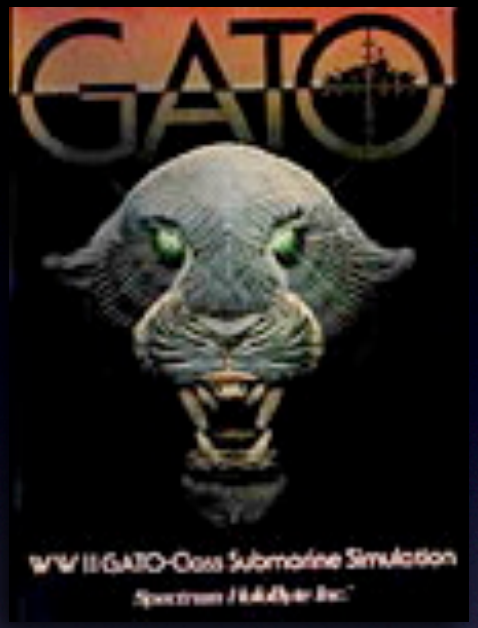
# Crafting Rich Web Experiences

Designing Web Interfaces: Principles & patterns for rich interfaces

Bill Scott
Director, UI Engineering

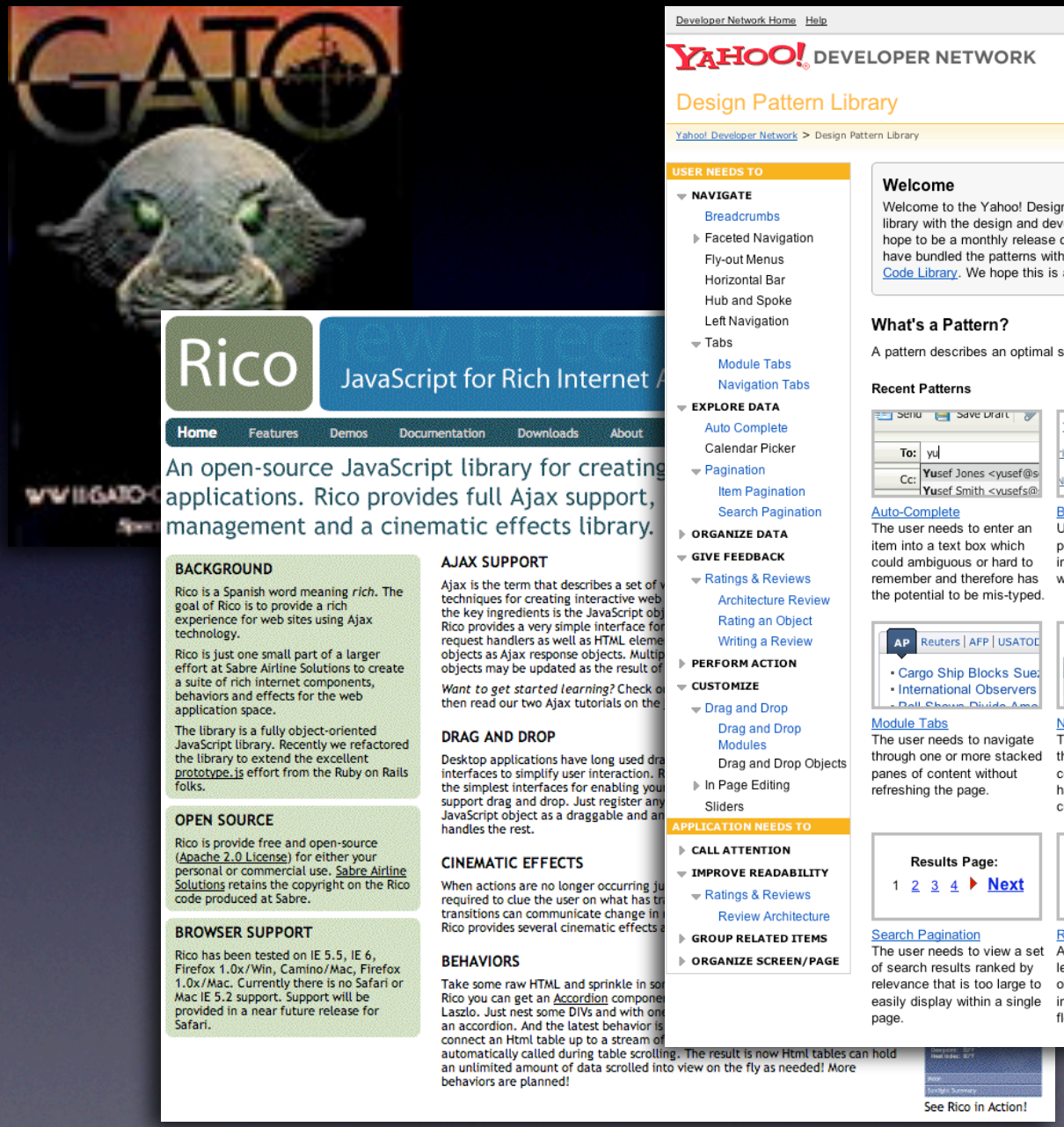
# background



# background

GATO
Rico
JavaScript for Rich Internet Applications
Home
Features
Demos
Documentation
Downloads
About
An open-source JavaScript library for creating rich internet applications. Rico provides full Ajax support, drag and drop management and a cinematic effects library.
BACKGROUND
Rico is a Spanish word meaning rich. The goal of Rico is to provide a rich experience for web sites using Ajax technology.
Rico is just one small part of a larger effort at Sabre Airline Solutions to create a suite of rich internet components, behaviors and effects for the web application space.
The library is a fully object-oriented JavaScript library. Recently we refactored the library to extend the excellent prototype.js effort from the Ruby on Rails folks.
OPEN SOURCE
Rico is 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 Safari.
AJAX SUPPORT
Ajax is the term that describes a set of web development techniques for creating interactive web applications. One of the key ingredients is the JavaScript object XmlHttpRequest. Rico provides a very simple interface for registering Ajax request handlers as well as HTML elements or JavaScript objects as Ajax response objects. Multiple elements and/or objects may be updated as the result of one Ajax request.
Want to get started learning? Check out our demos and then read our two Ajax tutorials on the Documentation page.
NEW! LiveGrid Behavior!
Check out the Alternative to Paging!
DRAG AND DROP
Desktop applications have long used drag and drop in their interfaces to simplify user interaction. Rico provides one of the simplest interfaces for enabling your web application to support drag and drop. Just register any HTML element or JavaScript object as a draggable and any other HTML element or JavaScript object as a drop zone and Rico handles the rest.
CINEMATIC EFFECTS
When actions are no longer occurring just at the page level but within the page itself, more clues are required to clue the user on what has transpired. Cinematic effects such as scaling and smooth sliding transitions can communicate change in richer ways than traditional web applications have explored before. Rico provides several cinematic effects as well as some simple visual style effects in a very simple interface.
BEHAVIORS
Take some raw HTML and sprinkle in some behaviors and what do you get? Well in Rico you can get an Accordion component like those found in Macromedia Flex and 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!
77°F
See Rico in Action!

# background


GATO
Rico
JavaScript for Rich Internet
Home
Features
Demos
Documentation
Downloads
About
An open-source JavaScript library for creating
applications. Rico provides full Ajax support,
management and a cinematic effects library.
BACKGROUND
Rico is a Spanish word meaning rich. The goal of Rico is to provide a rich experience for web sites using Ajax technology.
Rico is just one small part of a larger effort at Sabre Airline Solutions to create a suite of rich internet components, behaviors and effects for the web application space.
The library is a fully object-oriented JavaScript library. Recently we refactored the library to extend the excellent prototype.js effort from the Ruby on Rails folks.
OPEN SOURCE
Rico is 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 Safari.
AJAX SUPPORT
DRAG AND DROP
CINEMATIC EFFECTS
BEHAVIORS
See Rico in Action!
Developer Network Home
Help
Site Search
Search
YAHOO! DEVELOPER NETWORK
Design Pattern Library
Yahoo! Developer Network > Design Pattern Library
USER NEEDS TO
NAVIGATE
Breadcrumbs
Faceted Navigation
Fly-out Menus
Horizontal Bar
Hub and Spoke
Left Navigation
Tabs
Module Tabs
Navigation Tabs
EXPLORE DATA
Auto Complete
Calendar Picker
Pagination
Item Pagination
Search Pagination
ORGANIZE DATA
GIVE FEEDBACK
Ratings & Reviews
Architecture Review
Rating an Object
Writing a Review
PERFORM ACTION
CUSTOMIZE
Drag and Drop
Drag and Drop Modules
Drag and Drop Objects
In Page Editing
Sliders
APPLICATION NEEDS TO
CALL ATTENTION
IMPROVE READABILITY
Ratings & Reviews
Review Architecture
GROUP RELATED ITEMS
ORGANIZE SCREEN/PAGE
Welcome
Welcome to the Yahoo! Design Pattern Library. We are very happy to be sharing our library with the design and development community. This is our first drop of what we hope to be a monthly release cycle for the publication of patterns. In many cases we have bundled the patterns with pointers to related code from the Yahoo! User Interface Code Library. We hope this is a useful resource and look forward to your feedback.
What's a Pattern?
A pattern describes an optimal solution to a common problem within a specific context. more...
Recent Patterns
Auto-Complete
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.
Drag and Drop Modules
The user needs needs to re-arrange the layout of modules on a web page directly with the mouse.
Module Tabs
The user needs to navigate through one or more stacked panes of content without refreshing the page.
Navigation Tabs
The user needs to navigate through a site to locate content and features and have clear indication of their current location in the site.
Object Pagination
The user needs to view data items from a potentially large set of sorted data that will not be easy to display within a single page.
Results Page:
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 page.
Average Rating (24)
Read 20 reviews
Good
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.
*Review Title - e.g. We can't
Great
*Write your review - Your
Writing a Review
User wants to share her opinion with others about an object (place, person, thing) in greater detail than a simple rating.

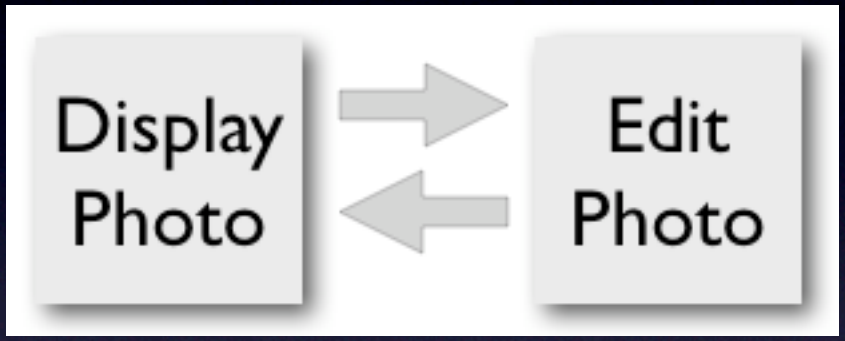
## 6 principles for Crafting Rich Web Experiences

make it direct
keep it lightweight
stay on the page
provide invitations
use transitions
react immediately

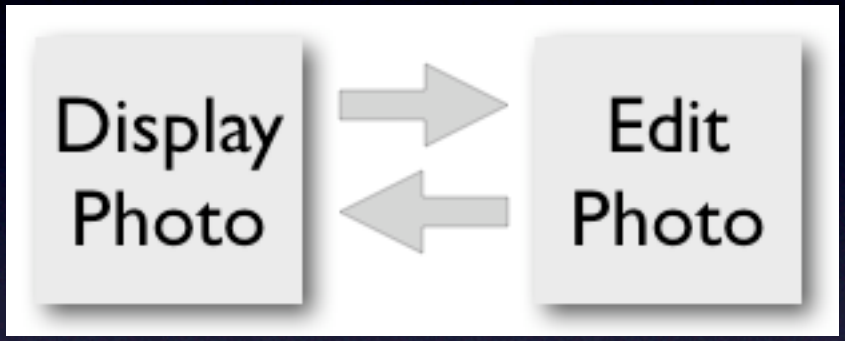
# make it direct

**Allow input wherever you have output**
**Shorten the length of interaction**
**Make objects directly actionable**

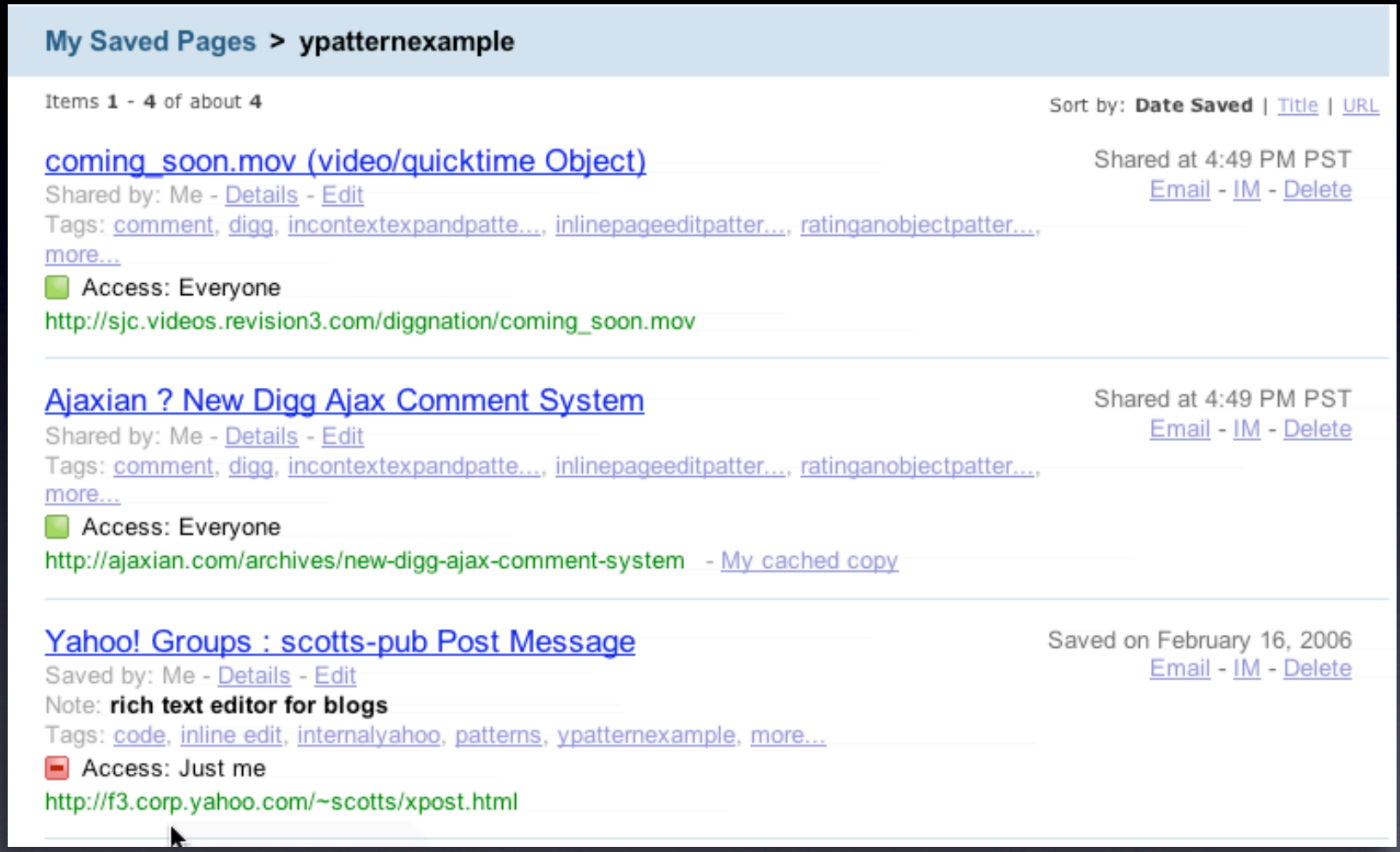
**Allow input wherever you have output**
**Shorten the length of interaction**
**Make objects directly actionable**



**Allow input wherever you have output**
**Shorten the length of interaction**
**Make objects directly actionable**



# inline editing



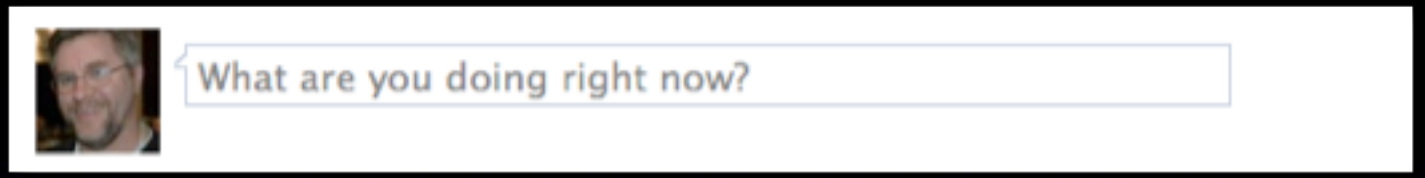

Yahoo! Bookmarks

make it direct. **inline editing**

**discoverability**
invitations

make it direct. **inline editing**

**discoverability**
invitations




facebook. **prompt-based invitation**

make it direct. **inline editing**

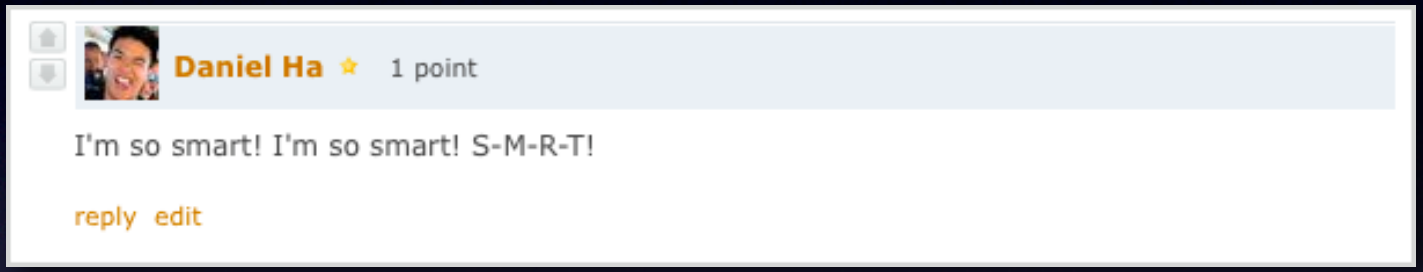
**discoverability**
invitations

facebook. **prompt-based invitation**

make it direct. **inline editing**

**discoverability**
invitations

facebook. **prompt-based invitation**

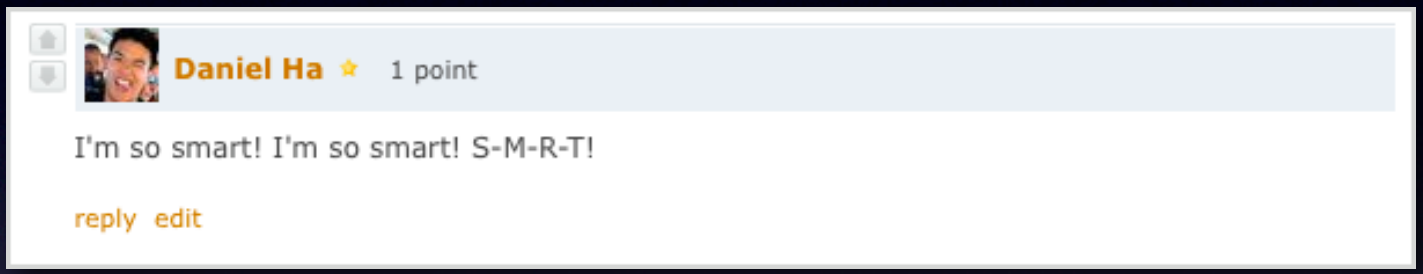



disqus. **explicit "edit" invitation**

make it direct. **inline editing**

**discoverability**
invitations

facebook. **prompt-based invitation**



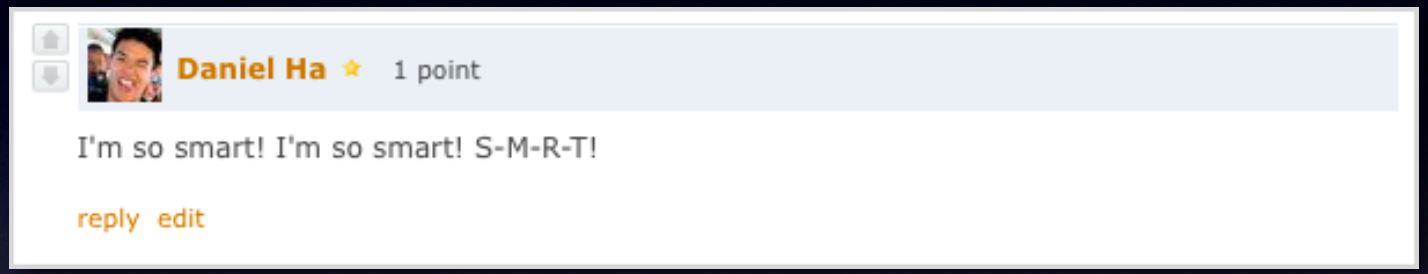

disqus. **explicit "edit" invitation**

Y!photo. **implicit**

make it direct. **inline editing**

**discoverability**
invitations

facebook. **prompt-based invitation**



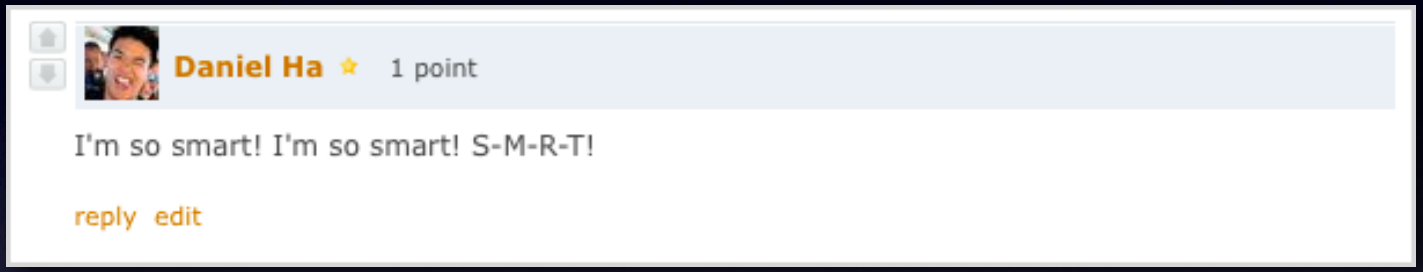

disqus. **explicit "edit" invitation**

Y!photo. **implicit**

make it direct. **inline editing**

**discoverability**
invitations

facebook. **prompt-based invitation**



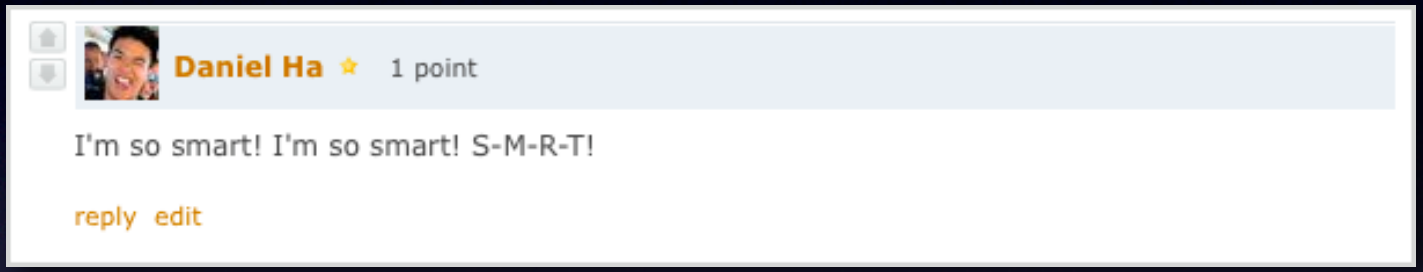

disqus. **explicit "edit" invitation**

Y!photo. **implicit**

make it direct. **inline editing**

**discoverability**
invitations

facebook. **prompt-based invitation**



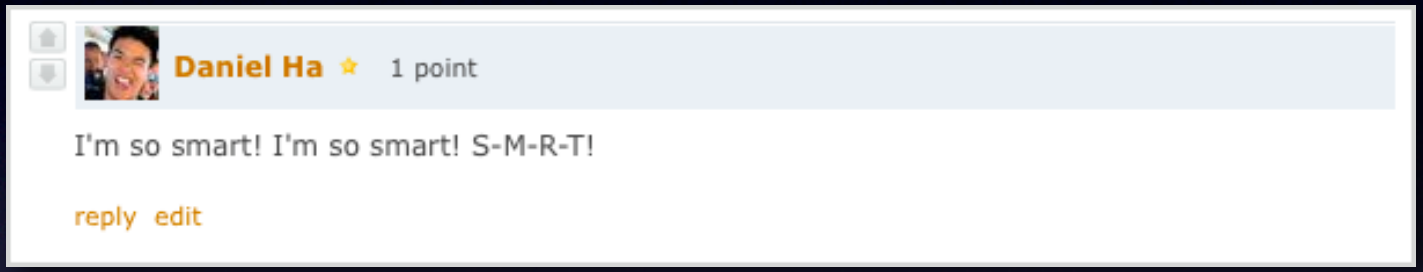

disqus. **explicit "edit" invitation**

Y!photo. **implicit**

make it direct. **inline editing**

**discoverability**
invitations

facebook. **prompt-based invitation**



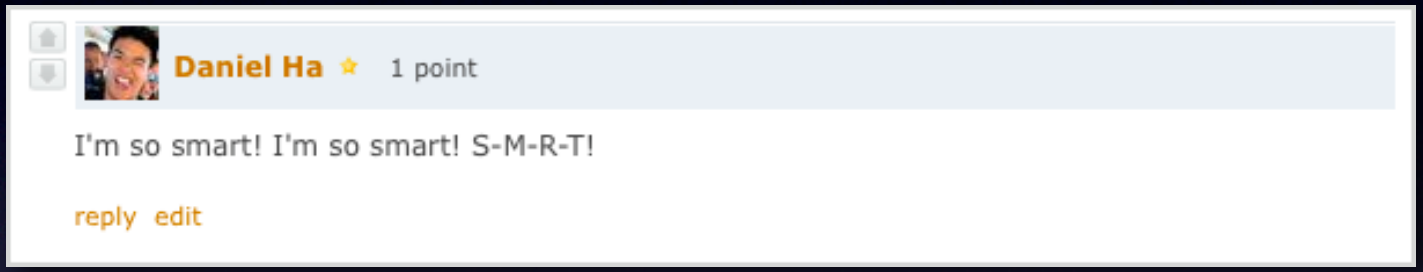

disqus. **explicit "edit" invitation**

Y!photo. **implicit**

make it direct. **inline editing**

**discoverability**
invitations

facebook. **prompt-based invitation**




disqus. **explicit "edit" invitation**

Y!photo. **implicit**

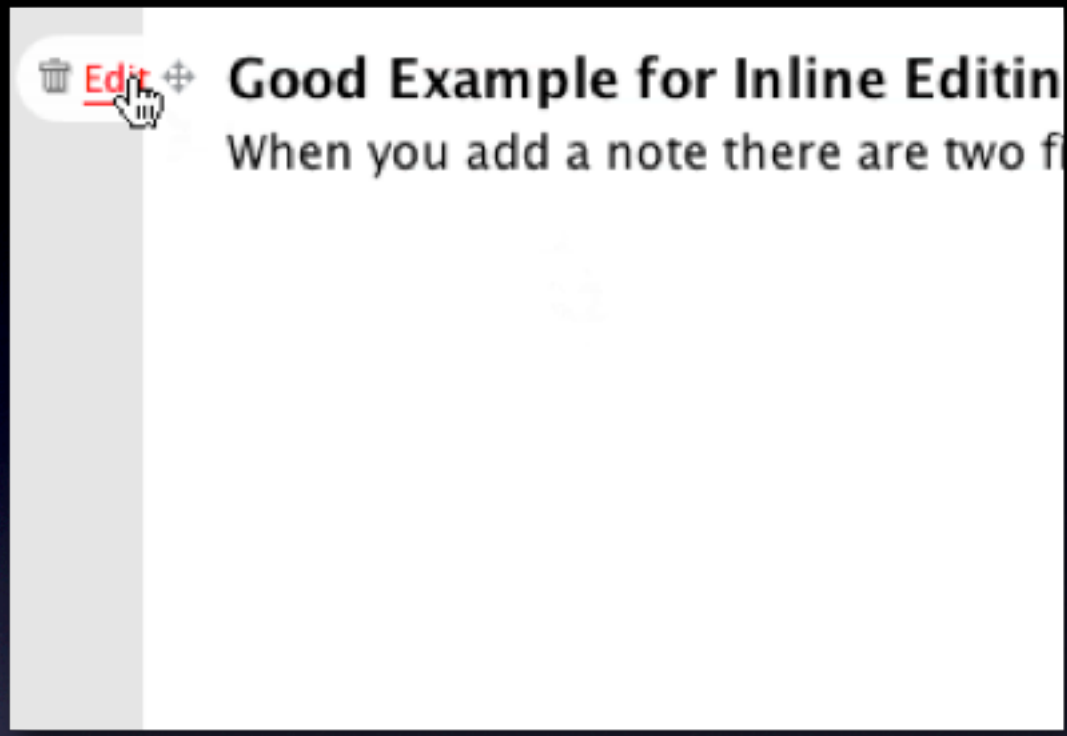
flickr. **on hover**

**considerations**

complex editing

blending modes

**considerations**
complex editing
blending modes



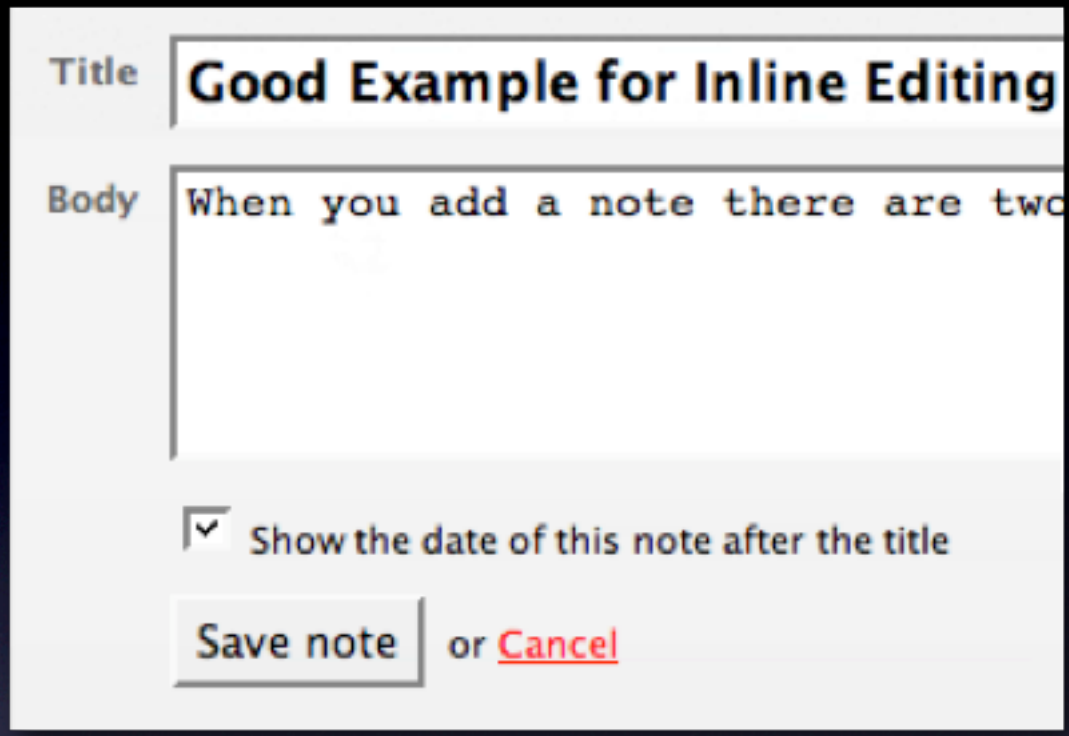

backpackit. **complex inline editing**

**considerations**
complex editing
blending modes

backpackit. **complex inline editing**

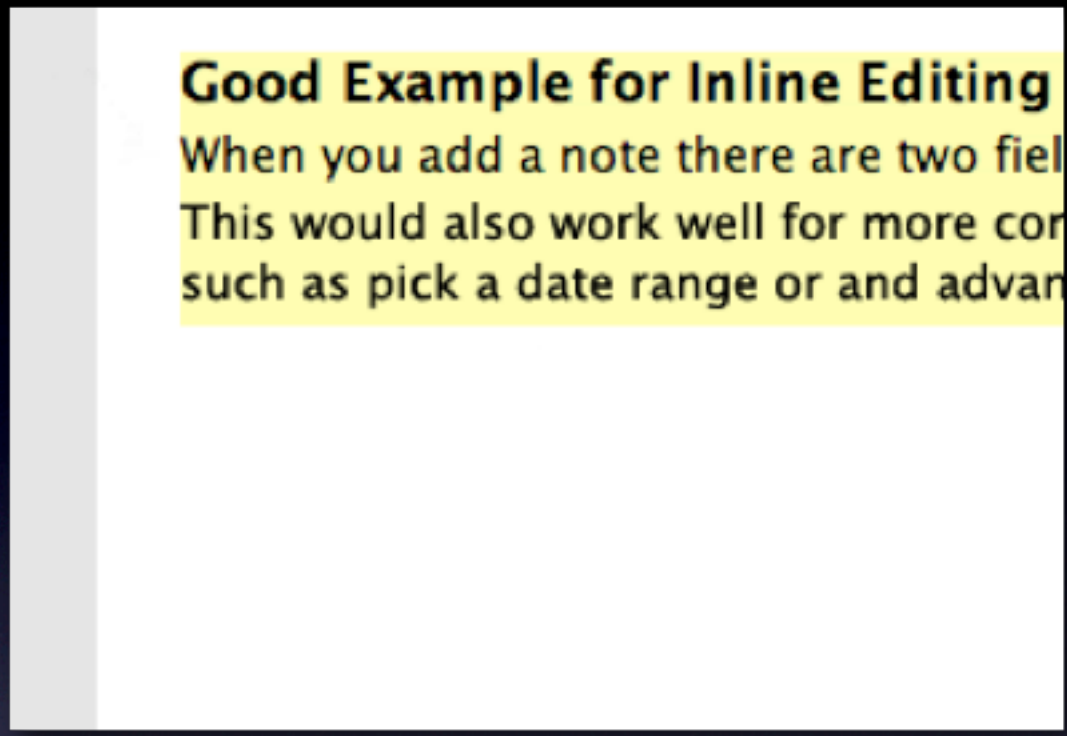
make it direct. **inline editing**

**considerations**
complex editing
blending modes



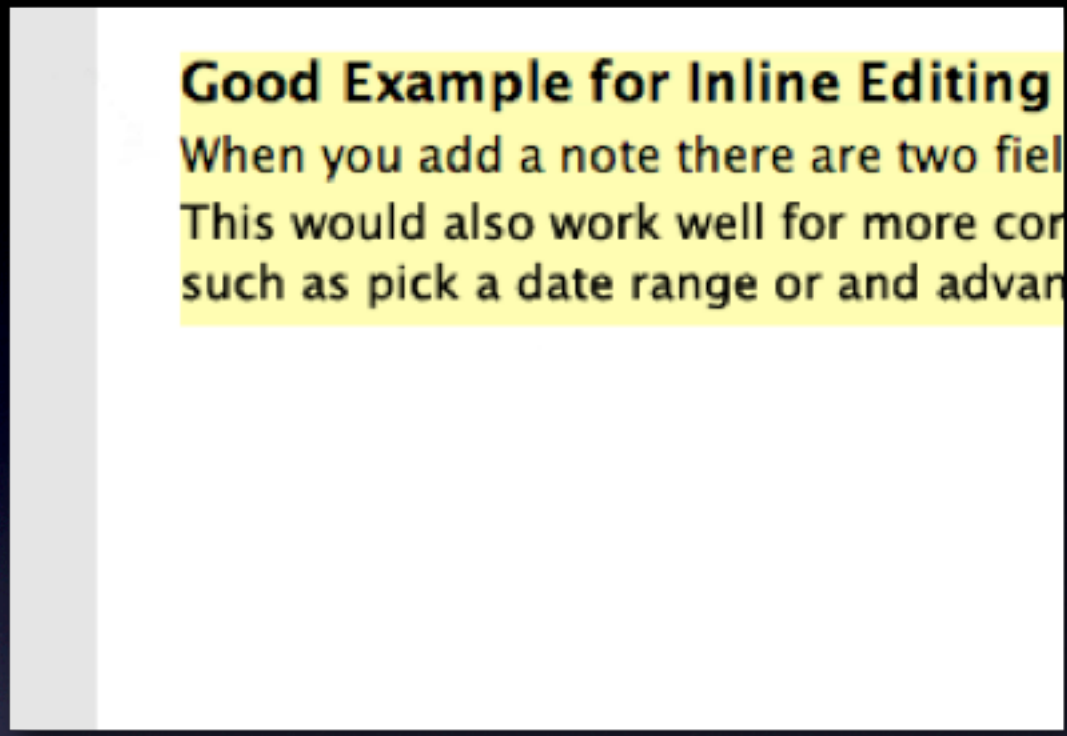

backpackit. **complex inline editing**

**considerations**
complex editing
blending modes

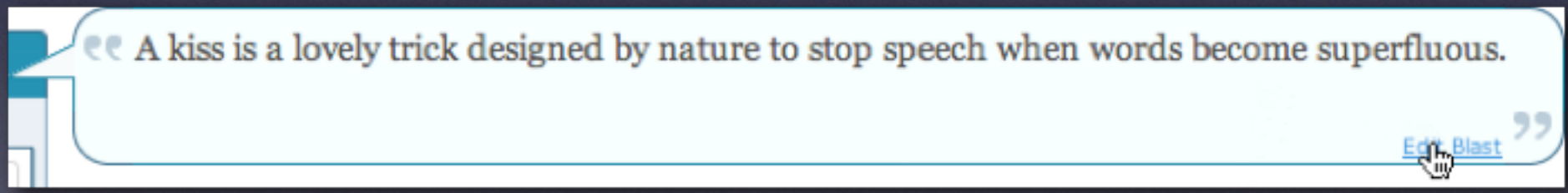



backpackit. **complex inline editing**

**considerations**
complex editing
blending modes

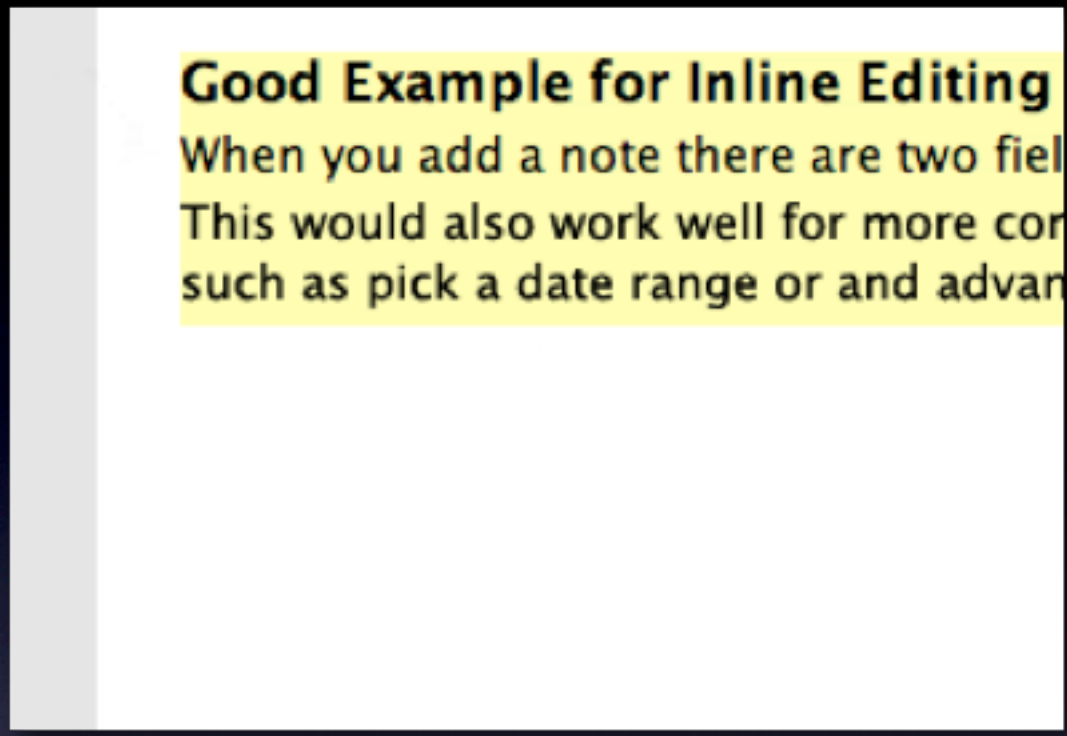



backpackit. **complex inline editing**

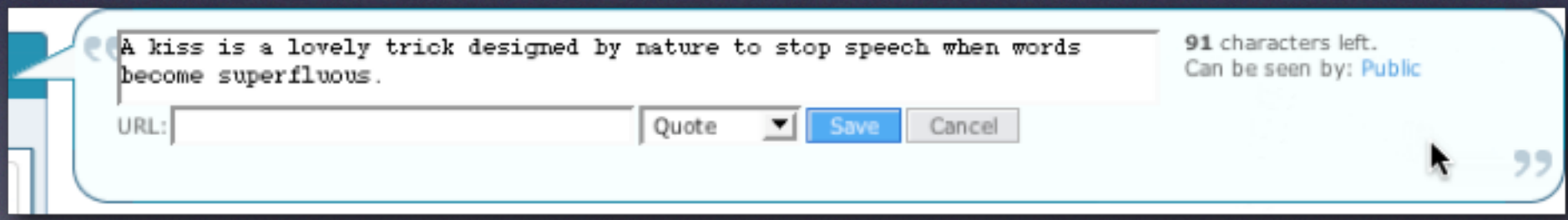



Yahoo! 360 blast. **blending display & edit modes**

**considerations**
complex editing
blending modes



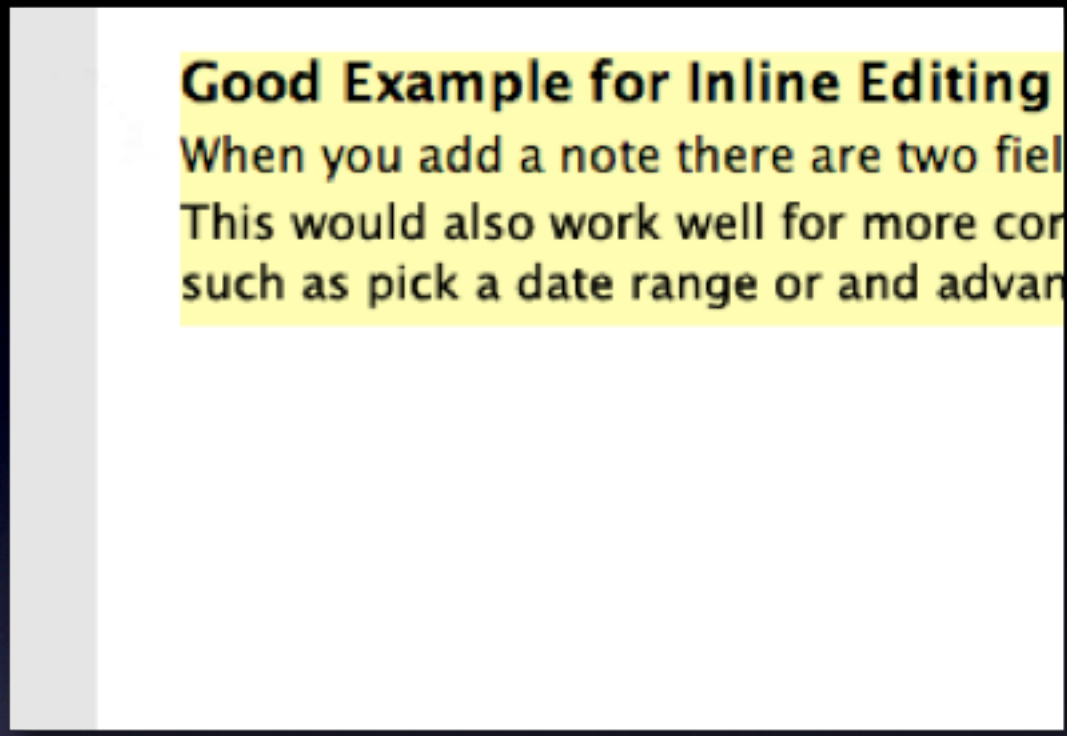

backpackit. **complex inline editing**




Yahoo! 360 blast. **blending display & edit modes**

make it direct. **inline editing**

**considerations**
complex editing
blending modes

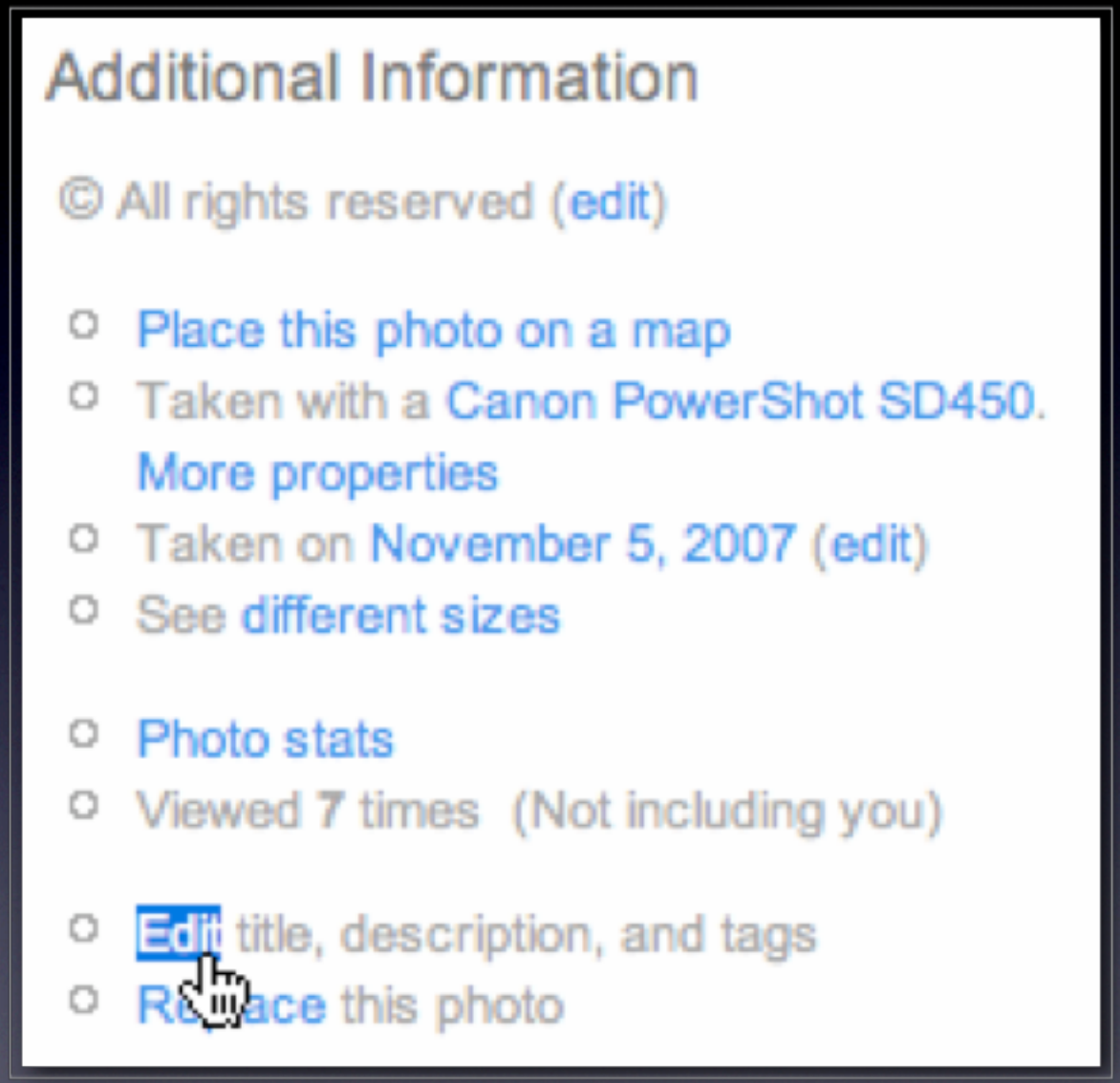



backpackit. **complex inline editing**

Yahoo! 360 blast. **blending display & edit modes**

# accessibility

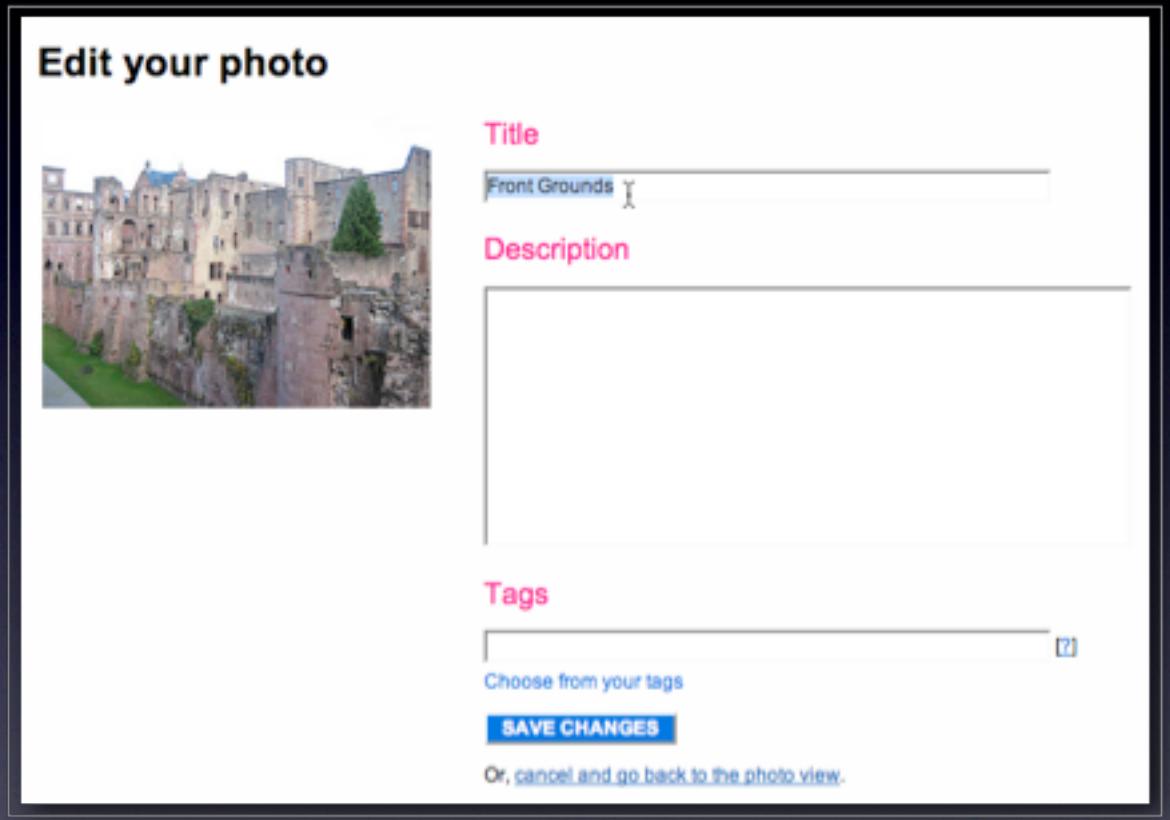
**accessibility**




flickr. **alternate edit path**

make it direct. **inline editing**

## accessibility




flickr. **alternate edit path**

**group editing**

symmetry of interaction

discoverability vs readability

## **group editing**

symmetry of interaction
discoverability vs readability

iPhone. **non-symmetrical; readability**

## **group editing**

symmetry of interaction
discoverability vs readability

iPhone. **non-symmetrical; readability**

## **group editing**

symmetry of interaction
discoverability vs readability

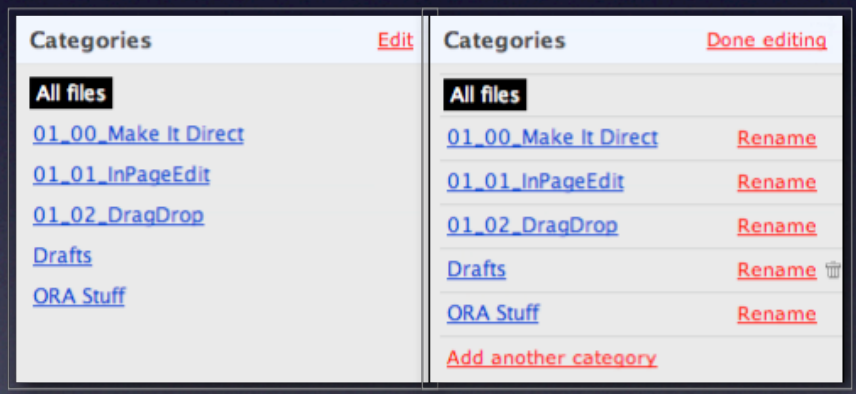
iPhone. **non-symmetrical; readability**

## **group editing**

symmetry of interaction

discoverability vs readability

iPhone. **non-symmetrical; readability**



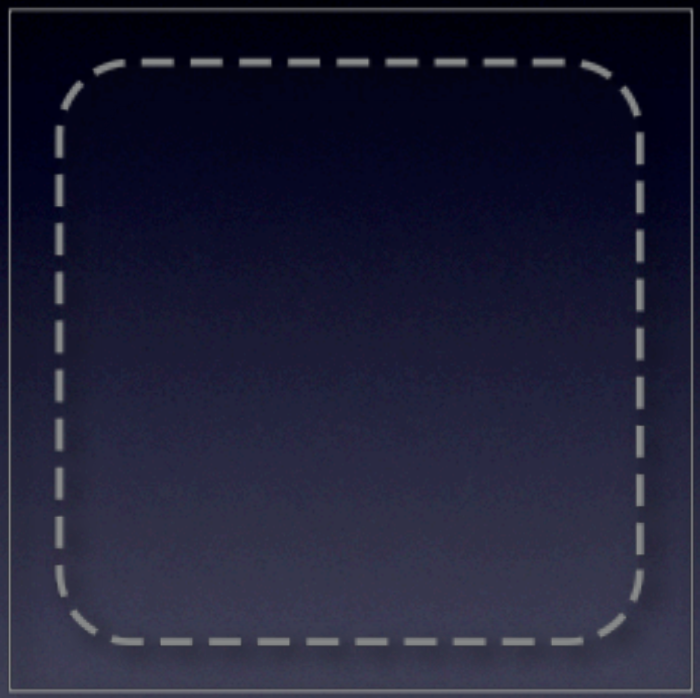

basecamp. **symmetry of interaction**

## **group editing**

symmetry of interaction

discoverability vs readability

iPhone. **non-symmetrical; readability**



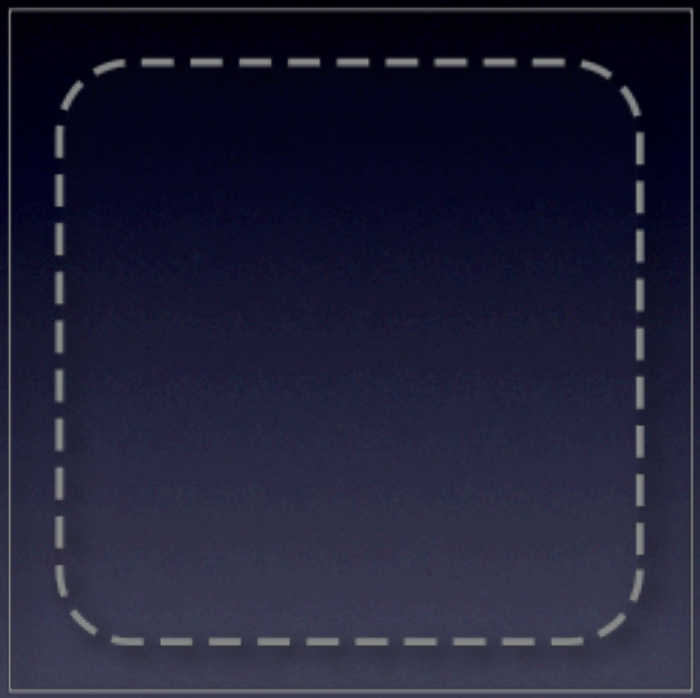
basecamp. **symmetry of interaction**

## **group editing**

symmetry of interaction

discoverability vs readability

iPhone. **non-symmetrical; readability**



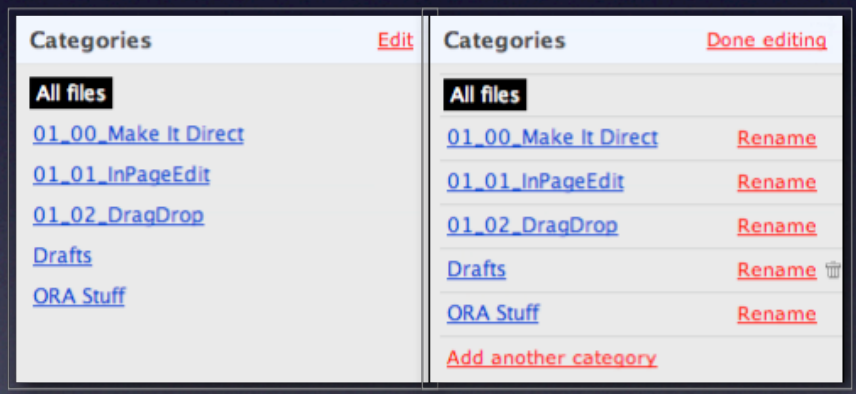
basecamp. **symmetry of interaction**

## **group editing**

symmetry of interaction

discoverability vs readability

iPhone. **non-symmetrical; readability**

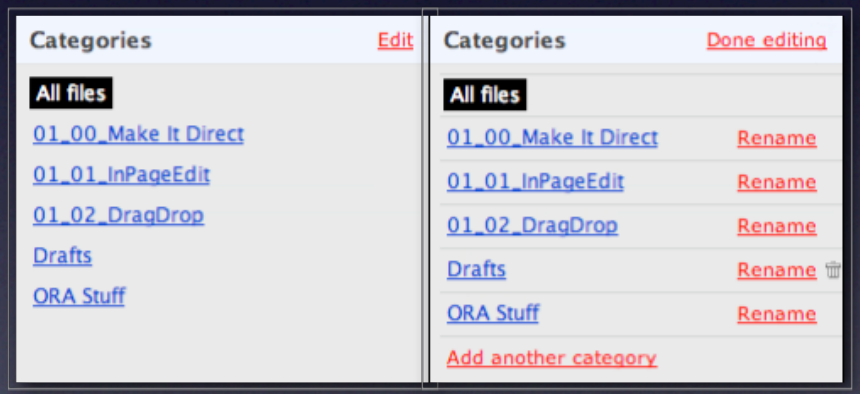



basecamp. **symmetry of interaction**

## **group editing**

symmetry of interaction
discoverability vs readability

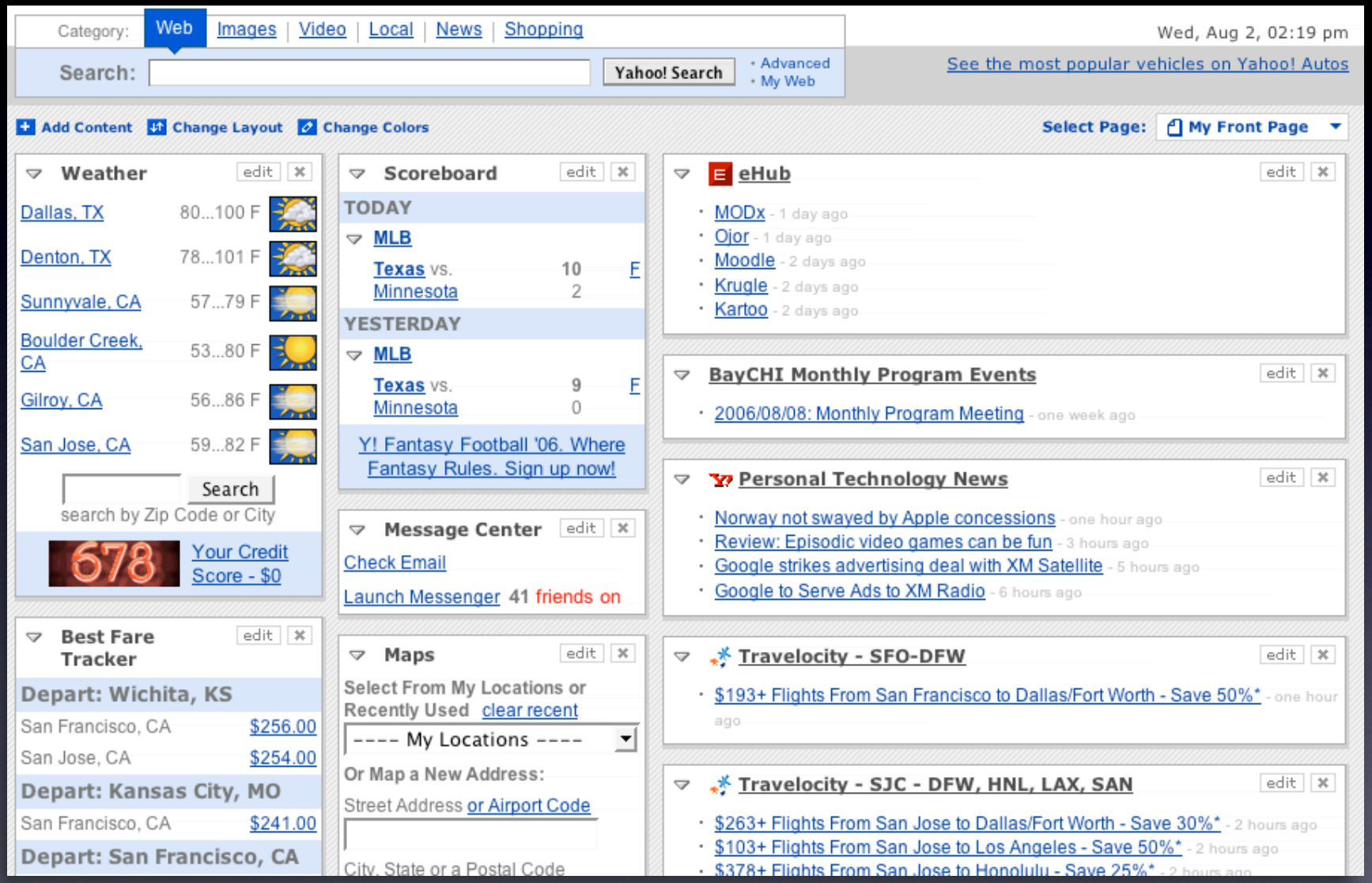
iPhone. **non-symmetrical; readability**




basecamp. **symmetry of interaction**

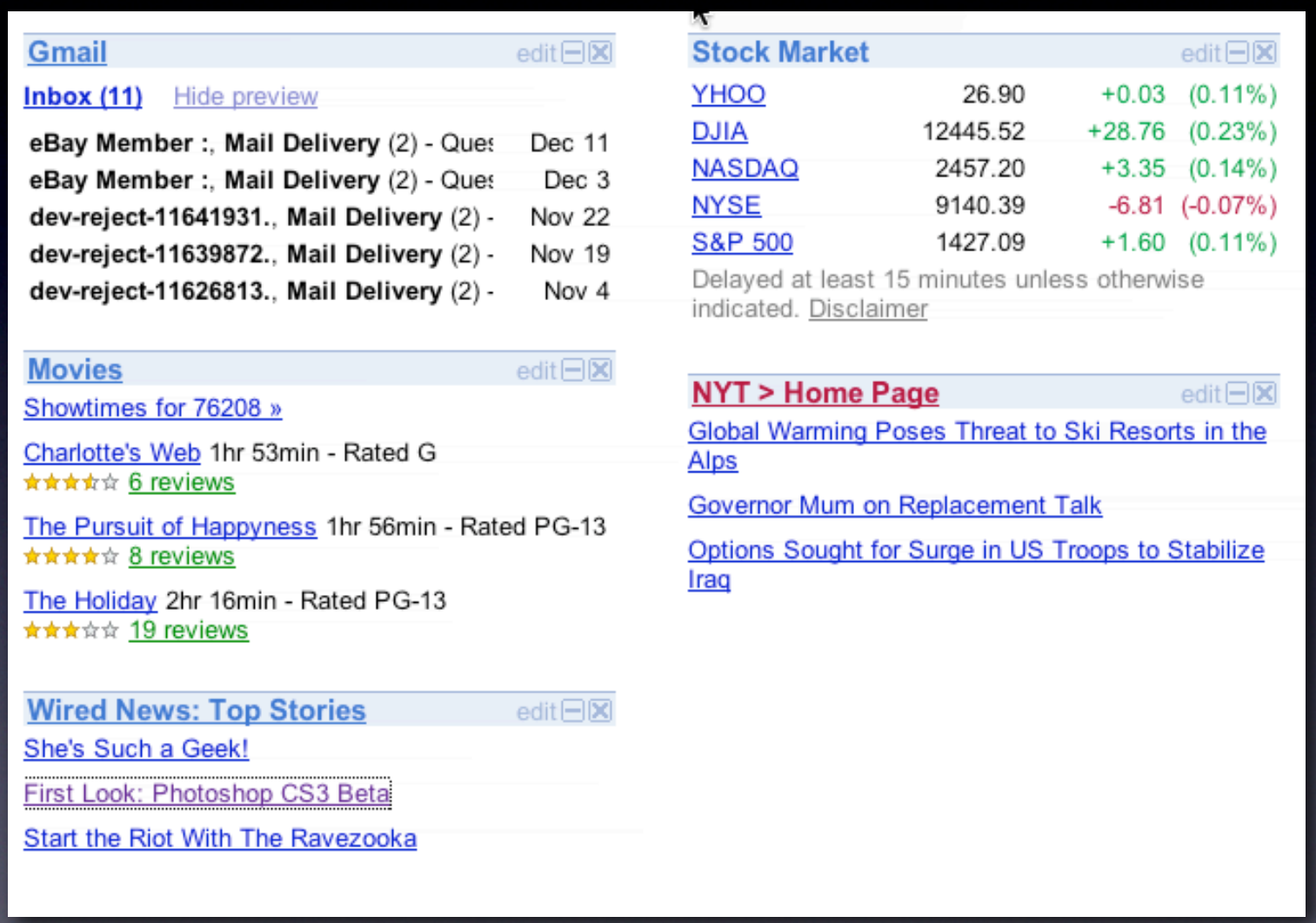
"If readability is more important than editing
then keep the editing action hidden
until the user interacts with the content."

# drag and drop

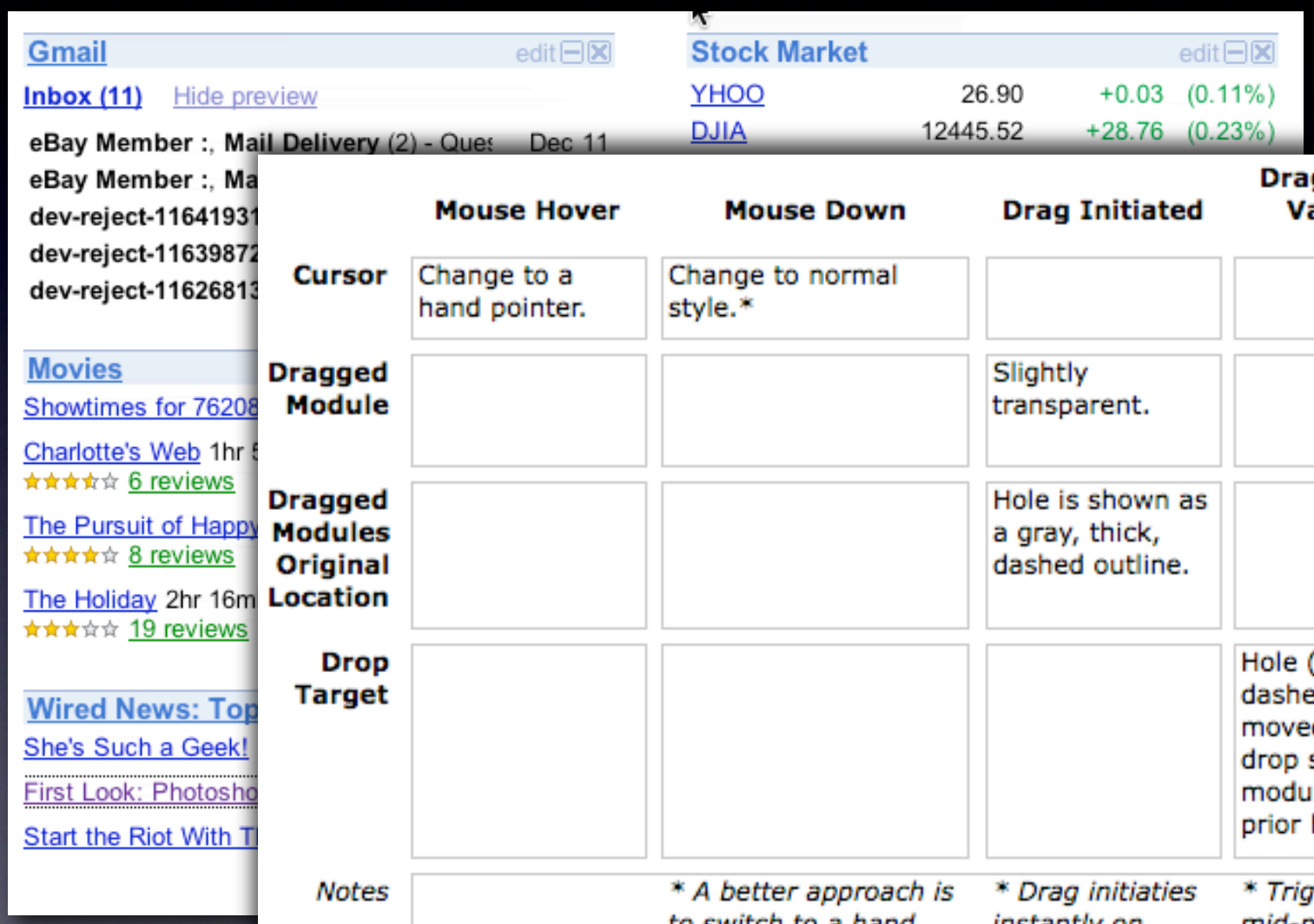



My Yahoo! **drag and drop**

# Take care of the interesting moments



# Take care of the interesting moments




| | Mouse Hover | Mouse Down | Drag Initiated | Drag Hovers over Valid Target* | Drop Accepted |
|---|---|---|---|---|---|
| **Cursor** | Change to a hand pointer. | Change to normal style.* | | | |
| **Dragged Module** | | | Slightly transparent. | | Dragged module removed. |
| **Dragged Modules Original Location** | | | Hole is shown as a gray, thick, dashed outline. | | Hole is removed. |
| **Drop Target** | | | | Hole (gray, thick, dashed outline) is moved to the new drop spot. Other modules shift to close prior hole. | Module is placed in the new location. |
| *Notes* | | ** A better approach is to switch to a hand that looks like it grabbed the module.* | ** Drag initiaties instantly on mouse down.* | ** Triggers when the mid-point of the dragged object enters a valid drop target.* | |

make it direct. **drag and drop**

## discoverability

hover invitation
interesting moments
activation on mouse down
tip during alternate path
additional visual affordances

make it direct. **drag and drop**

**discoverability**

hover invitation

interesting moments

activation on mouse down

tip during alternate path

additional visual affordances

netflix. **few hints.**

make it direct. **drag and drop**

**discoverability**

hover invitation

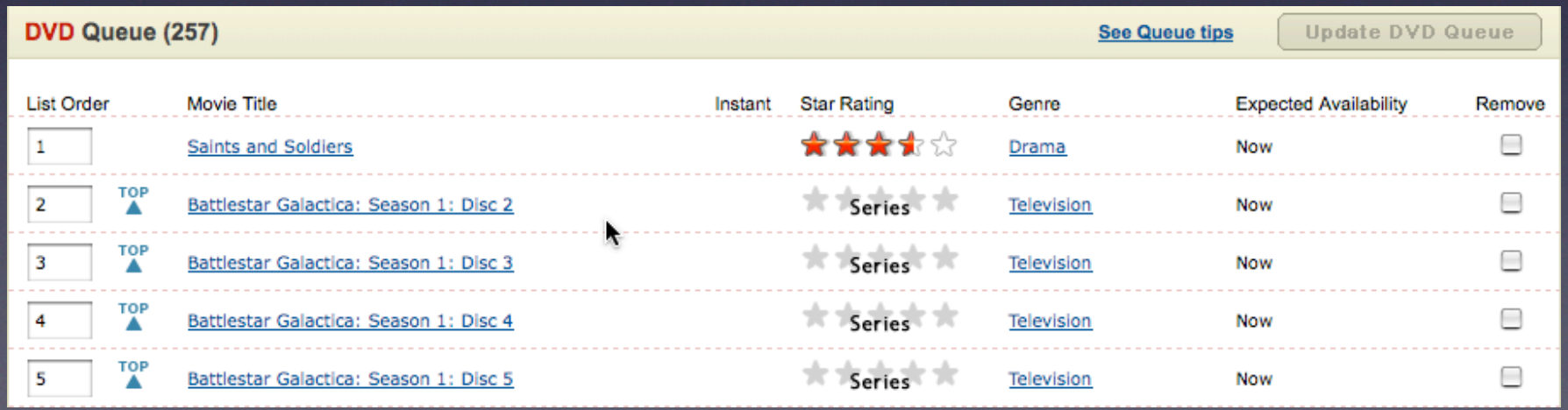
interesting moments

activation on mouse down

tip during alternate path

additional visual affordances

yahoo! teachers. **hints during interesting moments**




netflix. **few hints.**

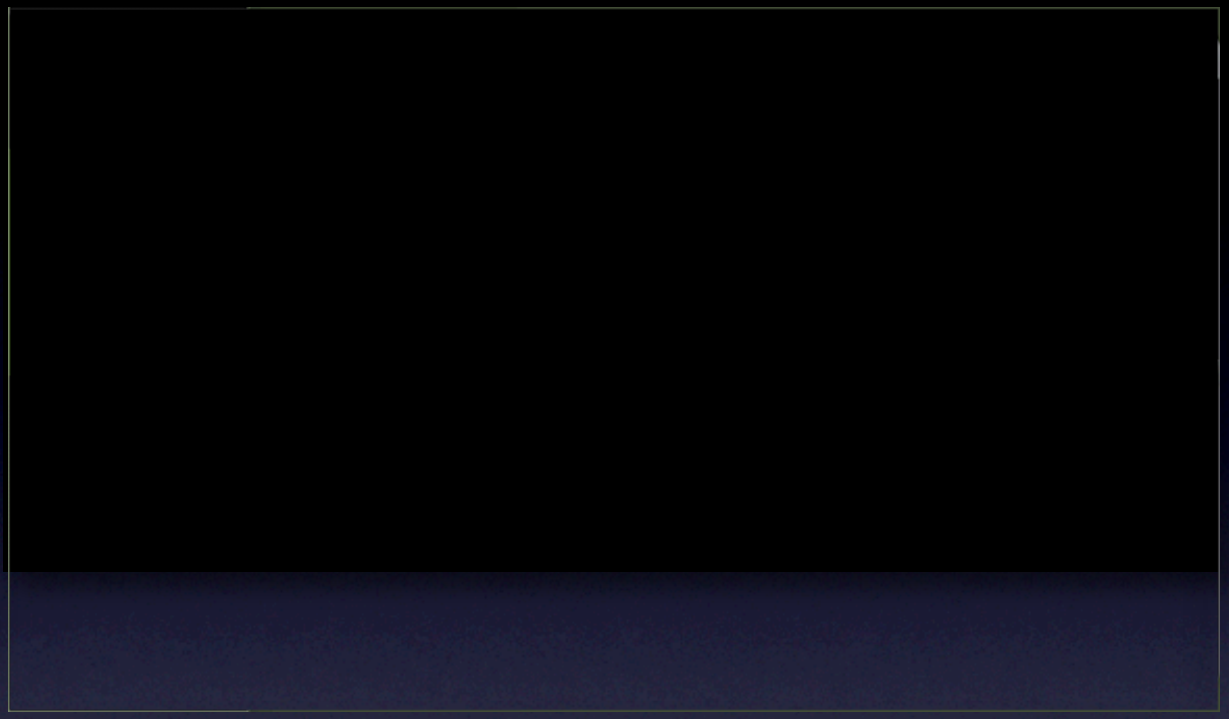
**drag and drop**

Not for simply setting an attribute

Don’t construct artificial visual constructs

make it direct. **drag and drop**

anti-pattern. **artificial construct**



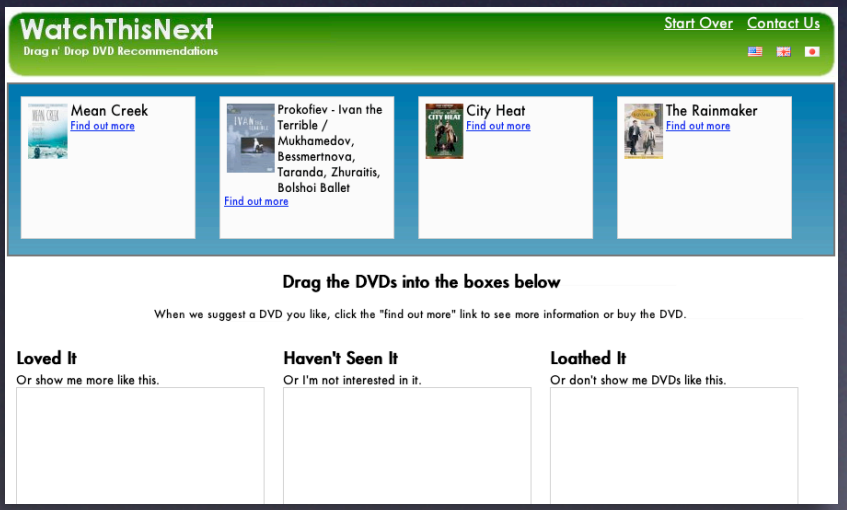
**drag and drop**

Not for simply setting an attribute

Don’t construct artificial visual constructs

make it direct. **drag and drop**

anti-pattern. **artificial construct**

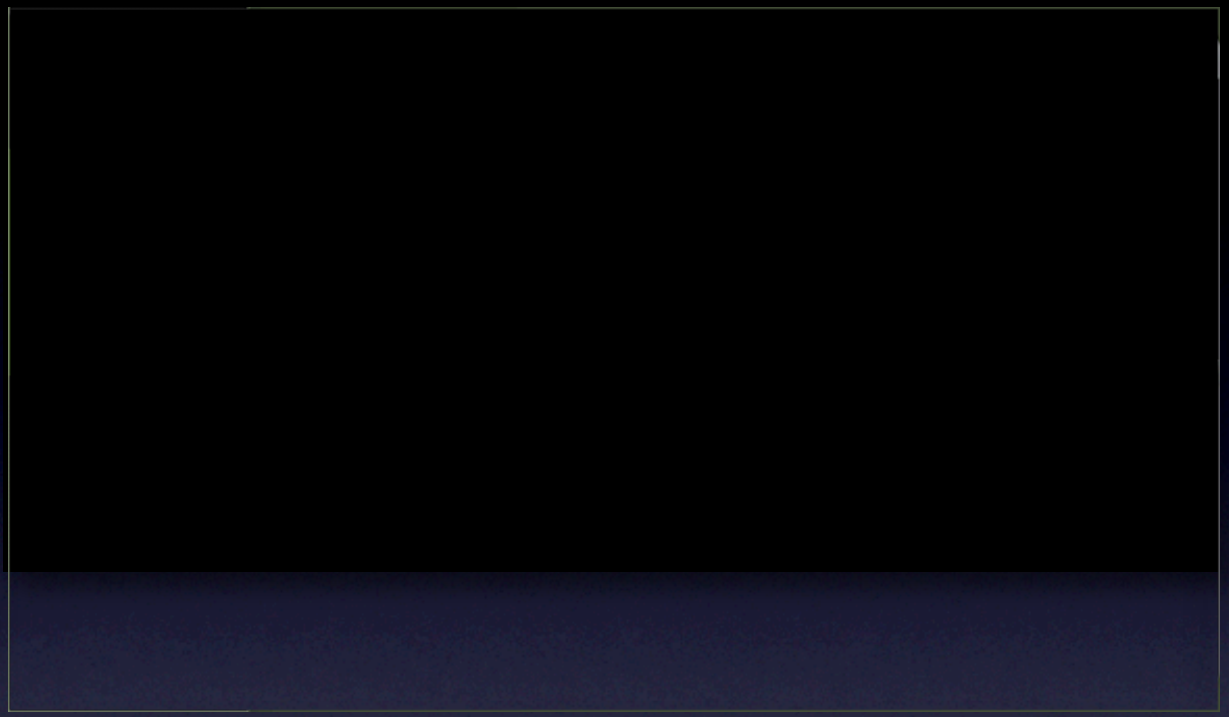



**drag and drop**

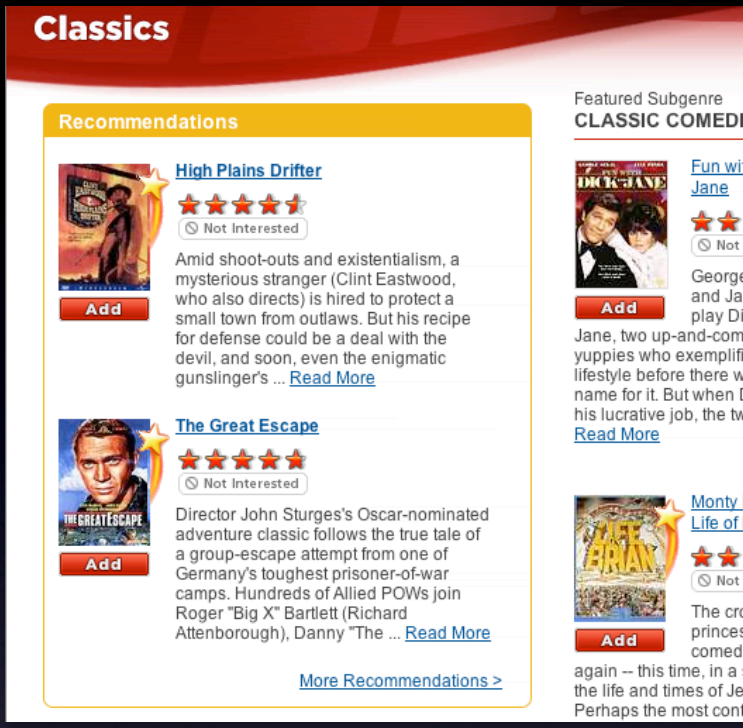
Not for simply setting an attribute

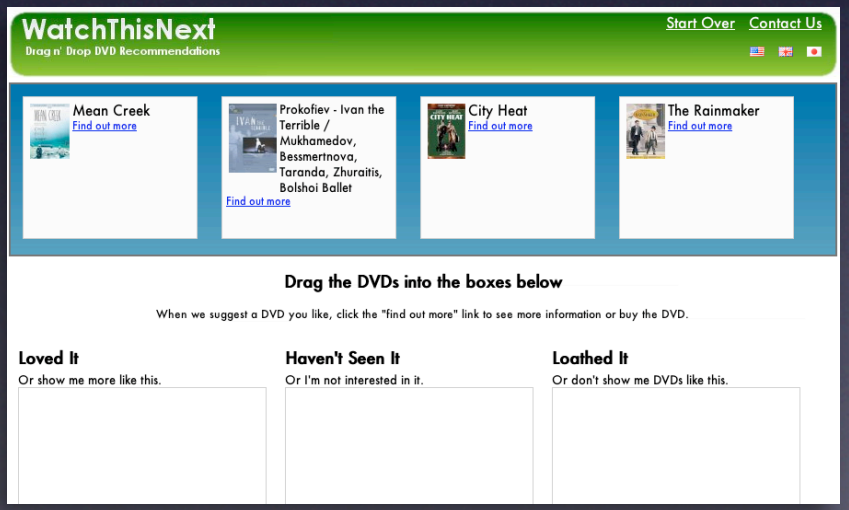
Don't construct artificial visual constructs

anti-pattern. **artificial construct**



make it direct. **drag and drop**




**drag and drop**

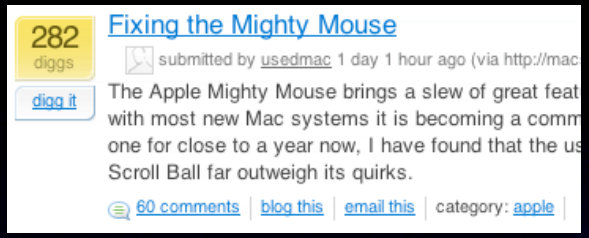
Not for simply setting an attribute

Don't construct artificial visual constructs

# keep it lightweight

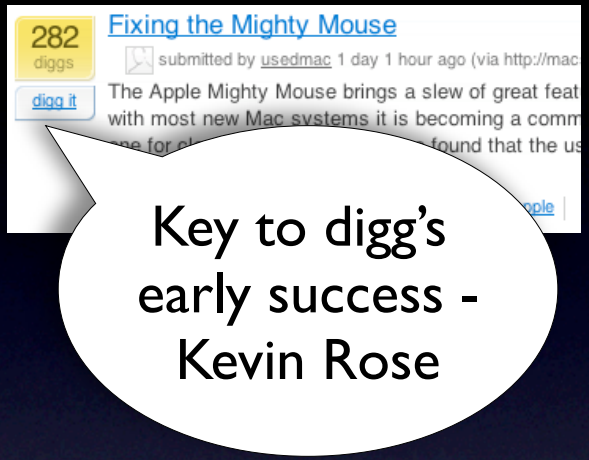
keep it lightweight. **contextual tools**

digg. in page action



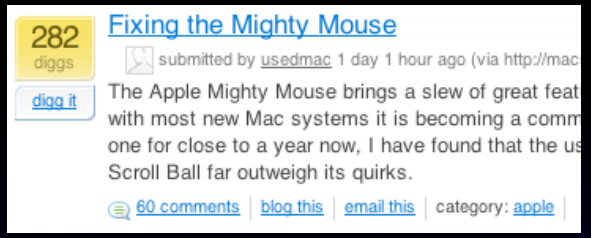
keep it lightweight. **contextual tools**

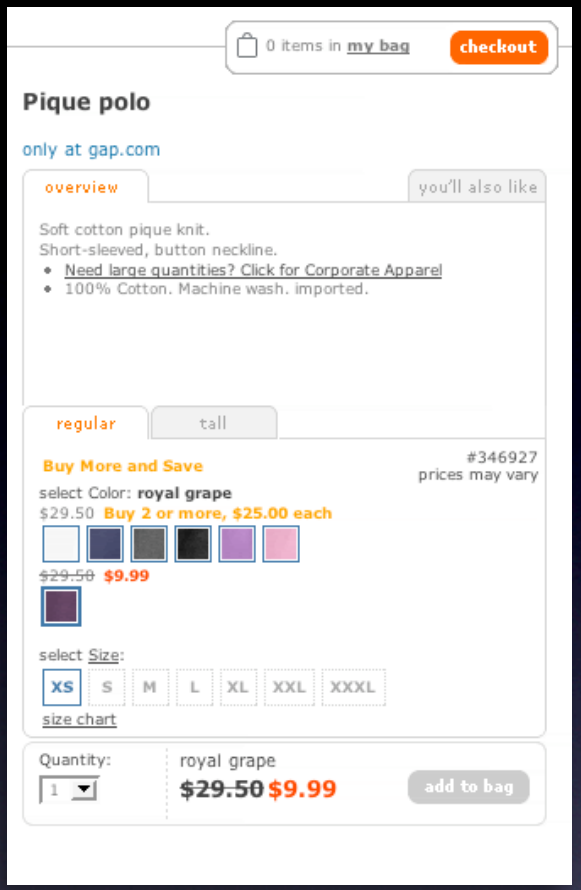
digg. **in page action**



keep it lightweight. **contextual tools**

digg. **in page action**

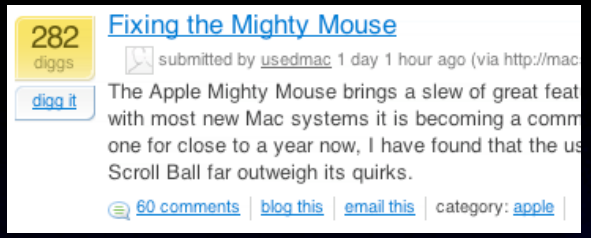


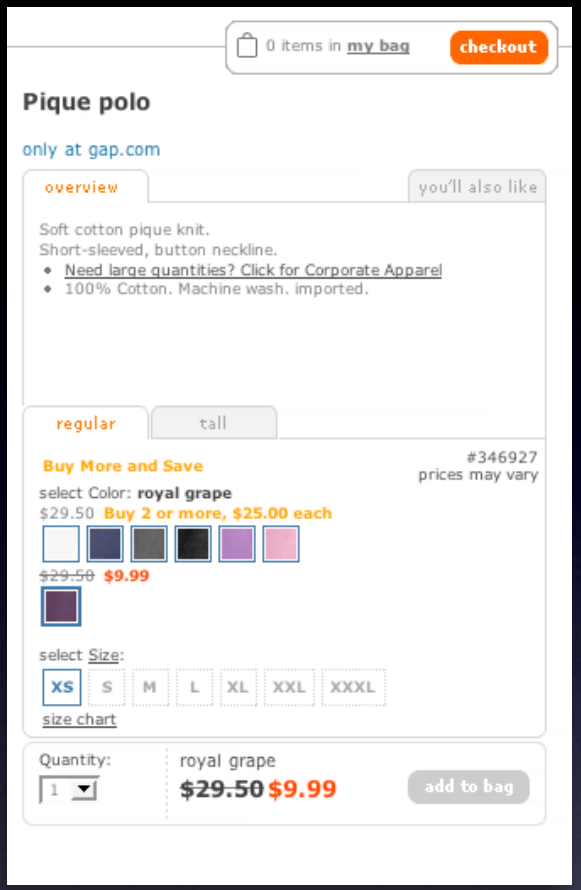




the gap. **remembered collections**

keep it lightweight. **contextual tools**

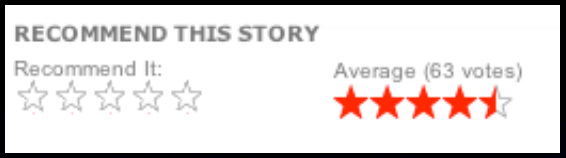
digg. **in page action**



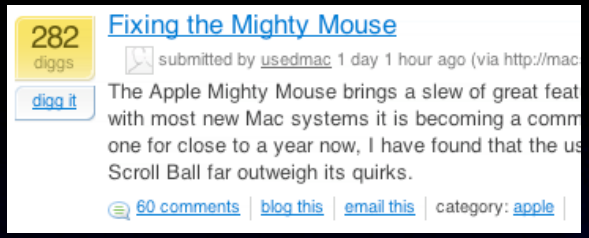

the gap. **remembered collections**

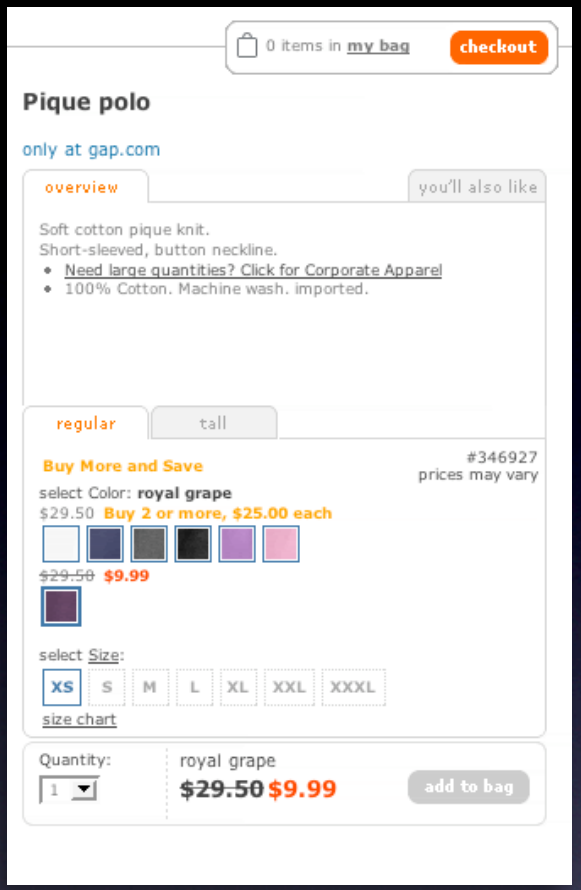
y! news, netflix. **rating an object**



keep it lightweight. **contextual tools**

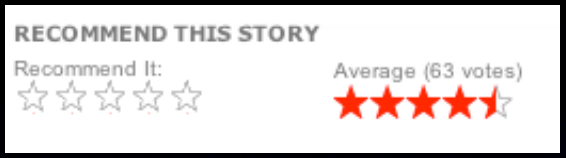
digg. **in page action**

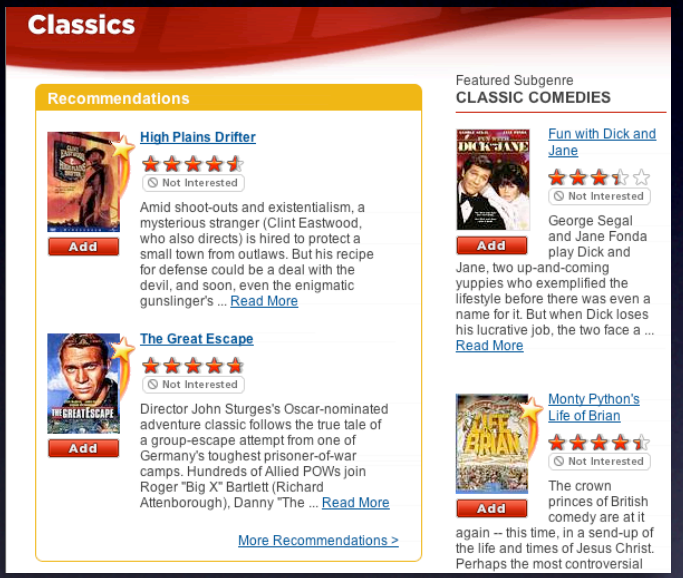



the gap. **remembered collections**

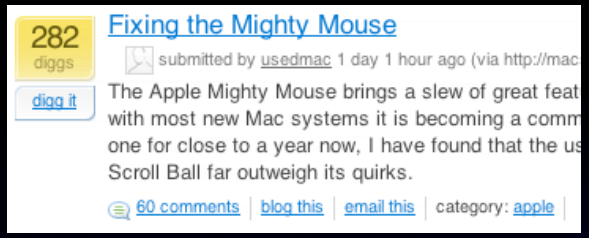
y! news, netflix. **rating an object**

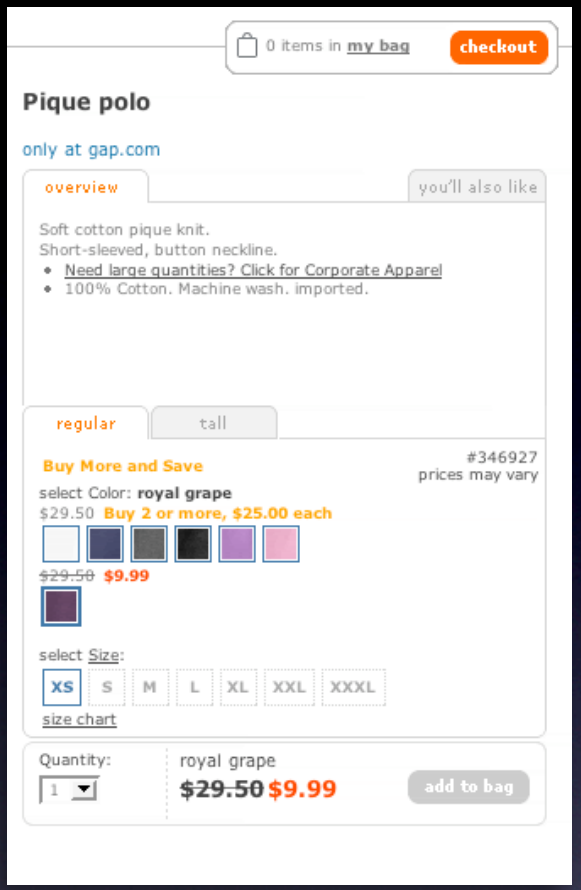


keep it lightweight. **contextual tools**

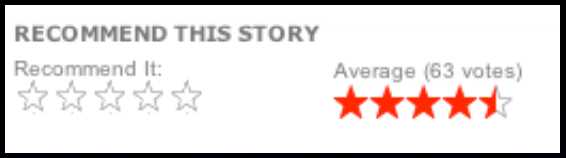
digg. **in page action**

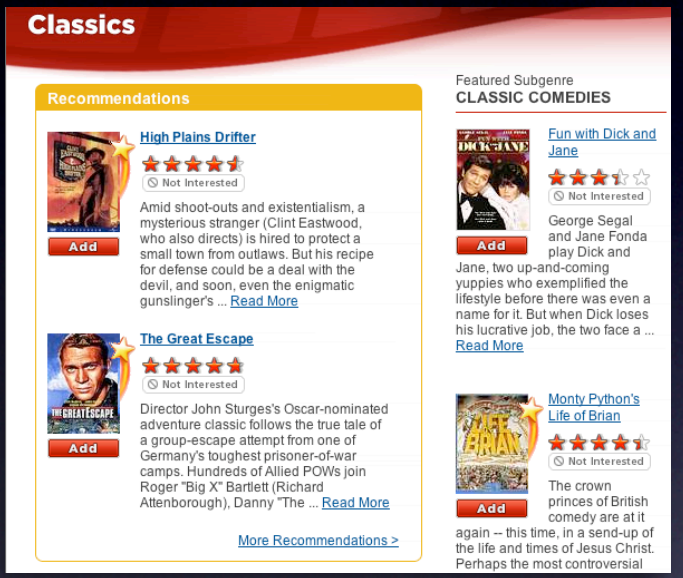



the gap. **remembered collections**

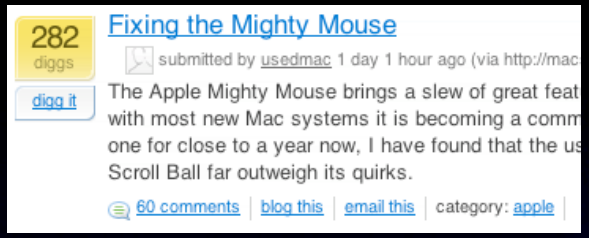
y! news, netflix. **rating an object**

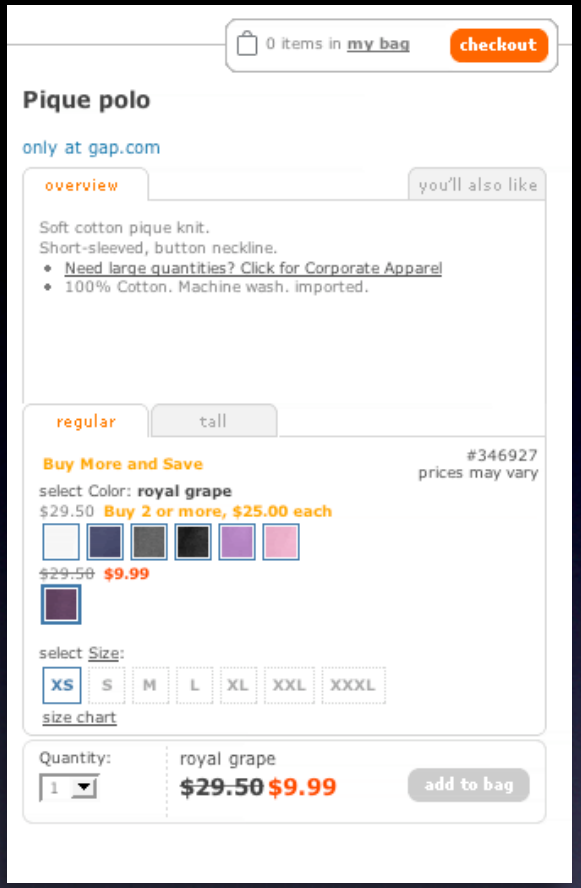


keep it lightweight. **contextual tools**

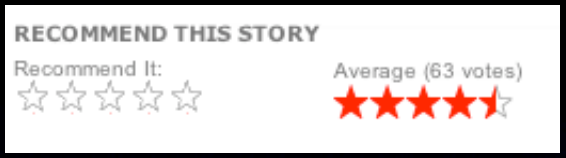
digg. **in page action**

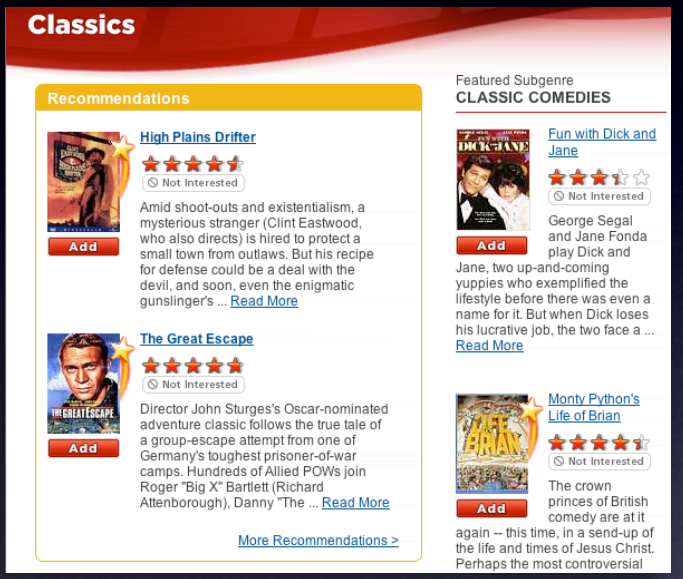


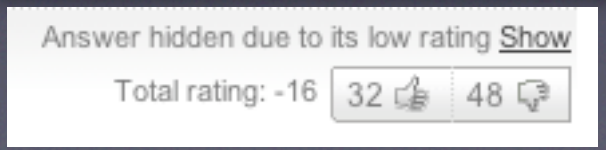




the gap. **remembered collections**

y! news, netflix. **rating an object**



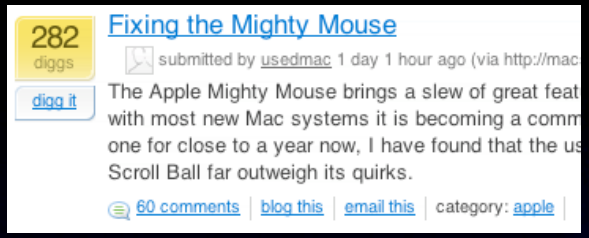



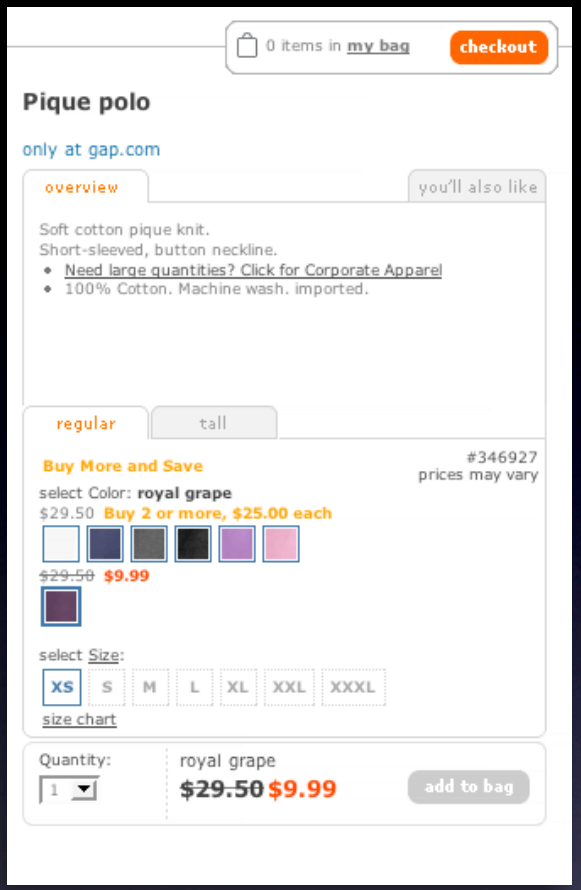



y! movies, y! answers. **rating an object**

keep it lightweight. **contextual tools**

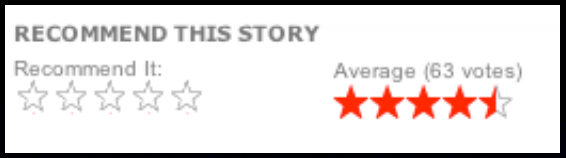
digg. **in page action**

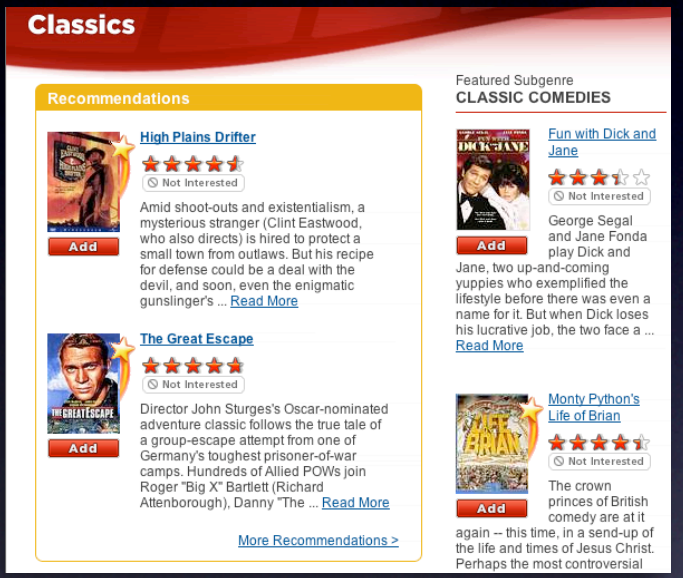


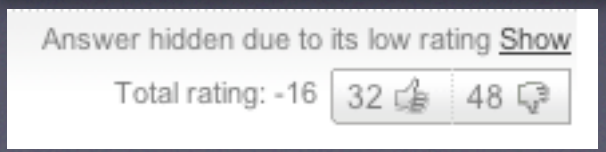




the gap. **remembered collections**

y! news, netflix. **rating an object**



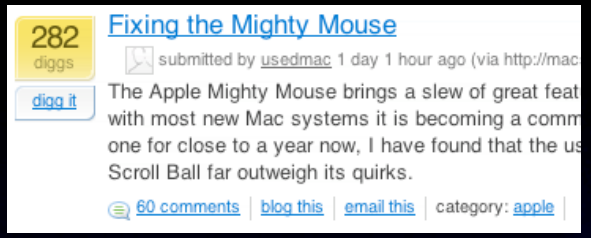


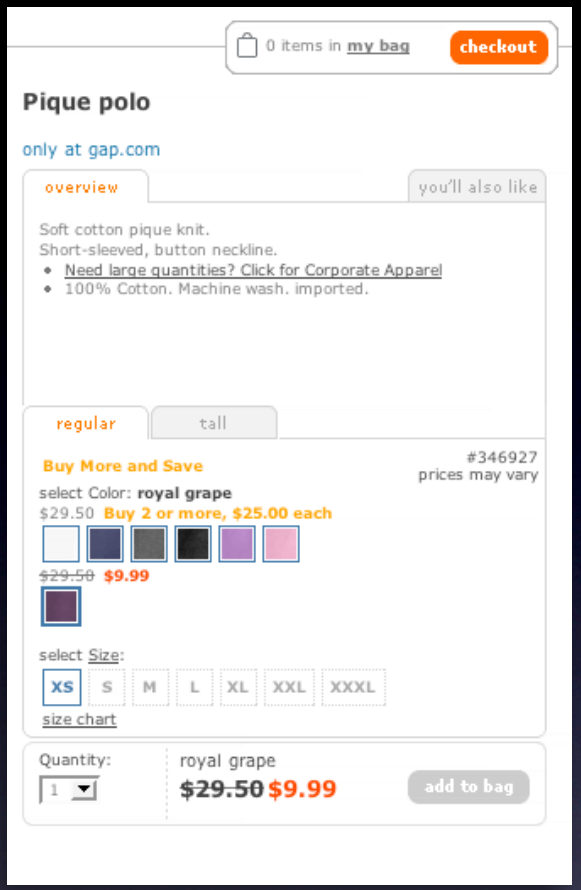

y! movies, y! answers. **rating an object**

flickr. **in-context tools**

keep it lightweight. **contextual tools**

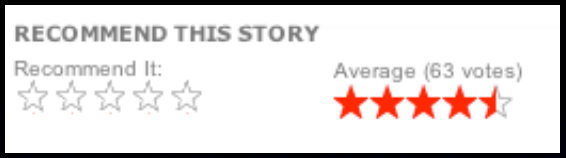
digg. **in page action**

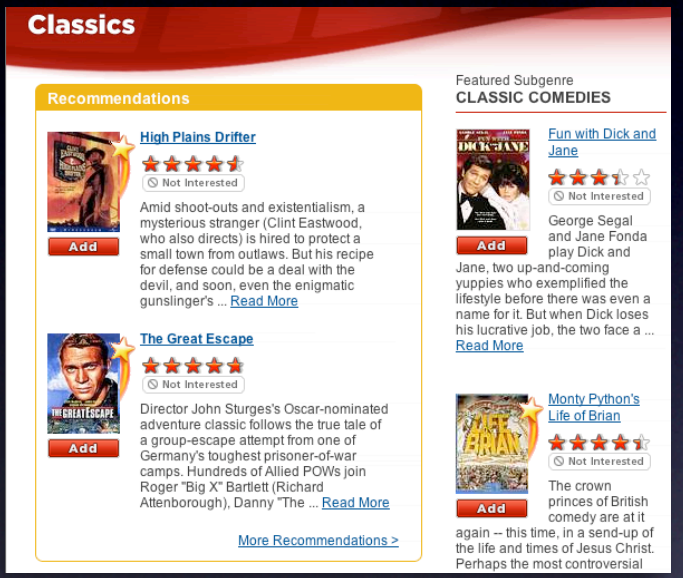


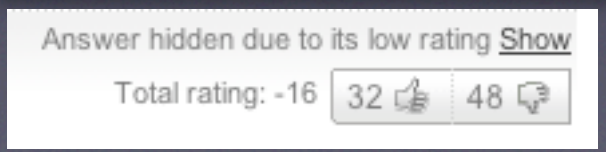




the gap. **remembered collections**

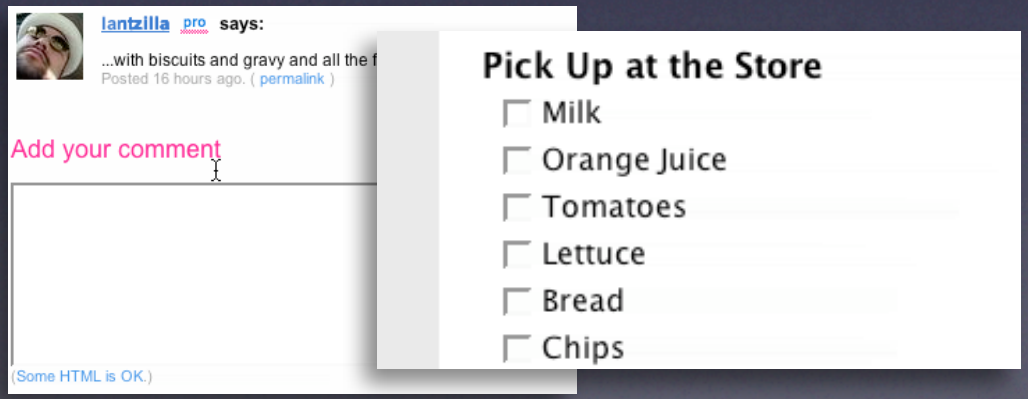
y! news, netflix. **rating an object**






y! movies, y! answers. **rating an object**



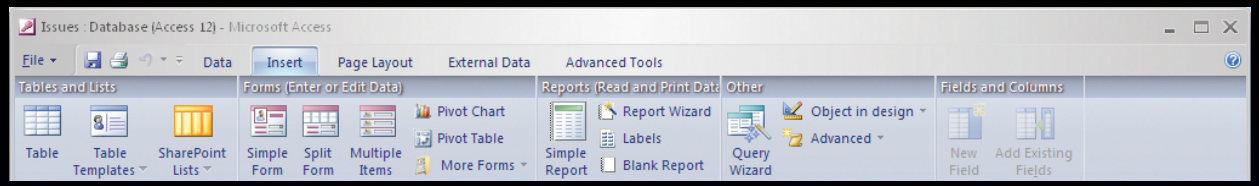

flickr. **in-context tools**

## keep it lightweight. **contextual tools**

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

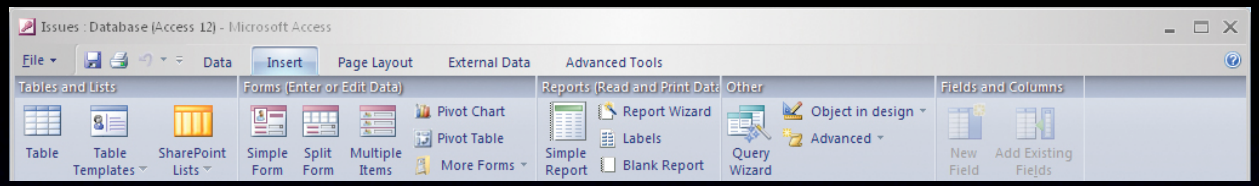
## keep it lightweight. **contextual tools**

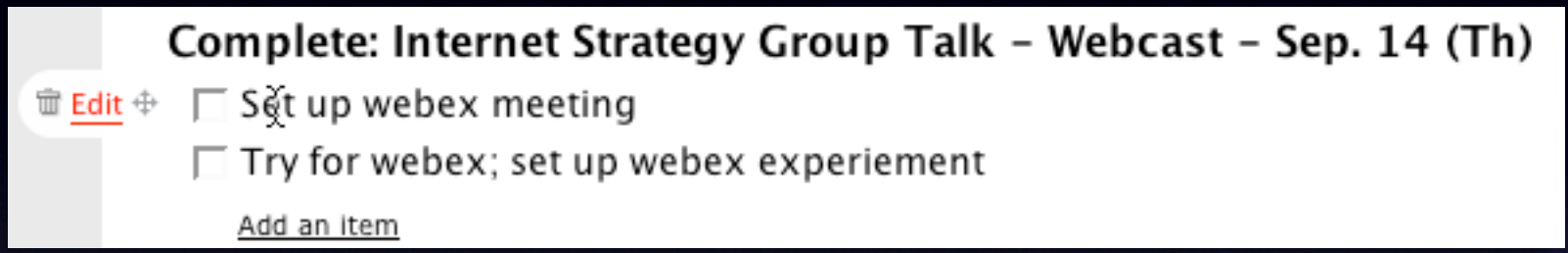
Same as context menus
Only good for single objects
Can actually slow you down



## keep it lightweight. **contextual tools**

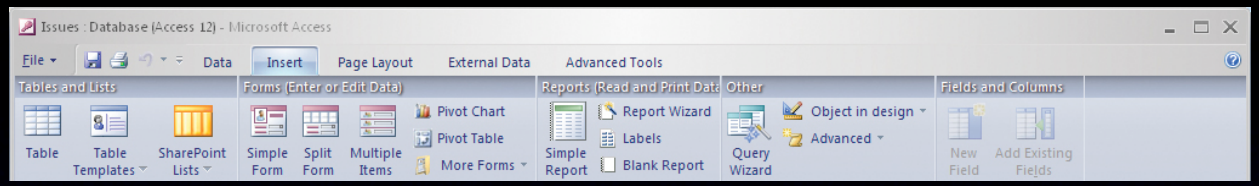
Same as context menus
Only good for single objects
Can actually slow you down

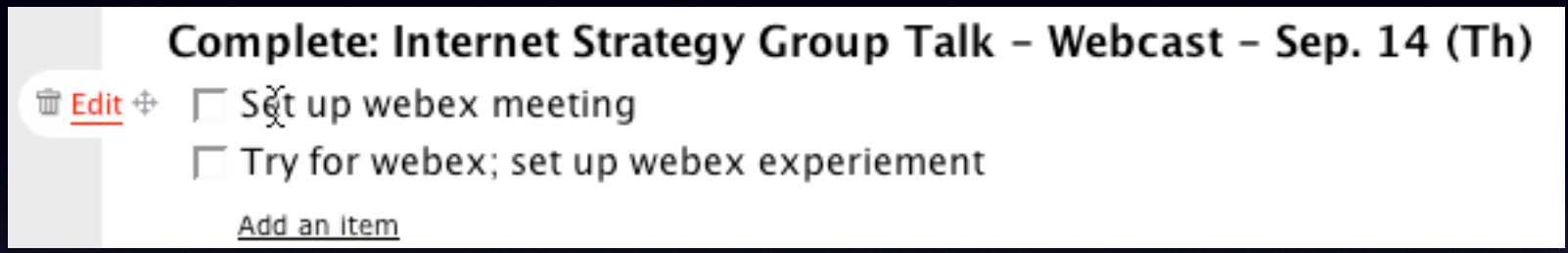




## keep it lightweight. **contextual tools**

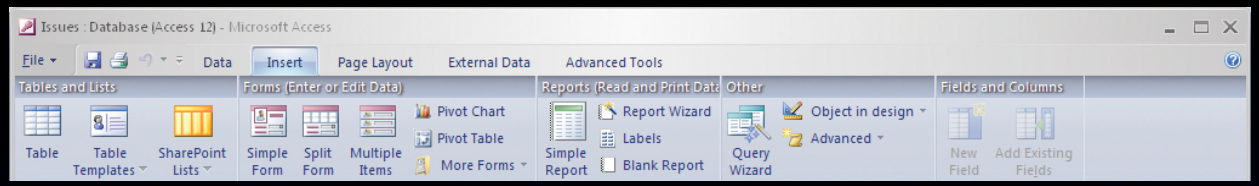
Same as context menus
Only good for single objects
Can actually slow you down

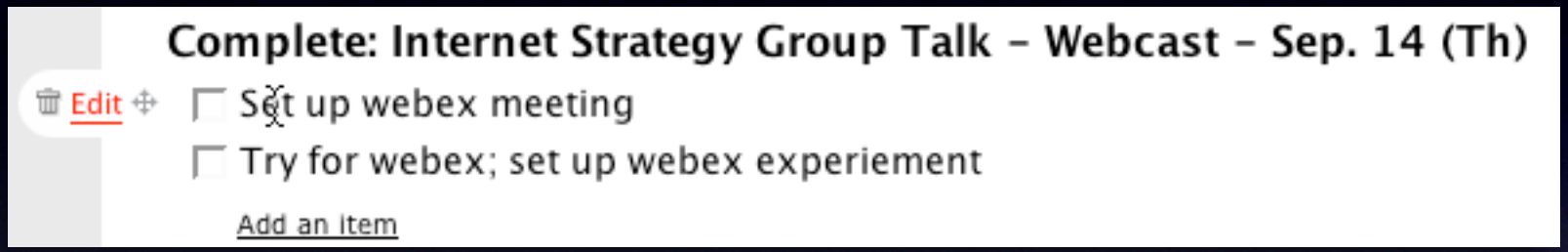


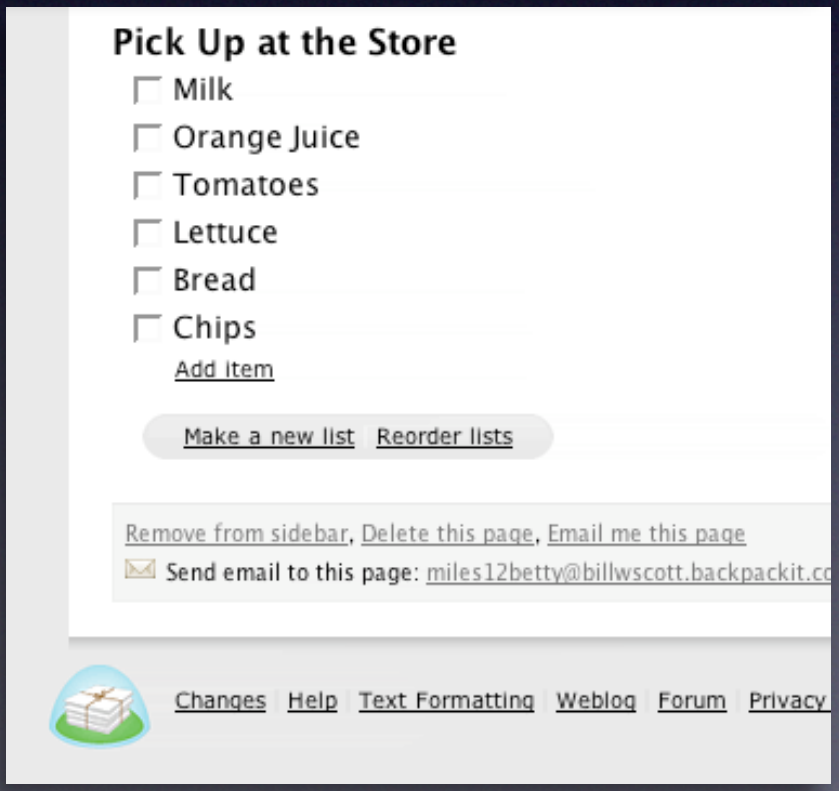


# keep it lightweight. **contextual tools**

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







**Remove the “pain points”**

Shorten the path

Keep actions immediate and light

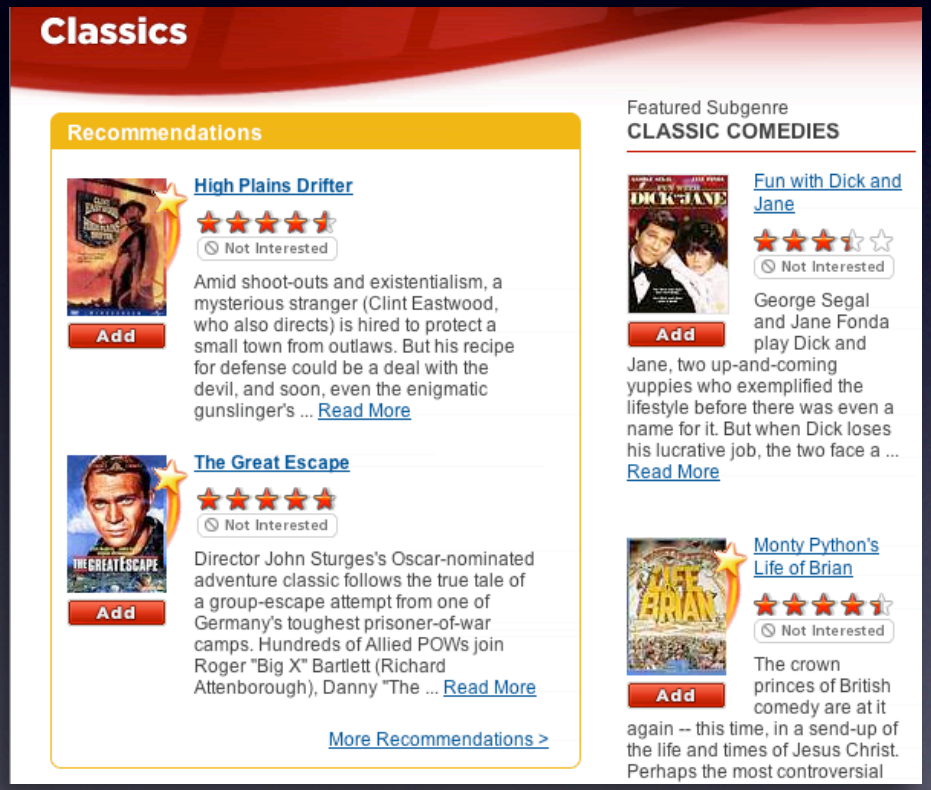
Use hover, blur, focus; avoid heavy events

# Remove the “pain points”

Shorten the path

Keep actions immediate and light

Use hover, blur, focus; avoid heavy events



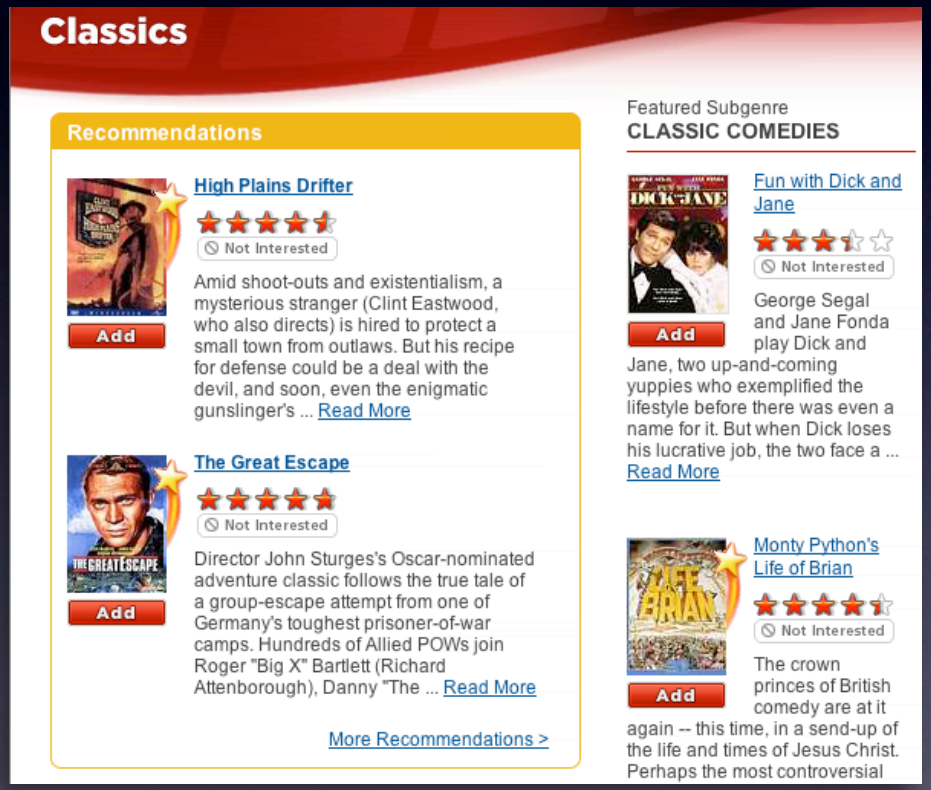

netflix. **ratings**

# Remove the “pain points”

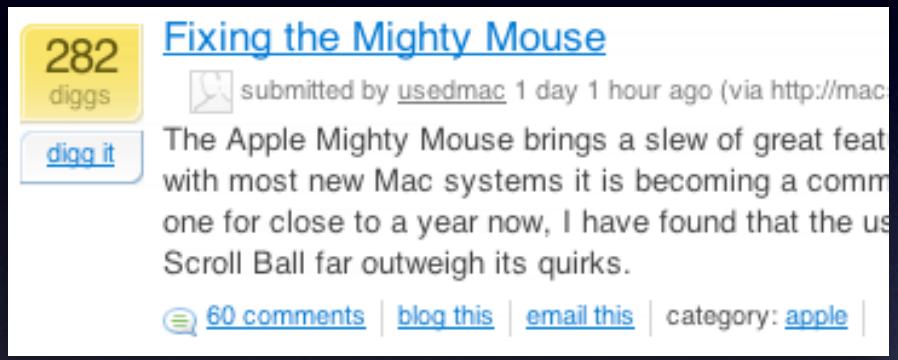
Shorten the path

Keep actions immediate and light

Use hover, blur, focus; avoid heavy events




netflix. **ratings**




digg. **vote**

**click-weight**

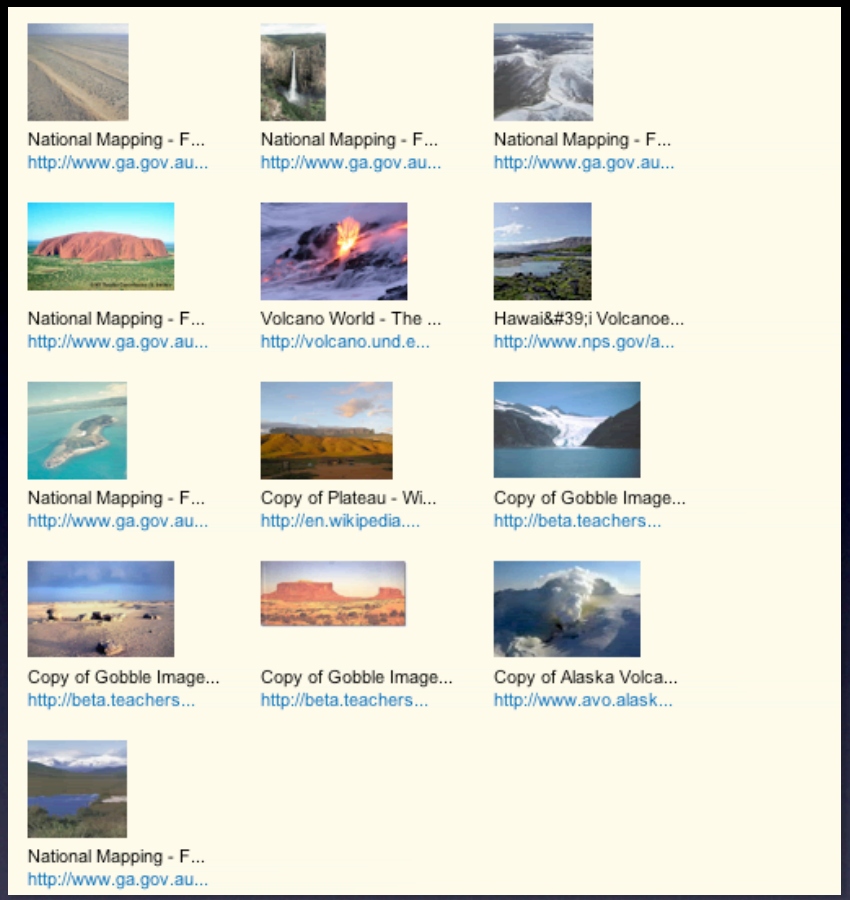
decision time

seek time

second guessing

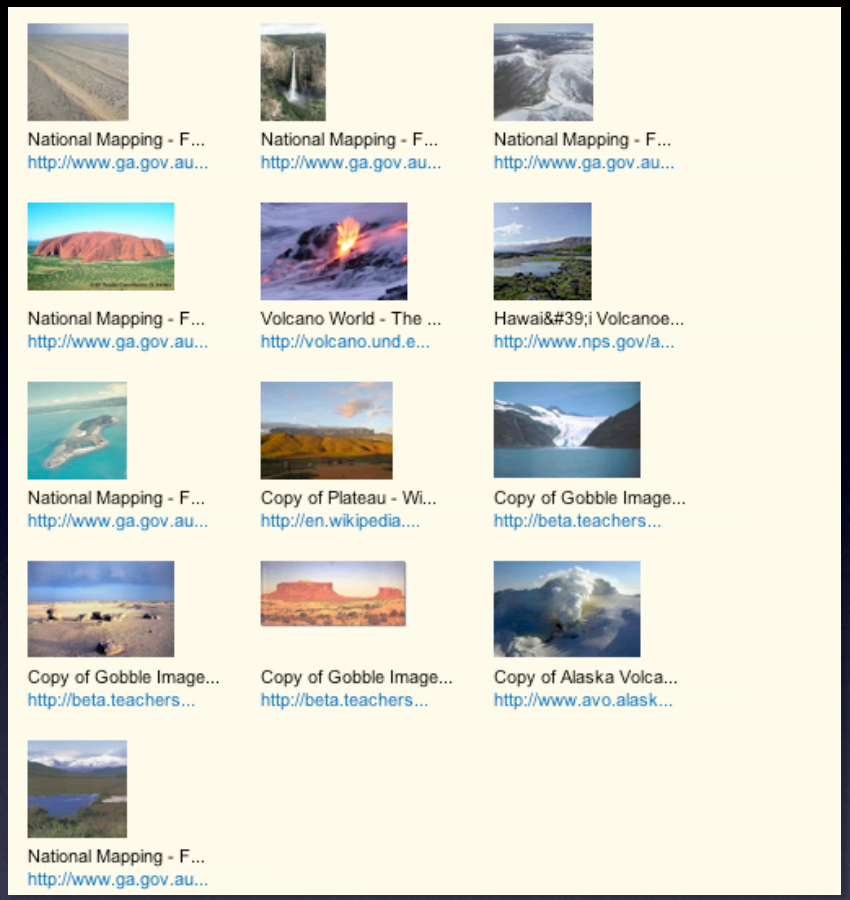
wait time

keep it lightweight. **anti-patterns**

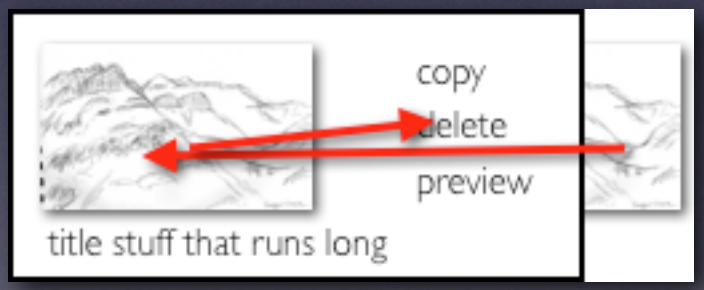


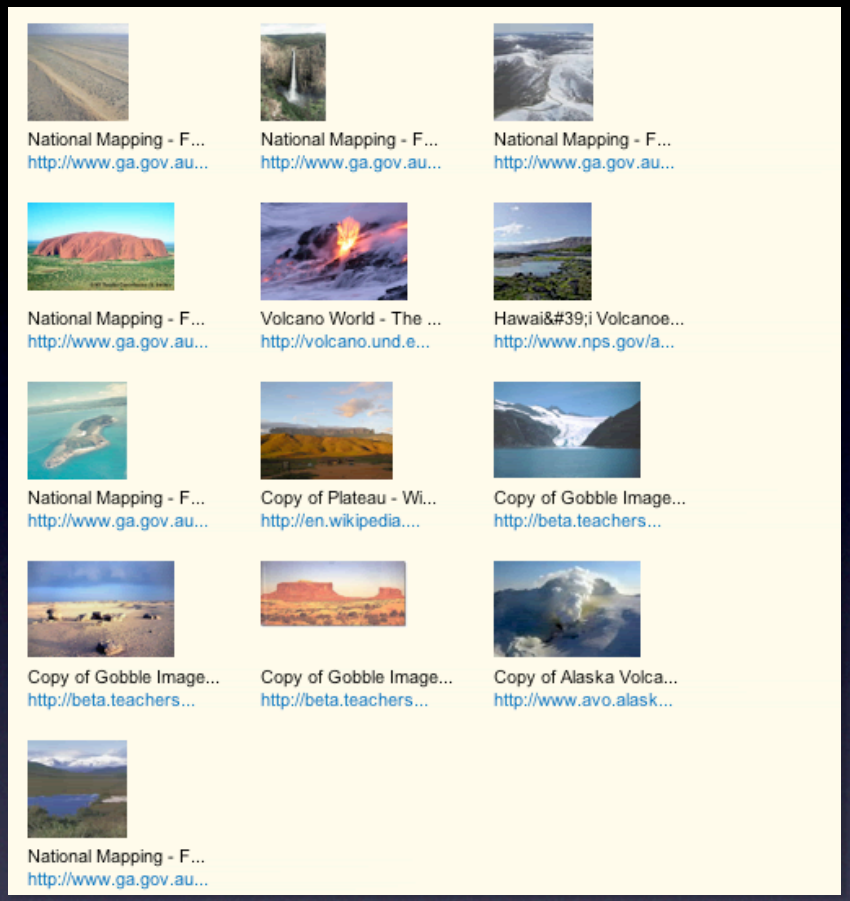

y! teachers. anti-pattern. **hover & cover**

# keep it lightweight. **anti-patterns**

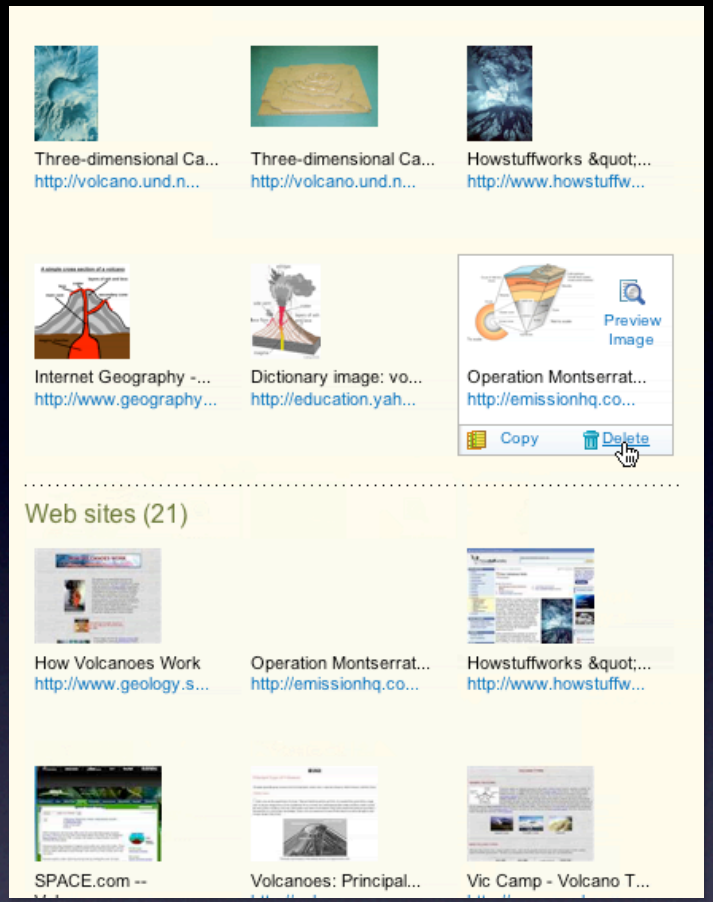



y! teachers. anti-pattern. **hover & cover**

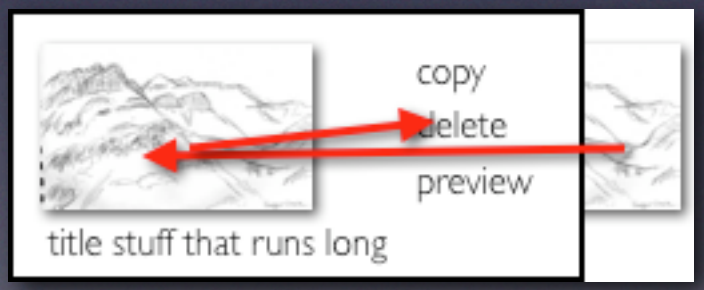




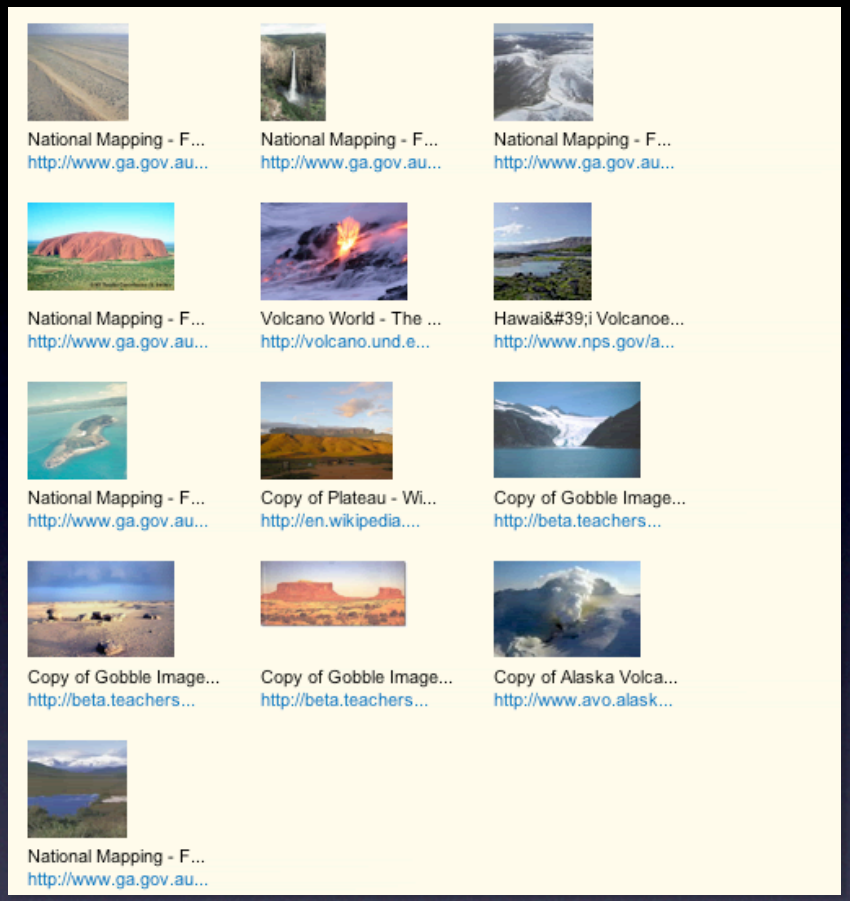

y! teachers. anti-pattern. **hover & cover**



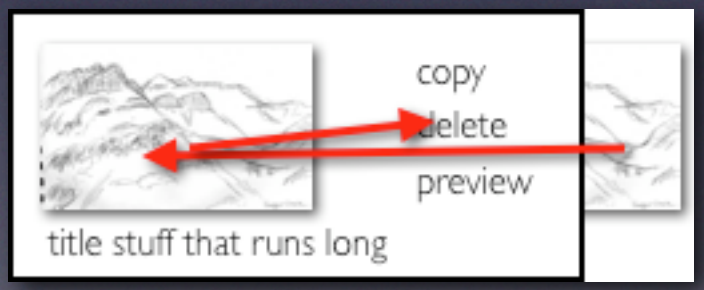

y! teachers. anti-pattern. **hover & cover. resolved**

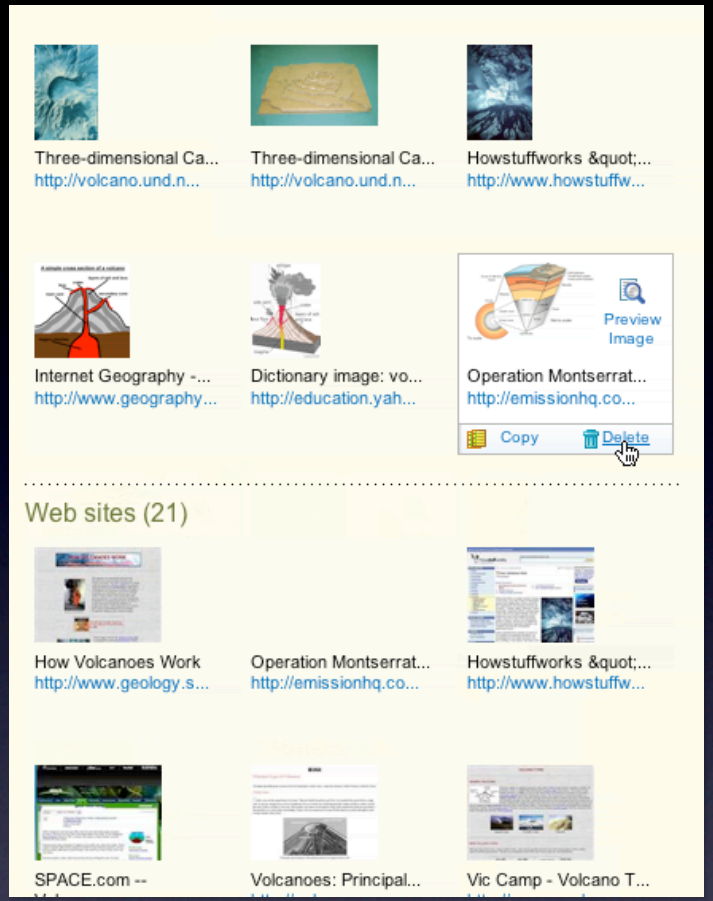


# keep it lightweight. **anti-patterns**

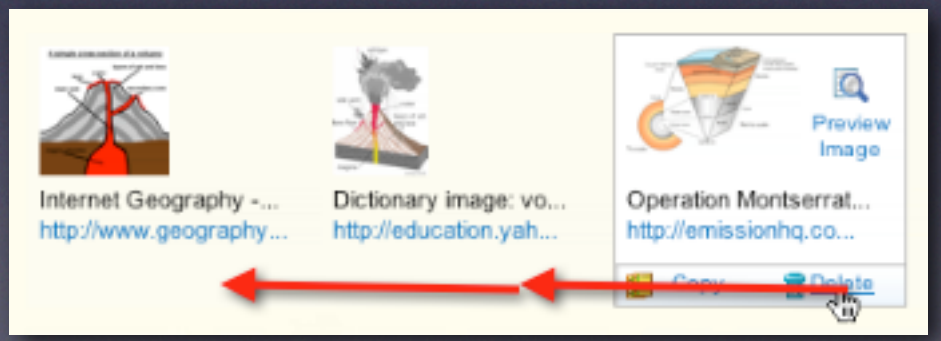



y! teachers. anti-pattern. **hover & cover**

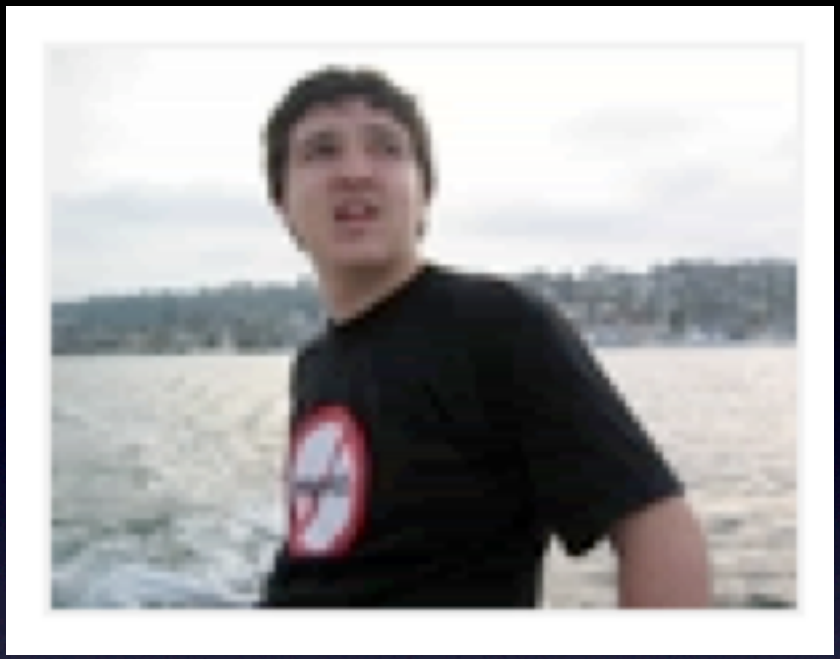



y! teachers. anti-pattern. **hover & cover. resolved**



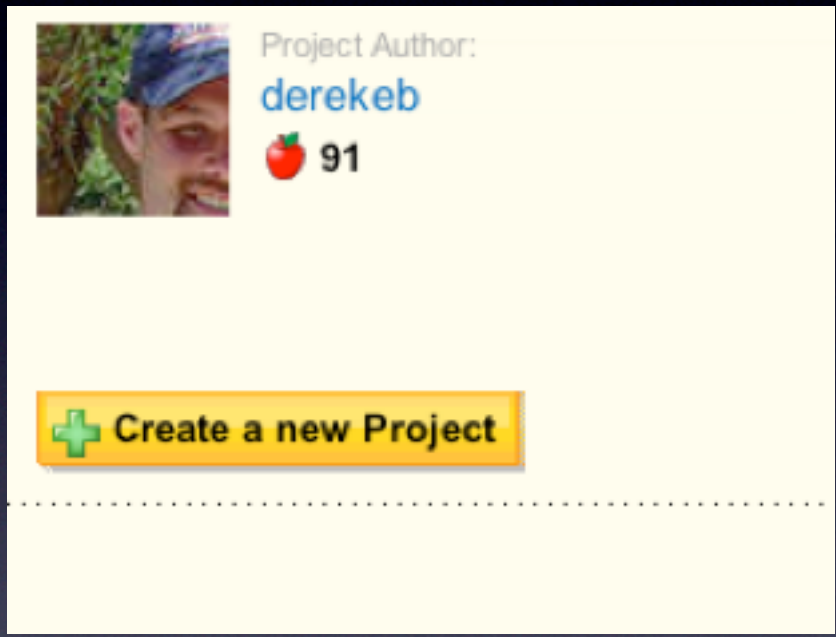
keep it lightweight. **anti-patterns**



zooomr. anti-pattern. **mystery meat**

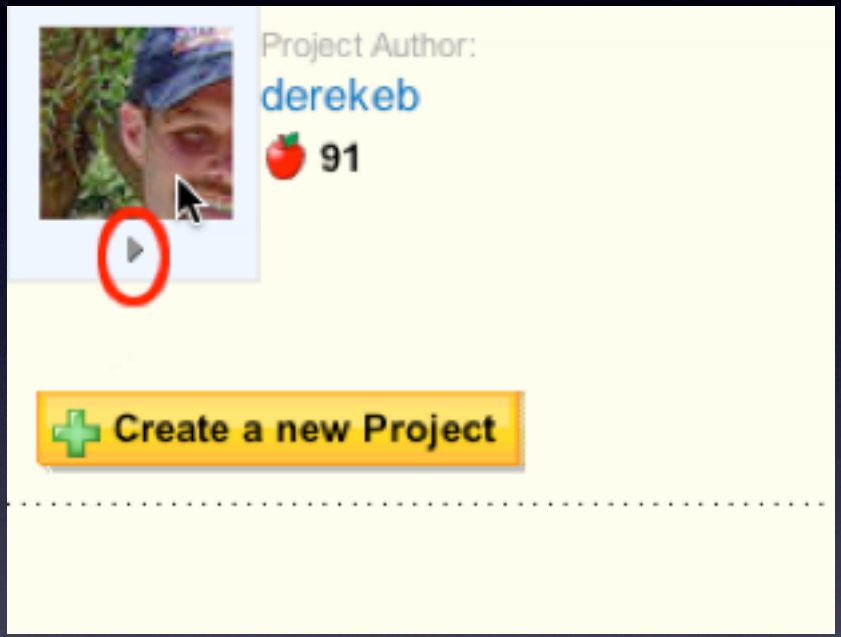
zooomr. anti-pattern. **mystery meat**

zooomr. anti-pattern. **mystery meat**



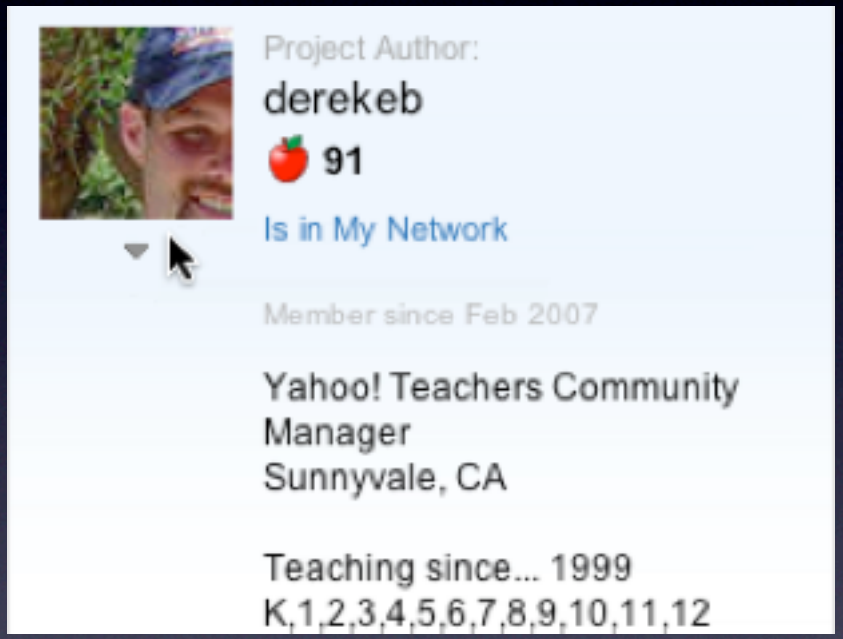

y! teachers. anti-pattern. **tiny targets**

zooomr. anti-pattern. **mystery meat**




y! teachers. anti-pattern. **tiny targets**

zooomr. anti-pattern. **mystery meat**



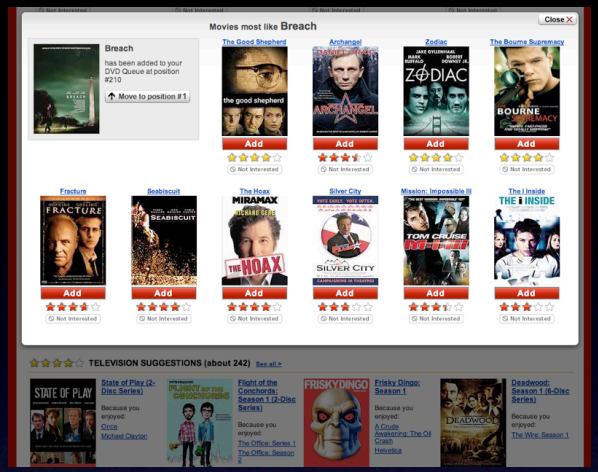

y! teachers. anti-pattern. **tiny targets**

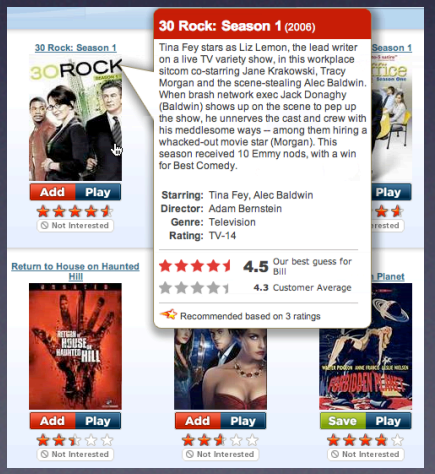
stay on the page

stay on the page. **overlay**

**overlays**
dialog overlay
detail overlay
input overlay

**considerations**
lightbox effect
modality
activation

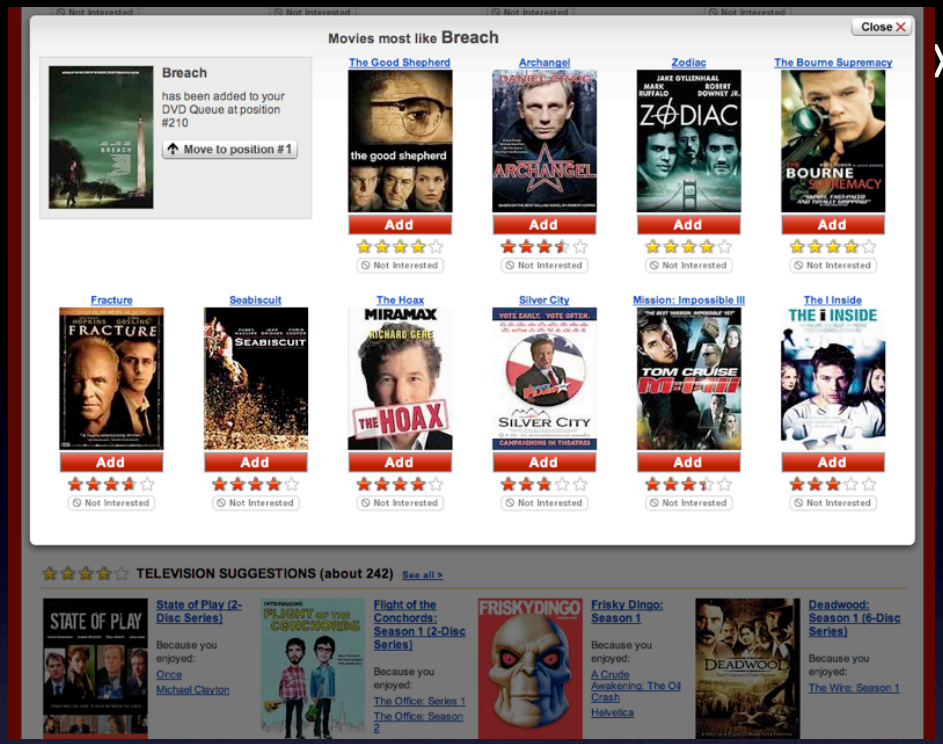


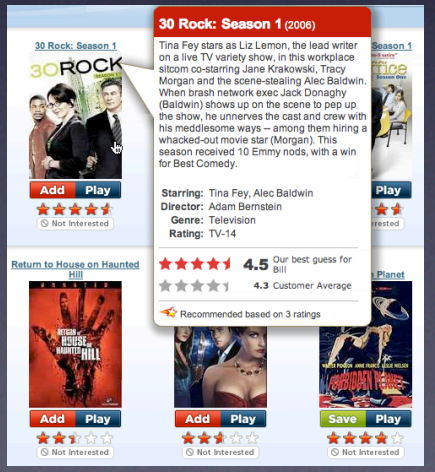


y on the page. **overlay**

**overlays**
dialog overlay
detail overlay
input overlay

**considerations**
lightbox effect
modality
activation

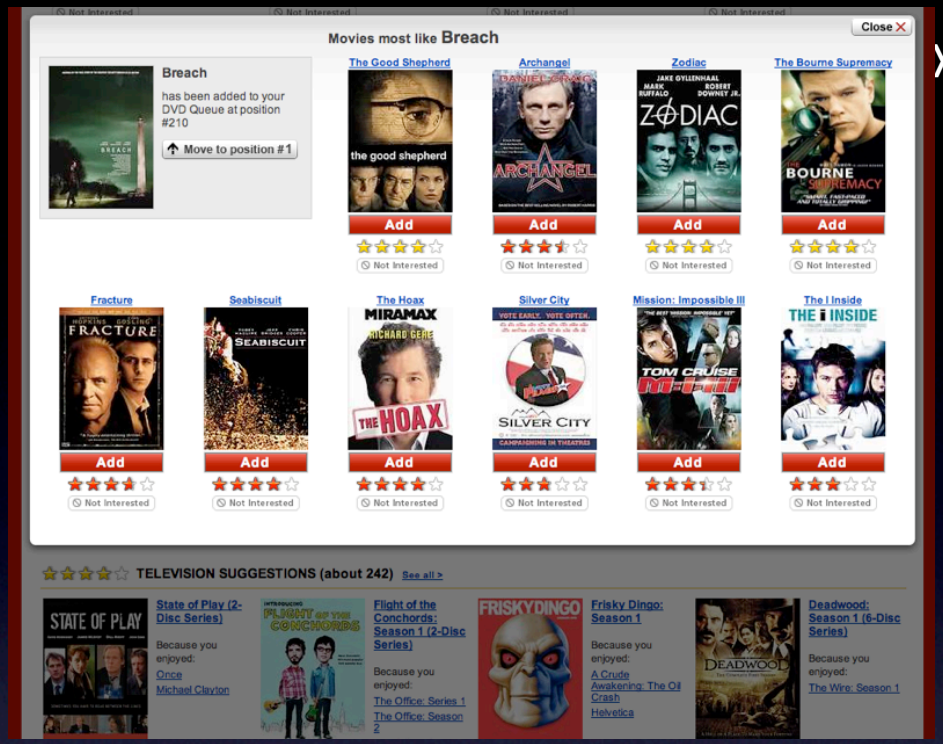


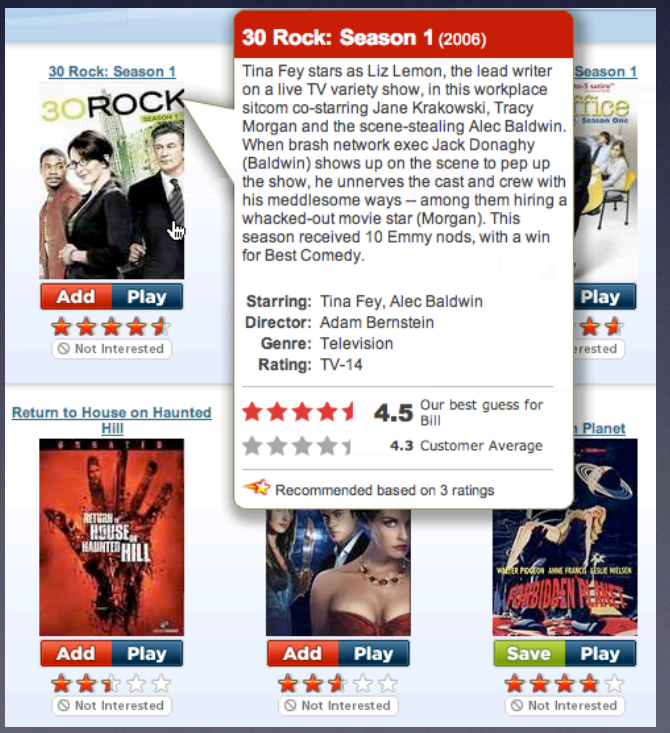


y on the page. **overlay**

**overlays**
dialog overlay
detail overlay
input overlay

**considerations**
lightbox effect
modality
activation

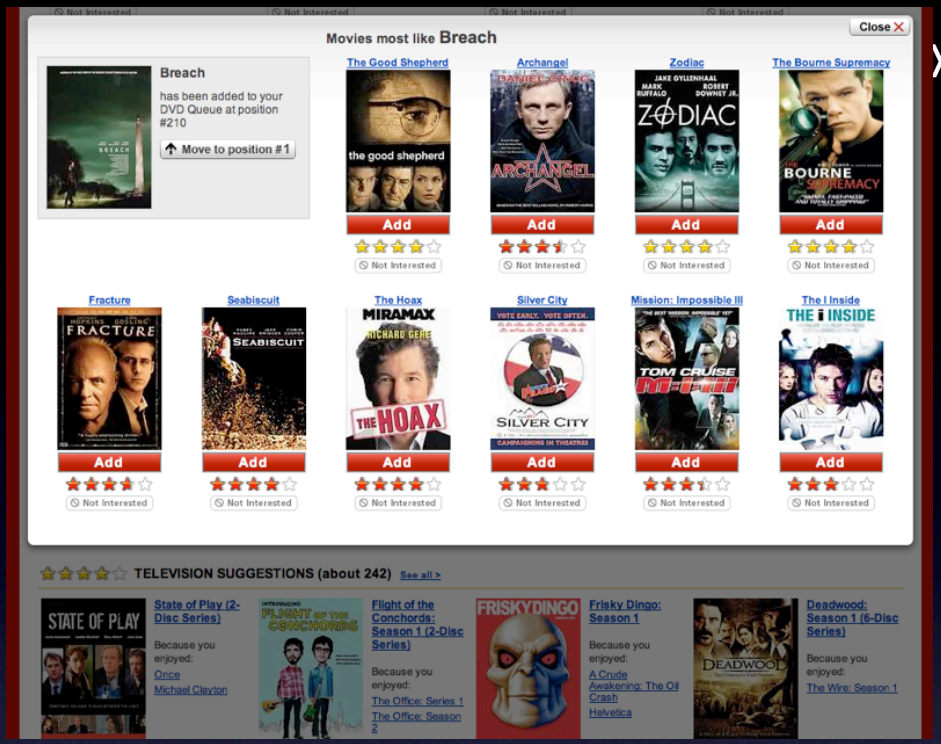


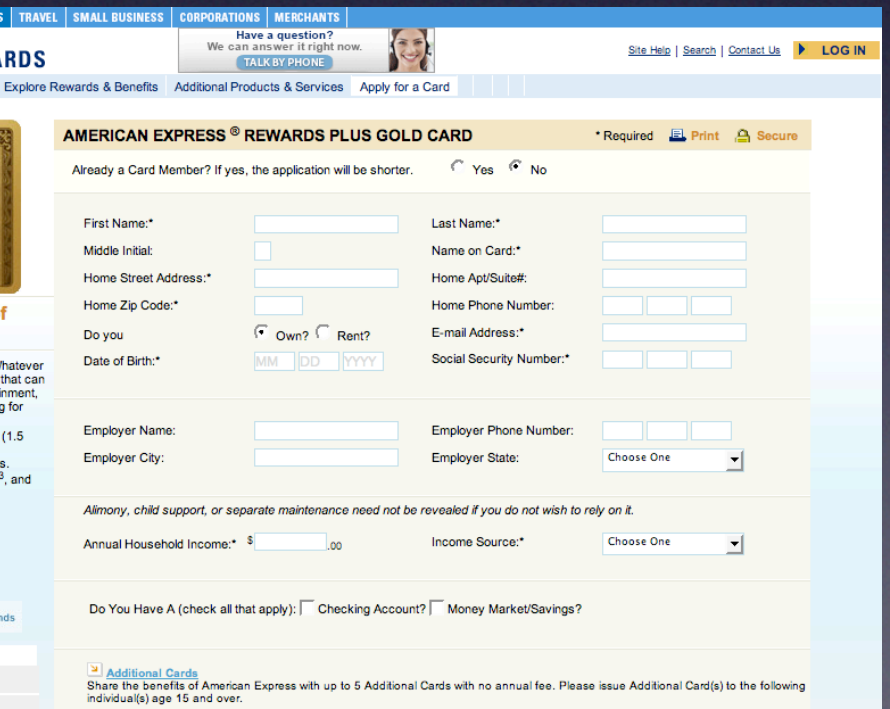


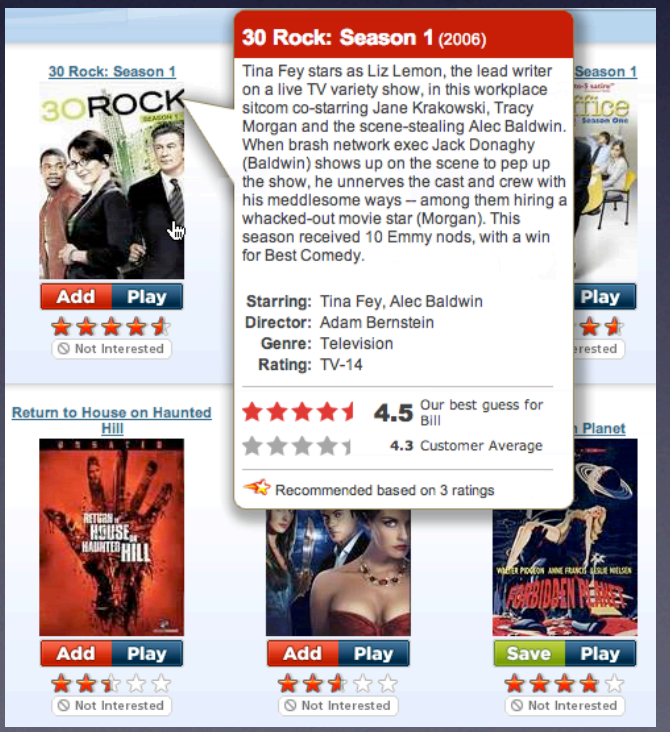
y on the page. **overlay**

**overlays**
dialog overlay
detail overlay
input overlay

**considerations**
lightbox effect
modality
activation



stay on the page. **overlay**

anti-pattern. y! photos. **idiot boxes**

stay on the page. **overlay**

anti-pattern. y! photos. **idiot boxes**

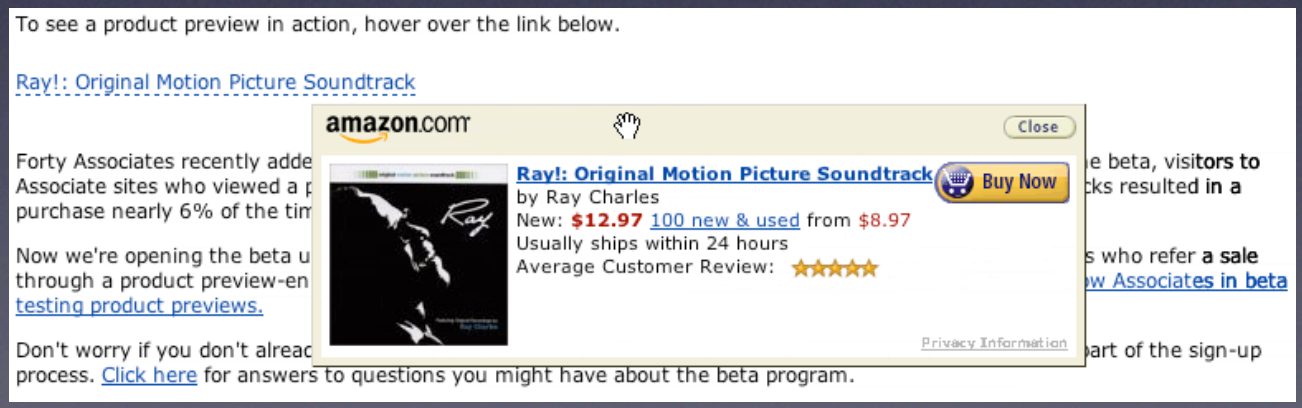
stay on the page. **overlay**

anti-pattern. borders. **hover & cover**

anti-pattern. y! photos. **idiot boxes**

stay on the page. **overlay**

anti-pattern. borders. **hover & cover**




anti-pattern. amazon. **mouse trap**

**inlays**

in-context configuration

in-context insight

parallel content

inlay vs. overlay

**inlays**

in-context configuration

in-context insight

parallel content

inlay vs. overlay

my y!. **in-context configuration**

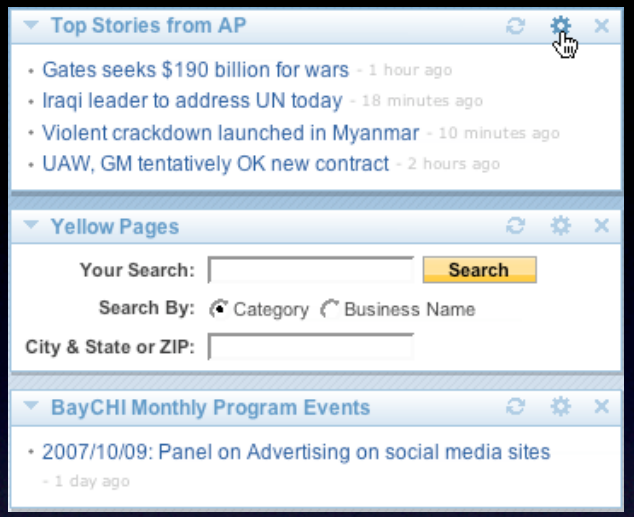
**inlays**

in-context configuration

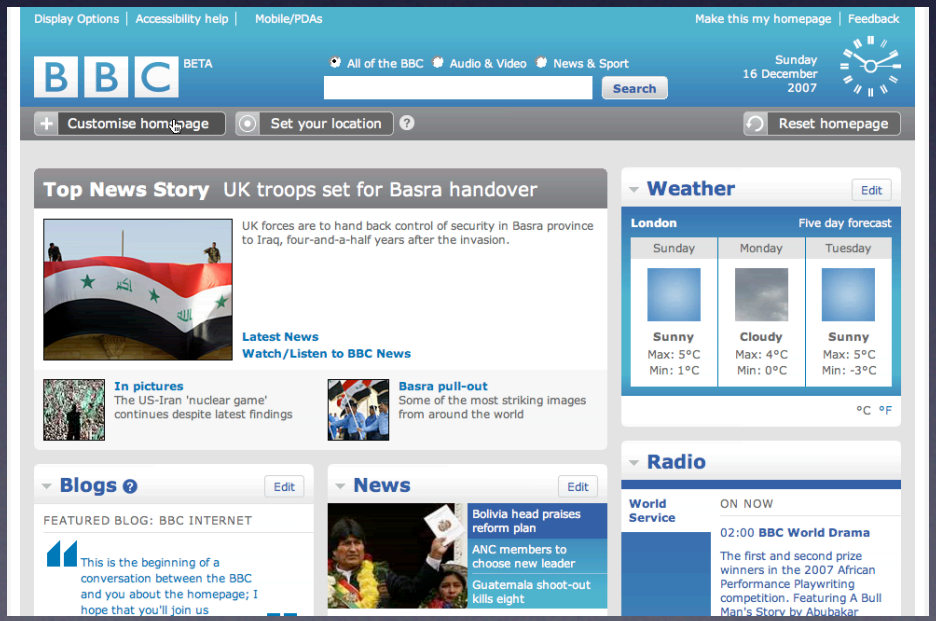
in-context insight

parallel content

inlay vs. overlay




my y!. **in-context configuration**

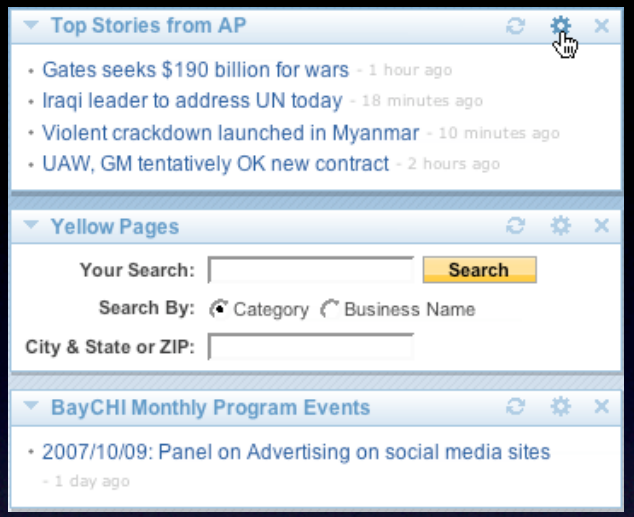



bbc. **in-context configuration**

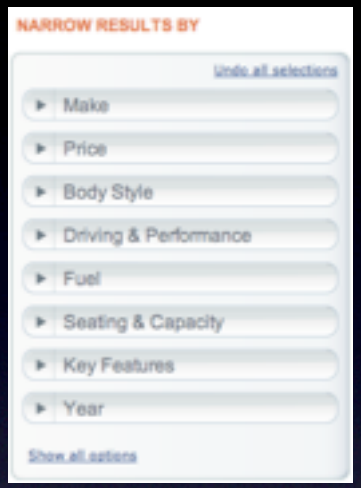
stay on the page. **inlay**

# inlays

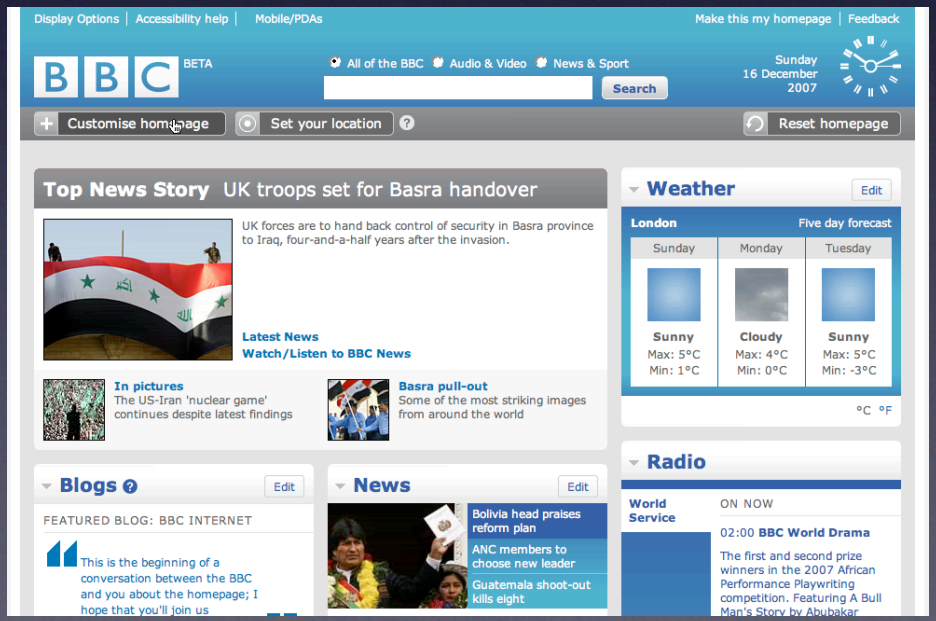
in-context configuration
in-context insight
parallel content
inlay vs. overlay




my y!. **in-context configuration**




y! autos. **accordion**




bbc. **in-context configuration**

**inlays**

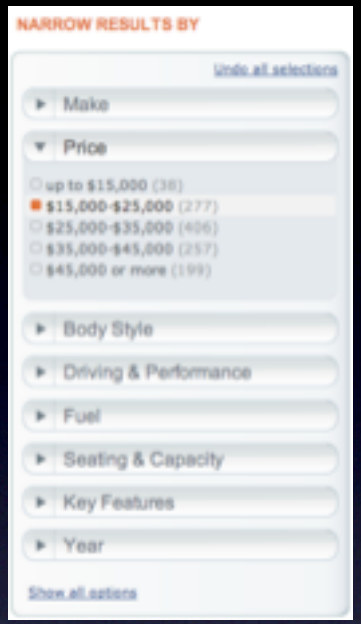
in-context configuration

in-context insight

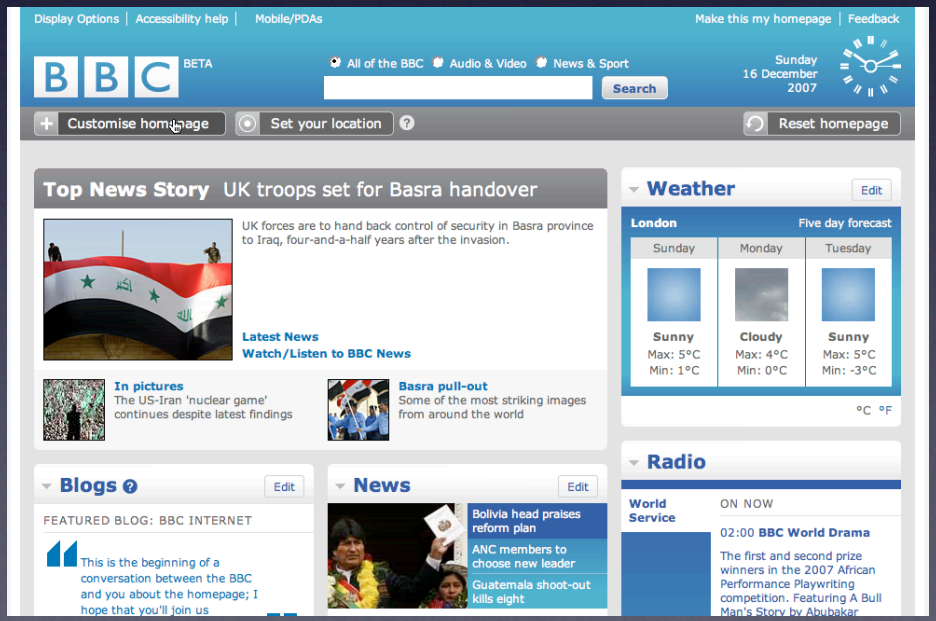
parallel content

inlay vs. overlay

my y!. **in-context configuration**



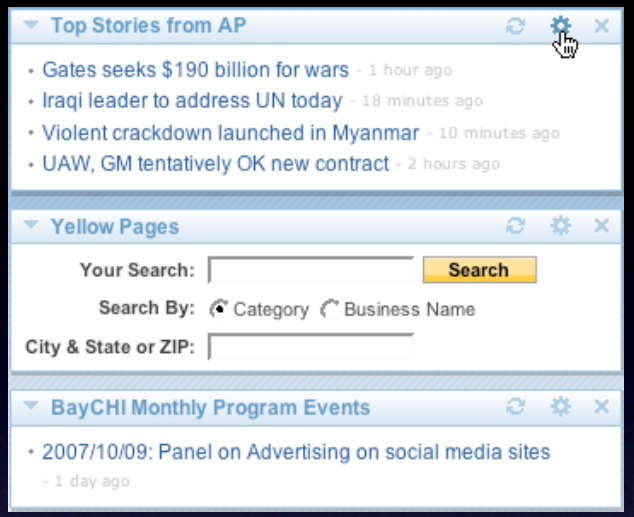

y! autos. **accordion**



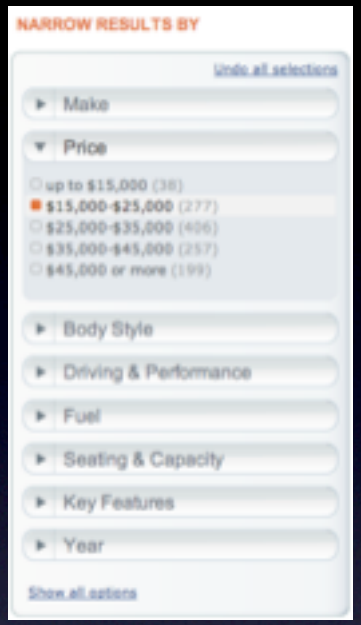

bbc. **in-context configuration**

stay on the page. **inlay**

**inlays**
in-context configuration
in-context insight
parallel content
inlay vs. overlay

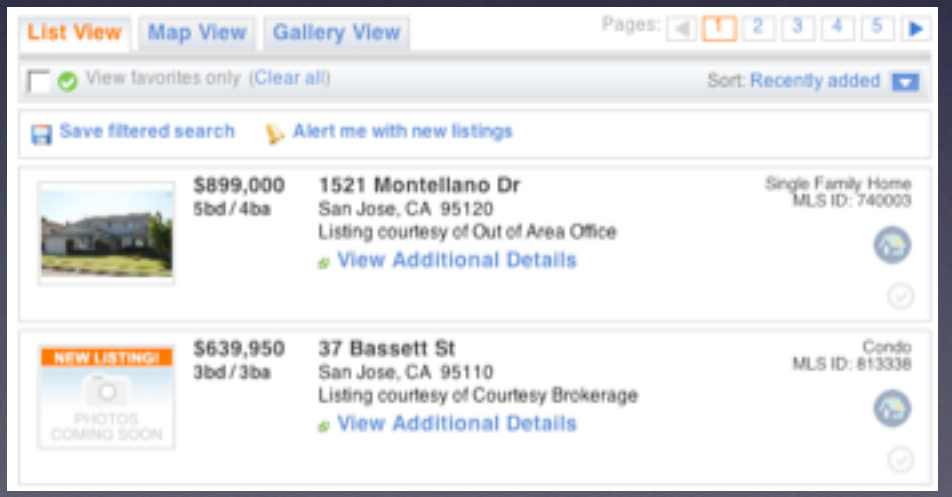



my y!. **in-context configuration**



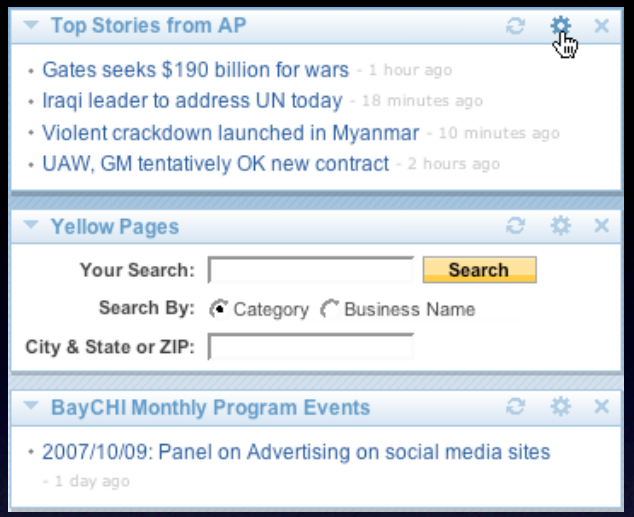

y! autos. **accordion**

bbc. **in-context configuration**

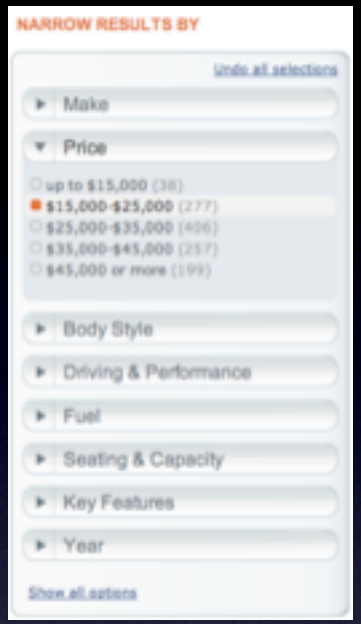



roost. **in-context insight**

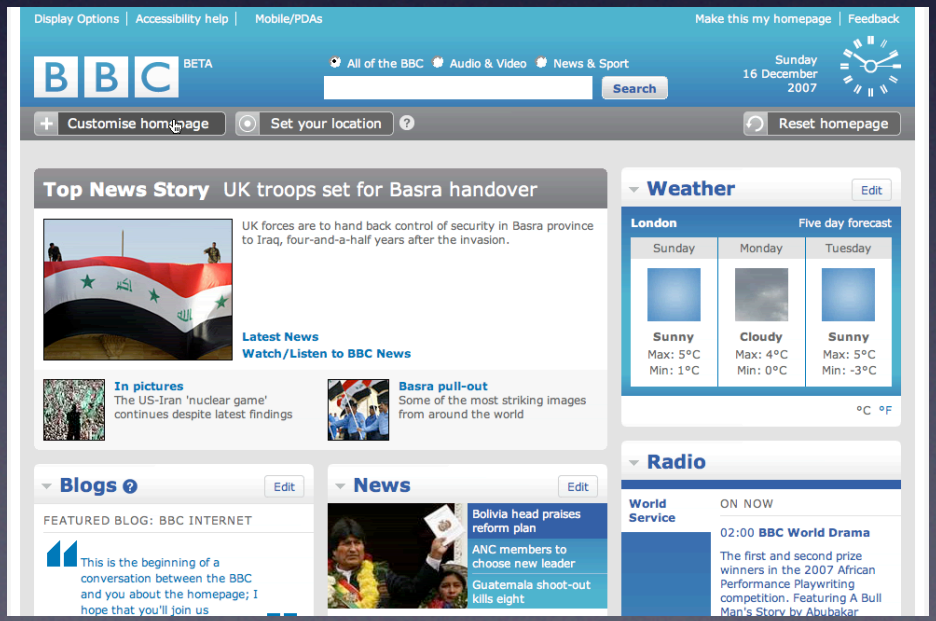
**inlays**
in-context configuration
in-context insight
parallel content
inlay vs. overlay



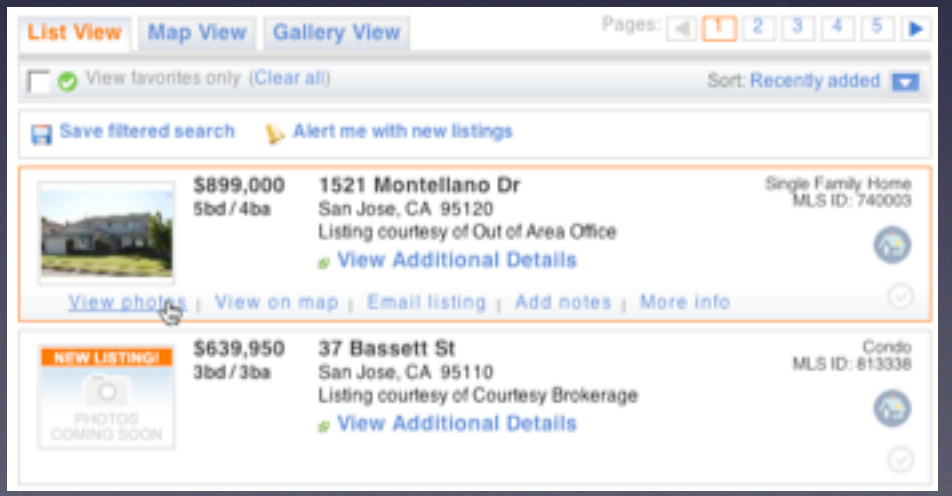

my y!. **in-context configuration**




y! autos. **accordion**

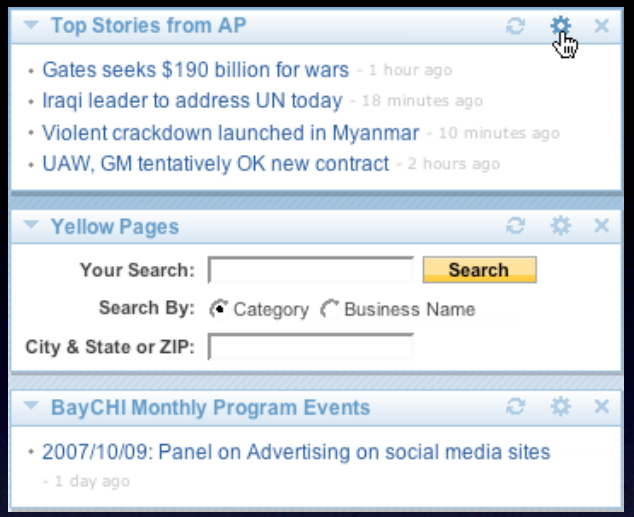



bbc. **in-context configuration**

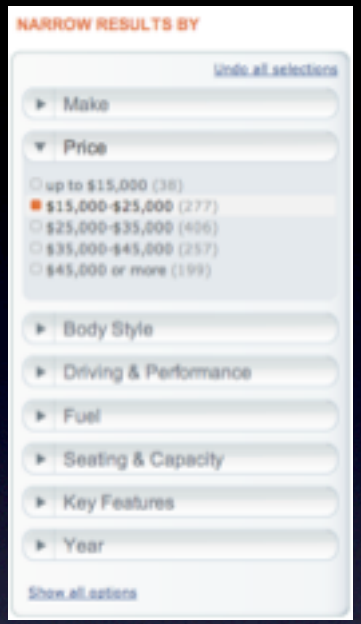



roost. **in-context insight**

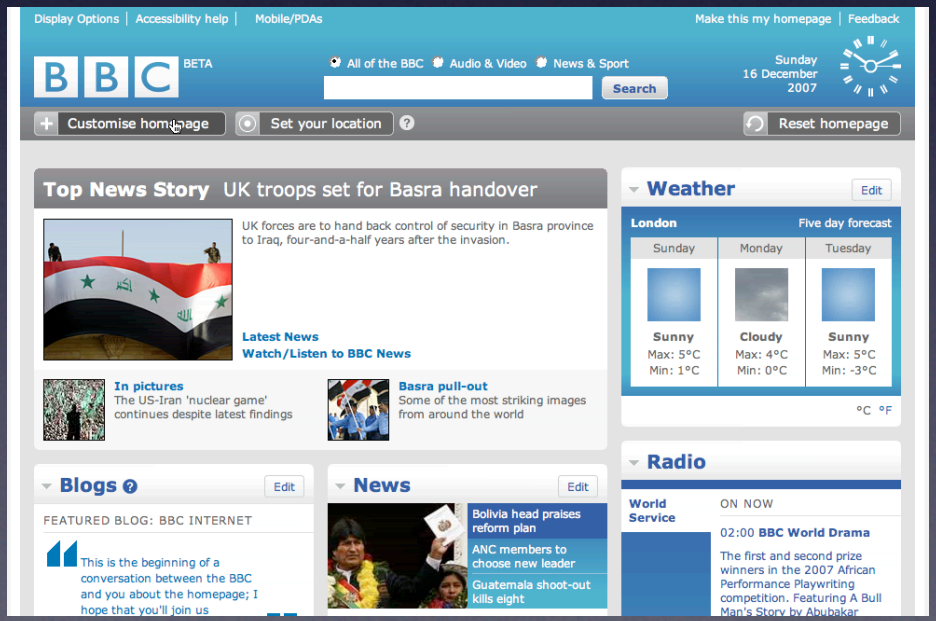
**inlays**
in-context configuration
in-context insight
parallel content
inlay vs. overlay



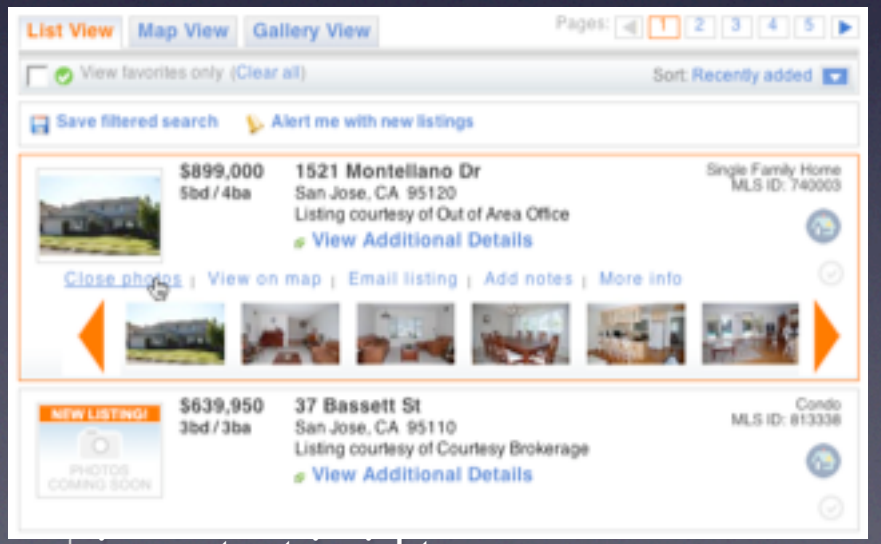

my y!. **in-context configuration**




y! autos. **accordion**

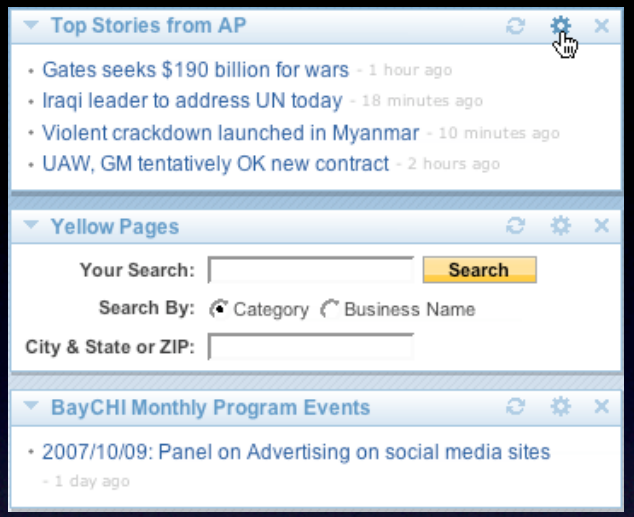



bbc. **in-context configuration**

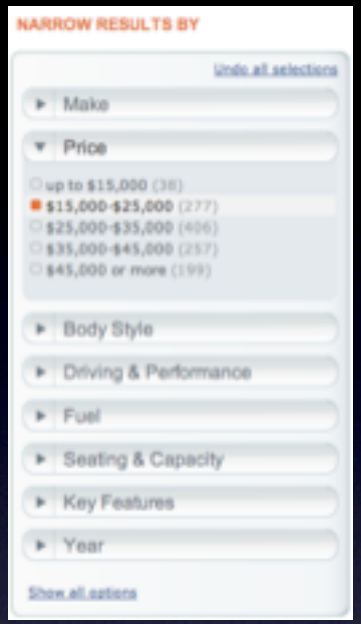



roost. **in-context insight**

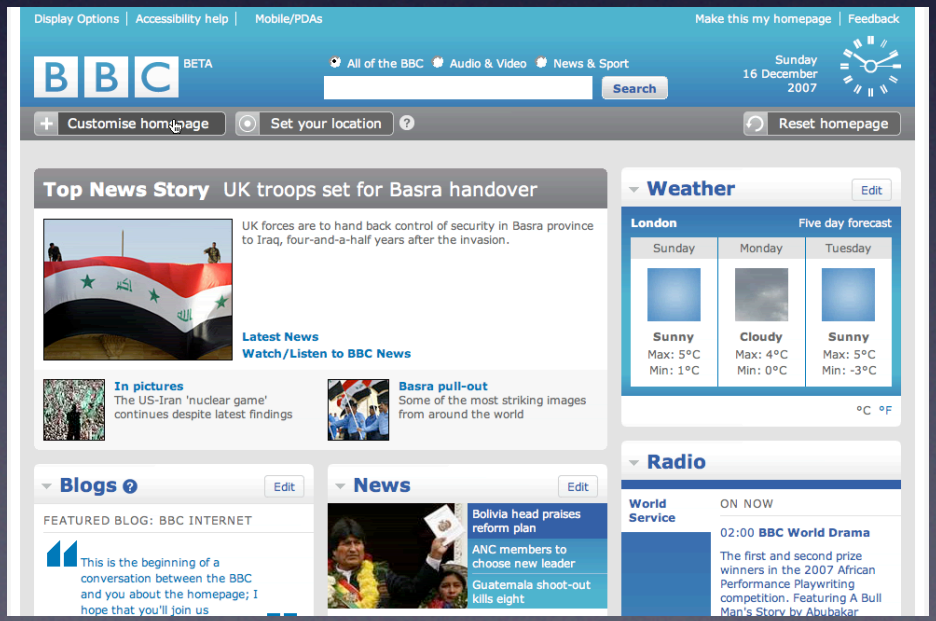
**inlays**
in-context configuration
in-context insight
parallel content
inlay vs. overlay



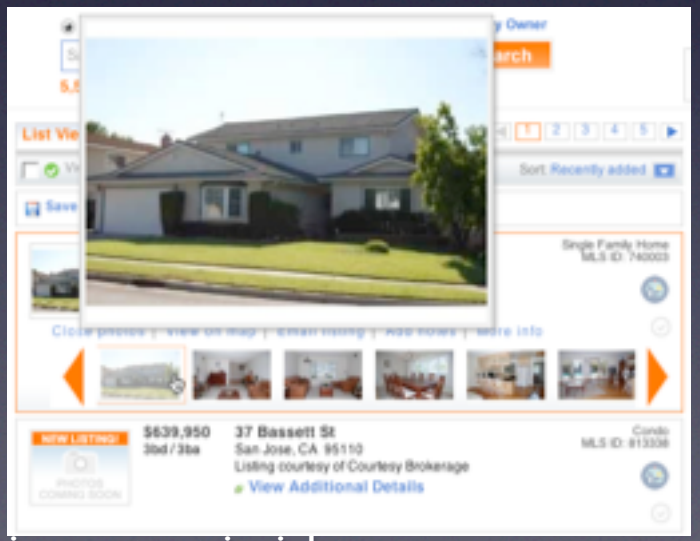

my y!. **in-context configuration**




y! autos. **accordion**




bbc. **in-context configuration**




roost. **in-context insight**

## Rethink paging

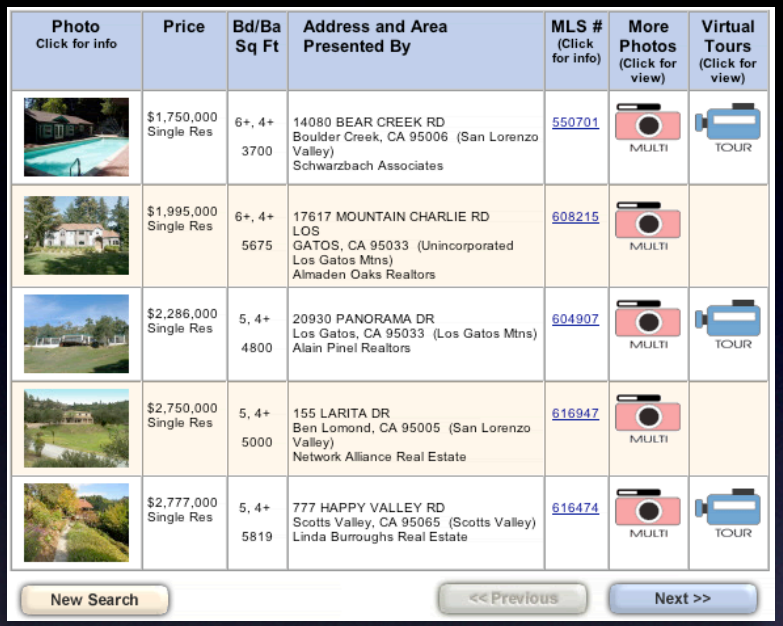
use scrolling for "owned" data

watch out for dual scroll bar issue

hybrid of paging & scrolling

stay on the page. **virtual**

mlslistings. **pagination**



| 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 | 550701 | MULTI | TOUR |
| | $1,995,000 Single Res | 6+, 4+ 5675 | 17617 MOUNTAIN CHARLIE RD LOS GATOS, CA 95033 (Unincorporated Los Gatos Mtns) 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 >>

**Rethink paging**

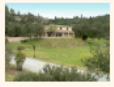
use scrolling for "owned" data

watch out for dual scroll bar issue

hybrid of paging & scrolling

stay on the page. **virtual**

mlslistings. **pagination**

| 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 | 550701 | MULTI | TOUR |
| | $1,995,000 Single Res | 6+, 4+ 5675 | 17617 MOUNTAIN CHARLIE RD LOS GATOS, CA 95033 (Unincorporated Los Gatos Mtns) 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 |

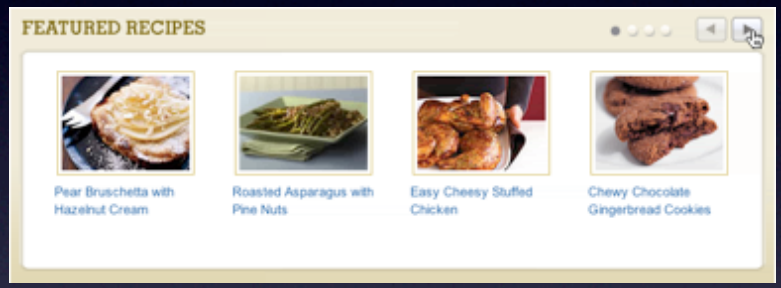
New Search << Previous Next >>

## **Rethink paging**

use scrolling for "owned" data

watch out for dual scroll bar issue

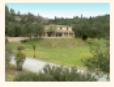
hybrid of paging & scrolling




y! health. **carousel**

stay on the page. **virtual**

mlslistings. **pagination**

| 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 | 550701 | MULTI | TOUR |
| | $1,995,000 Single Res | 6+, 4+ 5675 | 17617 MOUNTAIN CHARLIE RD LOS GATOS, CA 95033 (Unincorporated Los Gatos Mtns) 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 |

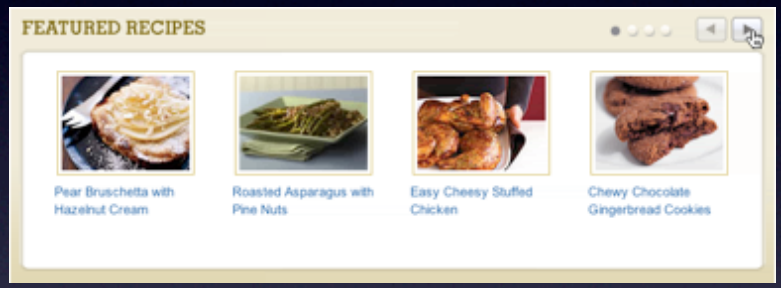
New Search << Previous Next >>

## Rethink paging

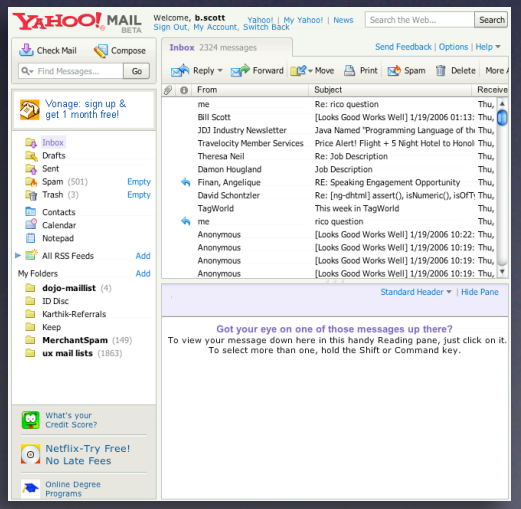
use scrolling for "owned" data

watch out for dual scroll bar issue

hybrid of paging & scrolling




y! health. **carousel**




y! mail. **on-demand scrolling**

stay on the page. **virtual**

mlslistings. **pagination**

| 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 | 550701 | MULTI | TOUR |
| | $1,995,000 Single Res | 6+, 4+ 5675 | 17617 MOUNTAIN CHARLIE RD LOS GATOS, CA 95033 (Unincorporated Los Gatos Mtns) 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 |

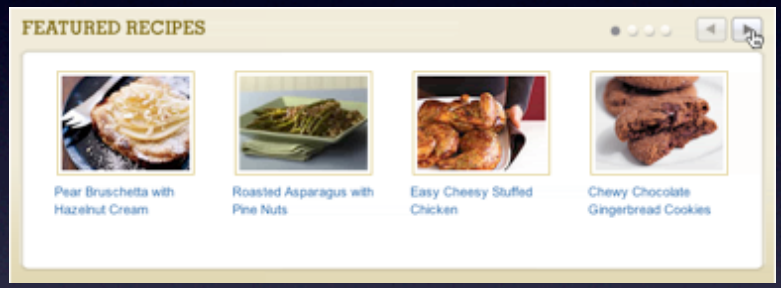
New Search << Previous Next >>

# Rethink paging

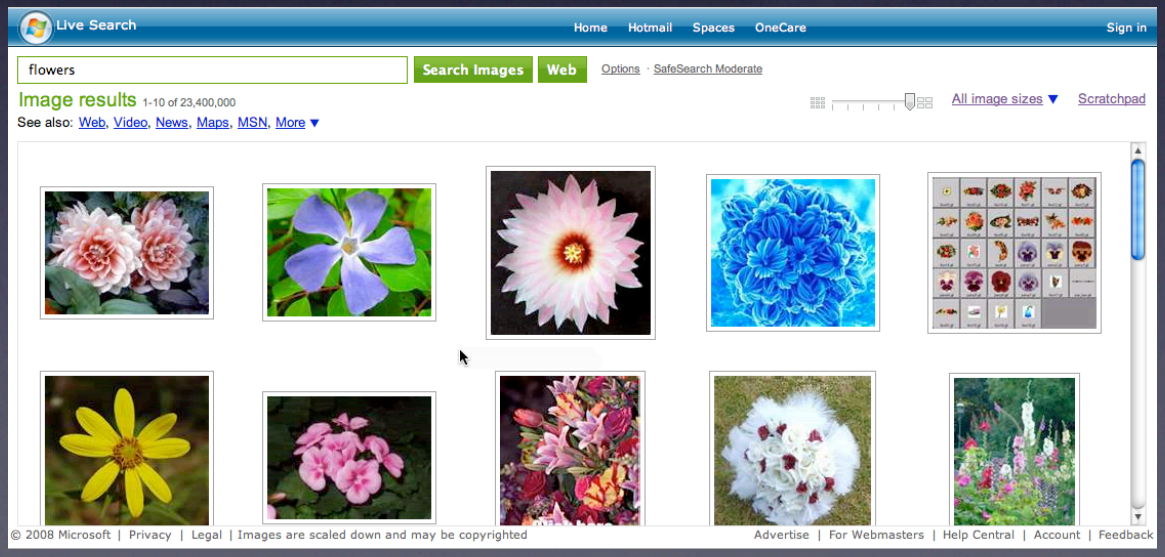
use scrolling for "owned" data

watch out for dual scroll bar issue

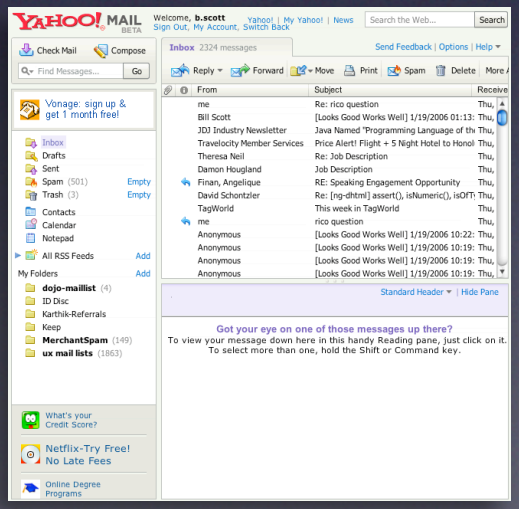
hybrid of paging & scrolling




y! health. **carousel**




microsoft live. **paged scrolling**




y! mail. **on-demand scrolling**

stay on the page. **virtual**

# Rethink paging

in-place paging

zoomable user interface (zui)

endless. **seamless paging**

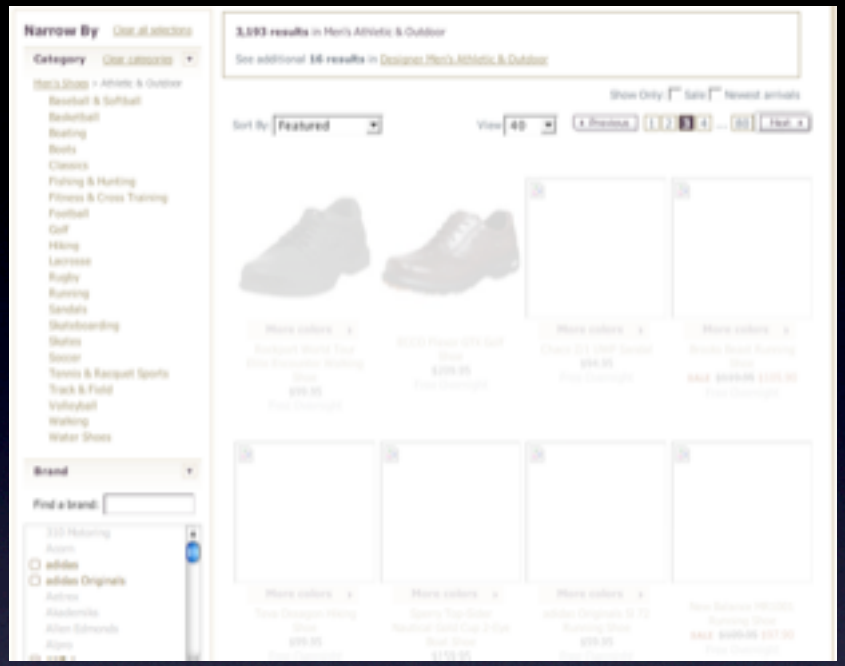
stay on the page. **virtual**

## Rethink paging

in-place paging

zoomable user interface (zui)

endless. **seamless paging**



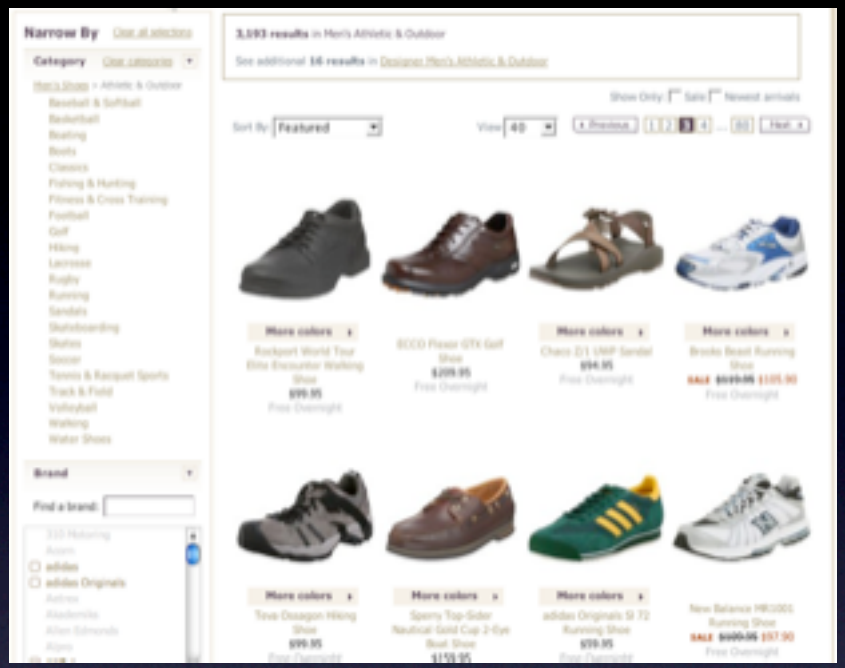

stay on the page. **virtual**

## Rethink paging

in-place paging

zoomable user interface (zui)

endless. **seamless paging**




stay on the page. **virtual**

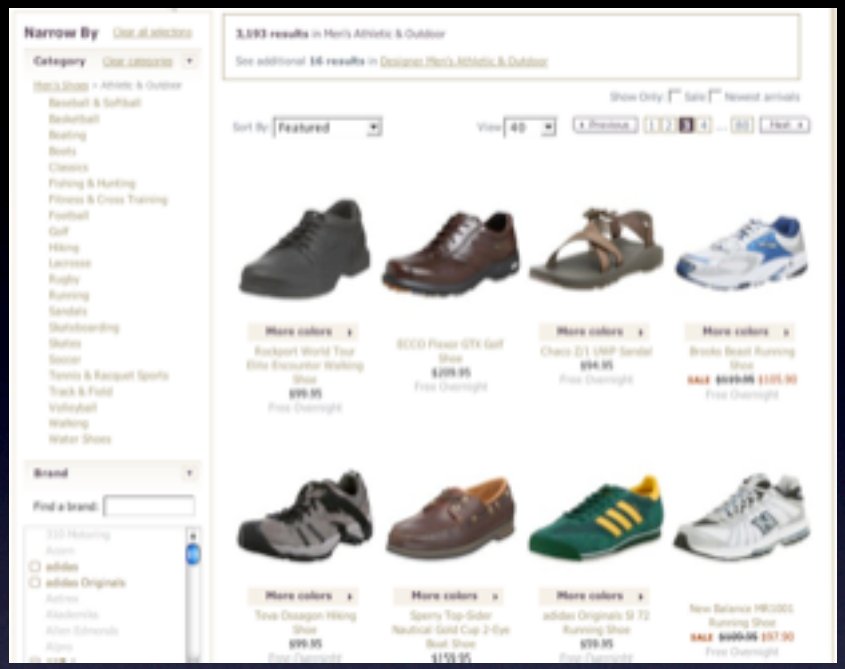
# Rethink paging

in-place paging

zoomable user interface (zui)

stay on the page. **virtual**

endless. **seamless paging**



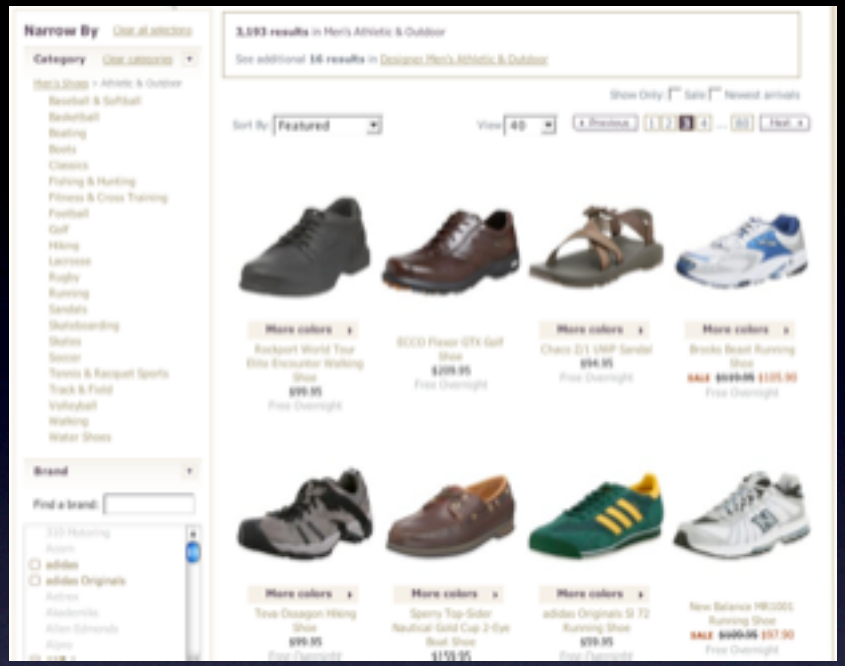
# **Rethink paging**

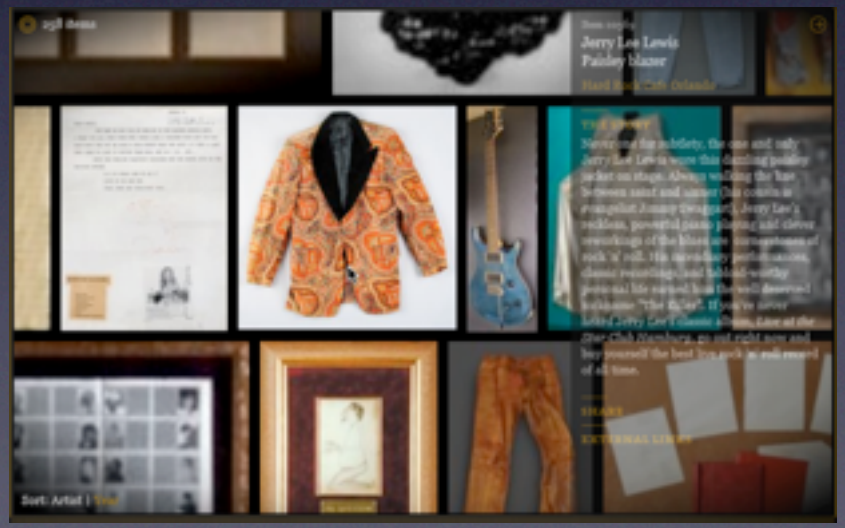
in-place paging

zoomable user interface (zui)

hard rock cafe. **zui**

endless. **seamless paging**




hard rock cafe. **zui**

stay on the page. **virtual**

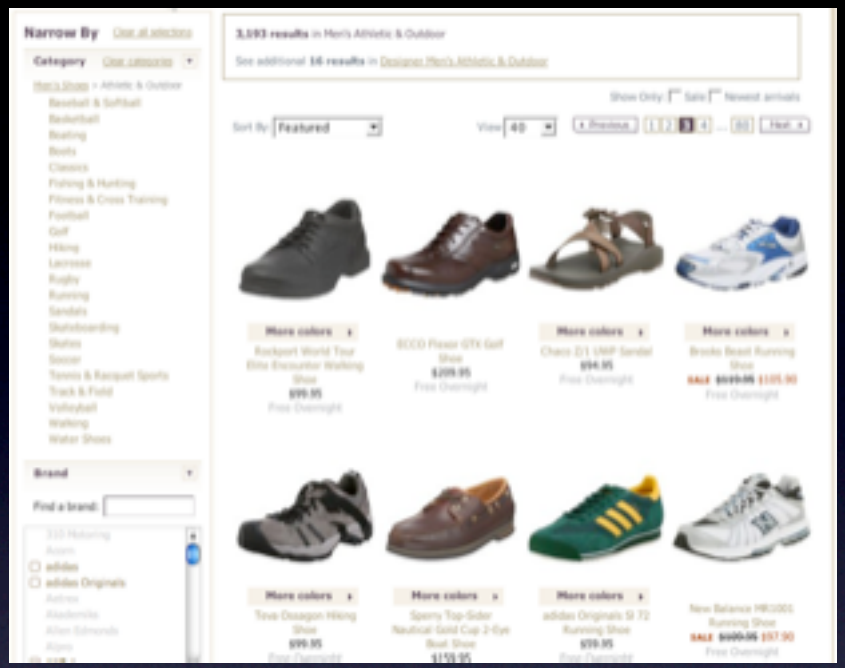
## **Rethink paging**

in-place paging

zoomable user interface (zui)

stay on the page. **virtual**

endless. **seamless paging**




## Rethink paging

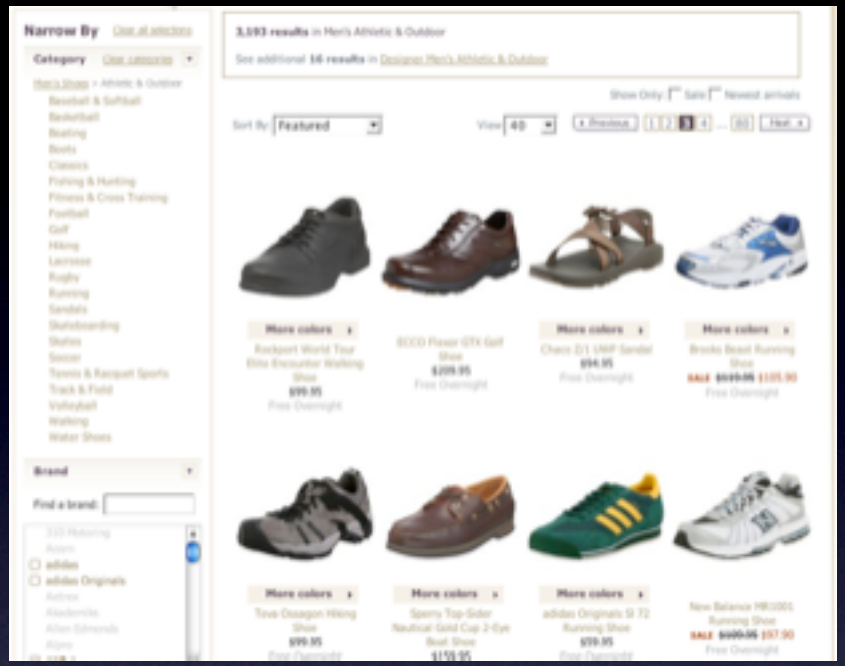
in-place paging

zoomable user interface (zui)

hard rock cafe. **zui**

stay on the page. **virtual**

endless. **seamless paging**

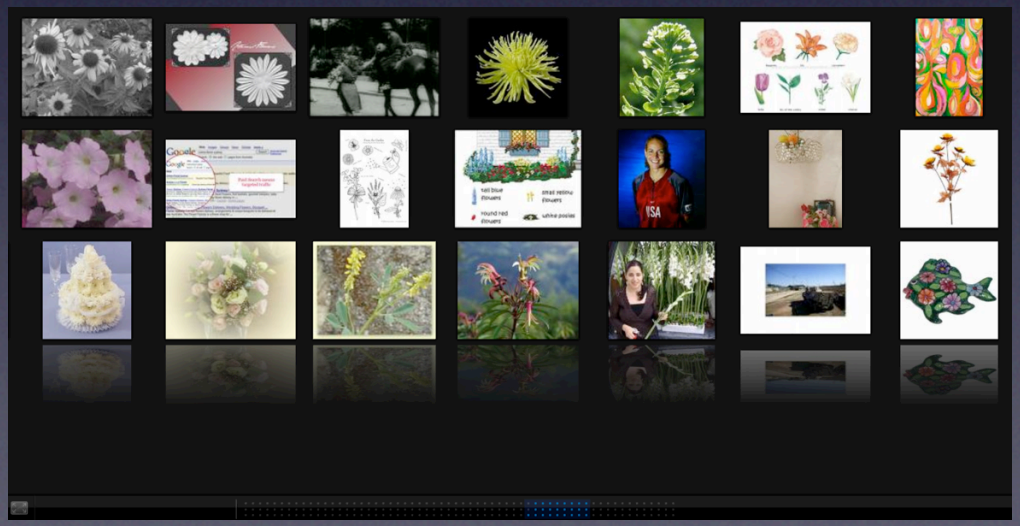


## **Rethink paging**

in-place paging

zoomable user interface (zui)

hard rock cafe. **zui**



cool iris (piclens). **zui**

## rethink process flows

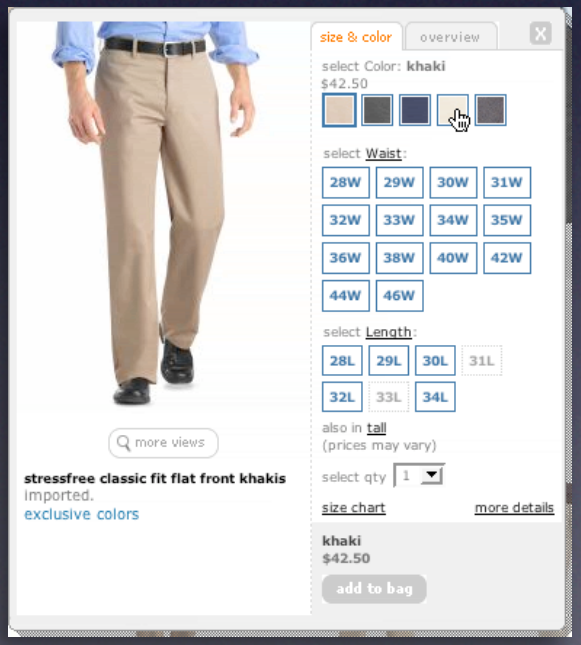
the user's mental model vs page model

every page jump is a mental speed bump

# rethink process flows

the user's mental model vs page model

every page jump is a mental speed bump



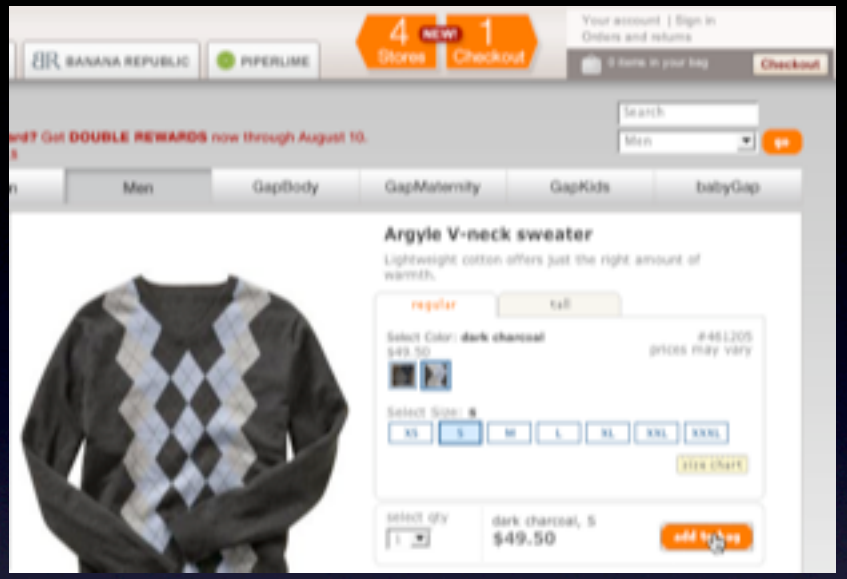

the gap. **inline assistant**

stay on the page. **process flow**

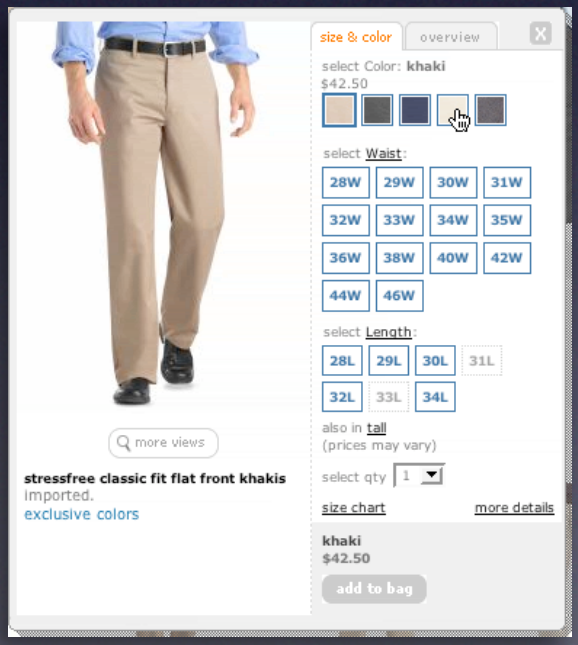
## rethink process flows

the user's mental model vs page model

every page jump is a mental speed bump




the gap. **inline checkout**

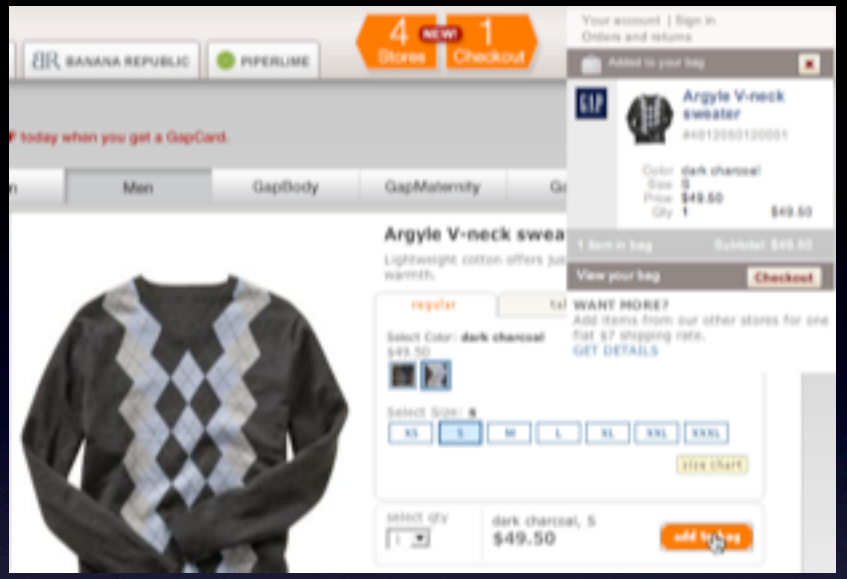



the gap. **inline assistant**

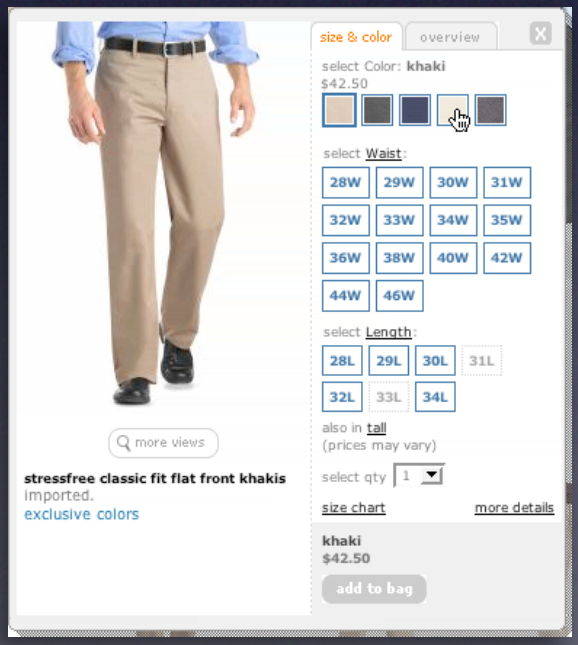
## rethink process flows

the user's mental model vs page model

every page jump is a mental speed bump




the gap. **inline checkout**

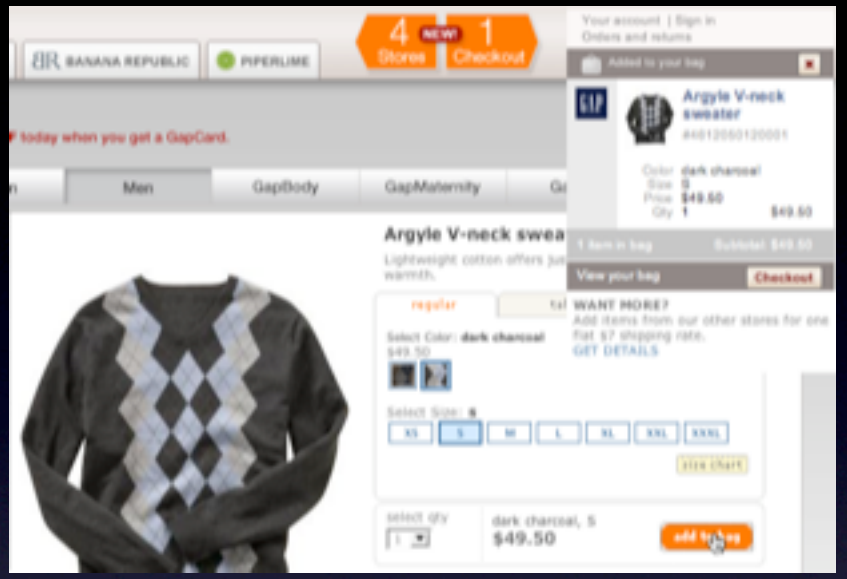



the gap. **inline assistant**

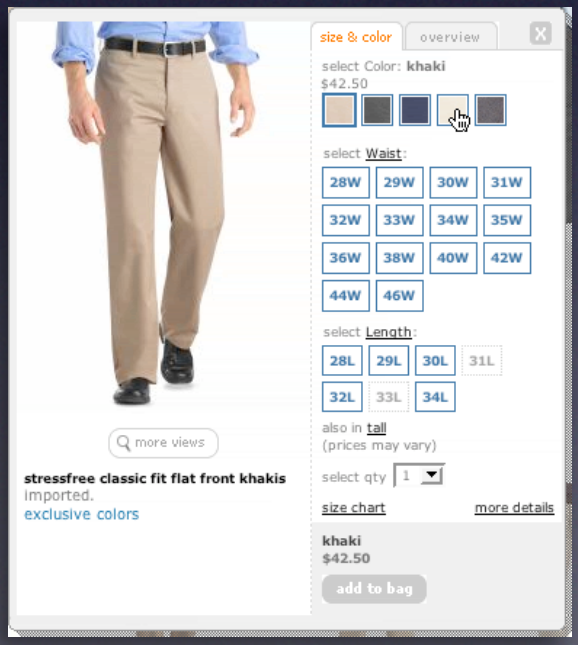
# rethink process flows

the user's mental model vs page model

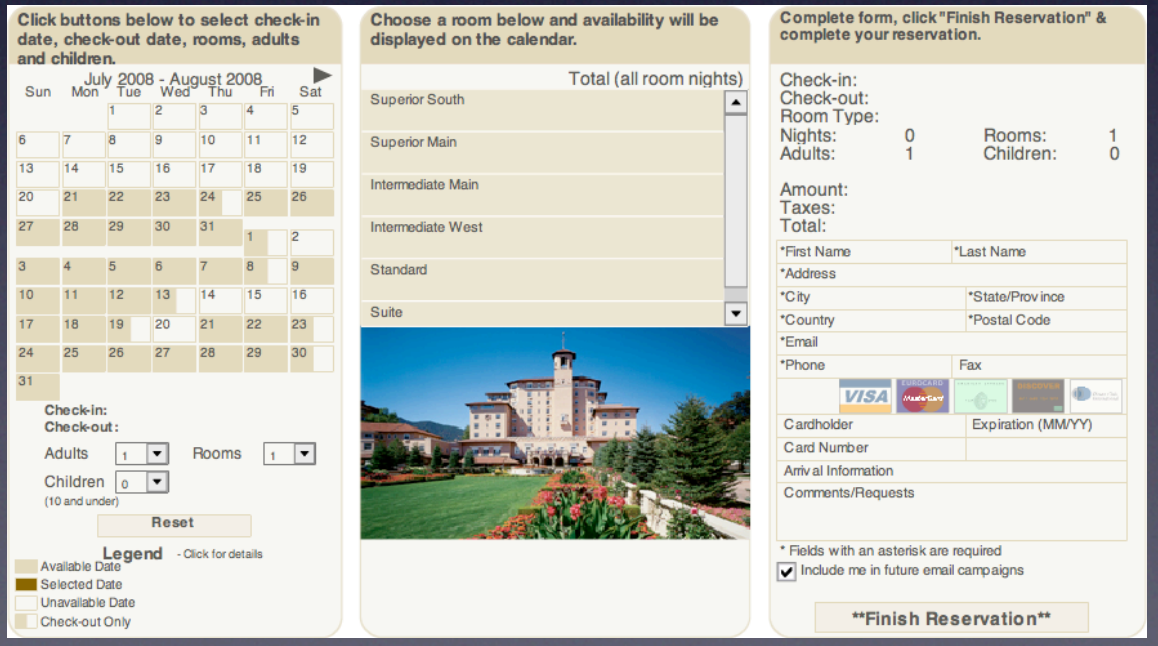
every page jump is a mental speed bump




the gap. **inline checkout**




the gap. **inline assistant**



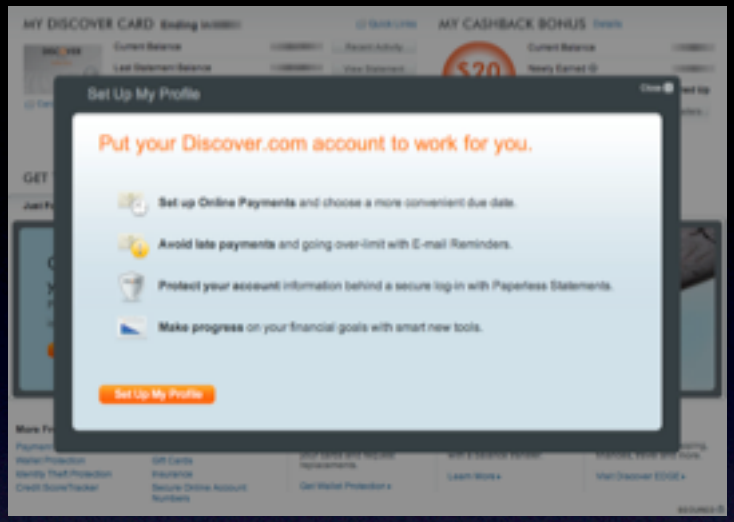

broadmoor hotel. **one page checkout**

## step by step?

yes, sometimes works best

stay on the page. **process flow**

**step by step?**
yes, sometimes works best

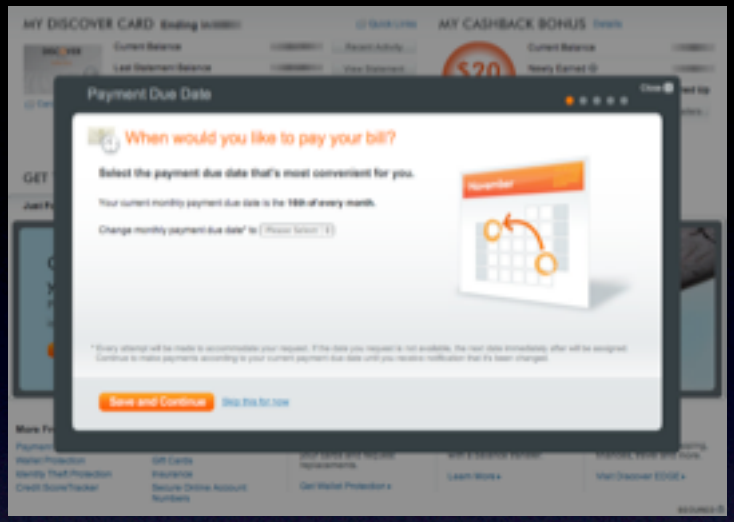



discover card. **step by step**

stay on the page. **process flow**

## step by step?

yes, sometimes works best

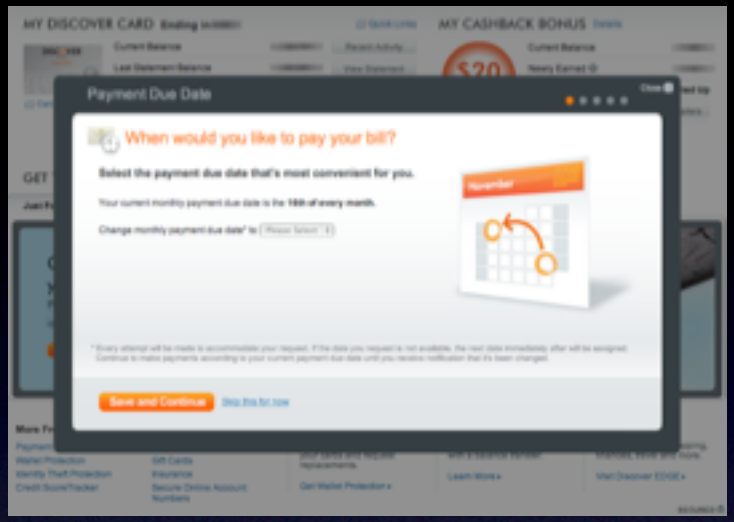



discover card. **step by step**

stay on the page. **process flow**

## step by step?

yes, sometimes works best

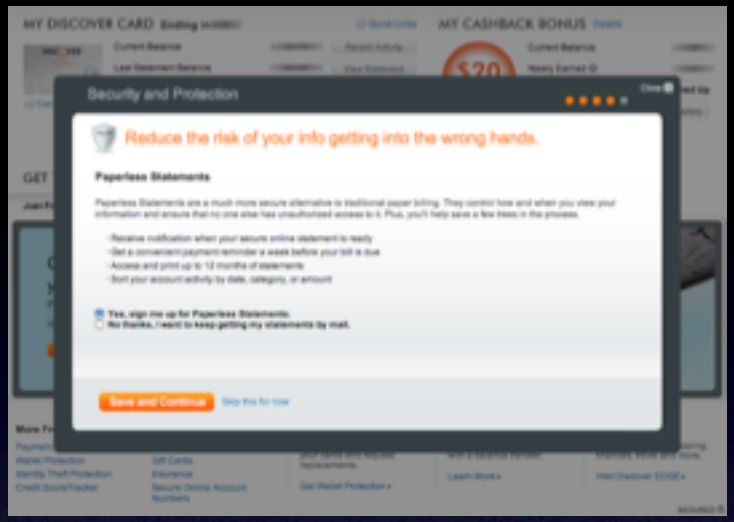



discover card. **step by step**

stay on the page. **process flow**

**step by step?**

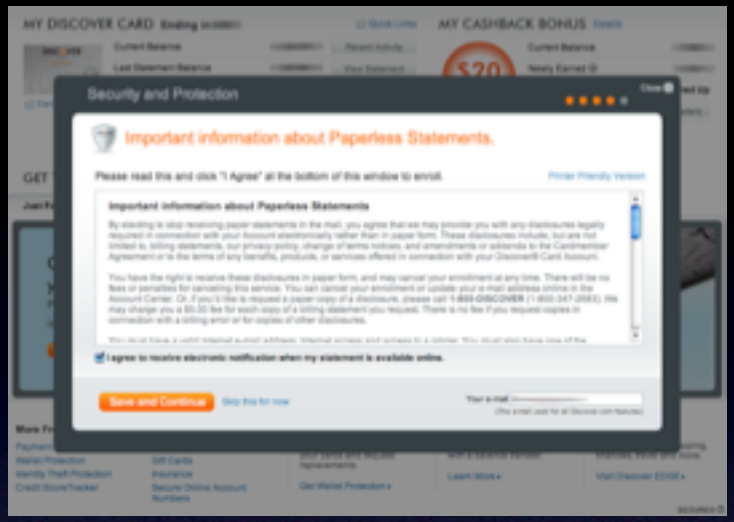
yes, sometimes works best




discover card. **step by step**

stay on the page. **process flow**

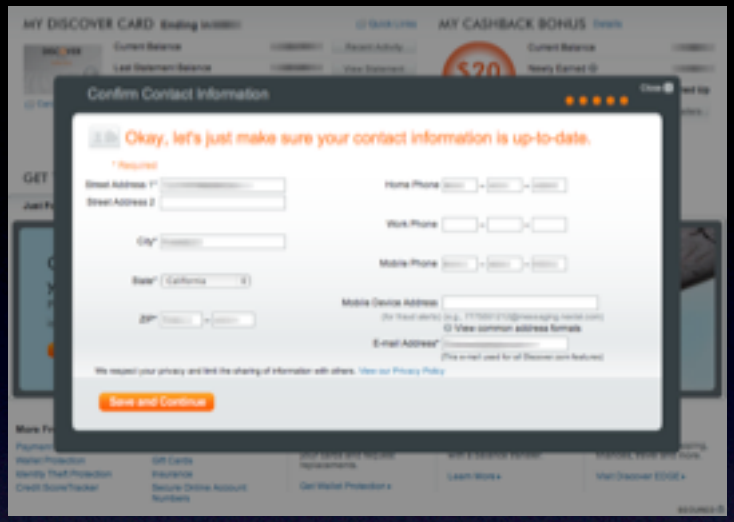
**step by step?**
yes, sometimes works best




discover card. **step by step**

**step by step?**

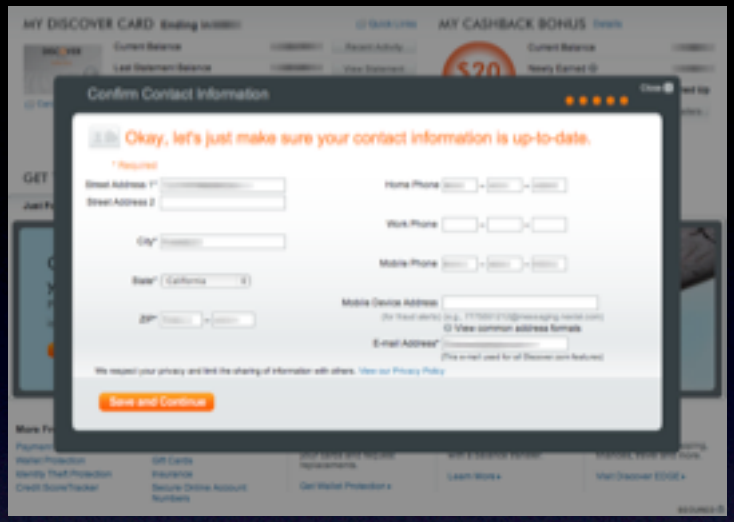
yes, sometimes works best



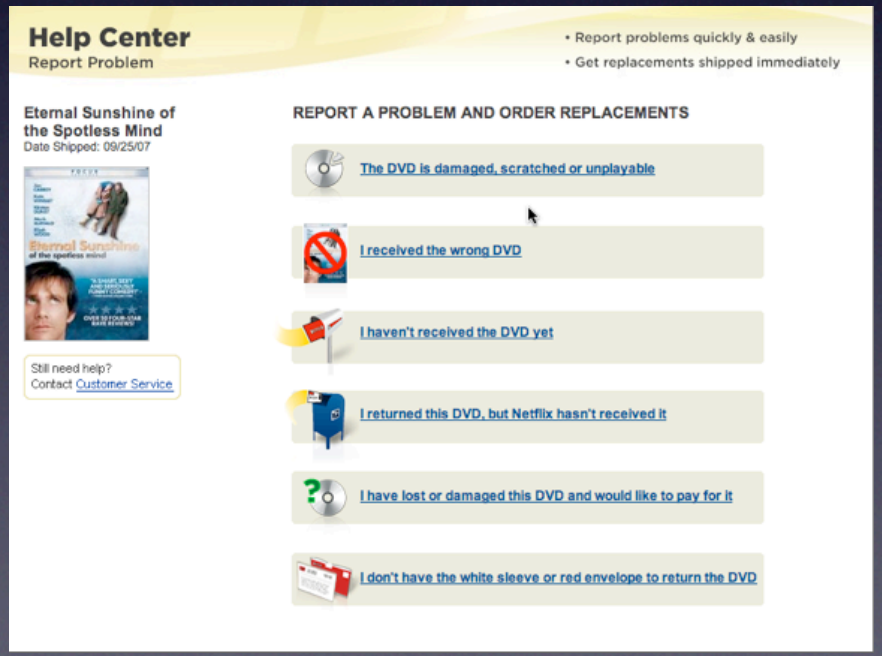

discover card. **step by step**

## **step by step?**

yes, sometimes works best

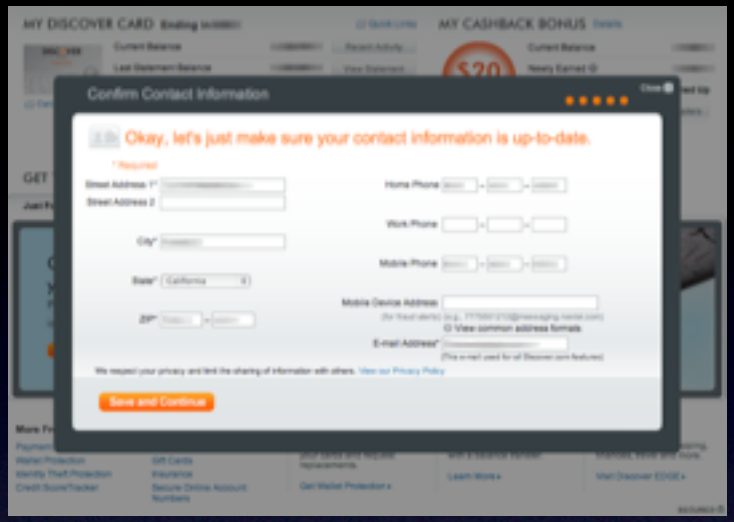



discover card. **step by step**

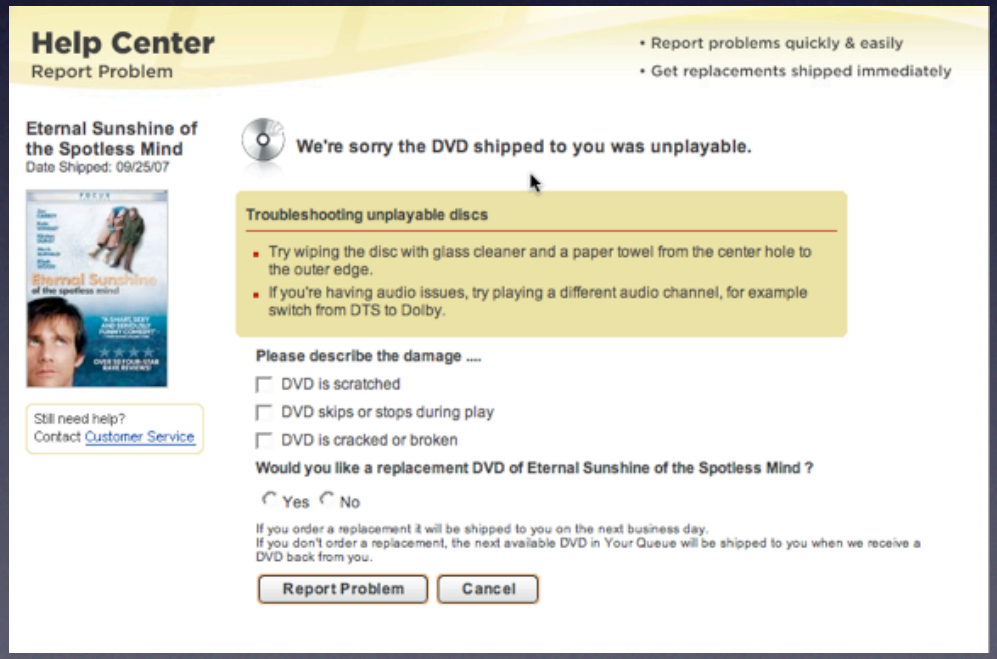


## **step by step?**

yes, sometimes works best




discover card. **step by step**

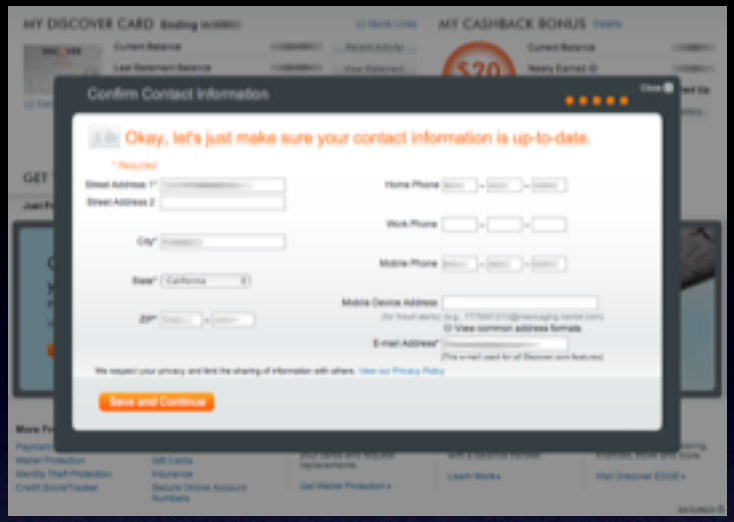



netflix. **step by step**

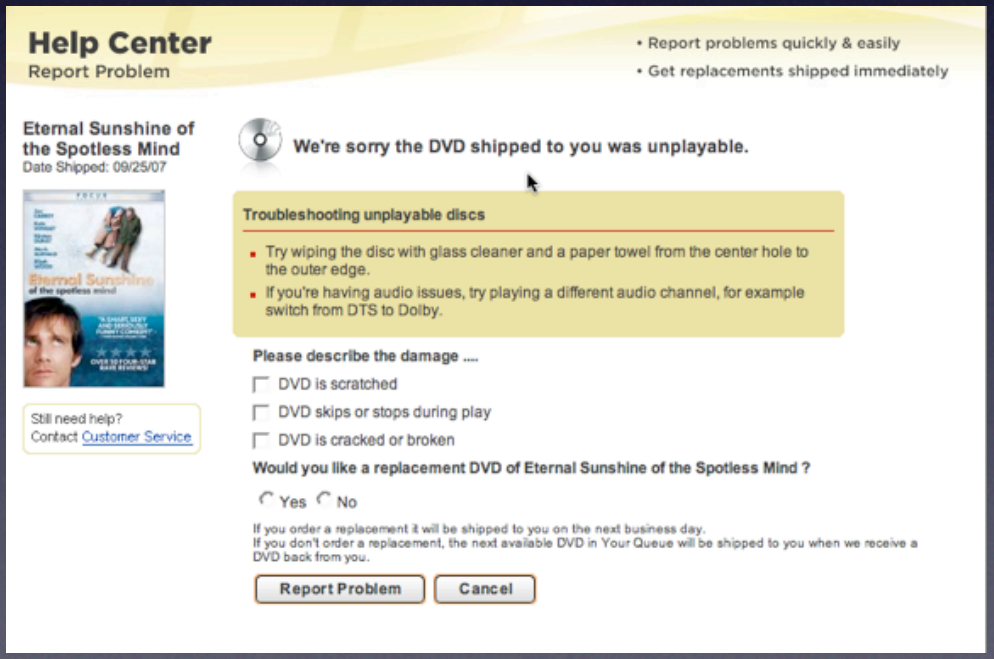
stay on the page. **process flow**

# **step by step?**

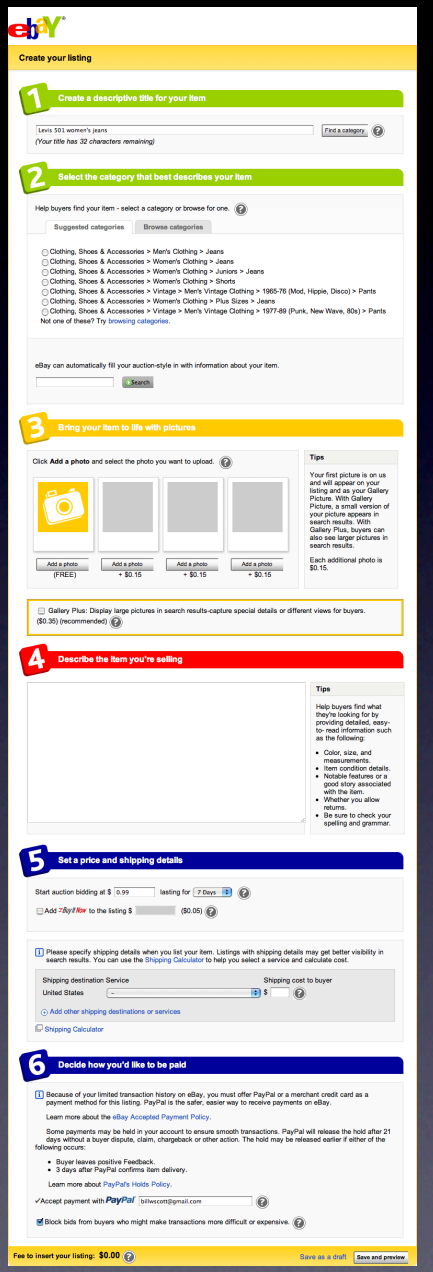
yes, sometimes works best




discover card. **step by step**



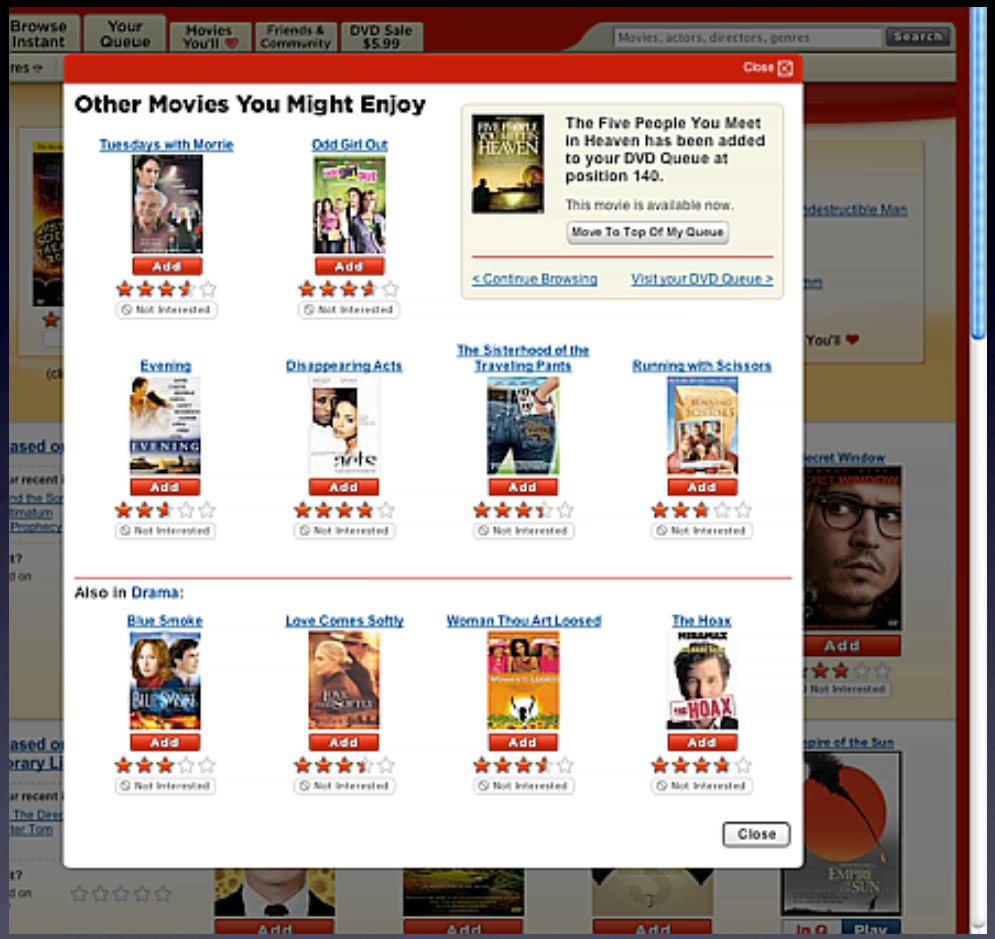

netflix. **step by step**




ebay. **single page flow**

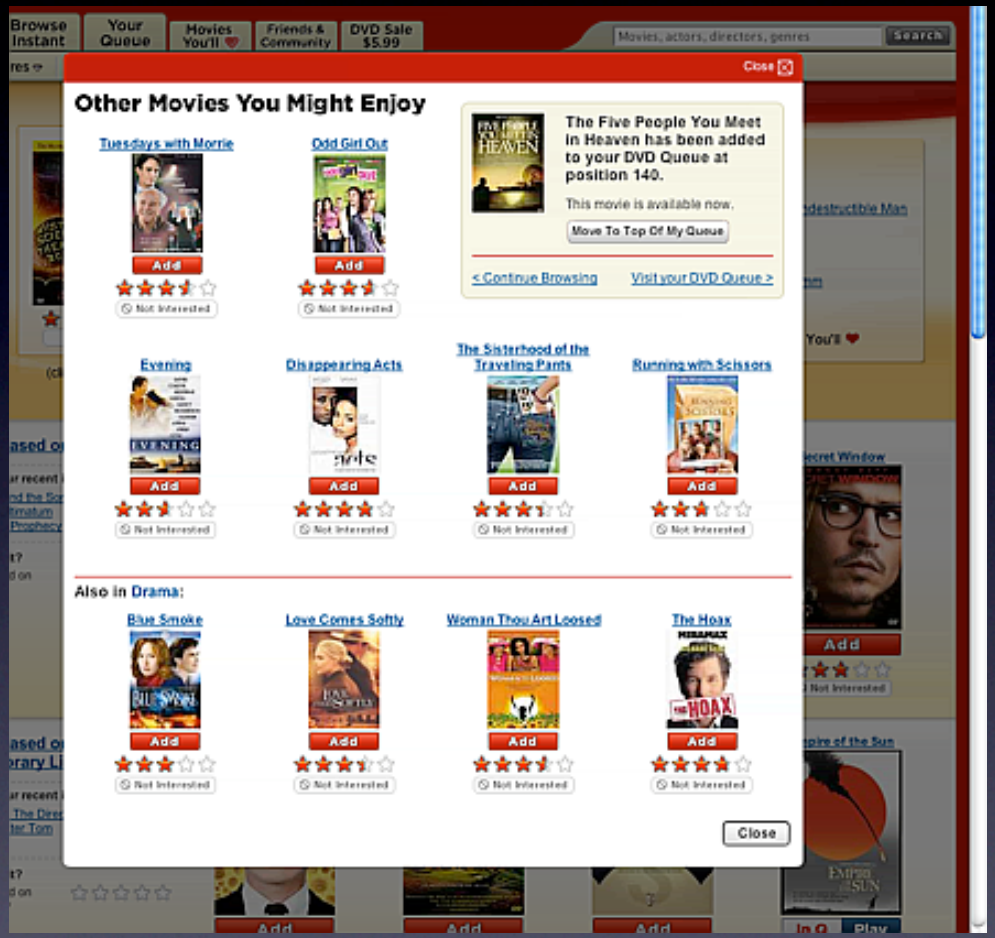
## the answer is in testing

# the answer is in testing

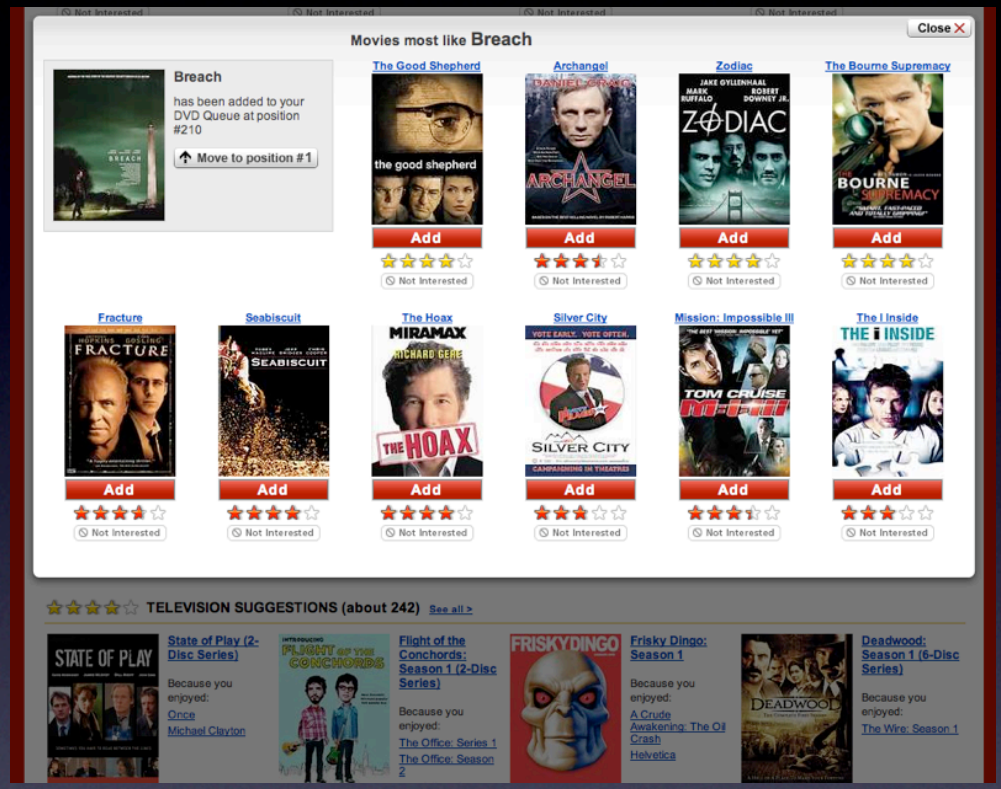



netflix. **stalker overlay**

# the answer is in testing




netflix. **stalker overlay**




netflix. **simpler overlay**

# offer an invitation

**unfinished look**

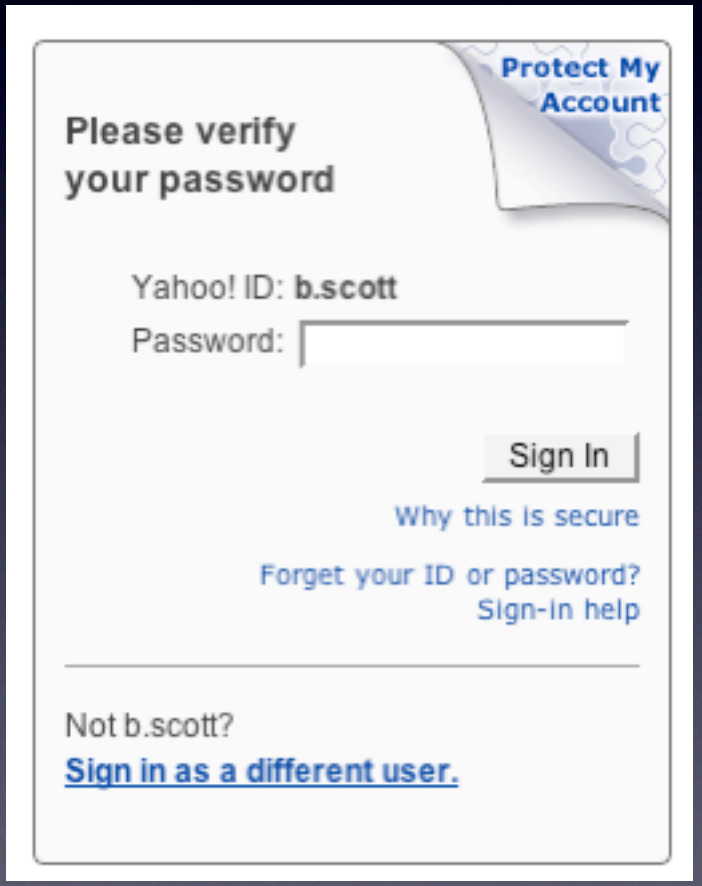
dog-ear

empty slots

blank slate

## **unfinished look**

dog-ear
empty slots
blank slate



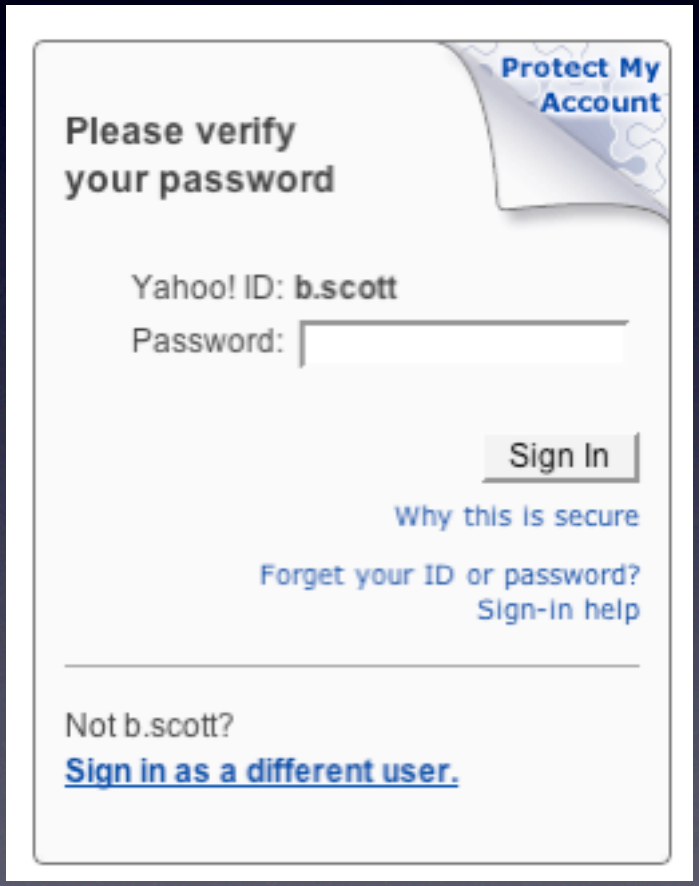

yahoo login! **dog-ear invite**

**unfinished look**

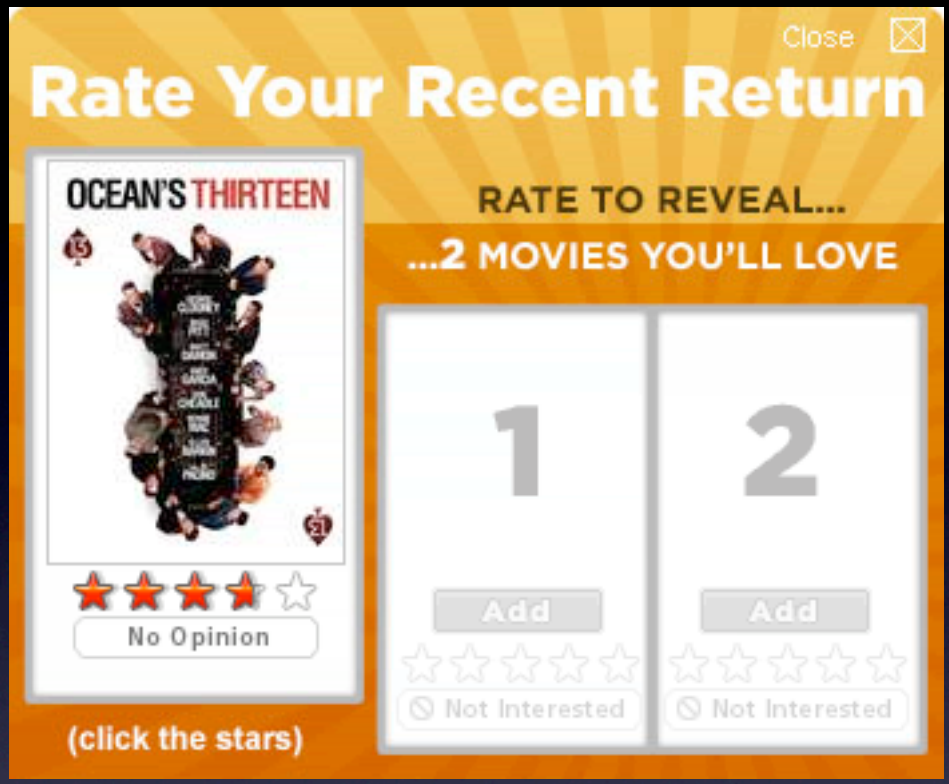
dog-ear

empty slots

blank slate




yahoo login! **dog-ear invite**



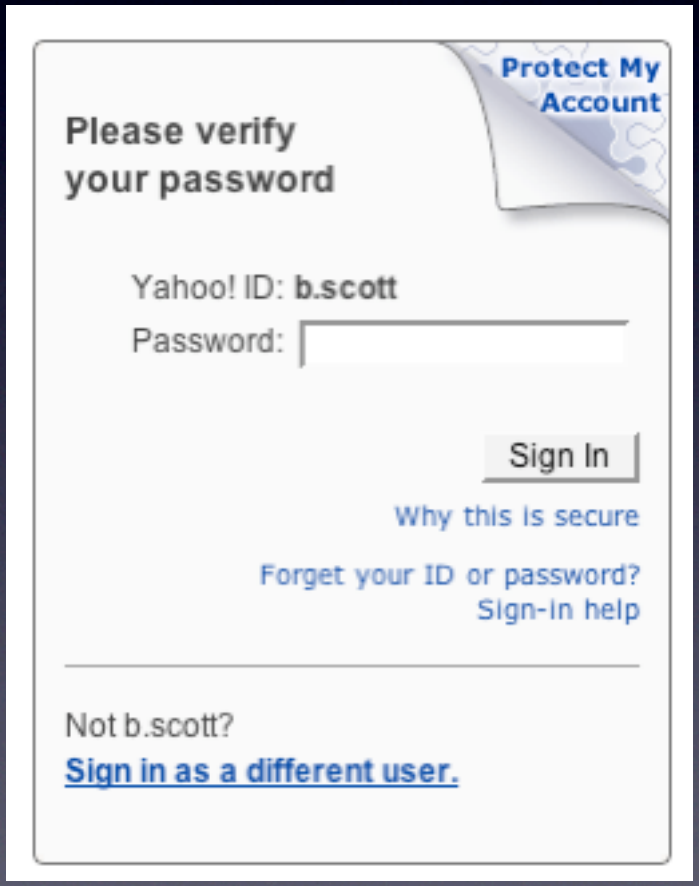

netflix. **rate invitiation (blank slots)**

**unfinished look**

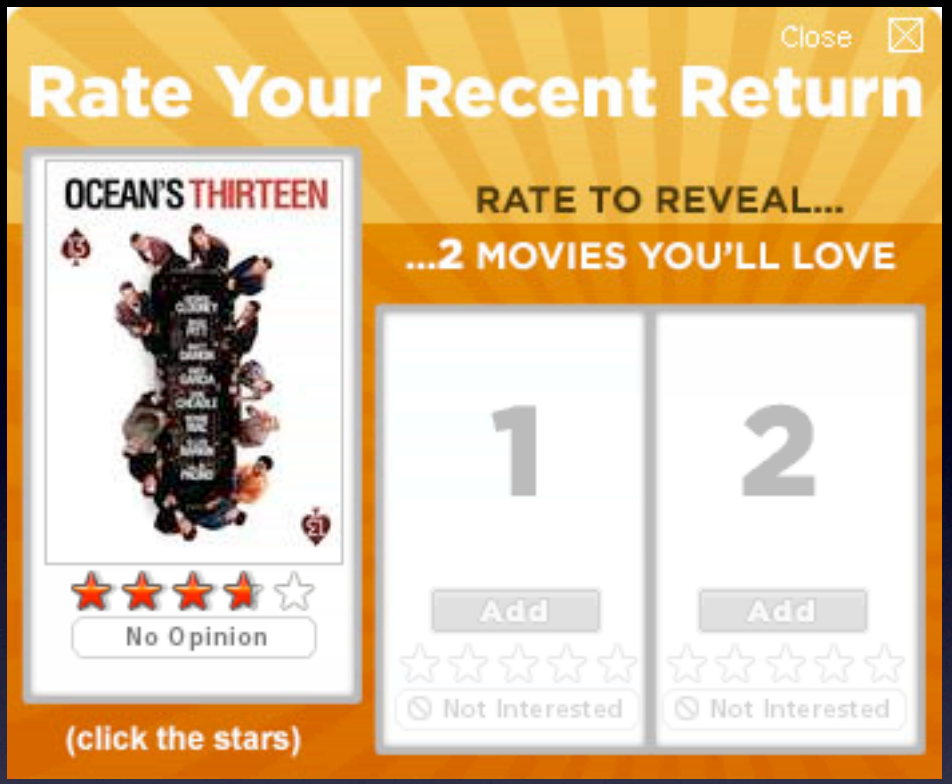
dog-ear

empty slots

blank slate




yahoo login! **dog-ear invite**




netflix. **rate invitiation (blank slots)**

backpackit. **blank slate invitation**

**call to action**

1-2-3 messaging

spotlighting or lightbox

provide a peek

offer an invitation. **static invitation**

**call to action**

1-2-3 messaging

spotlighting or lightbox

provide a peek

discover! **1-2-3 call to action**

**call to action**

1-2-3 messaging

spotlighting or lightbox

provide a peek

discover! **1-2-3 call to action**

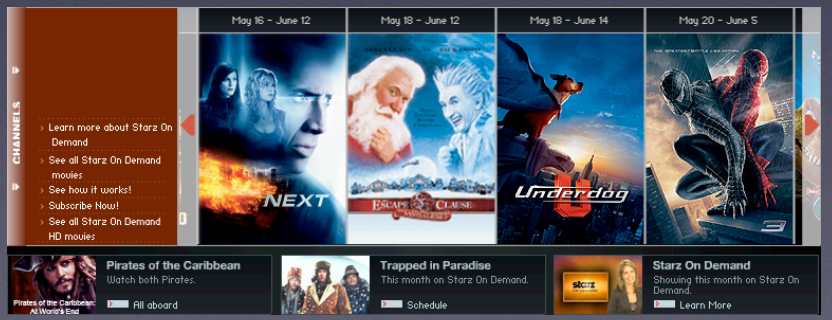
yahoo! **tour invitation**

## call to action

1-2-3 messaging
spotlighting or lightbox
provide a peek

discover! **1-2-3 call to action**

yahoo! **tour invitation**




starz play! **sneak peek in carousel**

## Discoverability

No easy answer

Use the hover to reveal interaction

Use the familiar to teach the new

Can't flag all interactions

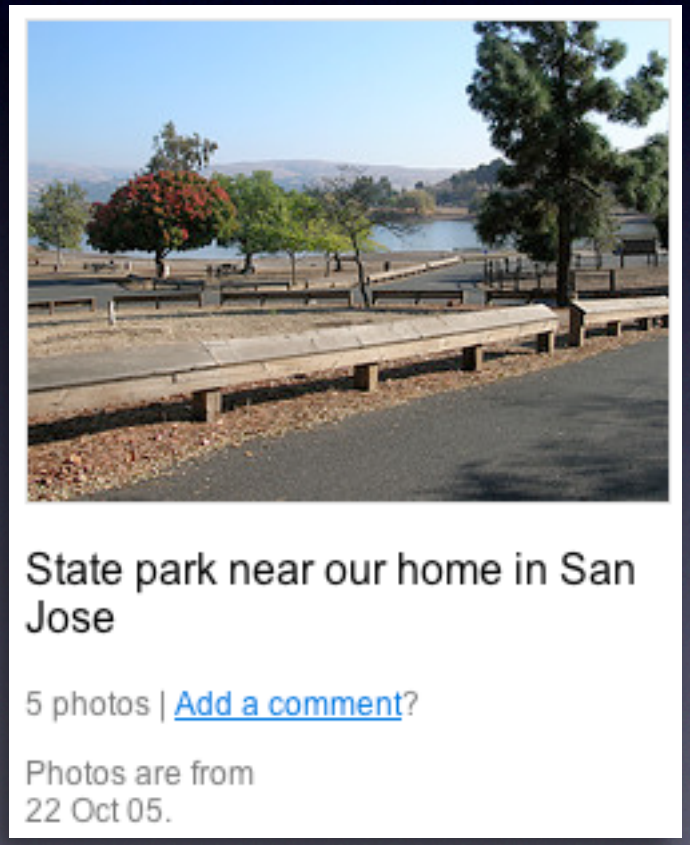
## Discoverability

No easy answer

Use the hover to reveal interaction

Use the familiar to teach the new

Can't flag all interactions




flickr. **hover invitation**

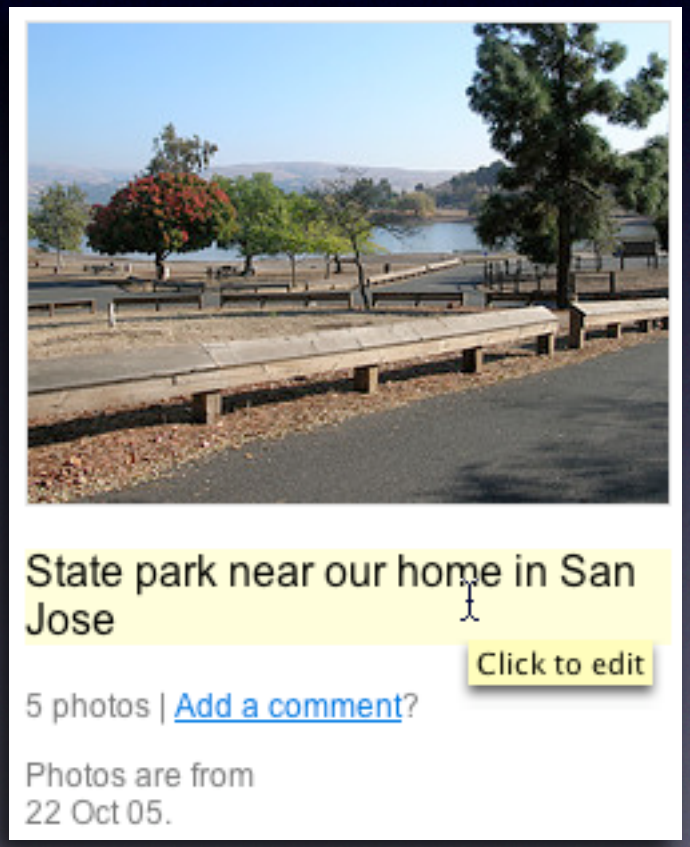
## Discoverability

No easy answer

Use the hover to reveal interaction

Use the familiar to teach the new

Can't flag all interactions




flickr. **hover invitation**

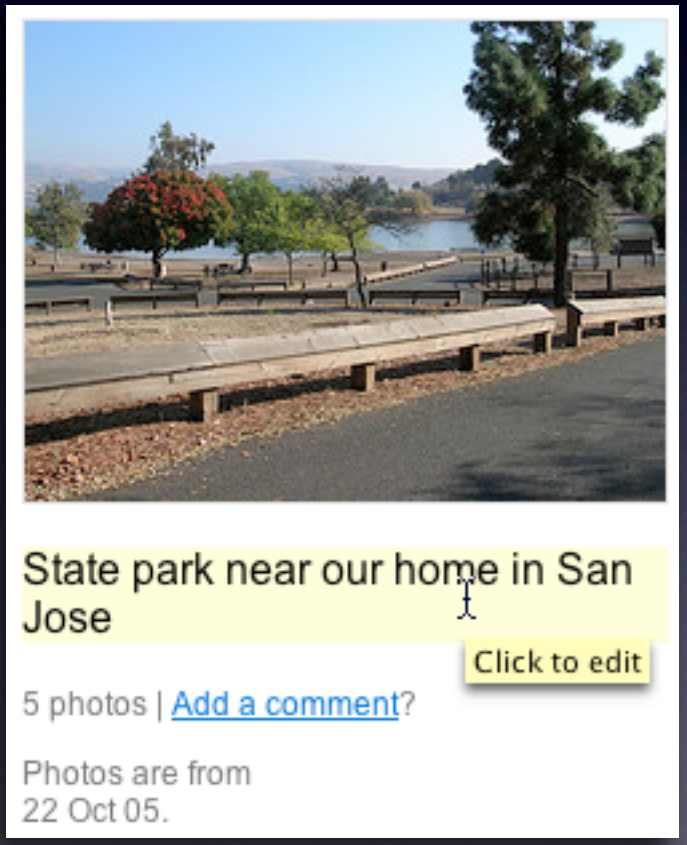
## Discoverability

No easy answer

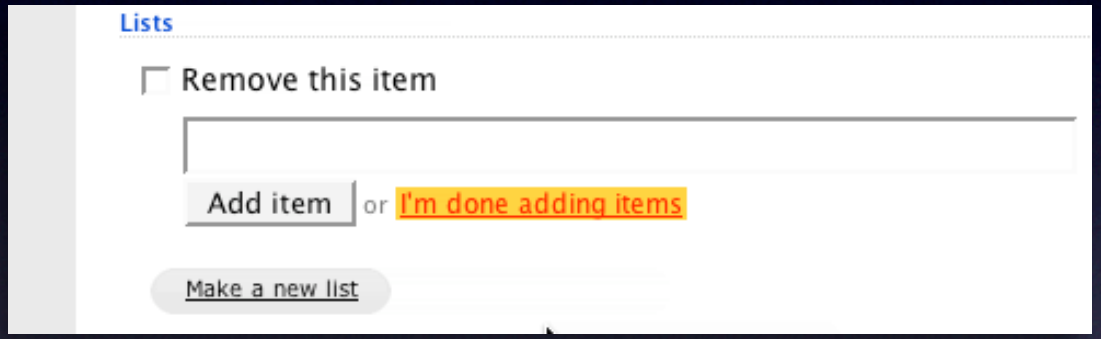
Use the hover to reveal interaction

Use the familiar to teach the new

Can't flag all interactions




flickr. **hover invitation**




backpackit. **tooltip invitation + hover invitation + cursor invitation**

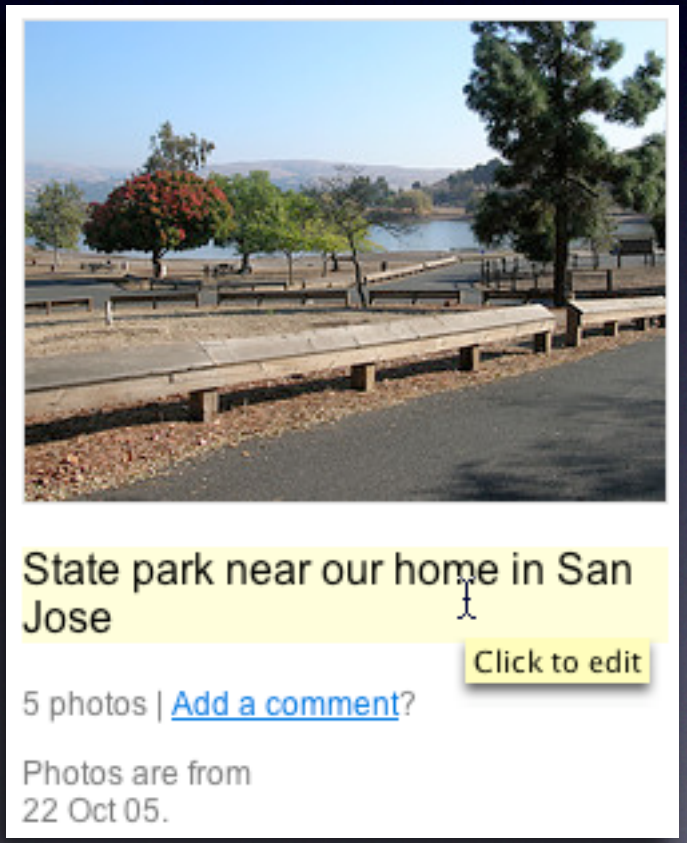
## Discoverability

No easy answer

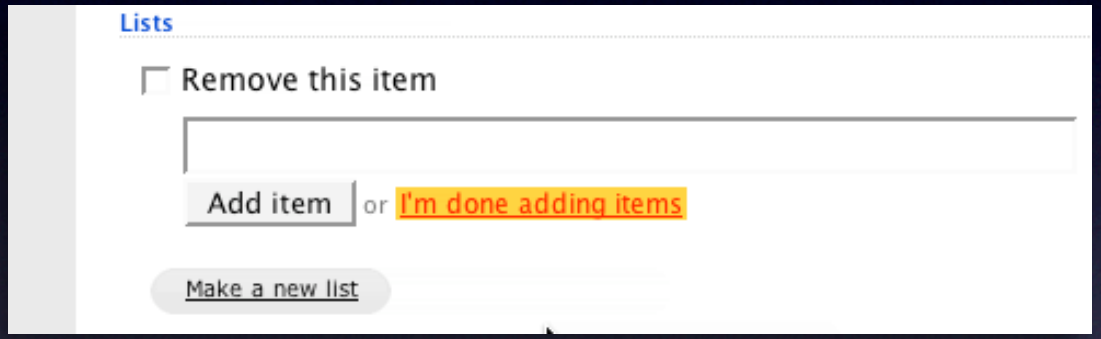
Use the hover to reveal interaction

Use the familiar to teach the new

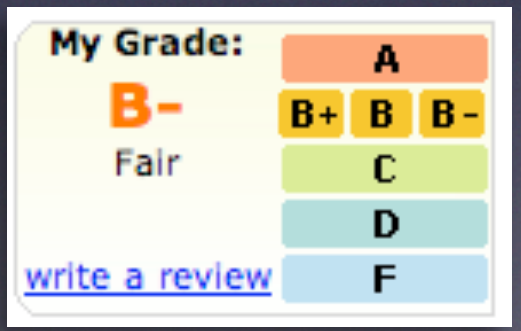
Can't flag all interactions




flickr. **hover invitation**




backpackit. **tooltip invitation + hover invitation + cursor invitation**




y! movies. **hover invitation**

offer an invitation. **dynamic invitation**

## Discoverability

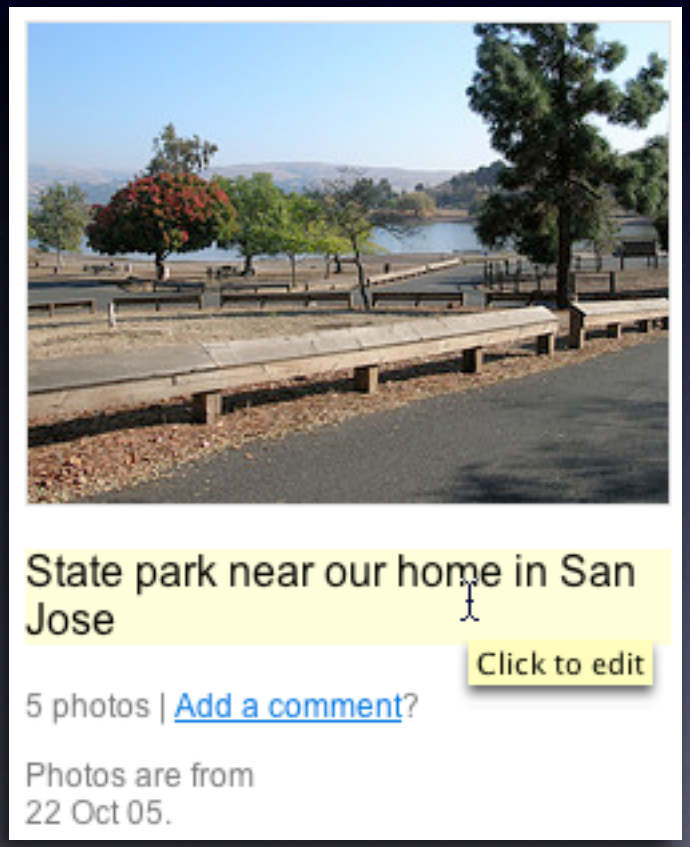
No easy answer

Use the hover to reveal interaction

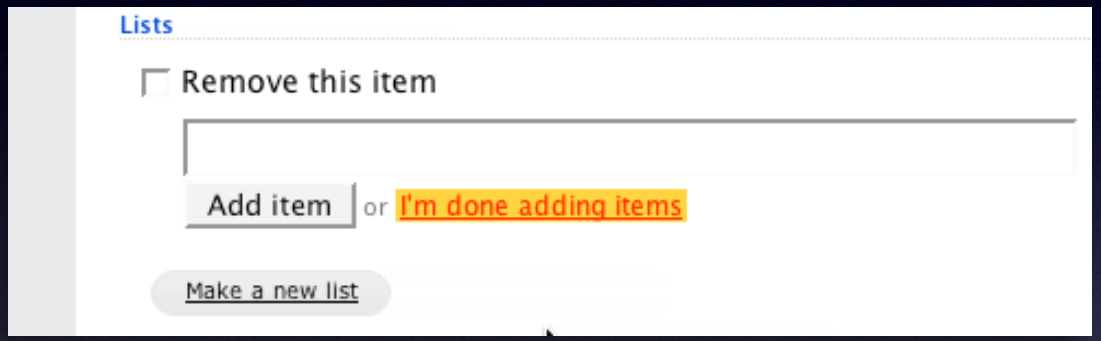
Use the familiar to teach the new

Can't flag all interactions

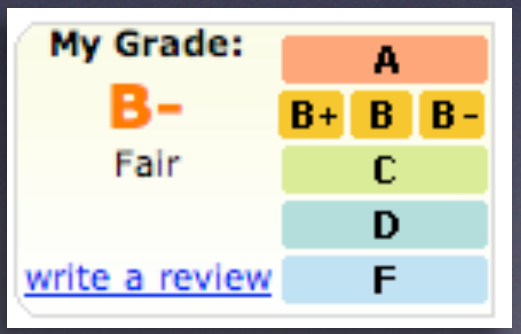
backpackit (fake). **being too explicit**




flickr. **hover invitation**




backpackit. **tooltip invitation + hover invitation + cursor invitation**



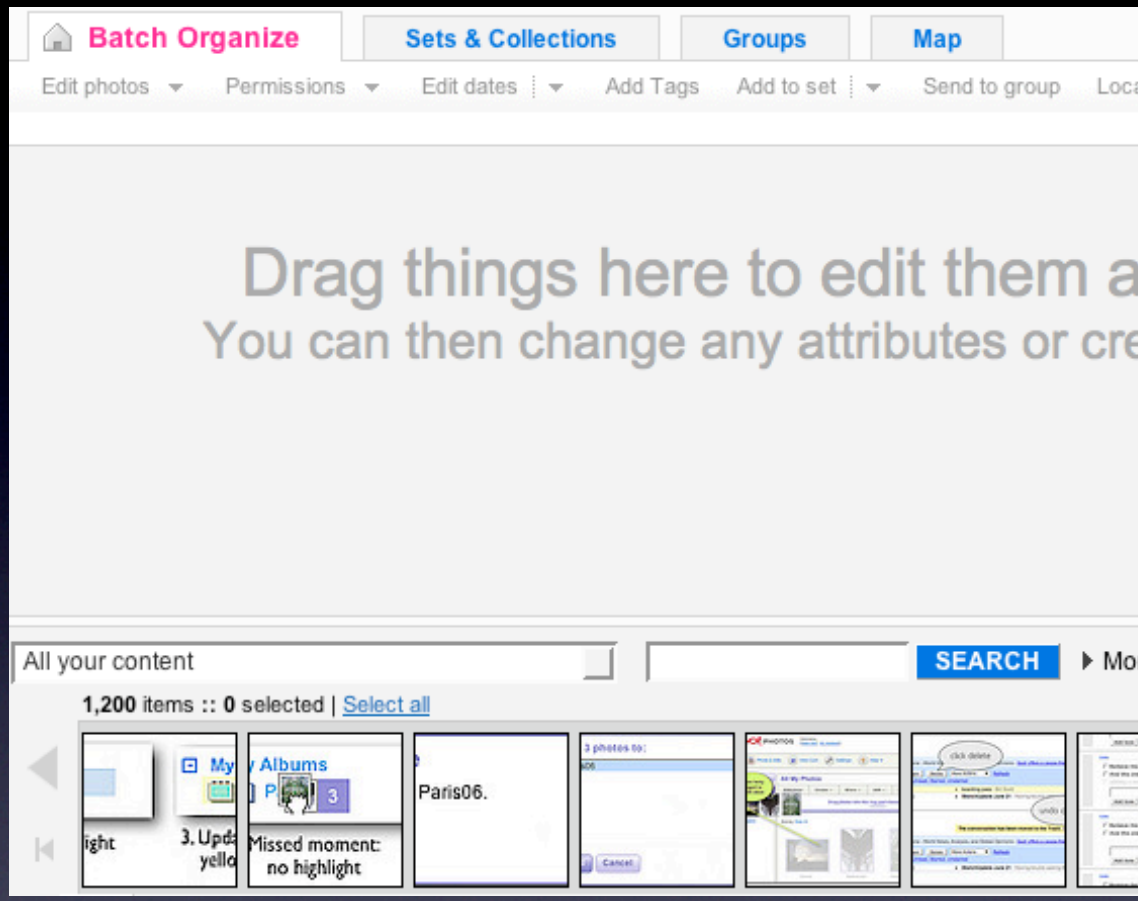

y! movies. **hover invitation**

**drag and drop**
use the interesting moments
before, during and after

offer an invitation. **dynamic invitation**

**drag and drop**

use the interesting moments
before, during and after

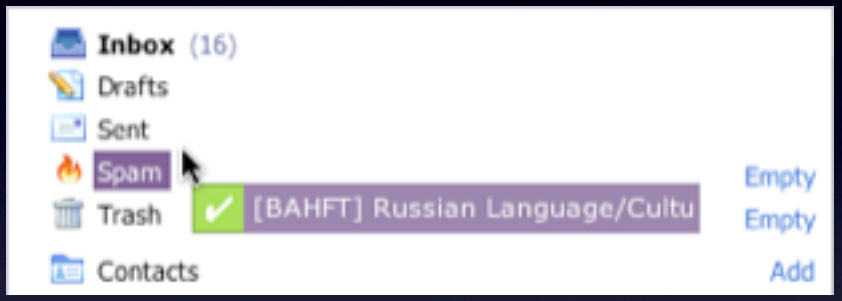



flickr. drop here invitation (static)

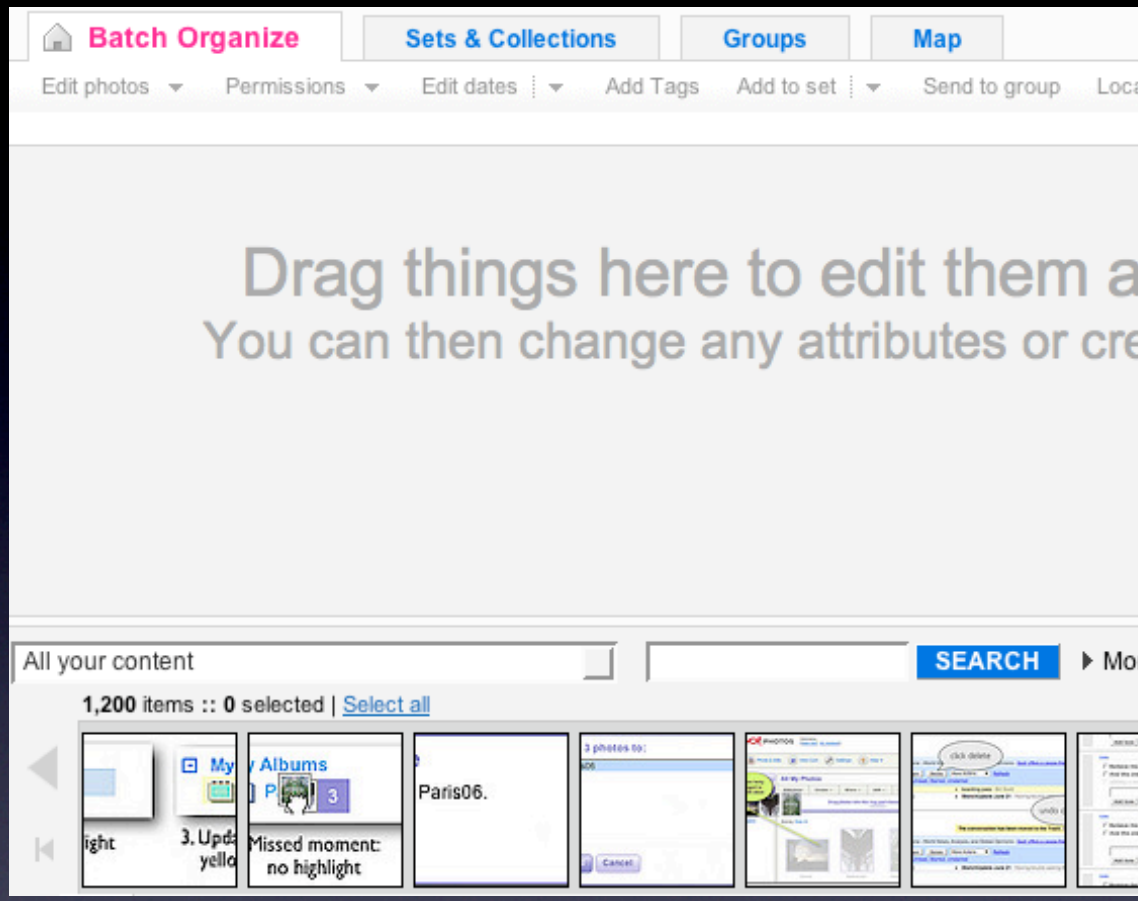
offer an invitation. **dynamic invitation**

## drag and drop

use the interesting moments
before, during and after




flickr. **drop here invitation (interactive)**

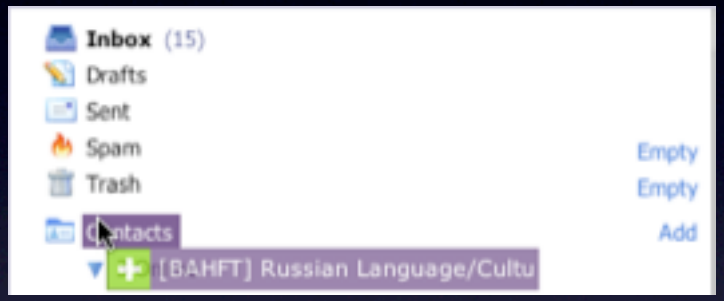



flickr. **drop here invitation (static)**

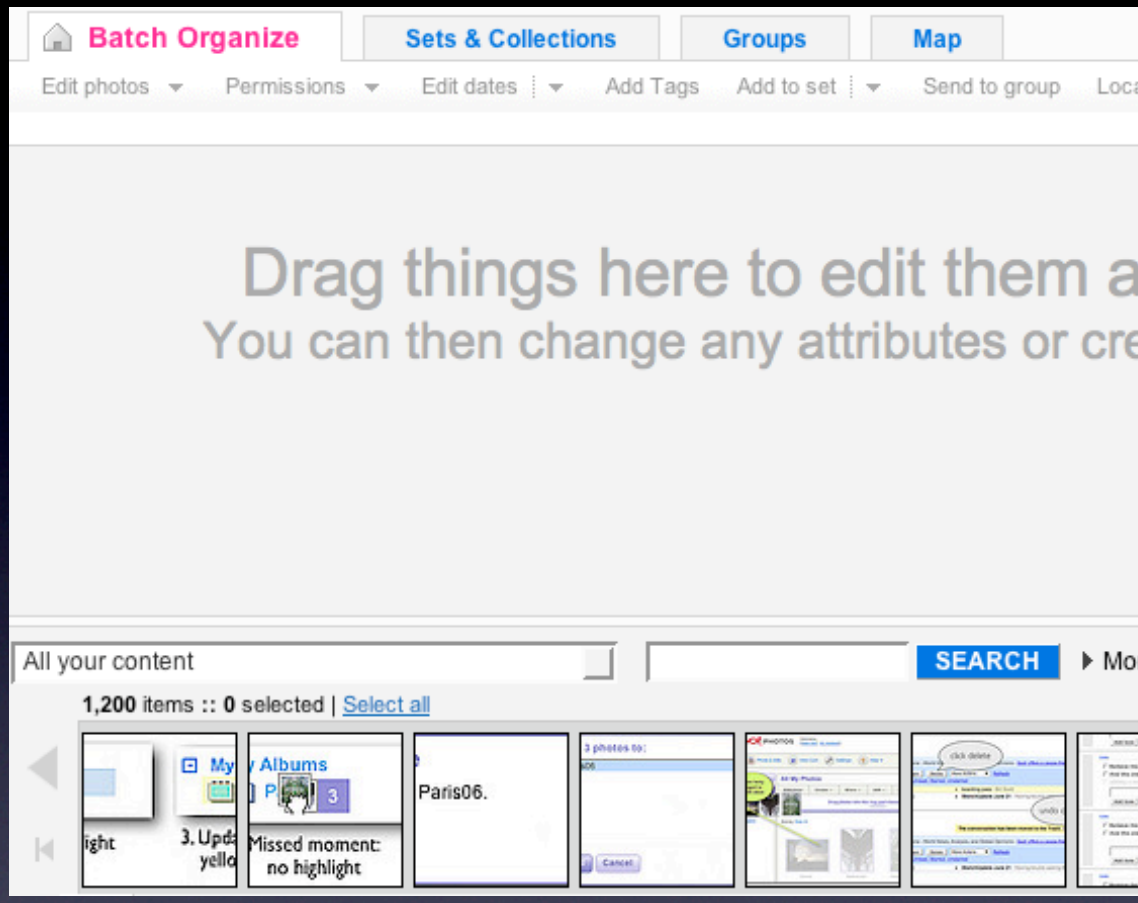
offer an invitation. **dynamic invitation**

## drag and drop

use the interesting moments
before, during and after




flickr. **drop here invitation (interactive)**

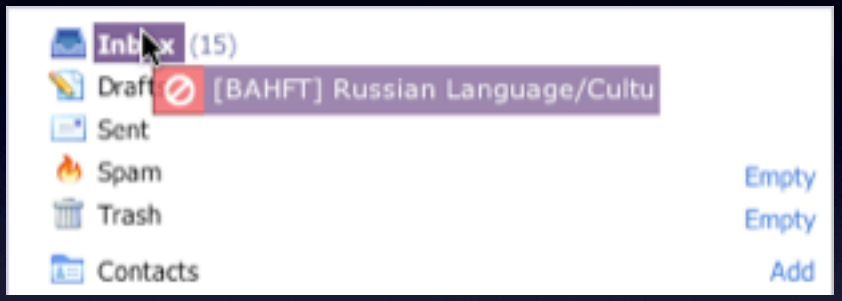



flickr. **drop here invitation (static)**

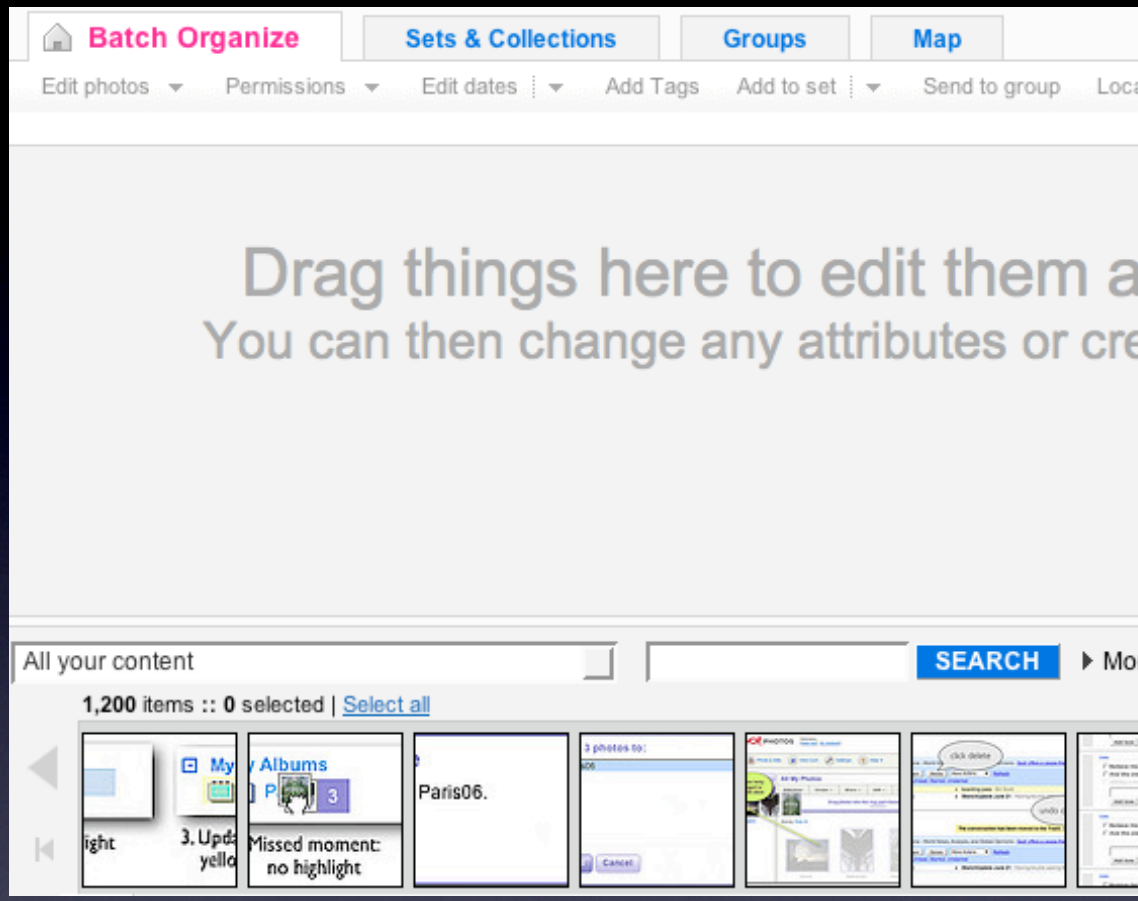
offer an invitation. **dynamic invitation**

## drag and drop

use the interesting moments
before, during and after




flickr. **drop here invitation (interactive)**




flickr. **drop here invitation (static)**

offer an invitation. **dynamic invitation**

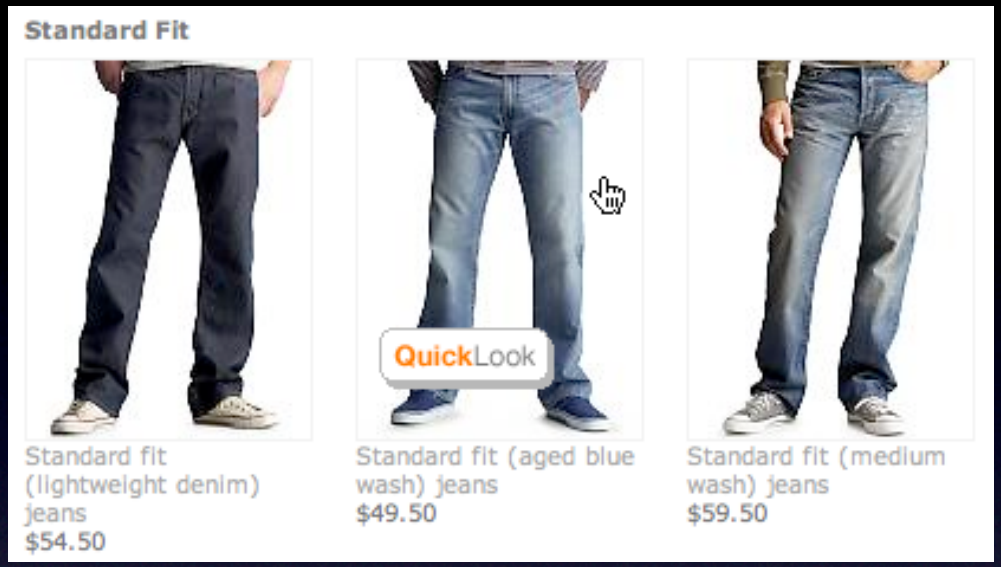
**bridge the new with the old**

hyperlinks as actions

reveal with hovers

drop down clues

offer an invitation. **dynamic invitation**




the gap. **button**

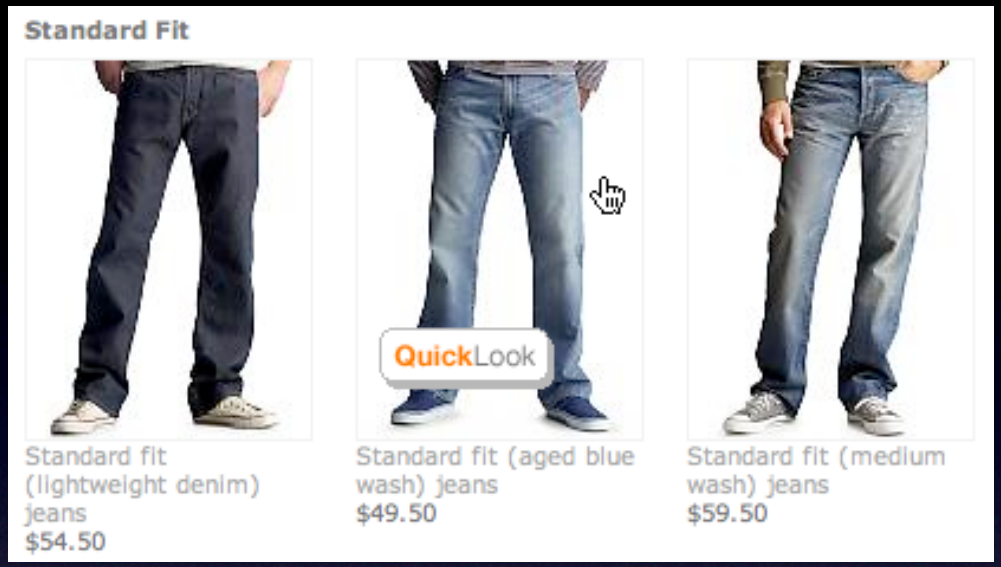
**bridge the new with the old**

hyperlinks as actions

reveal with hovers

drop down clues

offer an invitation. **dynamic invitation**




the gap. **button**

y! mail. **embedded buttons**

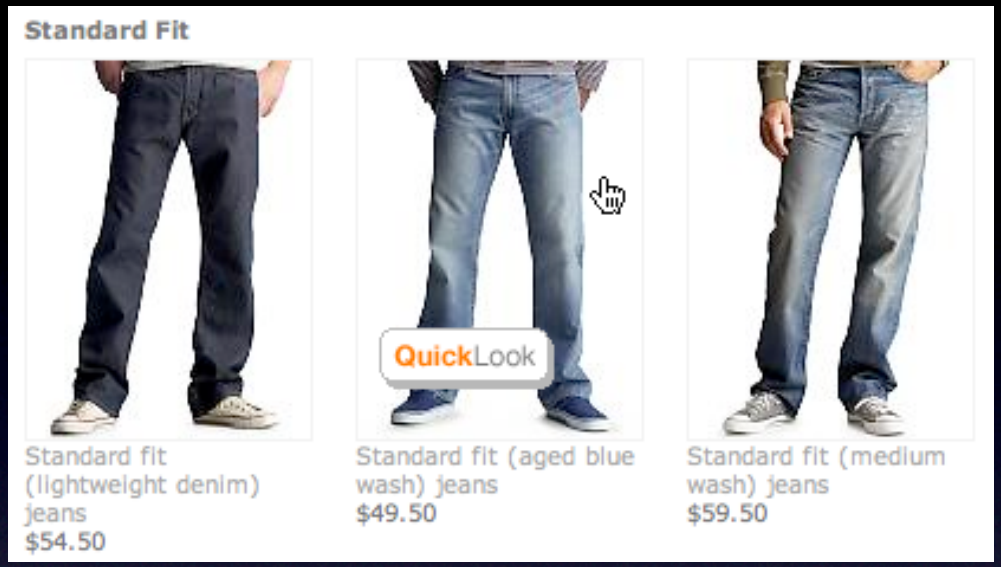
**bridge the new with the old**

hyperlinks as actions

reveal with hovers

drop down clues

offer an invitation. **dynamic invitation**




the gap. **button**

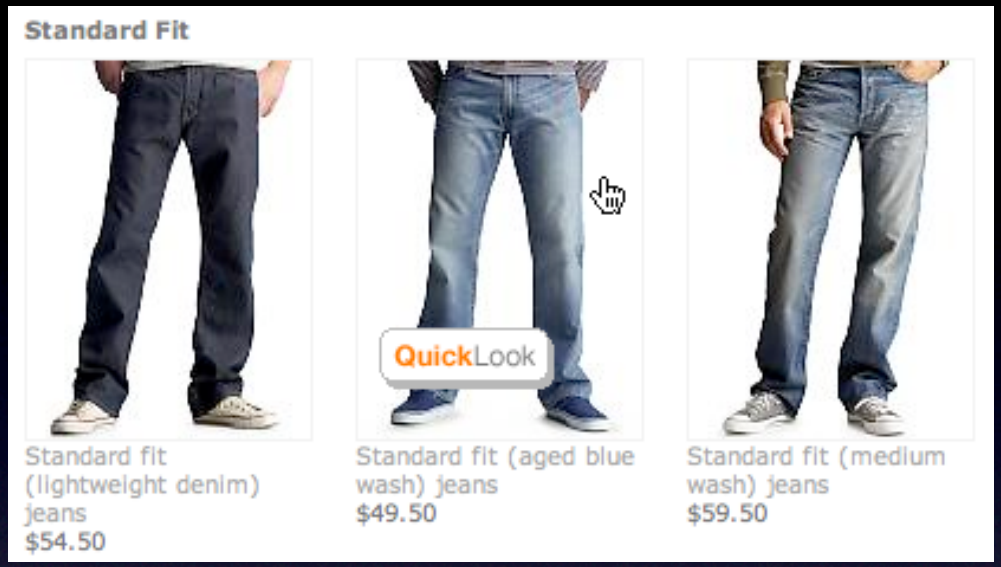
y! mail. **embedded buttons**

## **bridge the new with the old**

hyperlinks as actions
reveal with hovers
drop down clues

backpackit. **revealed hyperlinks/icons**

offer an invitation. **dynamic invitation**




the gap. **button**

y! mail. **embedded buttons**

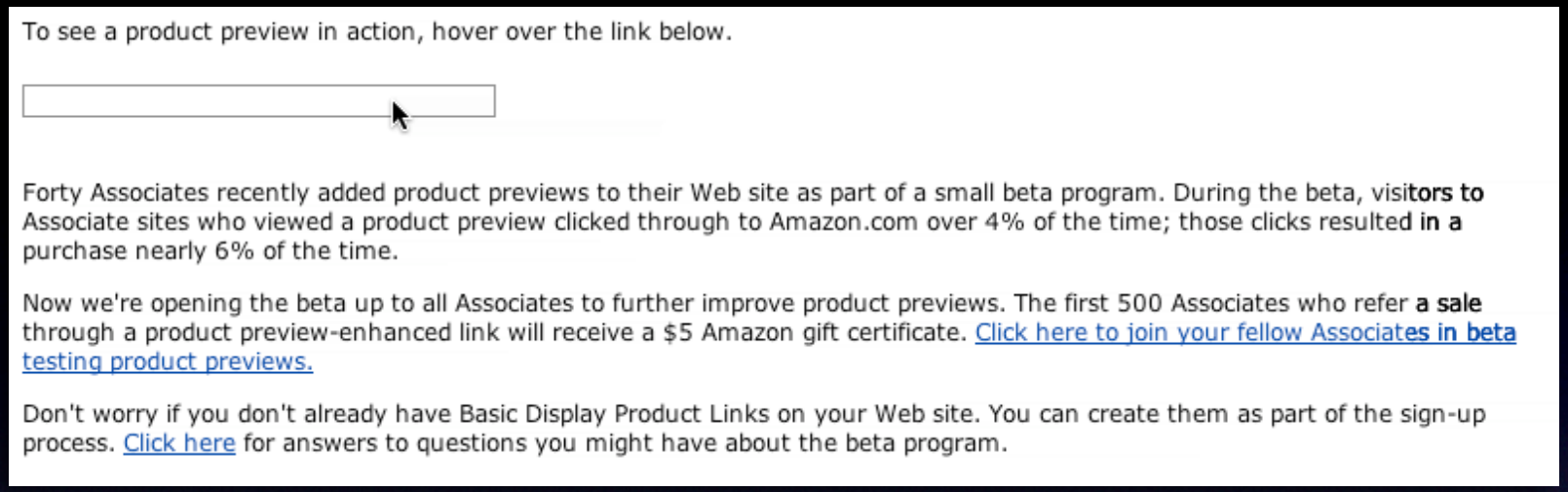
## bridge the new with the old

hyperlinks as actions
reveal with hovers
drop down clues

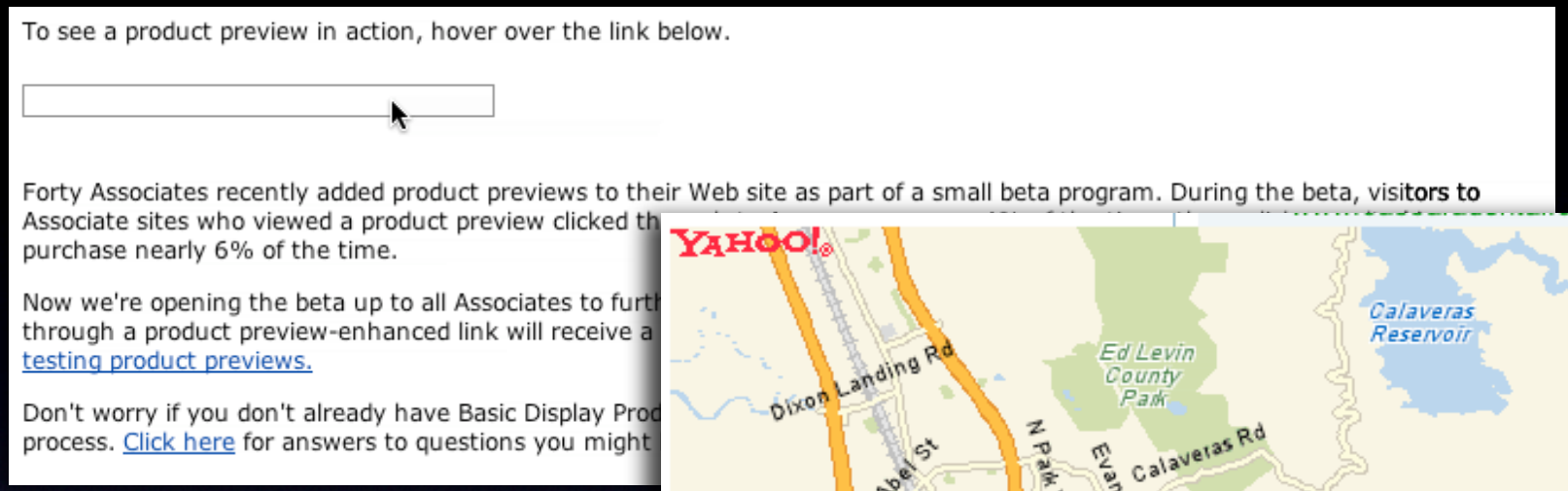
backpackit. **revealed hyperlinks/icons**

flickr. **drop down affordance**

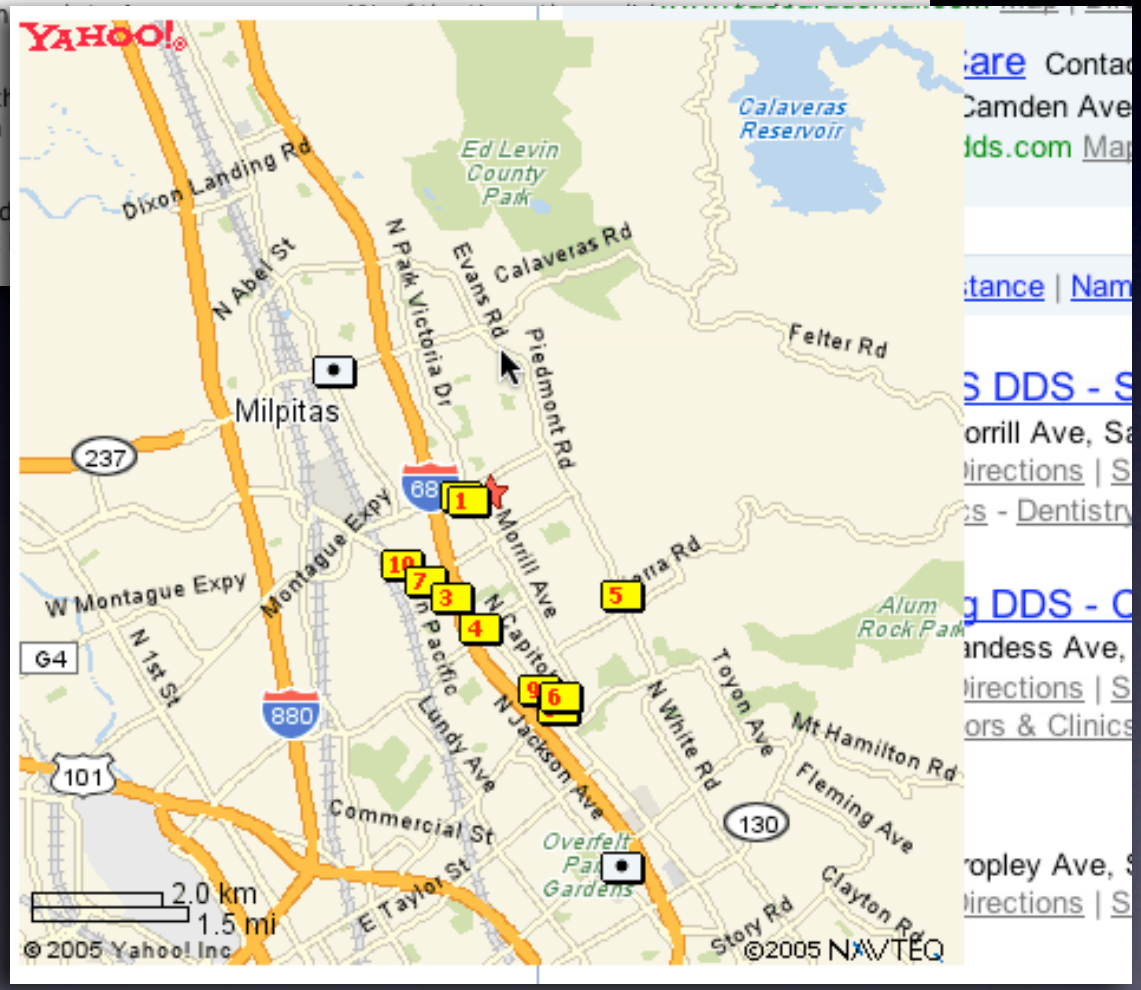
offer an invitation. **anti-patterns**




anti-pattern. amazon. **mouse trap**



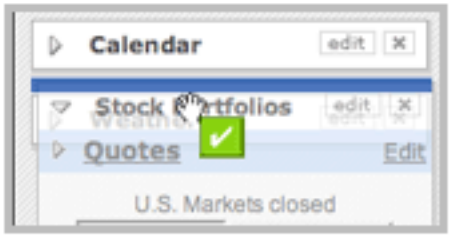

anti-pattern. amazon. **mouse trap**



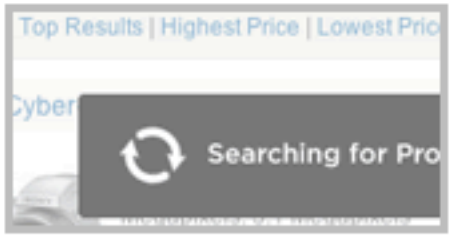

anti-pattern. y! maps. **mouse trap**

# use transitions

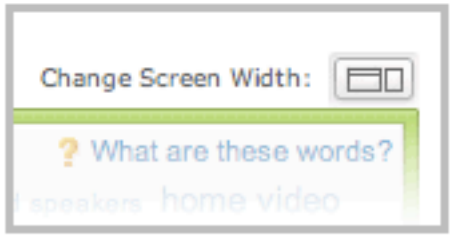
use transitions




[Animate Transition]
Designer needs to communicate that an object is changing its spatial relationship within the page.

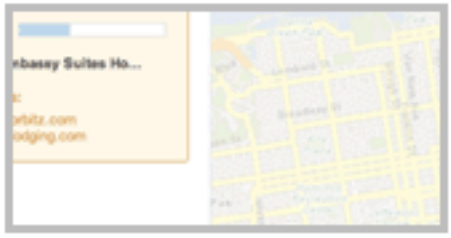



[Brighten Transition]
Designer wants to make a previously dimmed object a point of focus by making the object bright again.




[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.

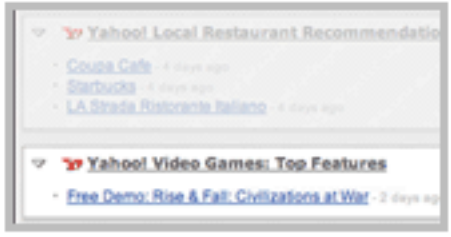
[Cross Fade Transition]
Designer wants to communicate that a new view of an object is replacing the previous view of the object.



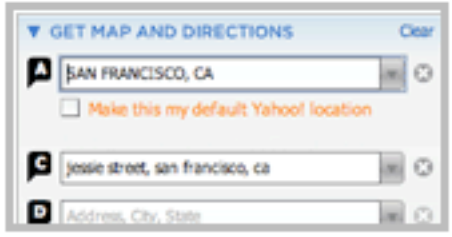
[Dim Transition]
Designer needs to communicate that an object is of secondary importance.

[Expand Transition]
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.



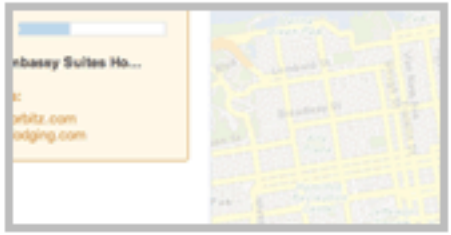

[Fade Out Transition]
Designer needs to communicate that an object is going away.




[Self Healing Transition]
Designer wants to show that an object has been removed from a list of objects.

use transitions

[Cross Fade Transition]
Designer wants to communicate that a new view of an object is replacing the previous view of the object.

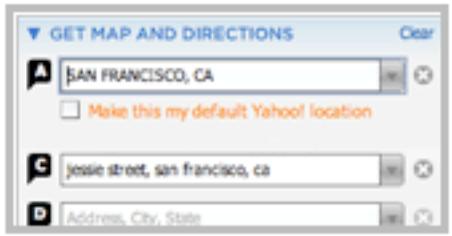


[Dim Transition]
Designer needs to communicate that an object is of secondary importance.

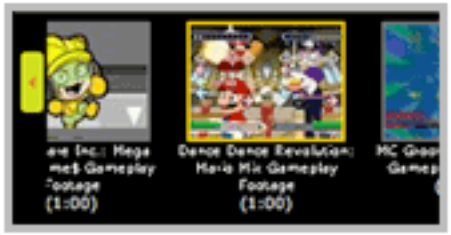
[Expand Transition]
Designer needs to show the detail of an object in its context or reveal a previously collapsed object.

[Fade In Transition]
Designer needs to communicate that an object is being added to the page or application.

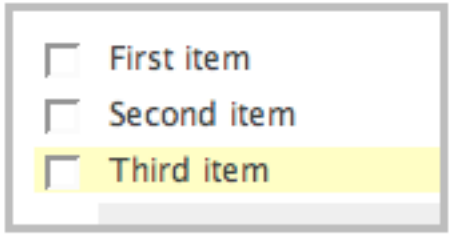
[Fade Out Transition]
Designer needs to communicate that an object is going away.




[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 communicate the additional content's relationship with other items on the page.




[Spotlight Transition]
Designer needs to call attention to where a data value or content has changed within the interface.

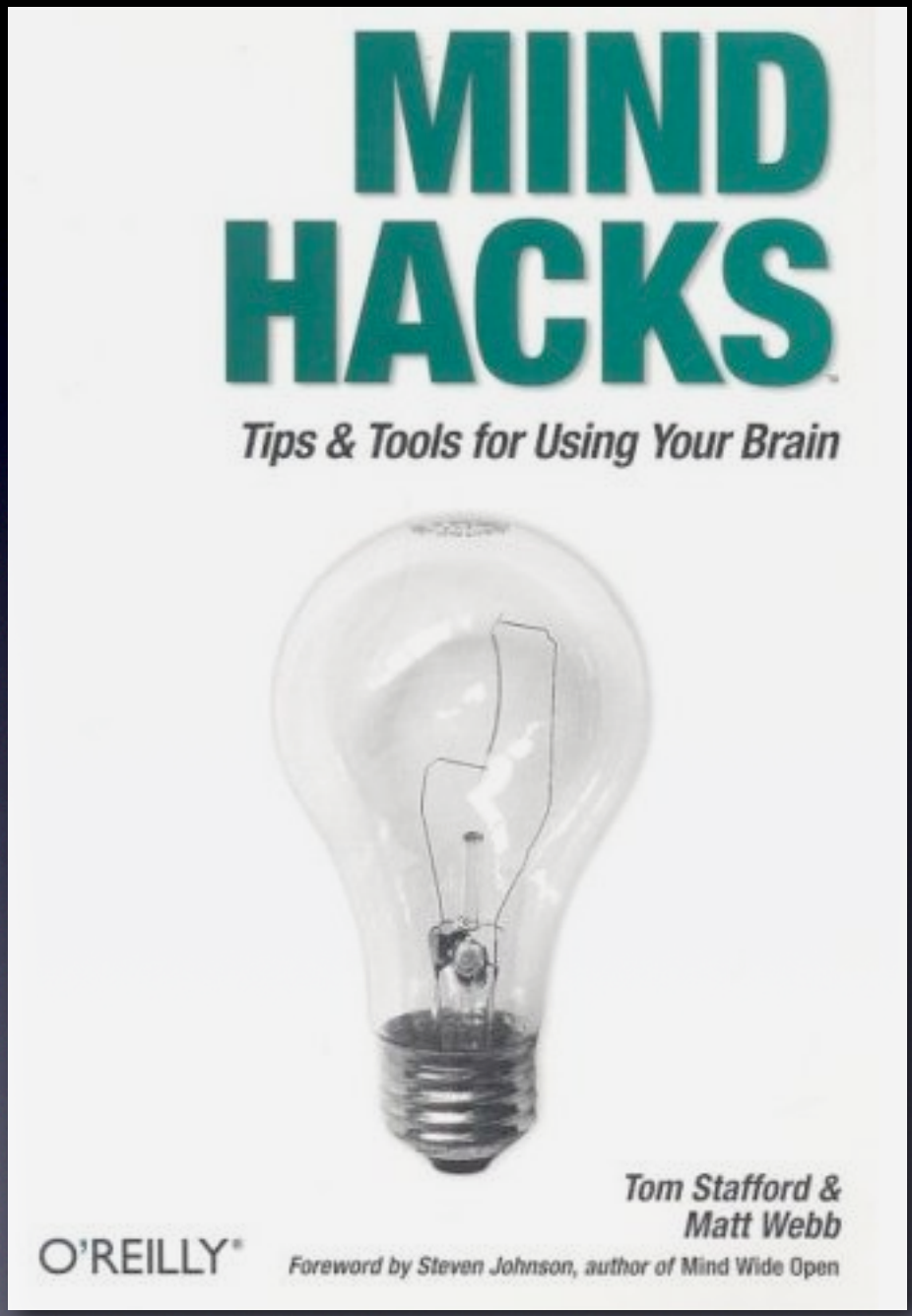
**Speak to the brain**

Understanding attention processing

use transitions

**Speak to the brain**

Understanding attention processing



**Speak to the brain**

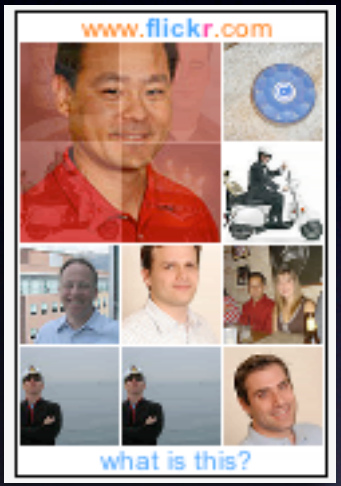
Understanding attention processing

Sending the wrong message

**Speak to the brain**

Understanding attention processing

Sending the wrong message

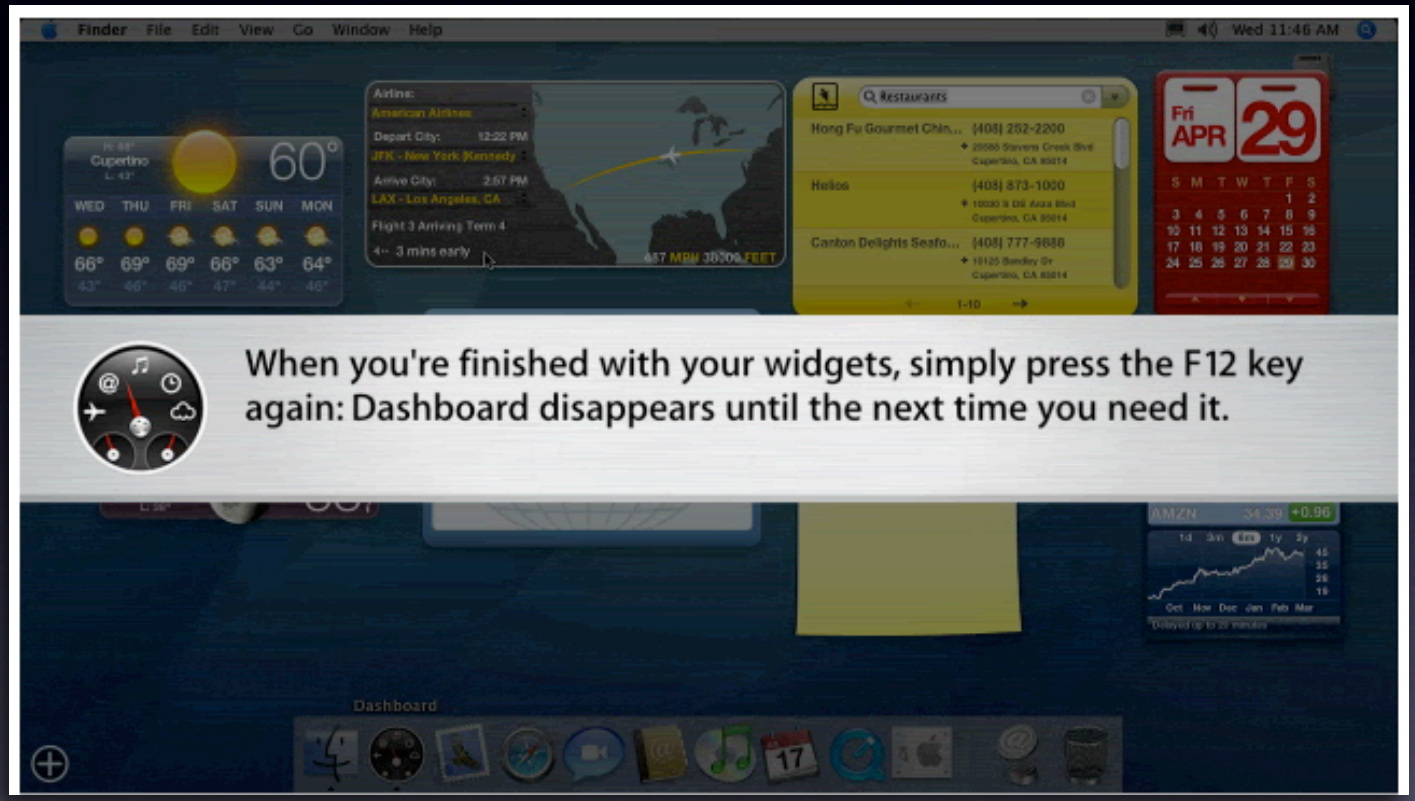



flickr **zeitgeist**

# Speak to the brain

Understanding attention processing

Sending the wrong message

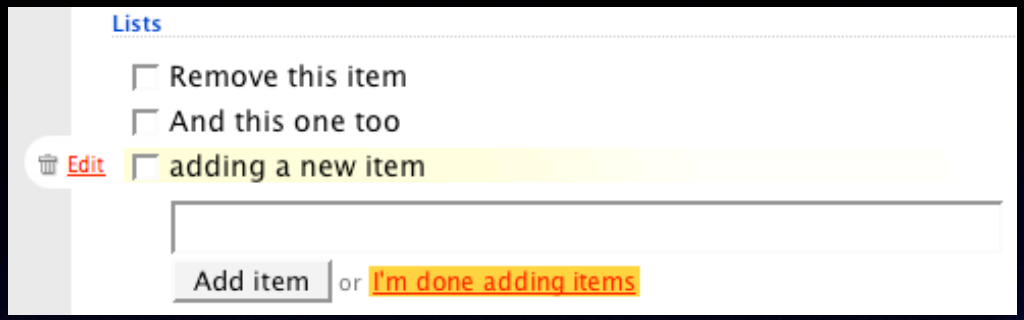



mac **widgets**

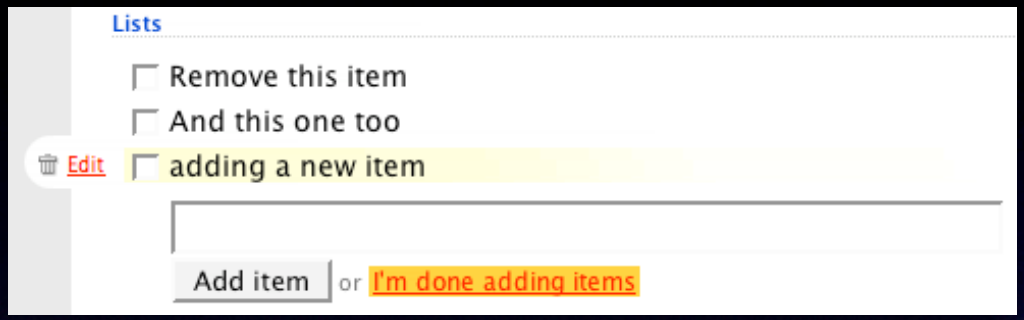
flickr **zeitgeist**

use transitions

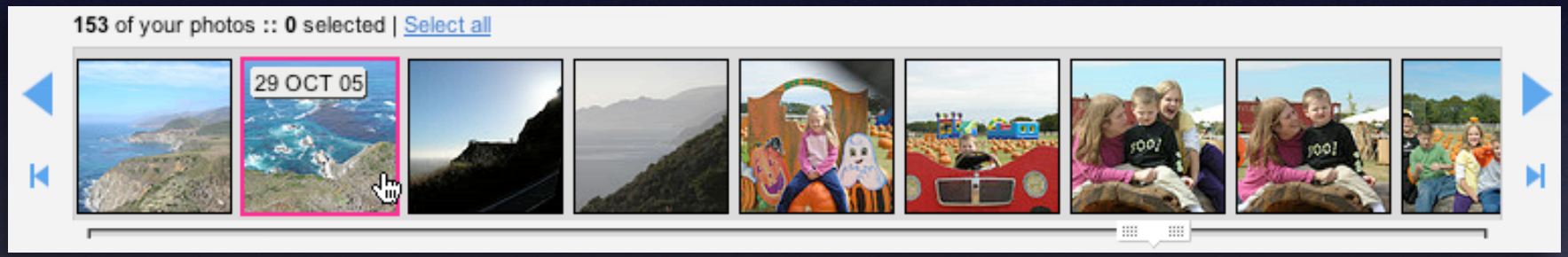
backpackit. **fade transition + self-healing transition.**



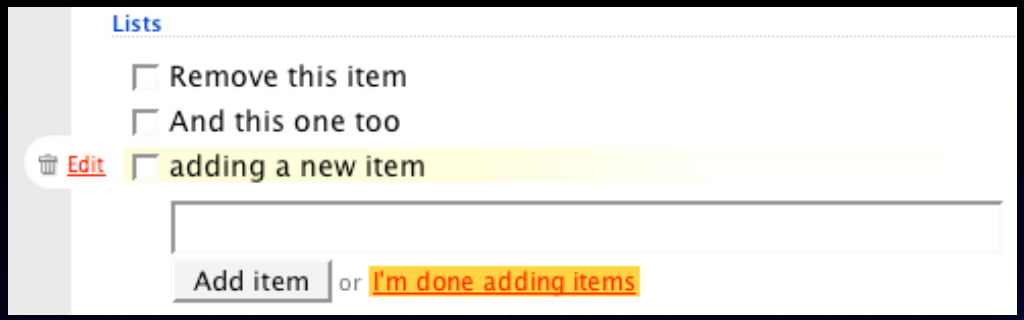
backpackit. **fade transition + self-healing transition.**



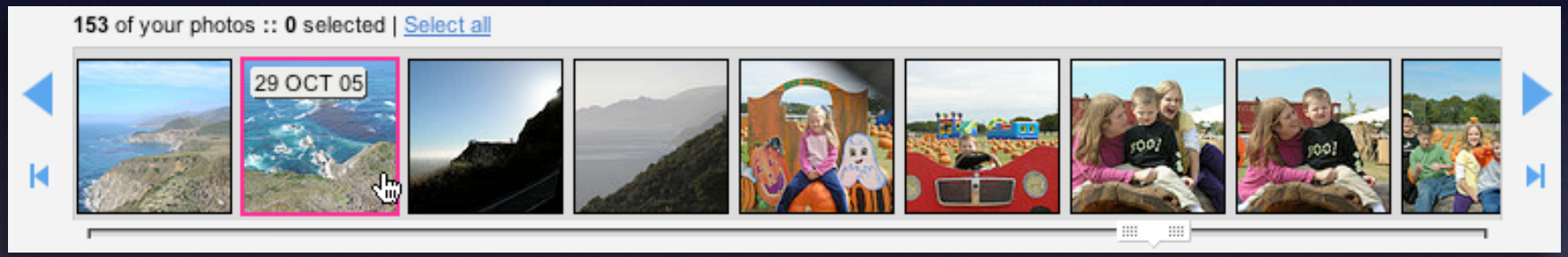

flickr. **slide transition.**



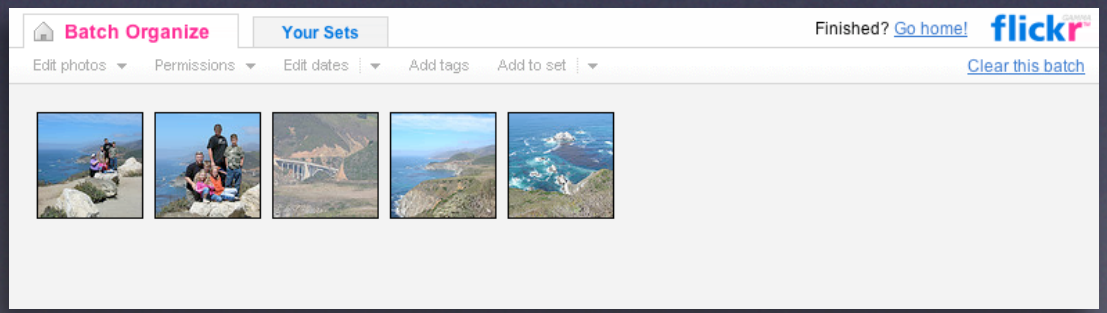
backpackit. **fade transition + self-healing transition.**




flickr. **slide transition.**

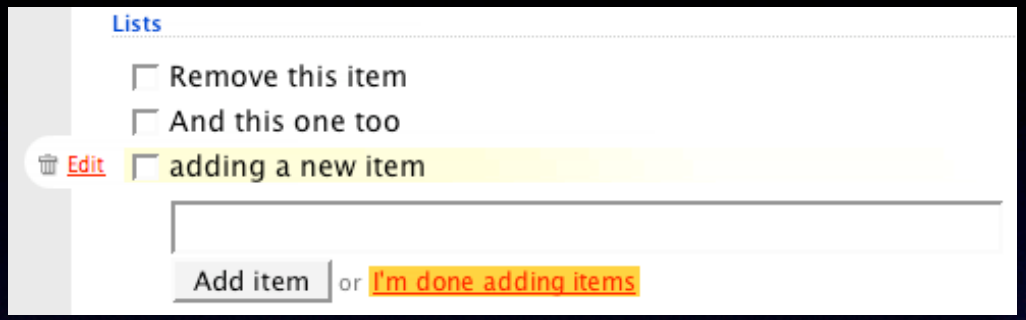


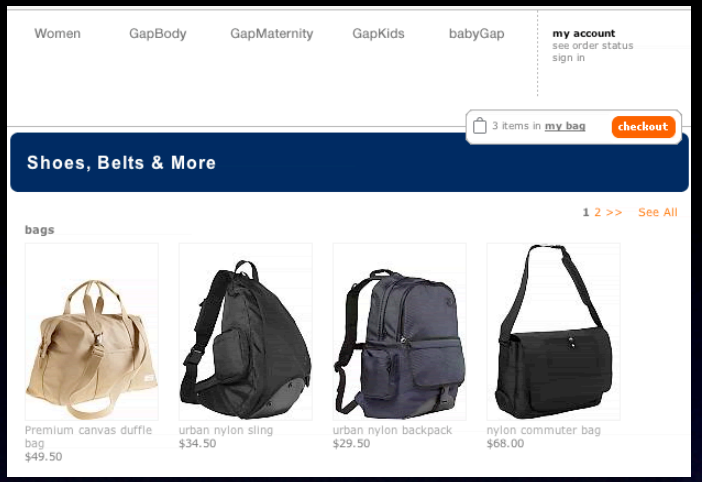

flickr. **active spotlight.**



use transitions

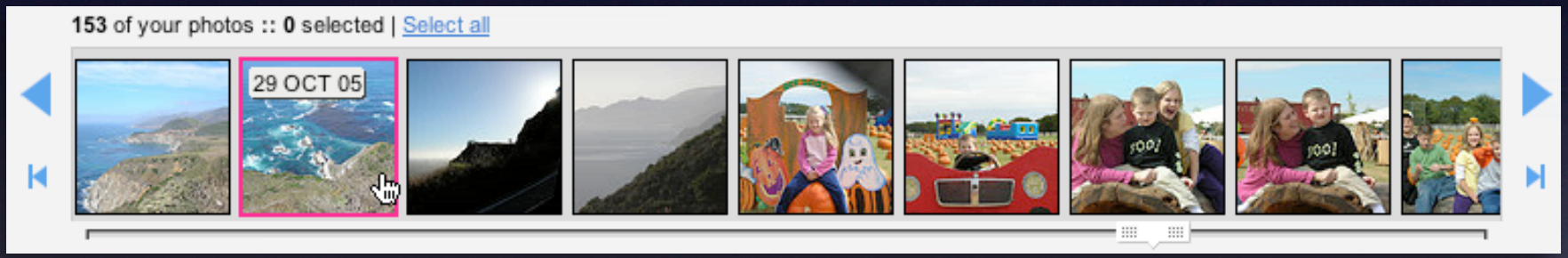
backpackit. **fade transition + self-healing transition.**



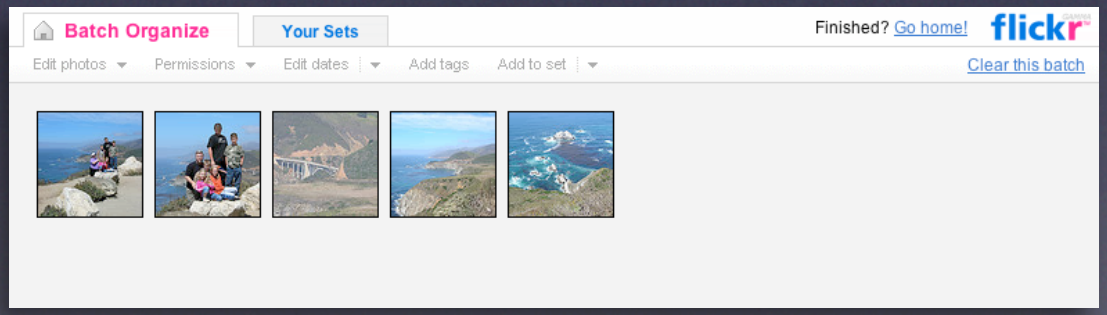




the gap. **zoom box.**

flickr. **slide transition.**




flickr. **active spotlight.**



**you can...**

speed up time

slow down interaction

show state change

show relationships between objects

focus attention

**you can...**

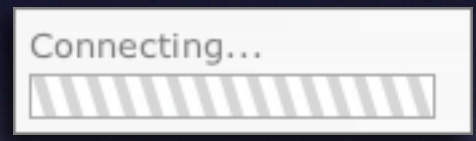
speed up time

slow down interaction

show state change

show relationships between objects

focus attention



use transitions

# you can...

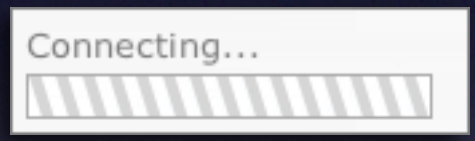
speed up time

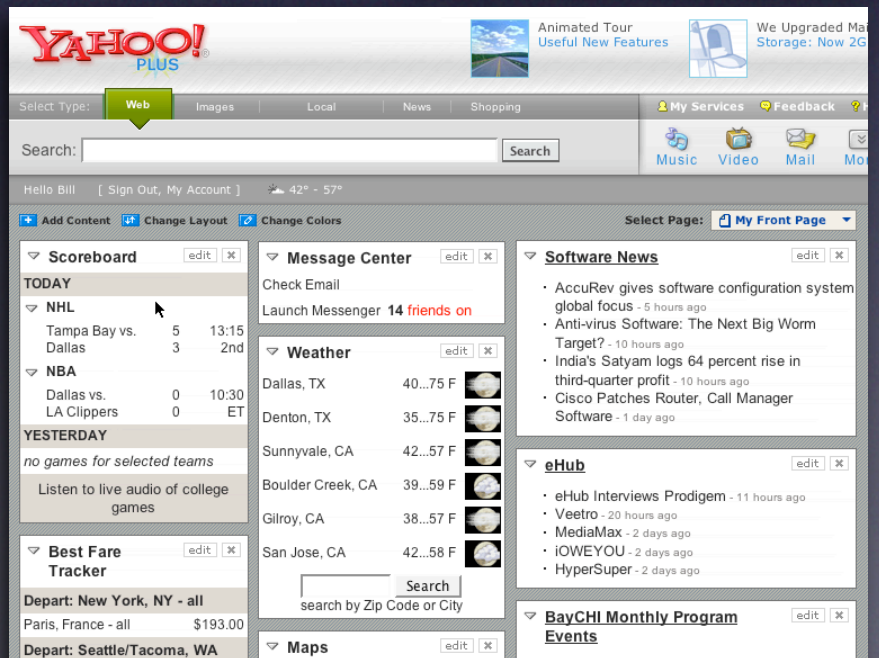
slow down interaction

show state change

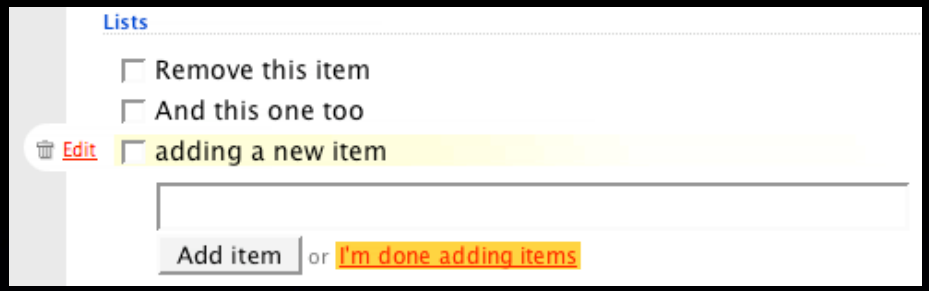
show relationships between objects

focus attention



use transitions




**you can...**

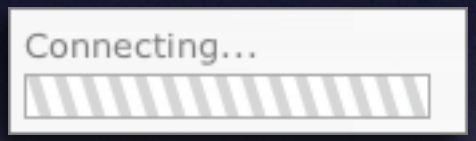
speed up time

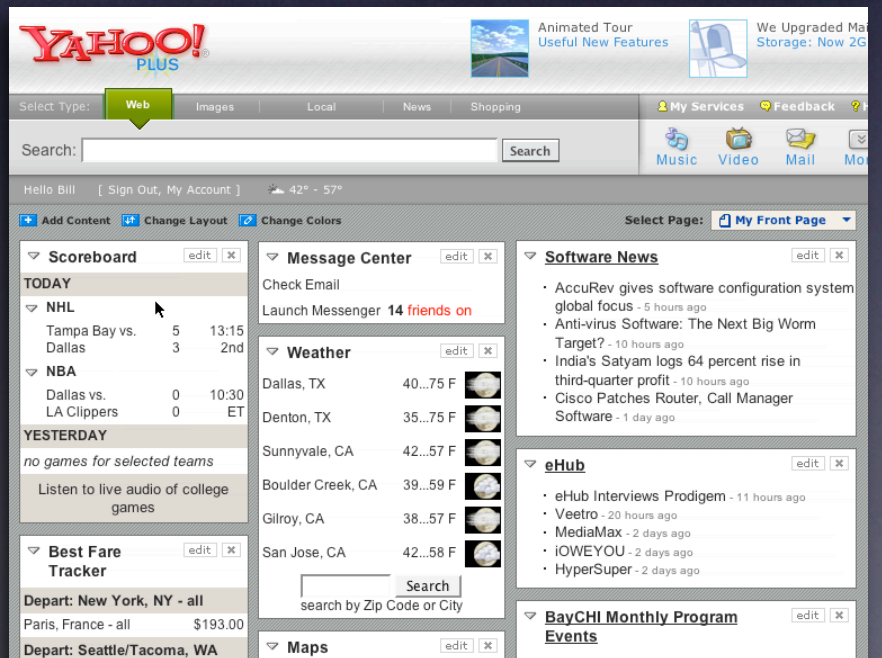
slow down interaction

show state change

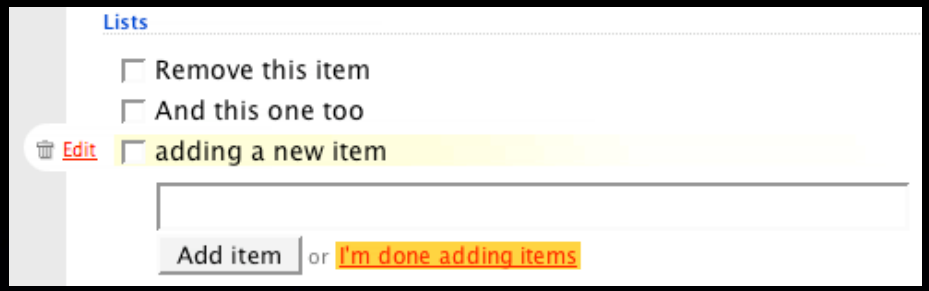
show relationships between objects

focus attention



use transitions




# you can...

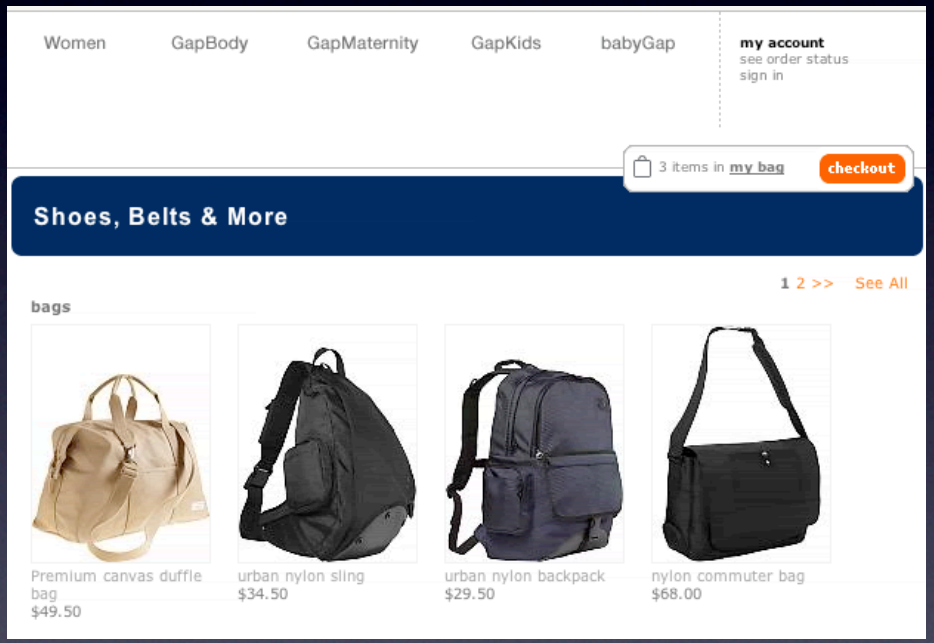
speed up time

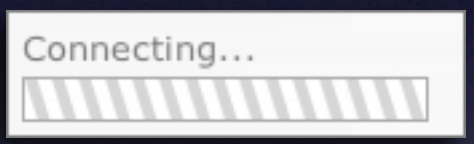
slow down interaction

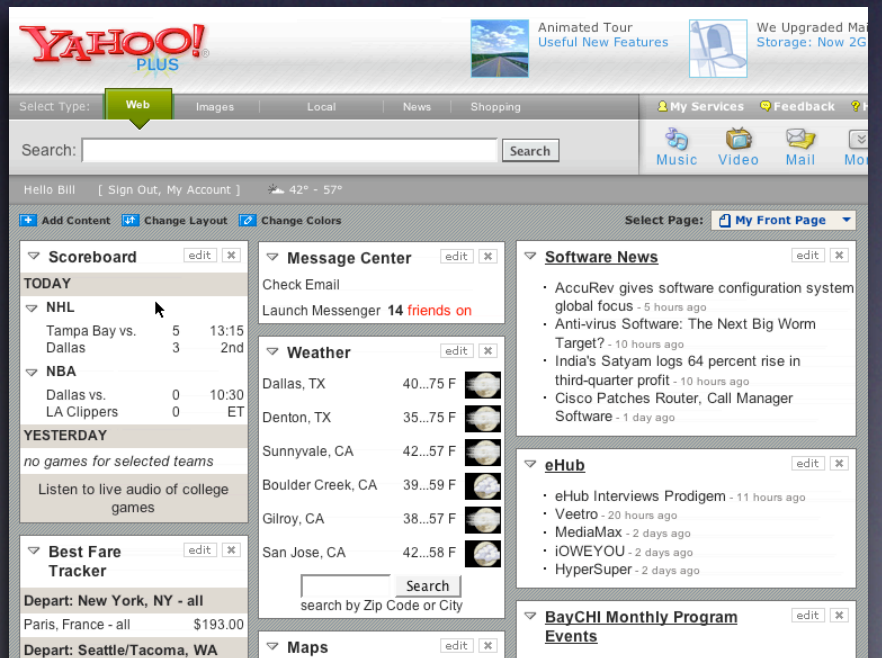
show state change

show relationships between objects

focus attention



use transitions

# you can...

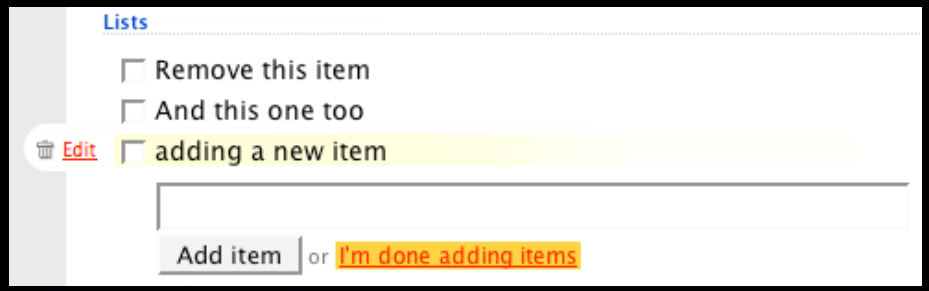
speed up time

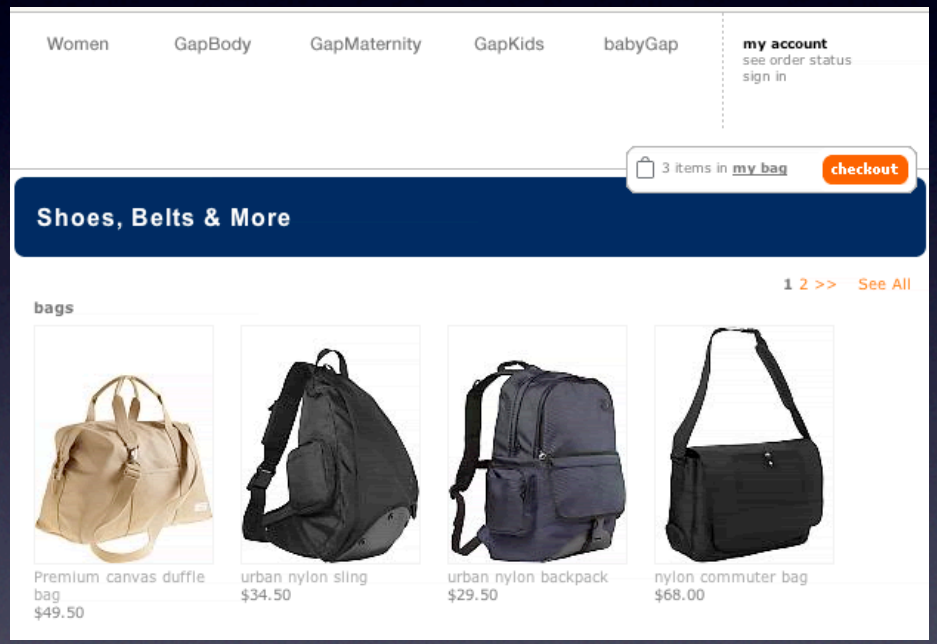
slow down interaction

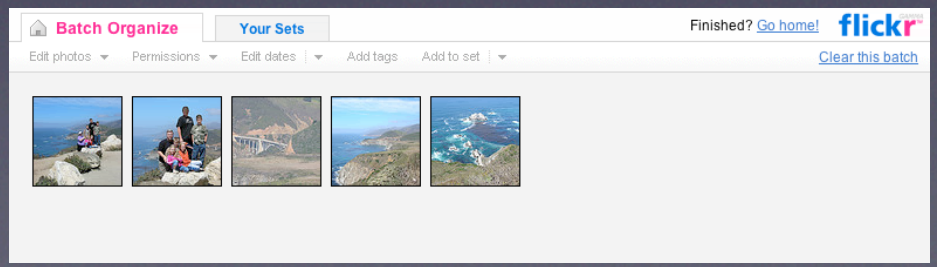
show state change

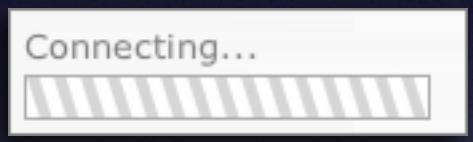
show relationships between objects

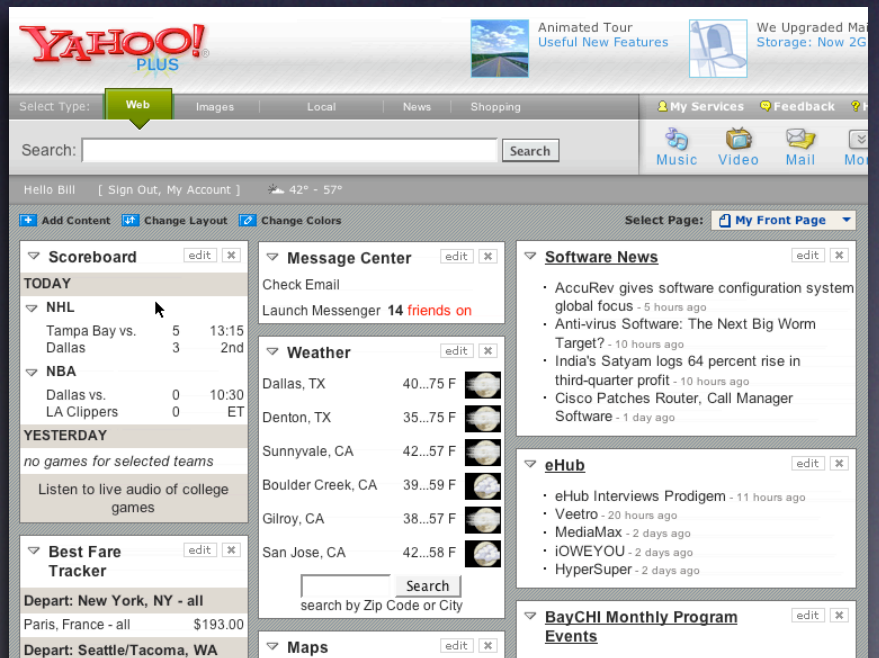
focus attention



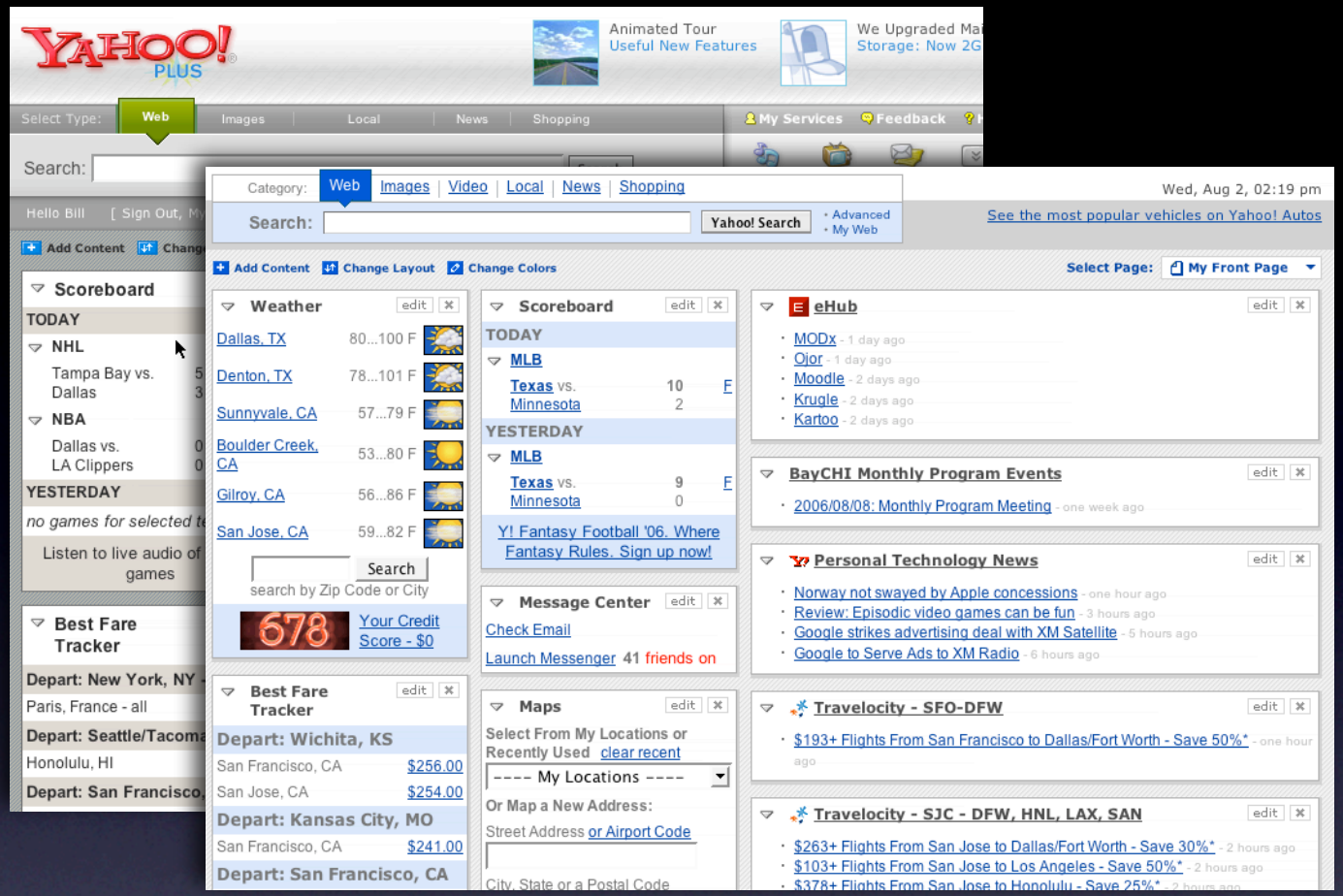
use transitions

**Keep it sane**

"Cut it in-half" rule of thumb

Use "contrast knob" approach

use transitions

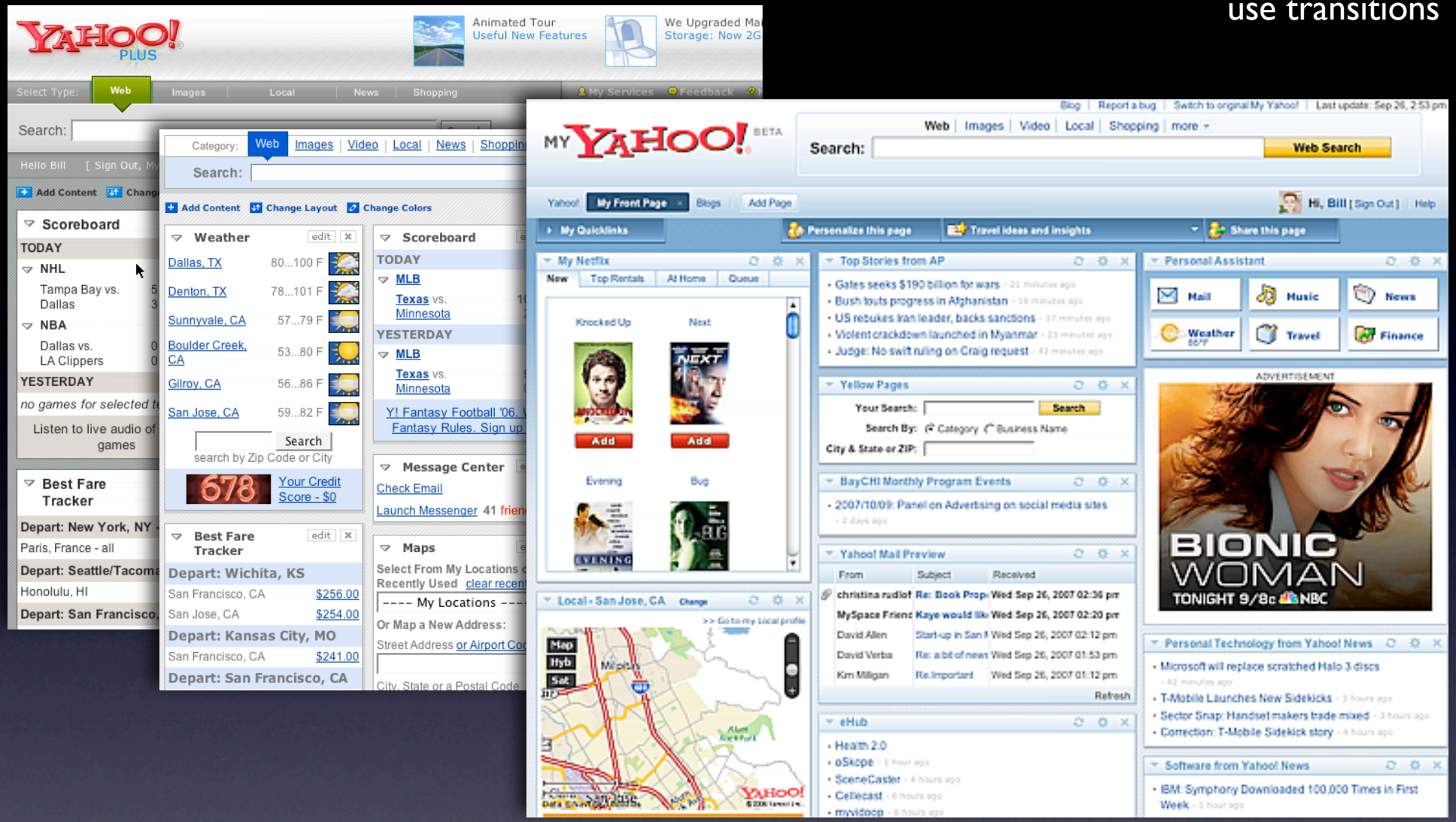



**Keep it sane**

"Cut it in-half" rule of thumb

Use "contrast knob" approach

use transitions




**Keep it sane**

"Cut it in-half" rule of thumb

Use "contrast knob" approach

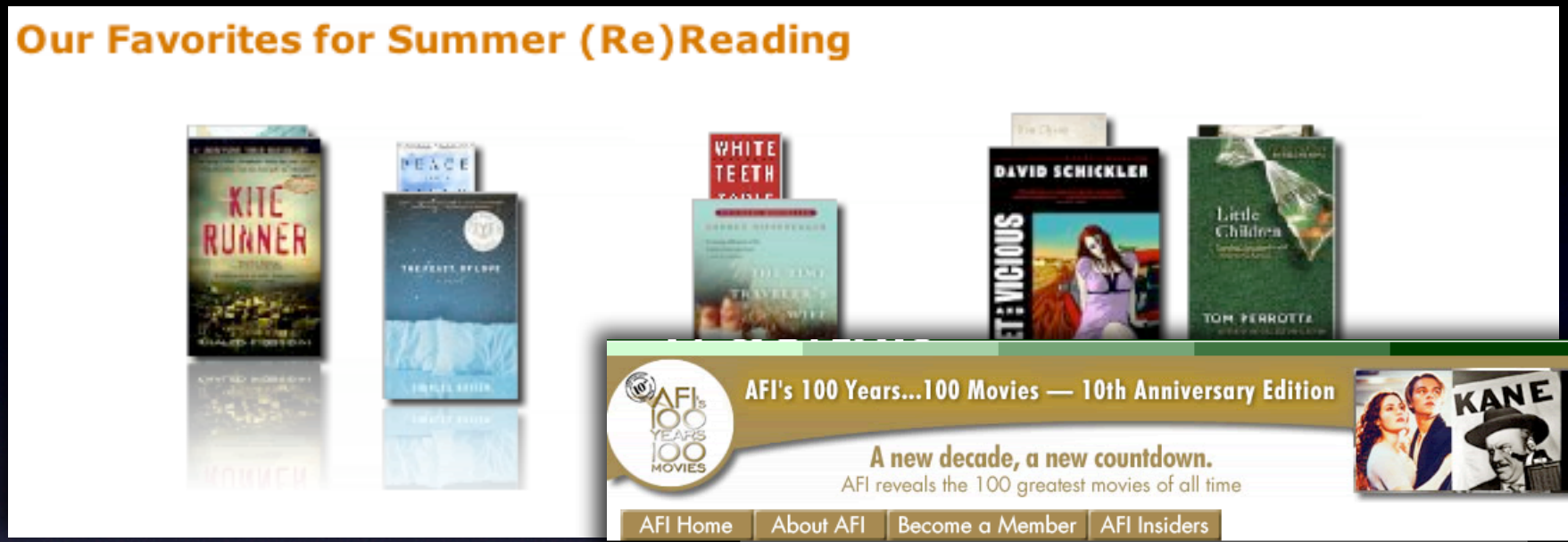
use transitions. **anti-patterns**

anti-pattern. borders. **needless fanfare**

use transitions. **anti-patterns**

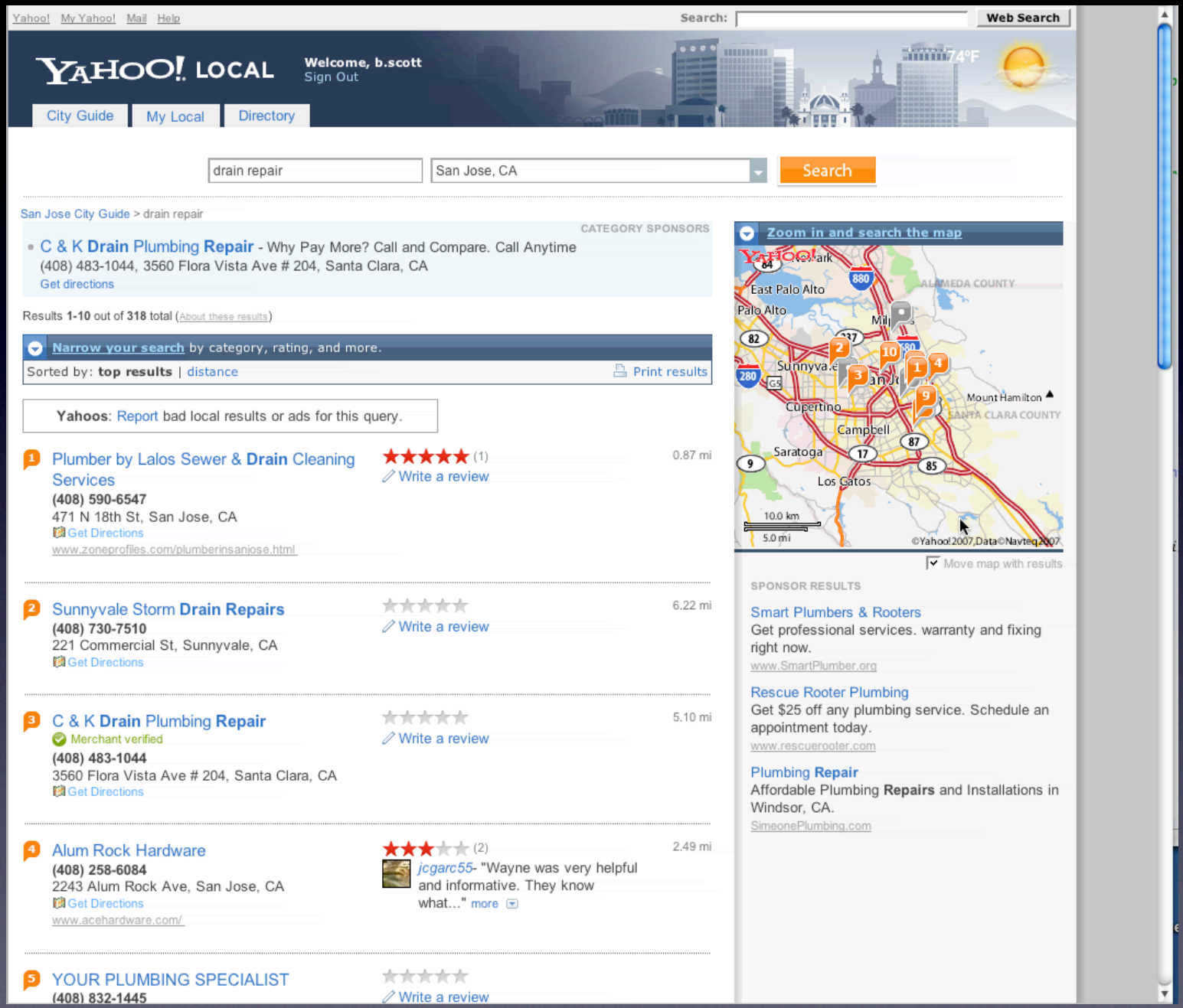
anti-pattern. amazon. **animation gone wild**

anti-pattern. amazon. **animation gone wild**



anti-pattern. afi. **animation gone wild**

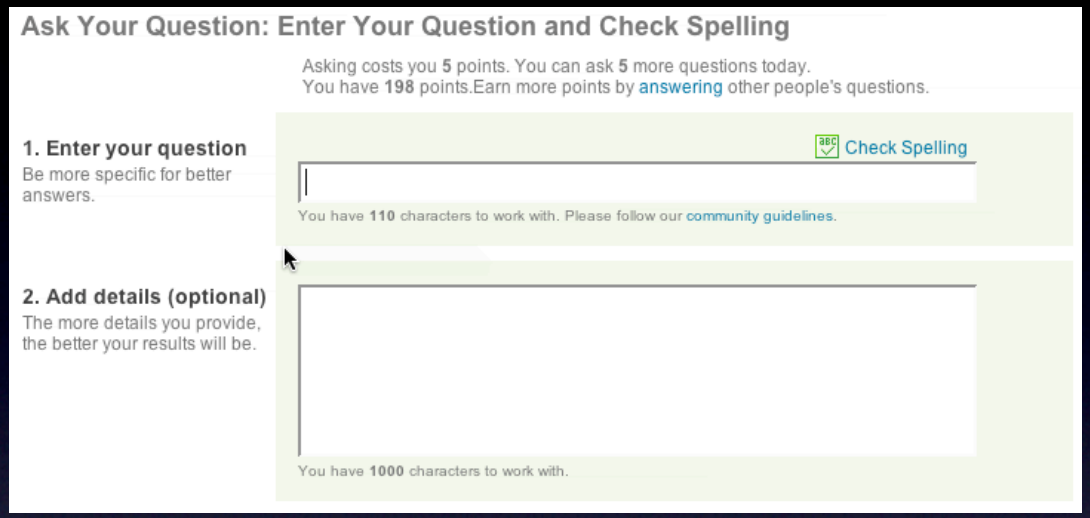
use transitions. **anti-patterns**


Yahoo! My Yahoo! Mail Help
Search:
Web Search
YAHOO! LOCAL
Welcome, b.scott
Sign Out
74°F
City Guide
My Local
Directory
drain repair
San Jose, CA
Search
San Jose City Guide > drain repair
CATEGORY SPONSORS
C & K Drain Plumbing Repair - Why Pay More? Call and Compare. Call Anytime
(408) 483-1044, 3560 Flora Vista Ave # 204, Santa Clara, CA
Get directions
Results 1-10 out of 318 total (About these results)
Narrow your search by category, rating, and more.
Sorted by: top results | distance
Print results
Yahoos: Report bad local results or ads for this query.
1 Plumber by Lalos Sewer & Drain Cleaning Services
(408) 590-6547
471 N 18th St, San Jose, CA
Get Directions
www.zoneprofiles.com/plumberinsanjose.html
(1)
Write a review
0.87 mi
2 Sunnyvale Storm Drain Repairs
(408) 730-7510
221 Commercial St, Sunnyvale, CA
Get Directions
Write a review
6.22 mi
3 C & K Drain Plumbing Repair
Merchant verified
(408) 483-1044
3560 Flora Vista Ave # 204, Santa Clara, CA
Get Directions
Write a review
5.10 mi
4 Alum Rock Hardware
(408) 258-6084
2243 Alum Rock Ave, San Jose, CA
Get Directions
www.acehardware.com/
(2)
jcgarc55- "Wayne was very helpful and informative. They know what..." more
2.49 mi
5 YOUR PLUMBING SPECIALIST
(408) 832-1445
Write a review
Zoom in and search the map
East Palo Alto
Palo Alto
ALAMEDA COUNTY
Sunnyvale
Cupertino
Campbell
Saratoga
Los Gatos
Mount Hamilton
SANTA CLARA COUNTY
10.0 km
5.0 mi
©Yahoo!2007,Data©Navteq2007
Move map with results
SPONSOR RESULTS
Smart Plumbers & Rooters
Get professional services. warranty and fixing right now.
www.SmartPlumber.org
Rescue Rooter Plumbing
Get $25 off any plumbing service. Schedule an appointment today.
www.rescuerooter.com
Plumbing Repair
Affordable Plumbing Repairs and Installations in Windsor, CA.
SimeonePlumbing.com

# react immediately

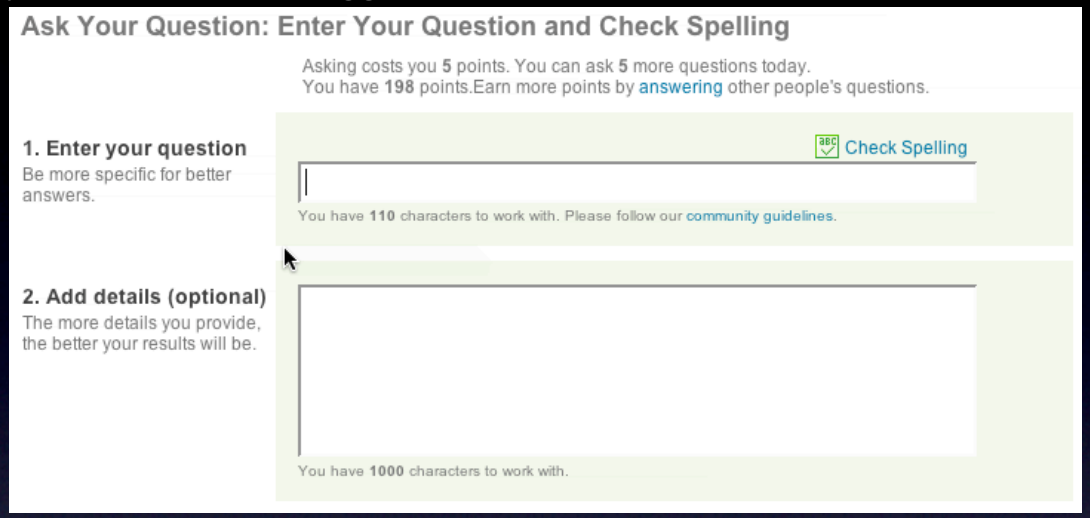
react immediately

react immediately



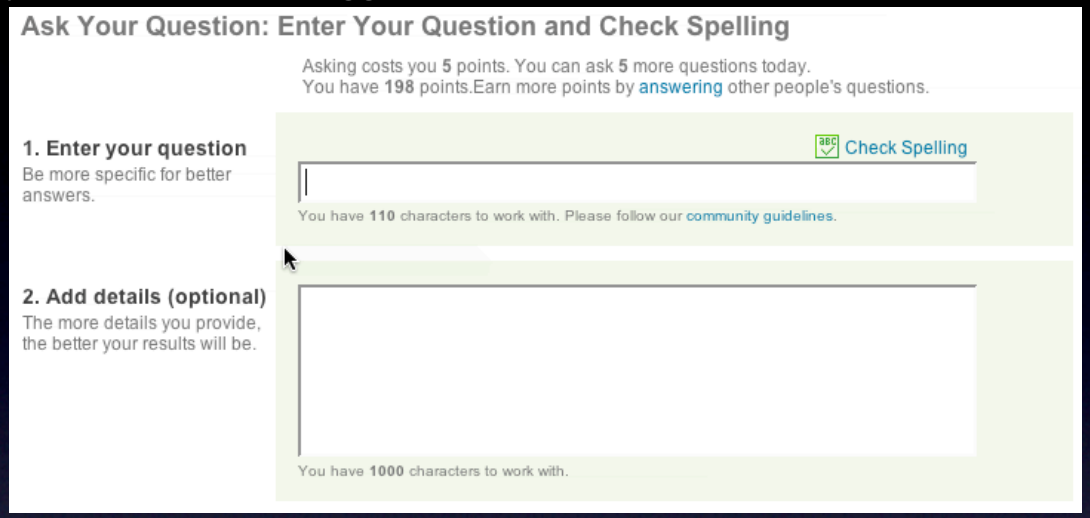
react immediately

y! answers. **live suggest**

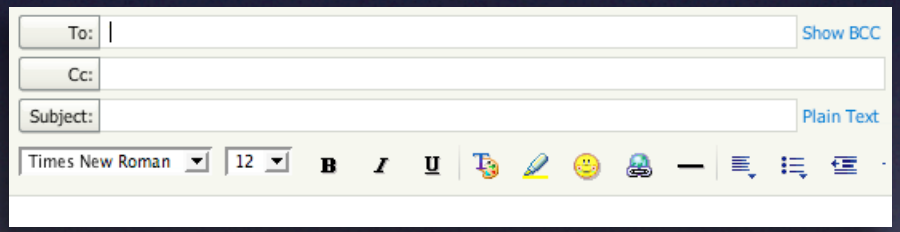


react immediately

y! answers. **live suggest**

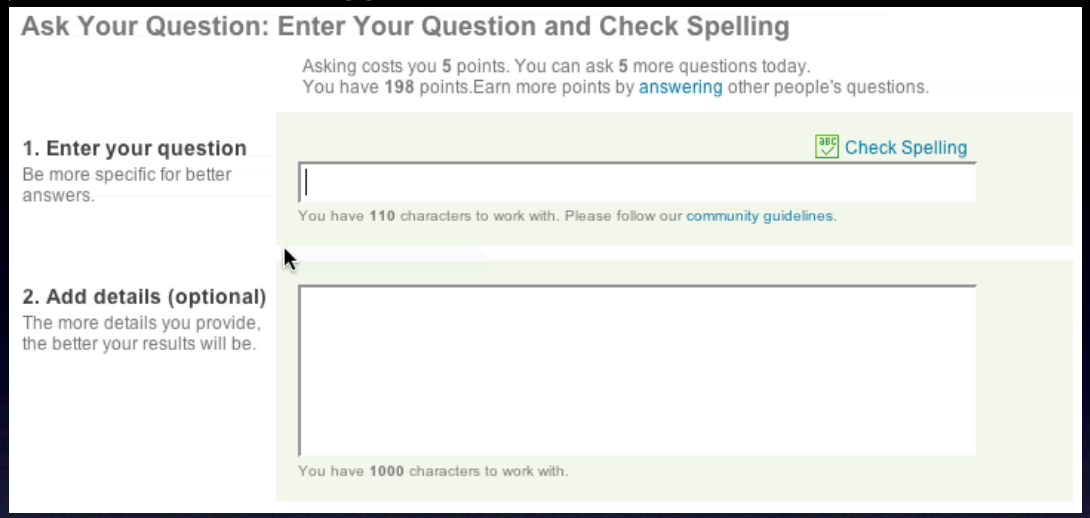



y! mail, kayak. **auto complete**

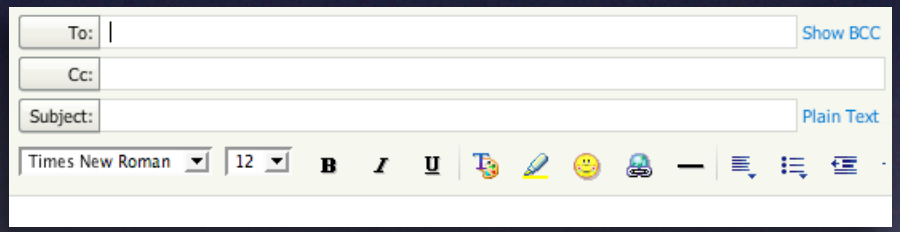


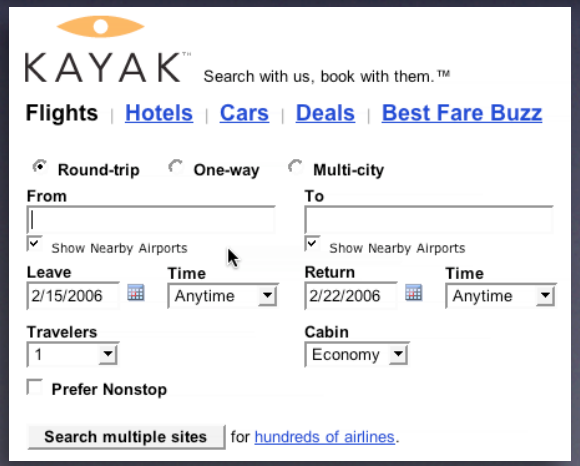
react immediately

## y! answers. **live suggest**



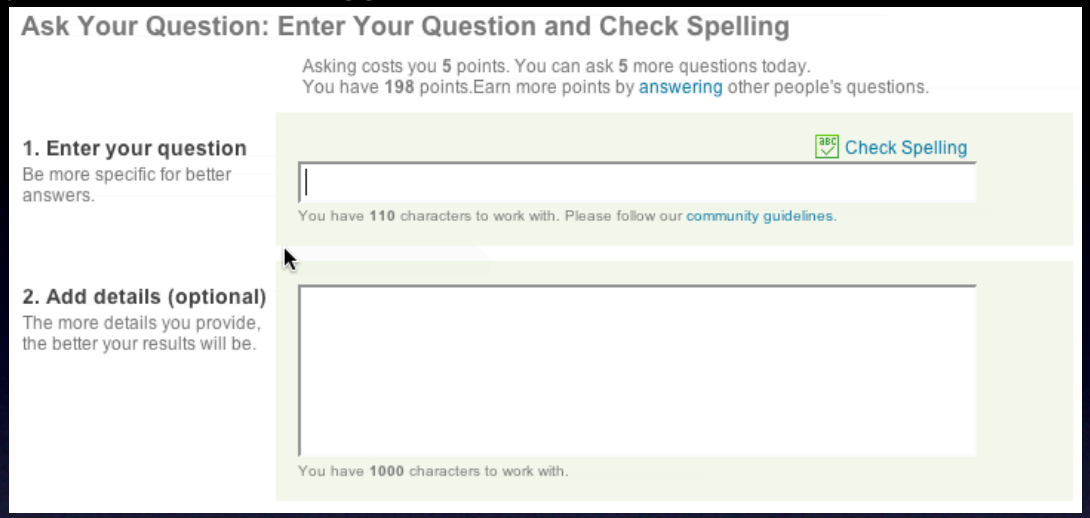

## y! mail, kayak. **auto complete**



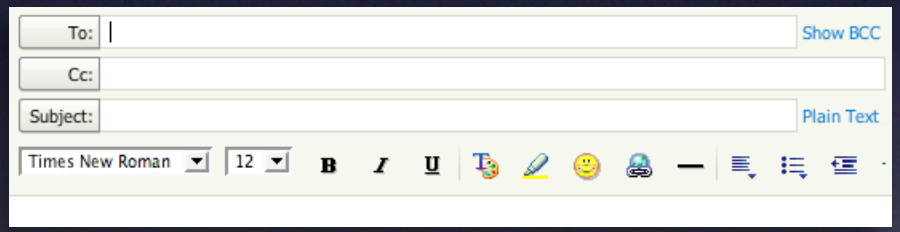



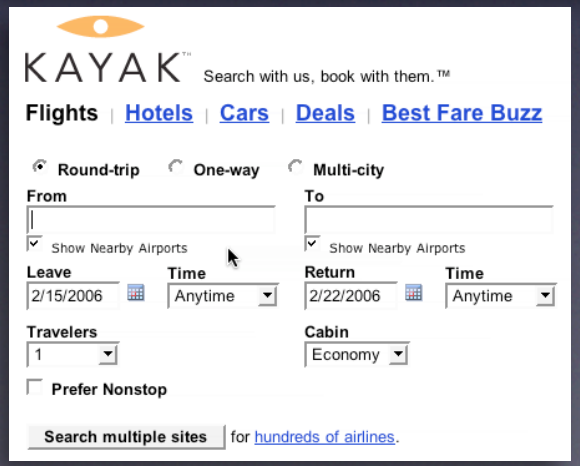
react immediately

## y! answers. **live suggest**

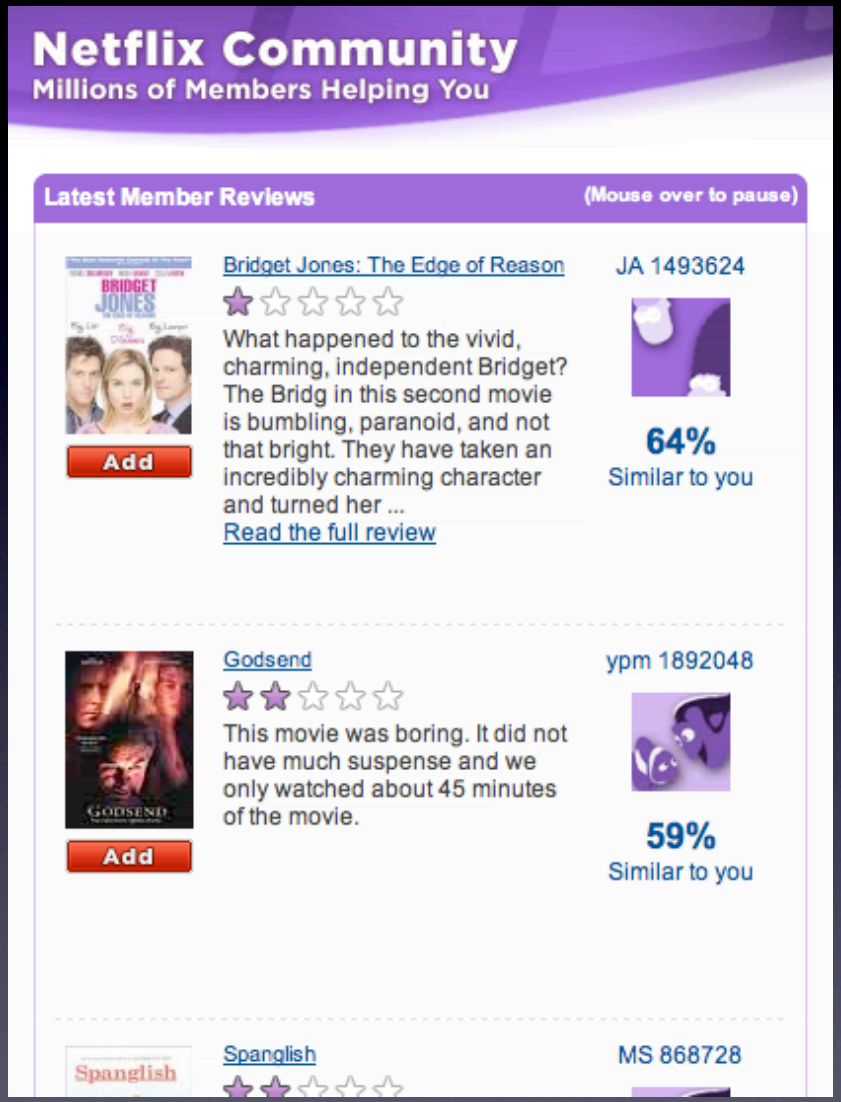



## y! mail, kayak. **auto complete**



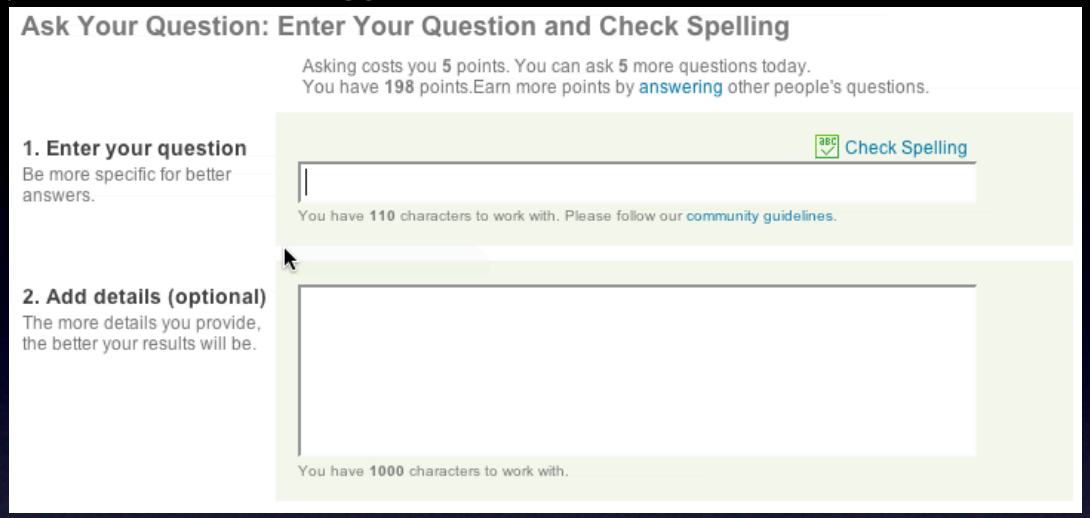




## netflix. **periodic refresh**

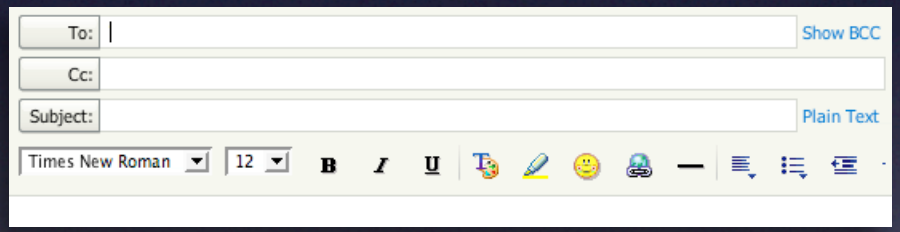


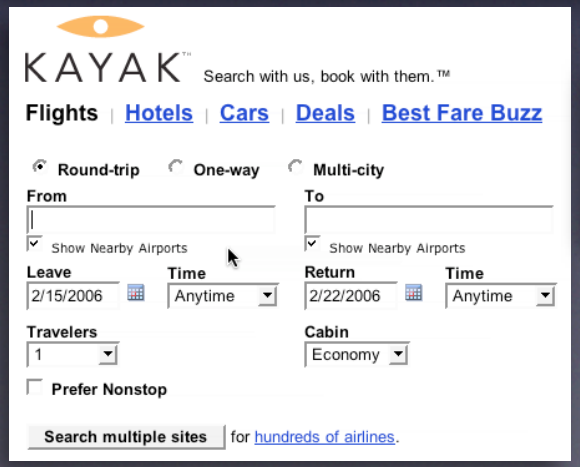
react immediately

## y! answers. **live suggest**

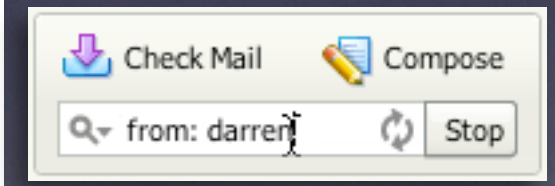



## y! mail, kayak. **auto complete**

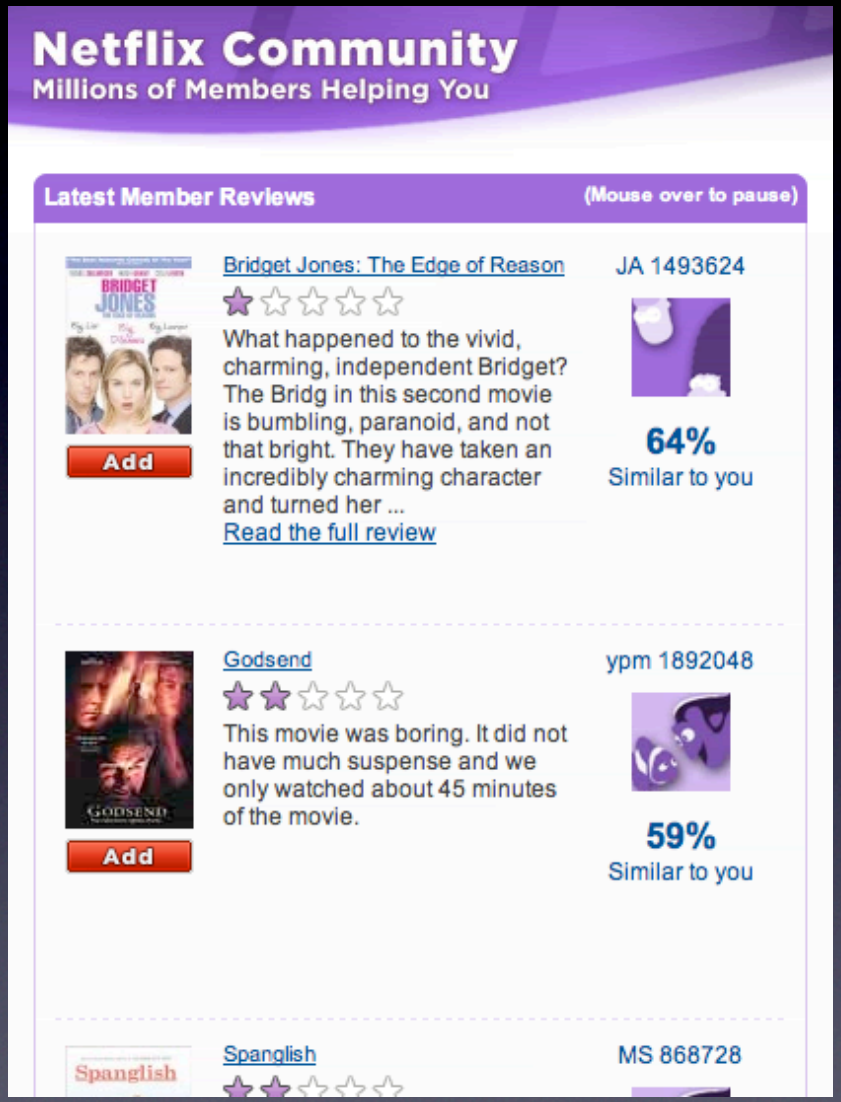



## y!mail. **busy indicator**

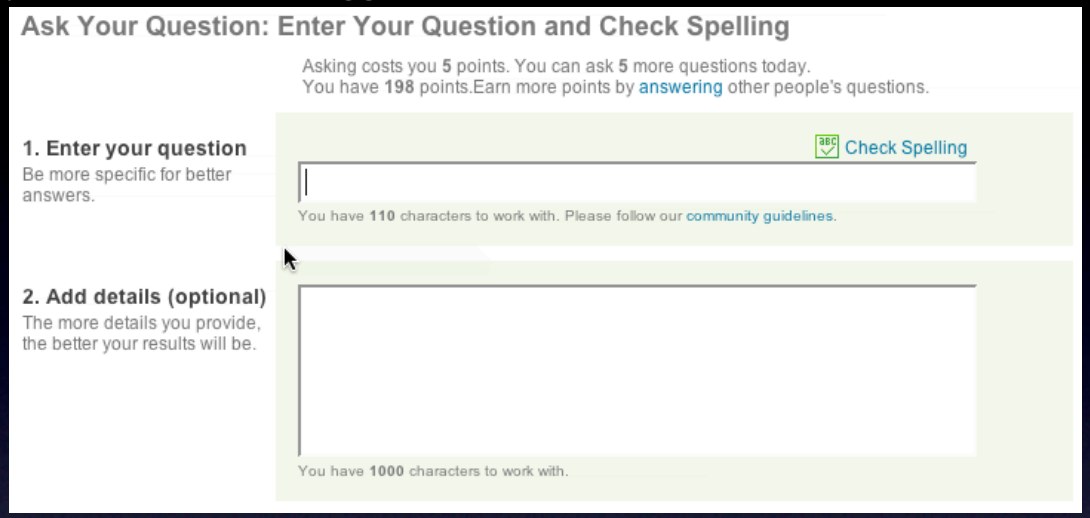



## netflix. **periodic refresh**

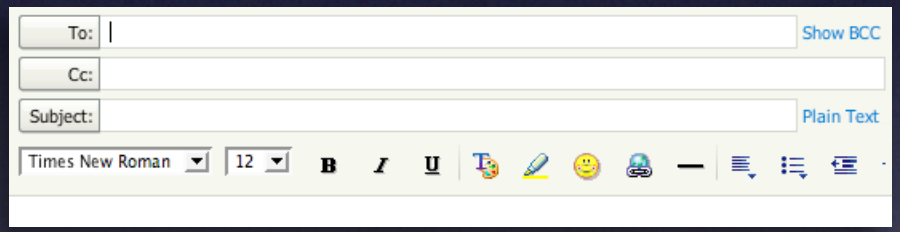


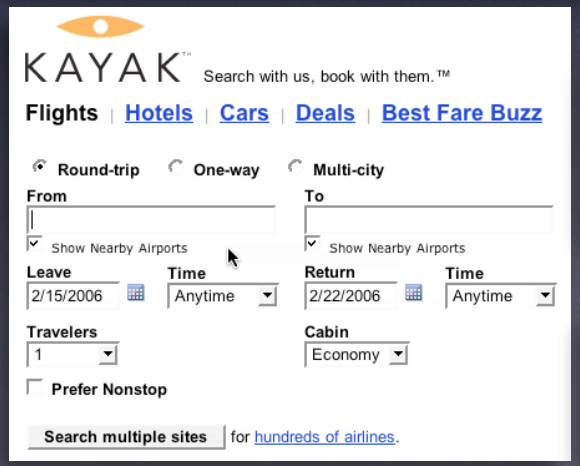
react immediately

## y! answers. **live suggest**

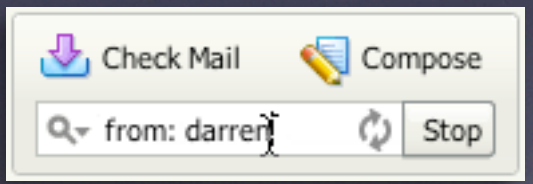



## y! mail, kayak. **auto complete**

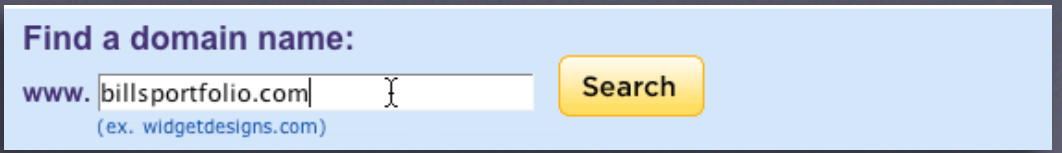


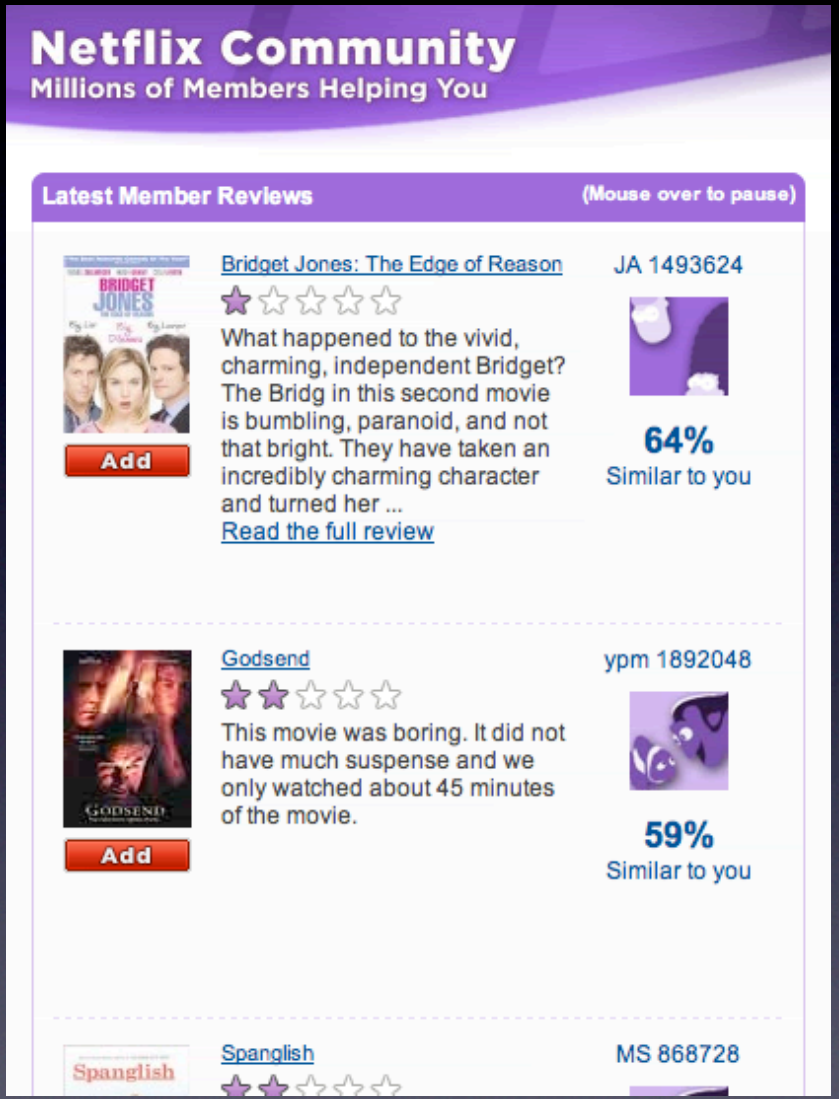

## y!mail. **busy indicator**




## y! small biz. **live previews**




## netflix. **periodic refresh**



**Keep the goal in mind**

Design for relevancy

Is it narrowing or distracting

**Keep the goal in mind**

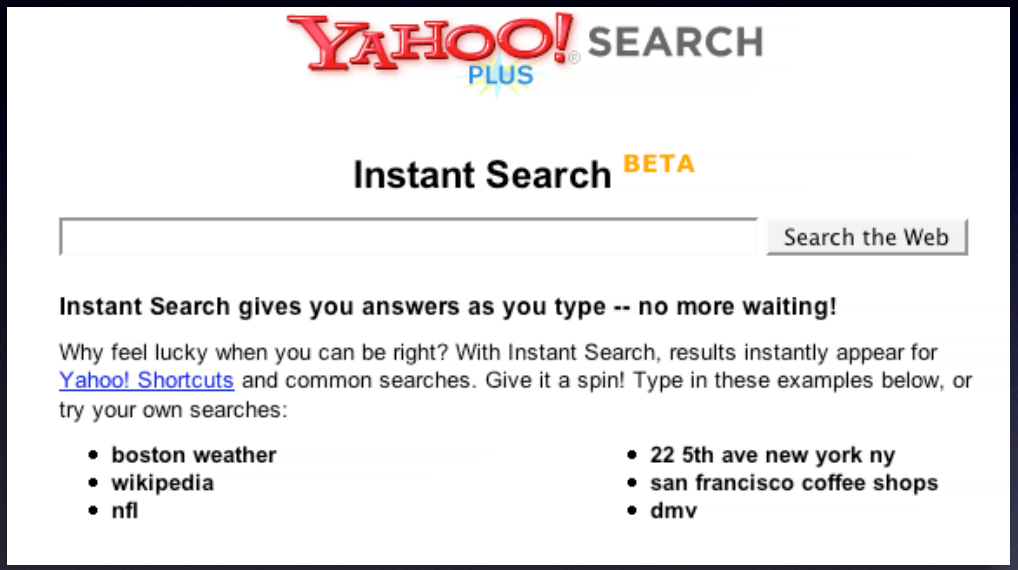
Design for relevancy

Is it narrowing or distracting

**Keep the goal in mind**

Design for relevancy

Is it narrowing or distracting



**Keep the goal in mind**

Design for relevancy

Is it narrowing or distracting?

Use feedback to boost confidence

Let the user iterate where possible

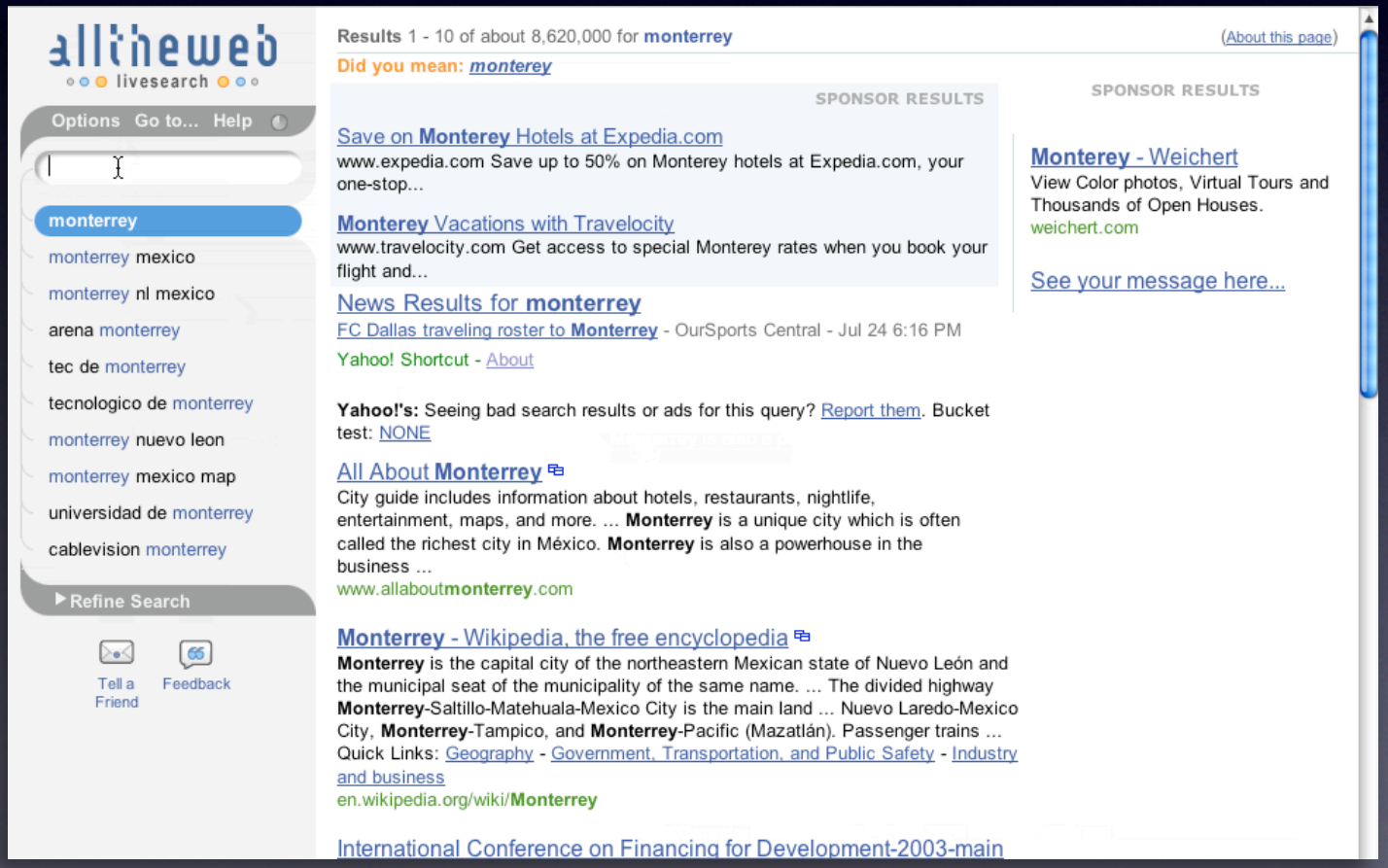
# Keep the goal in mind

Design for relevancy

Is it narrowing or distracting?

Use feedback to boost confidence

Let the user iterate where possible



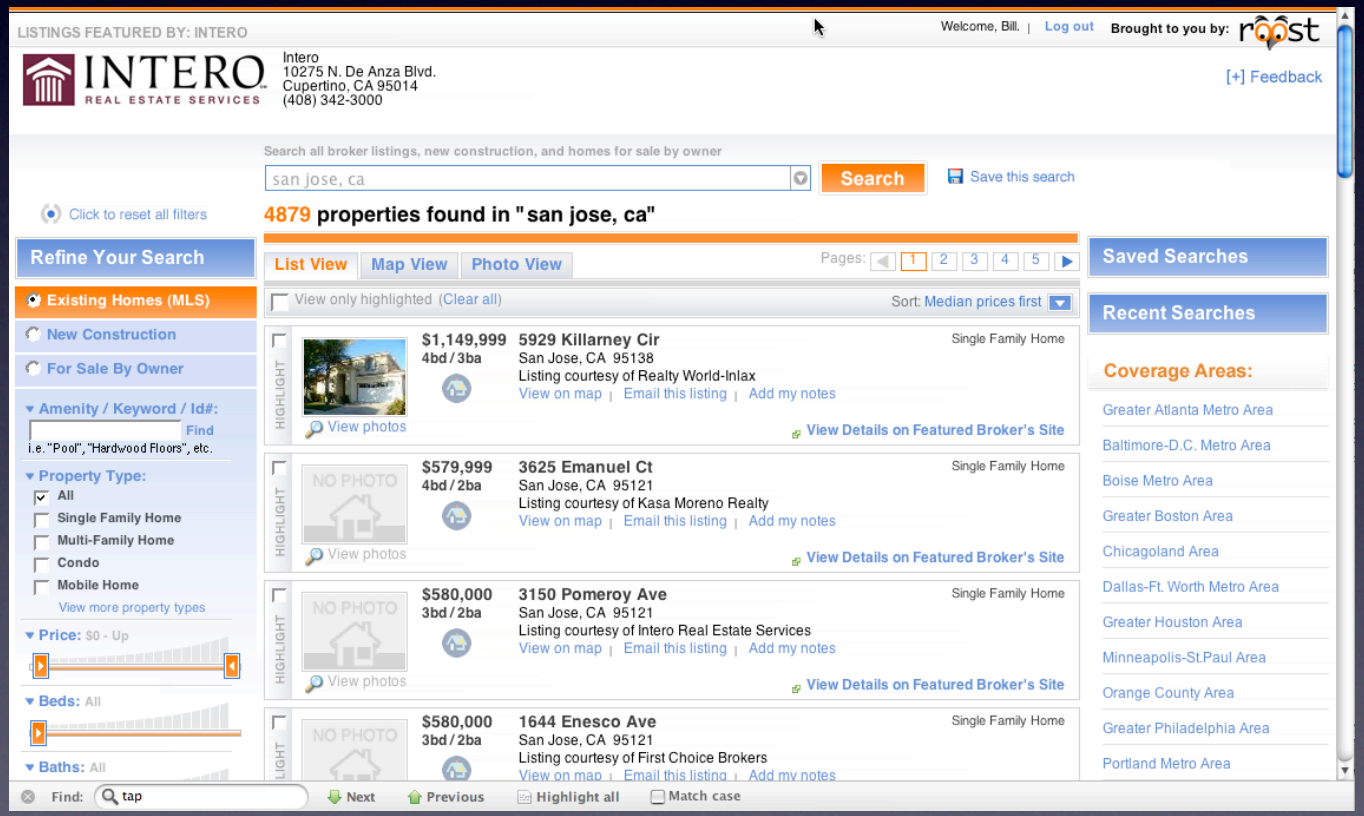
# Keep the goal in mind

Design for relevancy

Is it narrowing or distracting?

Use feedback to boost confidence

Let the user iterate where possible



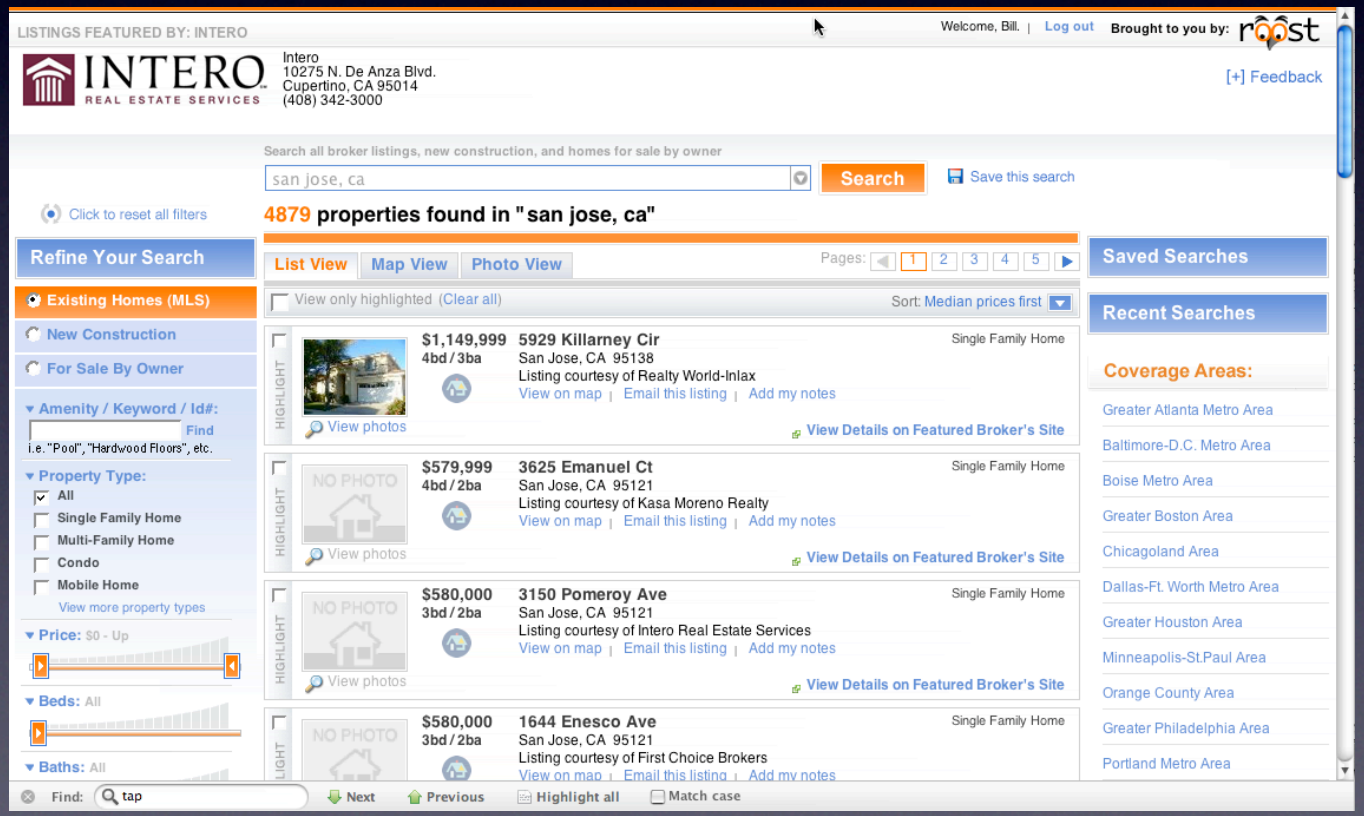
# Keep the goal in mind

Design for relevancy

Is it narrowing or distracting?

Use feedback to boost confidence

Let the user iterate where possible



## Shape user perception

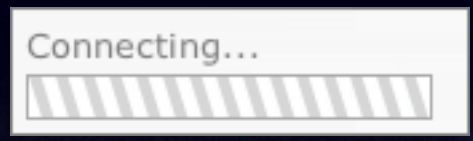
Make time pass faster

Make application feel more responsive

## Shape user perception

Make time pass faster

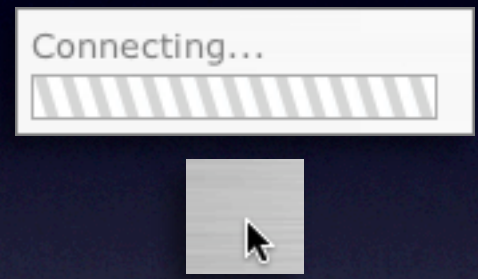
Make application feel more responsive



## Shape user perception

Make time pass faster

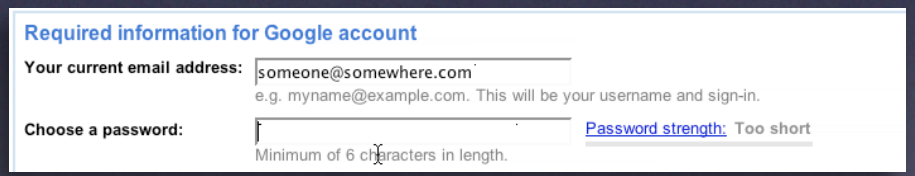
Make application feel more responsive



**Prevent errors before-hand**

Ounce of preventive design worth pound of error-handling

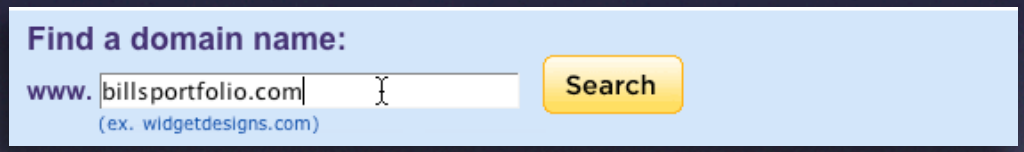
Look before you leap

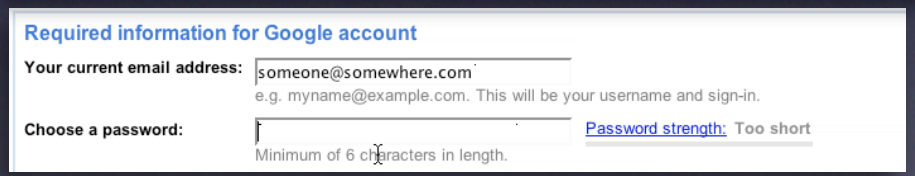



## Prevent errors before-hand

Ounce of preventive design worth pound of error-handling

Look before you leap



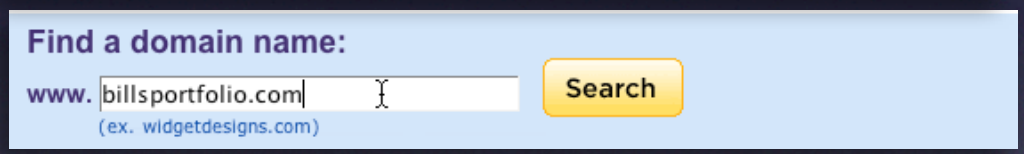



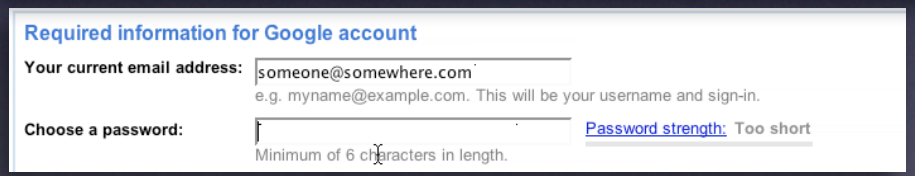

**Prevent errors before-hand**

Ounce of preventive design worth pound of error-handling

Look before you leap

react immediately




**Prevent errors before-hand**

Ounce of preventive design worth pound of error-handling

Look before you leap

**Keep feedback focused**

Avoid side-noise (peripheral distractions)

Use laws of proximity in context feedback

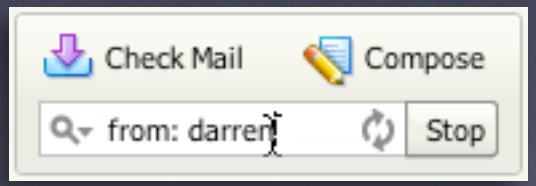
Respect feedback bandwidth

**Keep feedback focused**

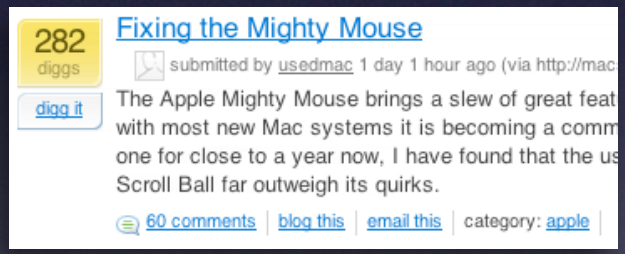
Avoid side-noise (peripheral distractions)

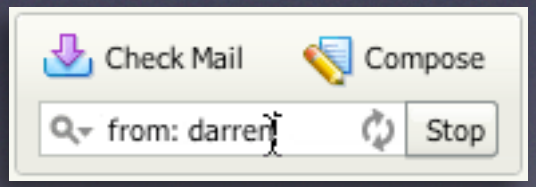
Use laws of proximity in context feedback

Respect feedback bandwidth



react immediately



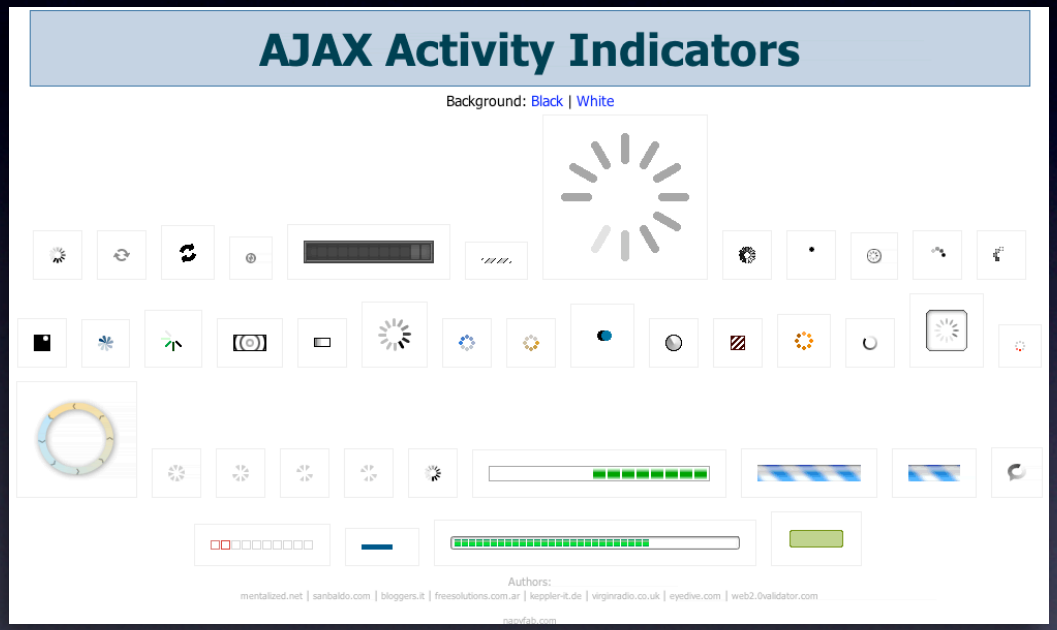

**Keep feedback focused**

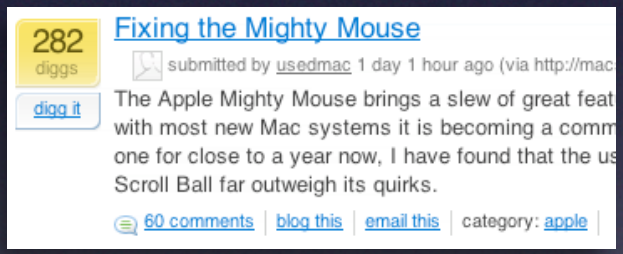
Avoid side-noise (peripheral distractions)

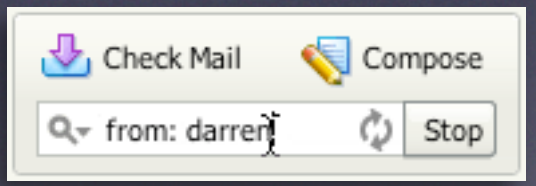
Use laws of proximity in context feedback

Respect feedback bandwidth

react immediately




**Keep feedback focused**

Avoid side-noise (peripheral distractions)

Use laws of proximity in context feedback

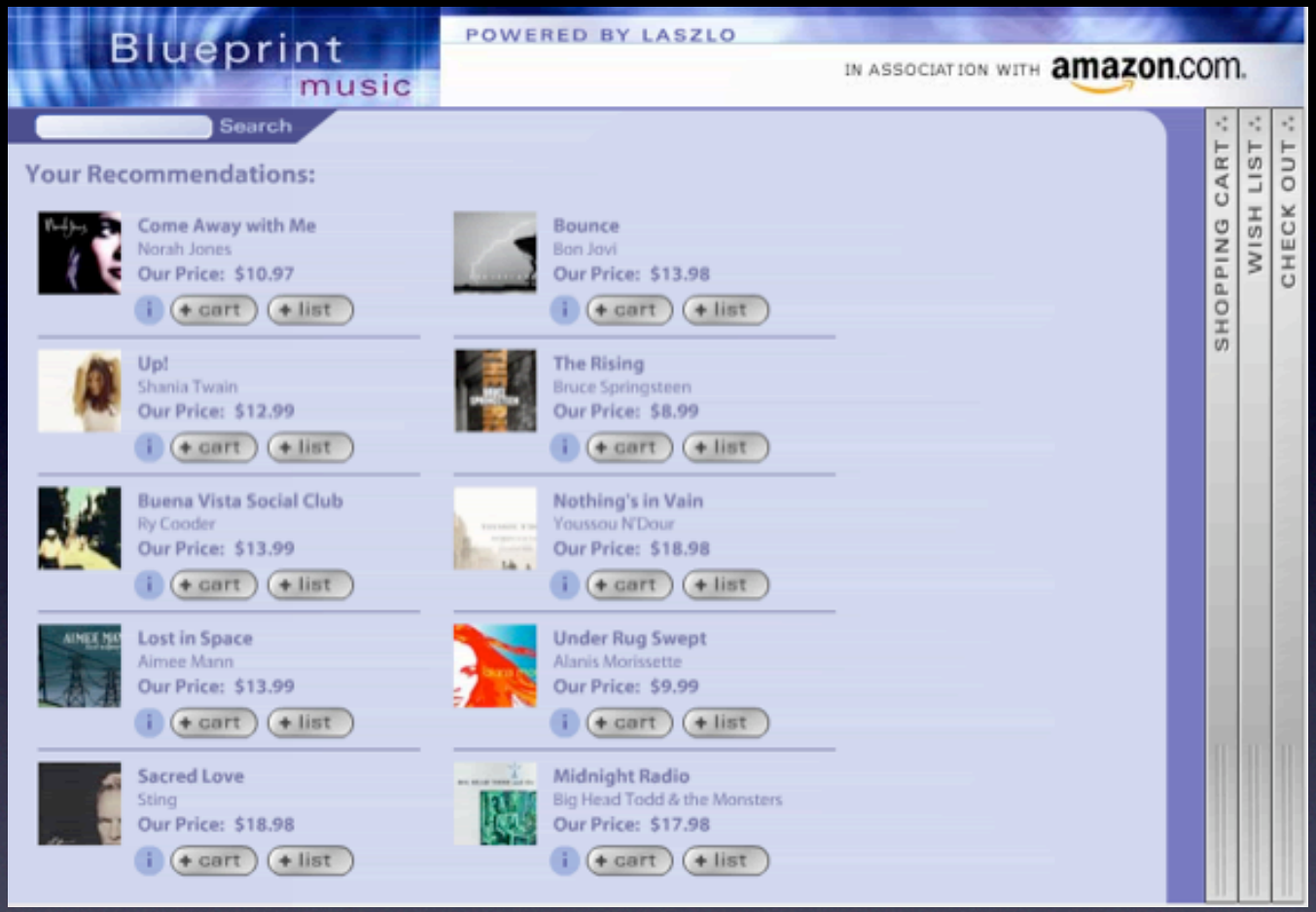
Respect feedback bandwidth

react immediately

**Keep feedback focused**

Use nuance

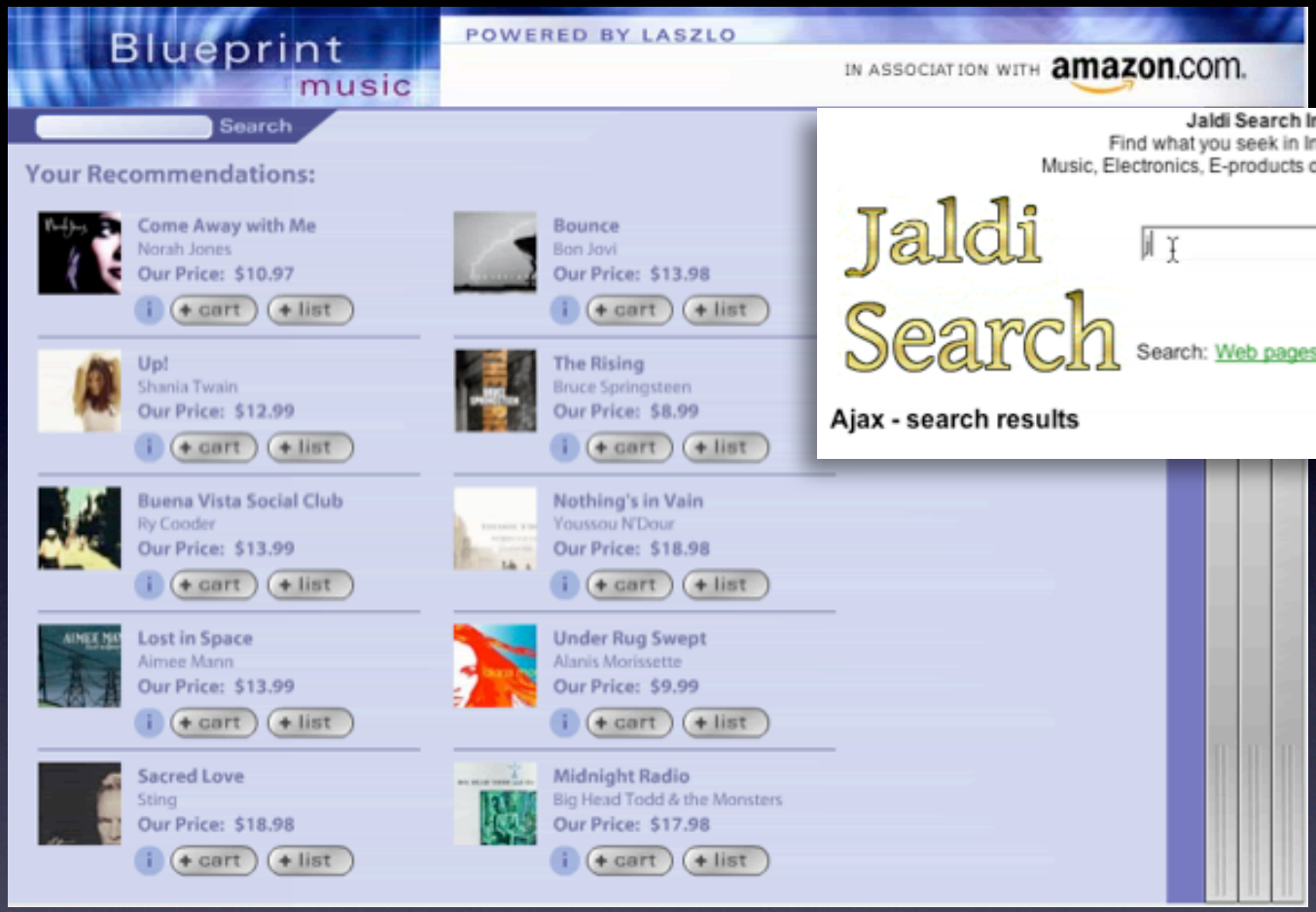
react immediately

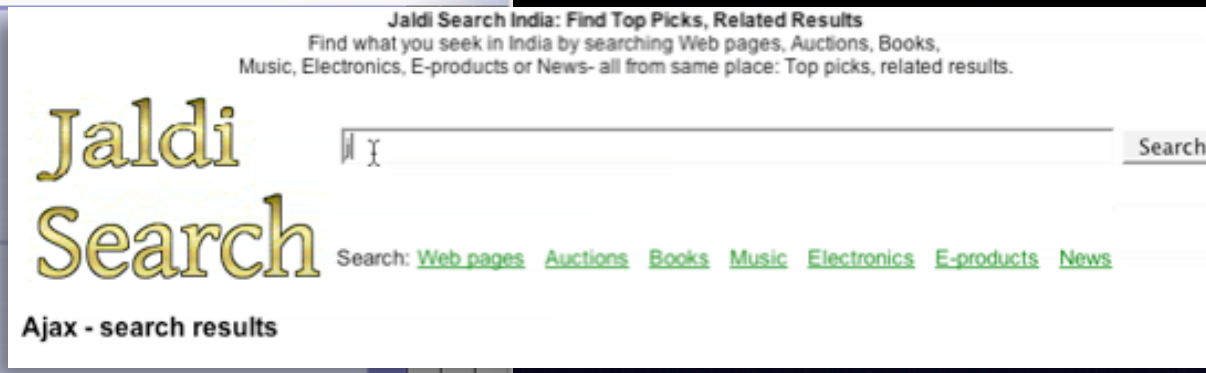



**Keep feedback focused**

Use nuance

react immediately




**Keep feedback focused**

Use nuance

**Think “deeper interaction”**

Multi-variate data

focus + context

# Think “deeper interaction”

Multi-variate data

focus + context

# Think “deeper interaction”

Multi-variate data
focus + context

## 6 principles for Crafting Rich Web Experiences

make it direct
keep it lightweight
stay on the page
provide invitations
use transitions
react immediately

Upcoming Book:
*Designing Web Interfaces: Principles & Patterns for Rich Interfaces*
*O'Reilly*

This Presentation:
*http://billwscott.com/share/presentations/2008/ajaxworld*