing



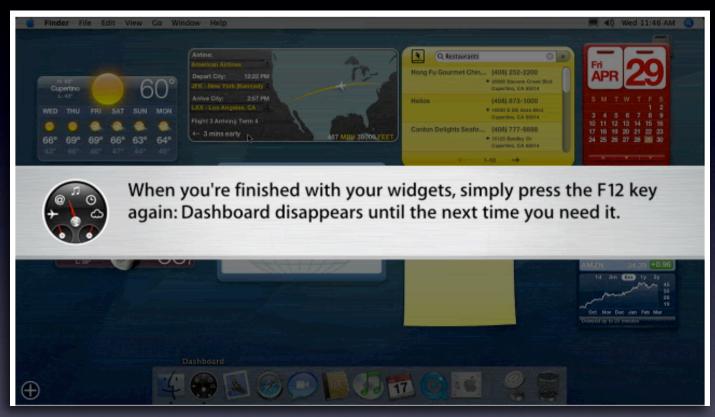
**Speak to the brain**Understanding attention processing
Sending the wrong message

**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...

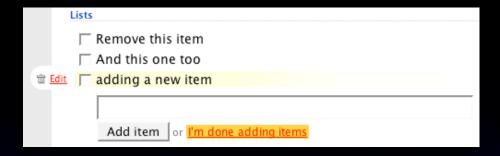
#### What you can communicate...

Connecting	

#### What you can communicate...



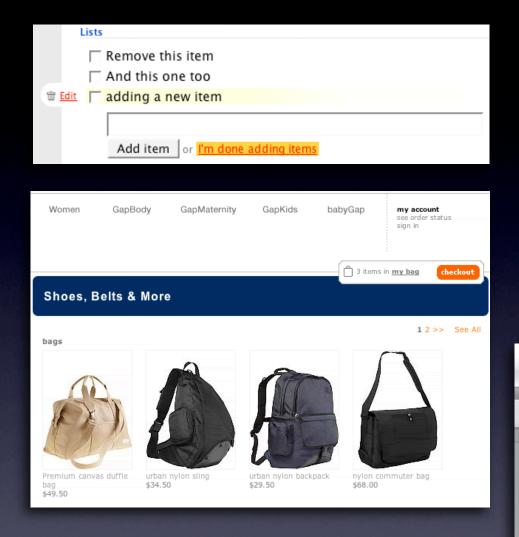




#### What you can communicate...



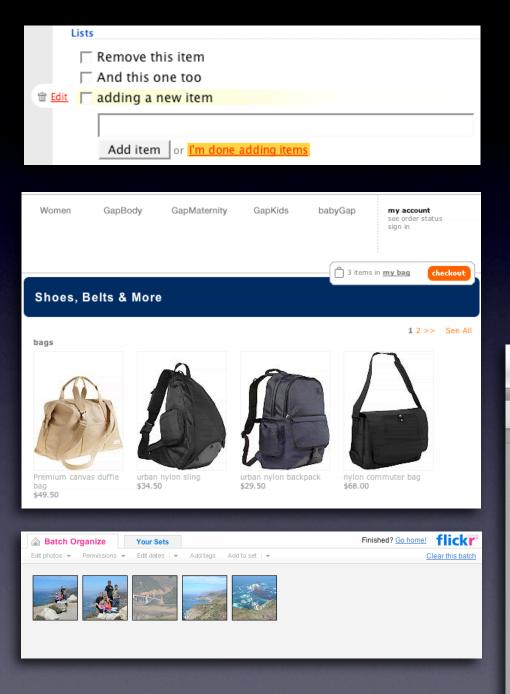




#### What you can communicate...



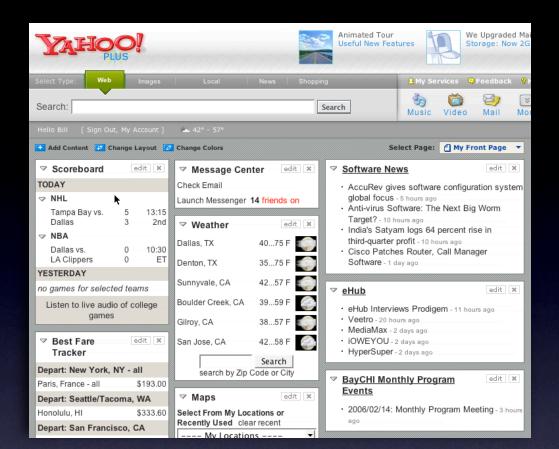




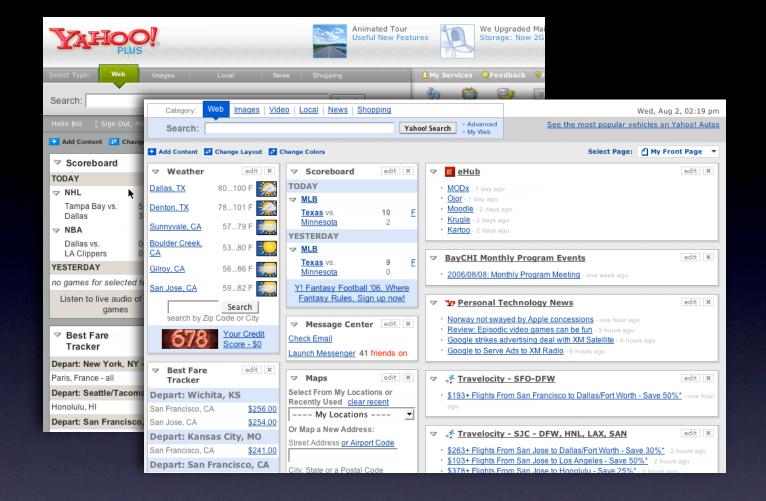
#### What you can communicate...



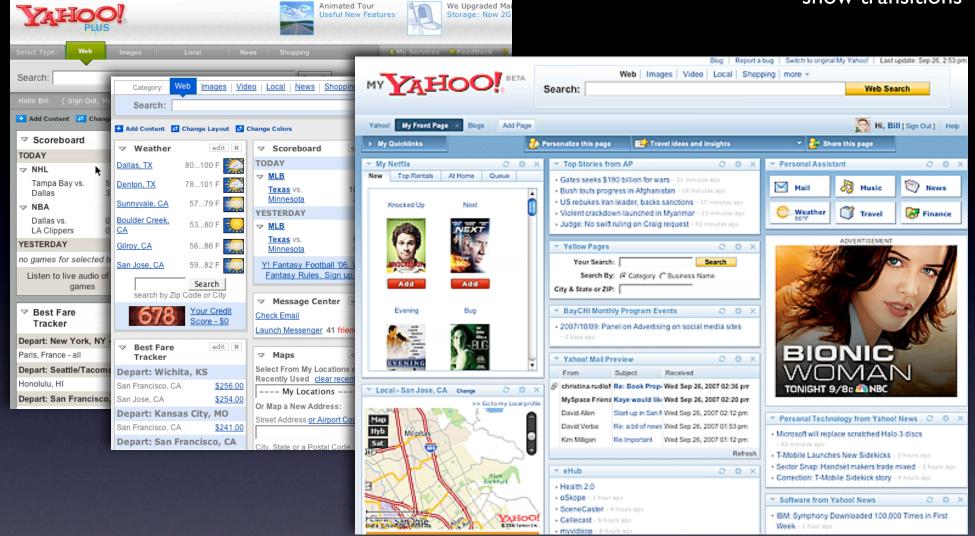




# **Keep it sane**"Cut it in-half" rule of thumb Use "contrast knob" approach Don't overuse



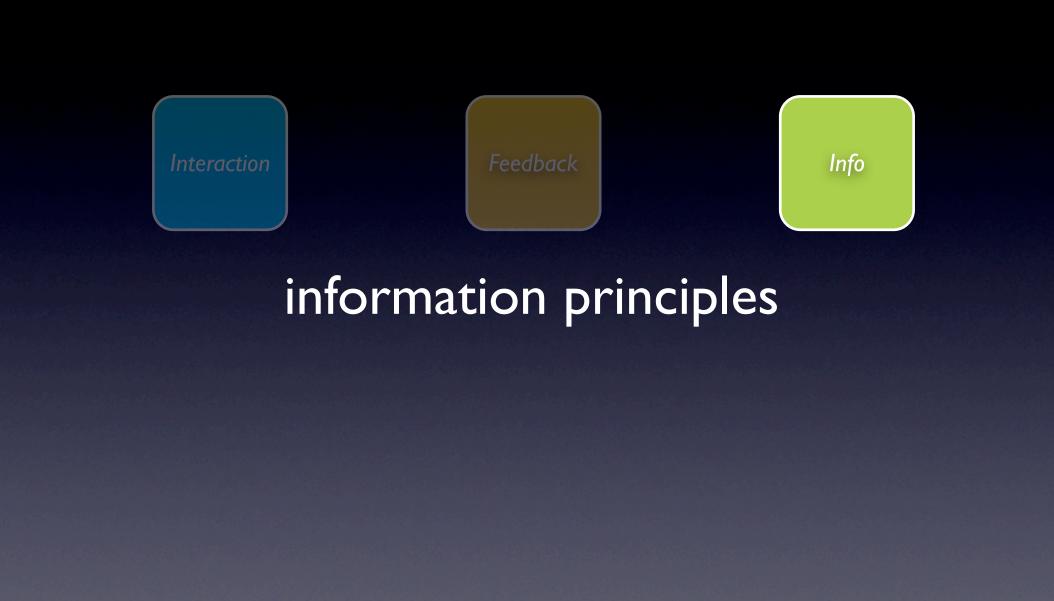
#### "Cut it in-half" rule of thumb Use "contrast knob" approach Don't overuse



#### Keep it sane

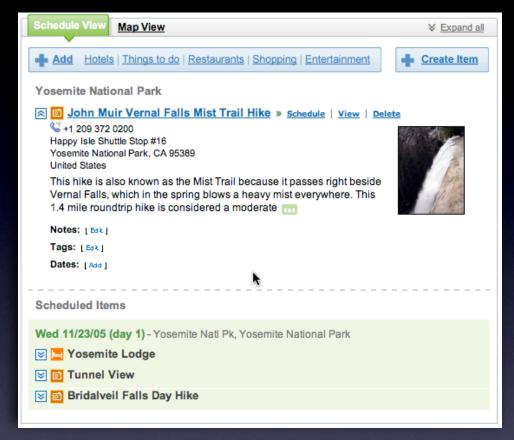
"Cut it in-half" rule of thumb Use "contrast knob" approach Don't overuse

# Provide invitations beforehand, transitions during, and feedback after interaction

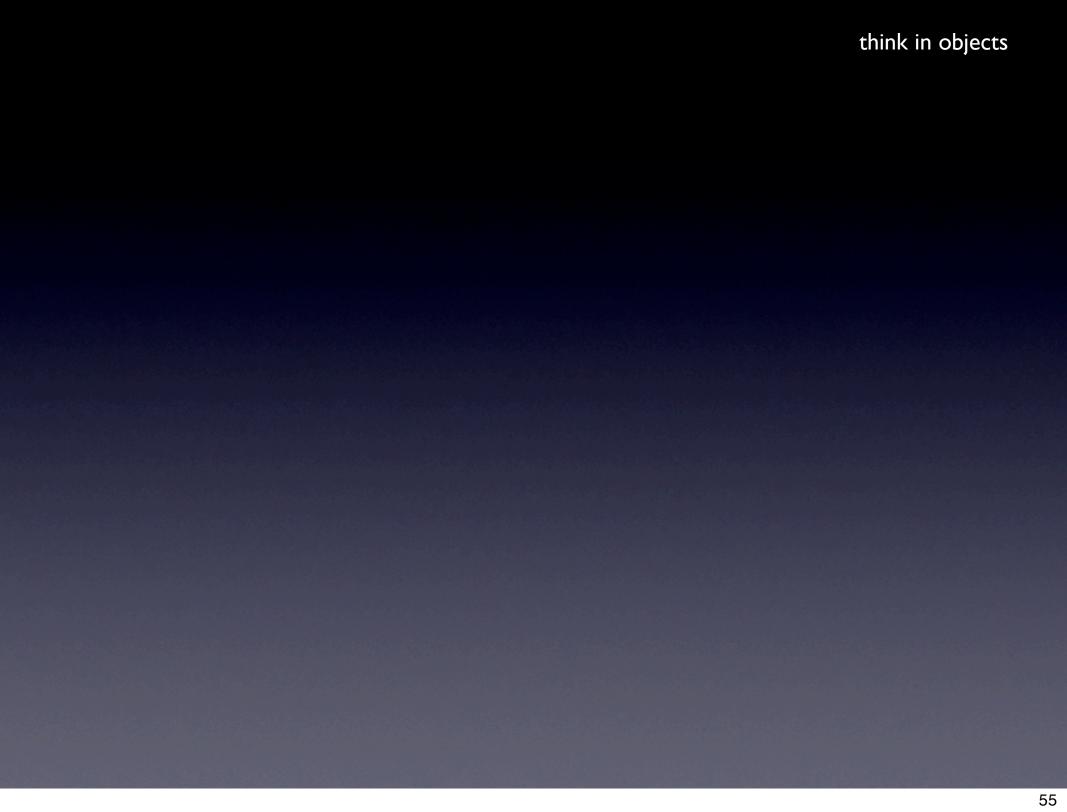


principle. think in objects.

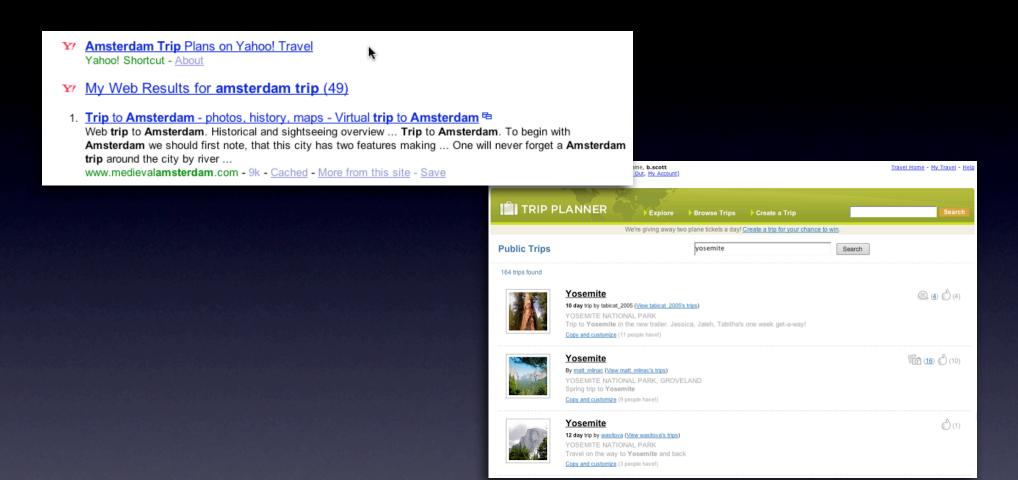
# principle. think in objects.



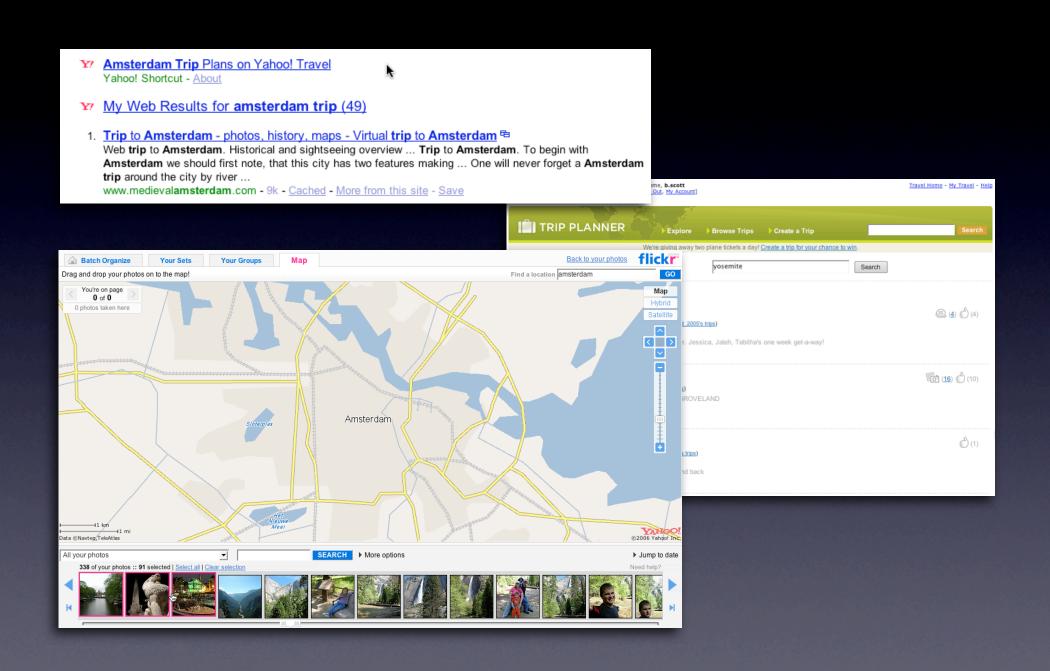
pattern. shareable object.



#### think in objects



#### think in objects



principle. tie information to interactivity.

# principle. tie information to interactivity.



pattern. multi-variate views.

tie information to interactivity

# **Think "deeper interaction"**Multi-variate data

focus + context

#### Think "deeper interaction"

Multi-variate data focus + context



#### tie information to interactivity

#### Think "deeper interaction"

Multi-variate data



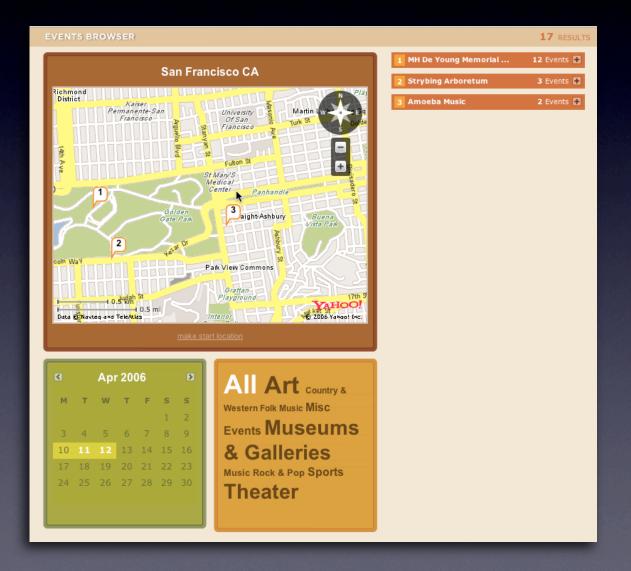
tie information to interactivity

#### Think "deeper interaction"

Multi-variate data focus + context Interesting relationships

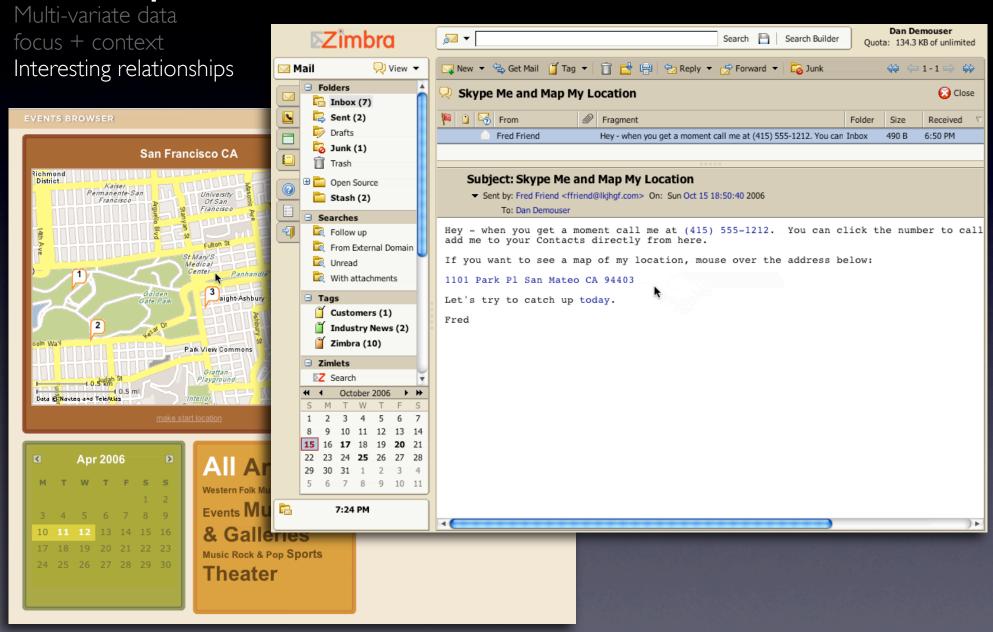
#### Think "deeper interaction"

Multi-variate data focus + context Interesting relationships



#### tie information to interactivity

#### Think "deeper interaction"



# Think in objects, tie information to interactivity

## key principles for richness



Prefer direct, lightweight, in-page interactions



Provide invitations beforehand, transitions during and feedback after interaction

Info

Think in objects and tie information to interactivity

## My talk at 4pm: Anti-Patterns

big ball of mud. meandering way.

borg idiom. tiny targets. mystery meat.

buried treasure. hover and cover.

pogo stick navigation. novel notions.

against the flow metaphor mismatch.

double duty. linkitus. blind type.

windows aplenty. animation gone wild.

misguided misdirections. unmarked hazards. missed

moments. missing scene.

one at a time. non-symmetrical actions.

Note: anti-patterns denoted in **bold** are discussed in this talk.

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my blog. looksgoodworkswell.com this prez. billwscott.com/share/presentations/2007/aiade/

# NETFLIX is hiring!

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