When Designers Get Too Clever

Anti-Patterns: Avoiding the Traps of Bad Design

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background



JavaScript for Rich Internet Application

Home

WW III GATIO

Demos Documentation Downloads

An open-source JavaScript library for creating rich in applications. Rico provides full Ajax support, drag an 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. is effort from the Ruby on Rails folks.

OPEN SOURCE

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

BROWSER SUPPORT

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

AJAX SUPPORT

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

Want to get started learning? Check out our demos then read our two Ajax tutorials on the Documentat

DRAG AND DROP

Desktop applications have long used drag and drop in interfaces to simplify user interaction. Rico provides of the simplest interfaces for enabling your web applicat support drag and drop. Just register any HTML eleme JavaScript object as a draggable and any other HTML handles the rest.

CINEMATIC EFFECTS

When actions are no longer occurring just at the page required to clue the user on what has transpired. Cin transitions can communicate change in richer ways th Rico provides several cinematic effects as well as son

BEHAVIORS

Take some raw HTML and sprinkle in some behaviors Rico you can get an Accordion component like those t Laszlo. Just nest some DIVs and with one line of Java an accordion. And the latest behavior is the LiveGrid.

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!

Developer Network Home Help

TAHOO! DEVELOPER NETWORK

Design Pattern Library

Yahoo! Developer Network > Design Pattern Library

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

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

Site Search

What's a Pattern?

A pattern describes an optimal solution to a common problem within a s

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.

AP Reuters AFP USATOD

- Cargo Ship Blocks Sue: International Observers
- Module Tabs

through one or more stacked panes of content without refreshing the page.

Results Page: 1 <u>2</u> <u>3</u> <u>4</u> • <u>Next</u>

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.

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

Breadcrumbs

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

Home U.S. Business

The user needs to navigate

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.

*** Read 20 reviews ***

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.

YAHOO! GOBBLER" X

Scratchpad

V We

Drag and

The user

re-arrange

modules

directly w

1 - 5 of

2 First |

Object P

The user

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*Revie

*Write

Writing a

User wan

opinion w

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in greater

simple rat

Great

Search



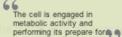
Add Website to Scratchpad

Projects(3)

National Mapping -Fab Facts, Landforms http://www.ga.gov.au/education/fa

Geography: Landfor...

🦥 Add Website to Project



Civil War Battles

Add Website to Project



掛 Create a new Project



The traps of bad design: anti-patterns

what are anti-patterns?

"Anti-patterns, also called pitfalls, are classes of commonly-reinvented bad solutions to problems. They are studied as a category so they can be avoided in the future, and so instances of them may be recognized when investigating non-working systems. The term originates in computer science, apparently inspired by the Gang of Four's book Design Patterns, which displayed examples of high-quality programming methods." - Wikipedia, Anti-Pattern.

interaction design anti-patterns

Like the software anti-pattern counterparts, the following anti-patterns are common pitfalls to avoid.

pitfalls with a pithy name

anti-patterns

big ball of mud. meandering way.

borg idiom. tiny targets. mystery meat.

buried treasure. hover and cover.

pogo stick navigation. novel notions.

against the flow metaphor mismatch jabberwocky. double duty. **linkitus**. blind type.

windows aplenty. animation gone wild.

misguided misdirections. unmarked hazards. missed

moments. missing scene.

one at a time. non-symmetrical actions.

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

summary

Normal flow through the page takes the user on a meandering journey with the mouse.

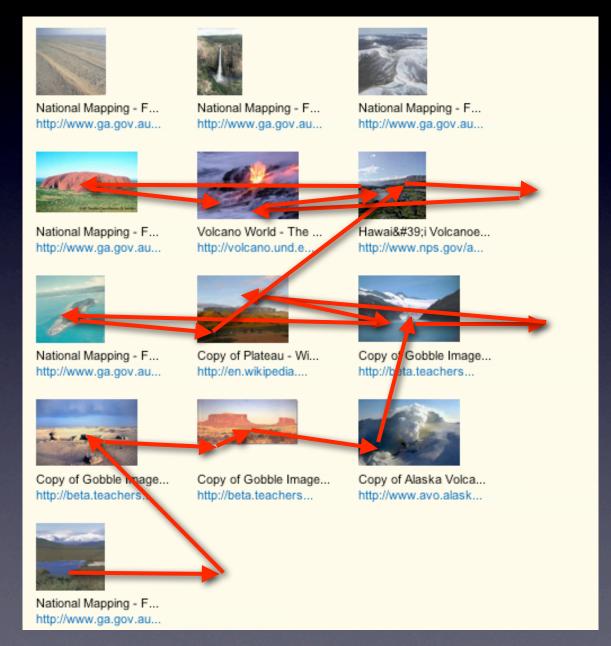
alternate names

zig-zag interaction, scenic route

example

Actions hidden under hover (in context tools) that require the user to hover an area, then move the mouse to an area that would normally be outside the object's space (back and forth operation)

Y! Teachers (first version)

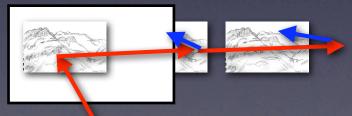


Hover revealed extra tools

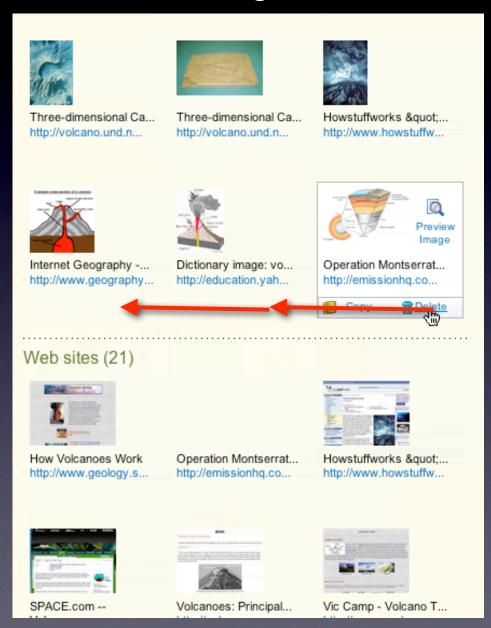
Required lots of mouse zig zag to delete an item



And overshooting as you move across (eye zig zag)



Y! Teacher's Redesign



Solution

Reveal hidden tools on hover Play on spatial memory

Avoid page jitter

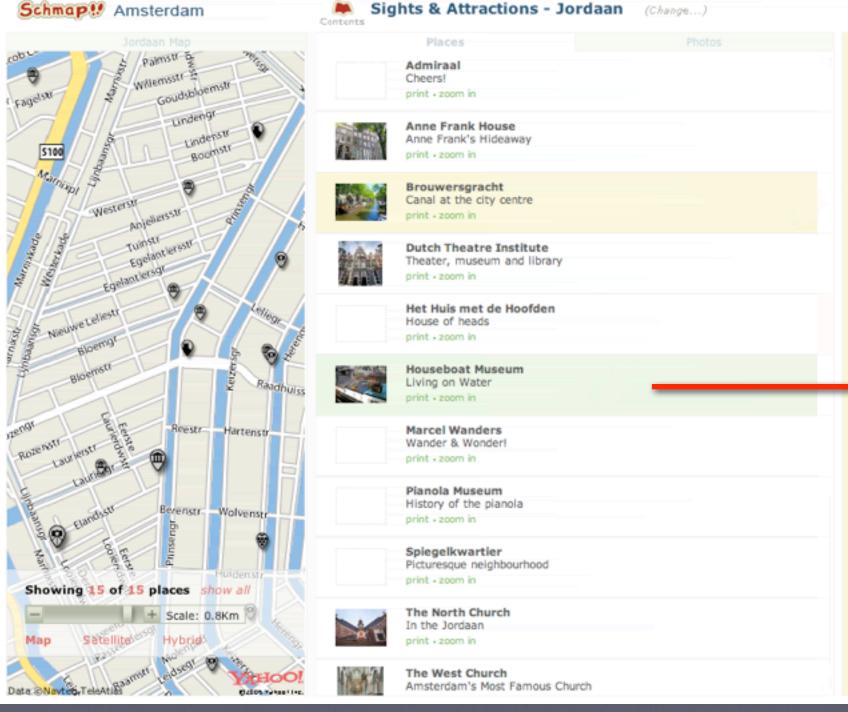












Photo: Phil Hollman (

Brouwersgra tht

Lijnbaansgrack and Singel Amsterdam, 016

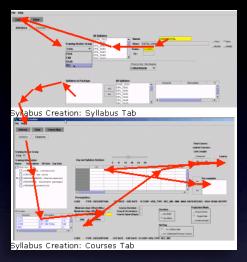
Tel: +31 (0) 20 551 2525 (Tourist

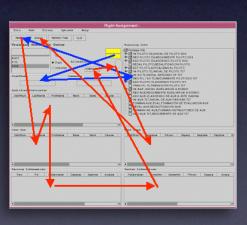
Information

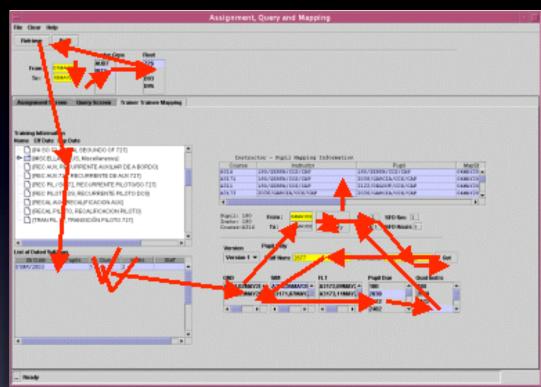
Amsterdad is known for its canals and why not- t boasts of around 165 of them! Brouwersgracht is no different from the others. Come here to take in the city's charm. The streets, lined with give you a sense of nostalgia. You can shop at the numerous stores, and follow it with feasting at one of the cafés.

Review © 2007, Wcities

Nightmare of endless meandering







Drawing flow arrows is a great way to visualize a flow Refactoring can follow

refactoring. meandering way

Annotate the current flow.

Think of flow arrows as a way to debug an interaction

Draw the ideal flow.

Display only elements needed for each interaction Will clarify important interactions

Watch out for hovers.

In-context tools should require minimal mouse effort Avoid flyouts Avoid page jitter

Follow spatial consistency.

Play off of user's spatial memory.

summary

Requiring the user to go down a level or two, perform an operation, come back to the top and then have to go back down again. Name comes from hopping up and down through the site.

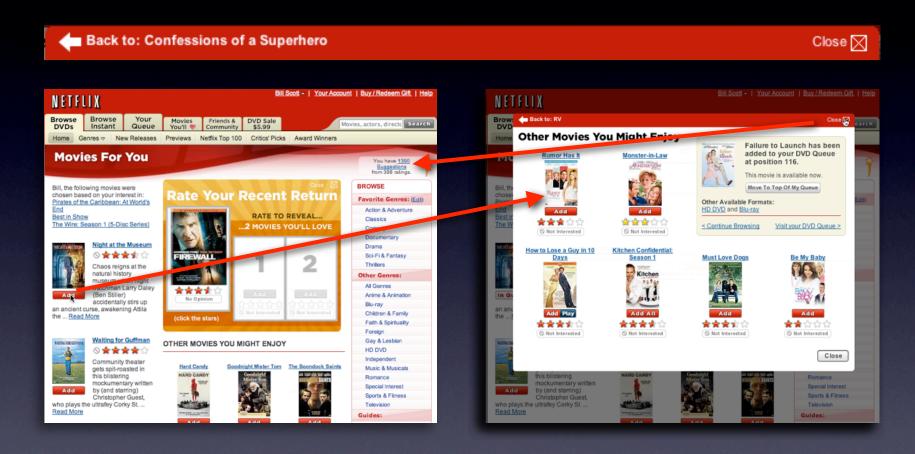
credit

Jared Spool

Netflix. Older version of add to queue



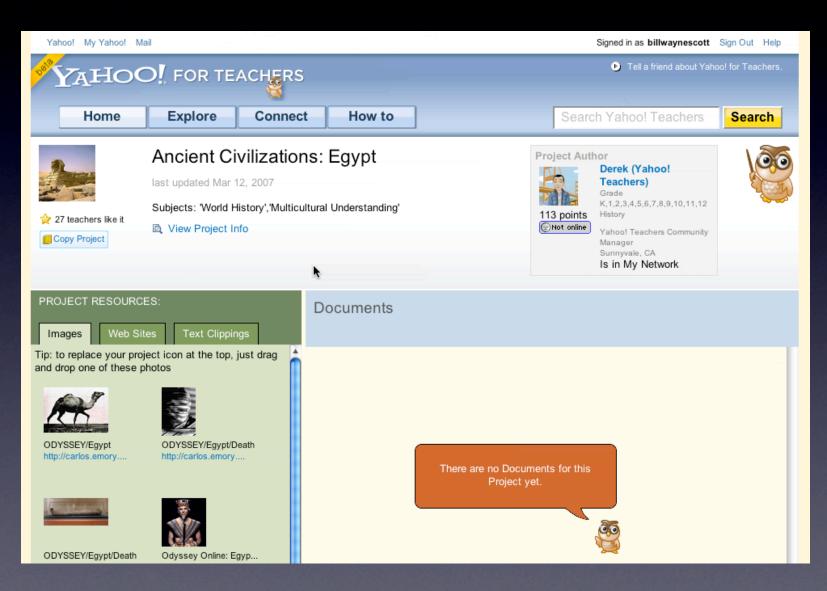
Netflix. Newer version of add to queue



Solution

Encapsulate alternate click stream in an overlay

Y! Teachers





No obvious close for overlay

Back Button goes to wrong place

refactoring. pogo stick

Draw flow arrows between pages to catch the zig-zag bouncing from page to page (see Meandering Way).

To avoid pogo effect:

- Use in-context tools to bring actions into the current page
- Use hover details to reveal information in context
- **Use overlays** for encapsulating an alternate navigation path to allow temporary exploration without losing the original context of navigation
- Use in page actions like inline editing, etc. to provide functionality inline.
- Use in-context expands to reveal information on the page.

Watch out for overlays

Can make users resort to back button anyway

summary

Making key interaction points too small increases the likelihood that users will be frustrated with the interface.

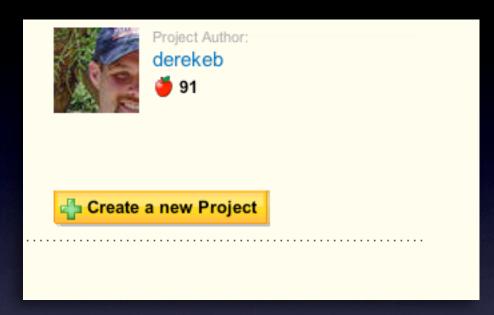
Fitt's law

The time to acquire a target is a function of the distance to and size of the target.

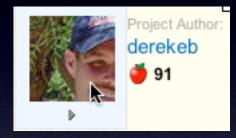
examples

divots for expand/collapse

The identity card area has a summary view and an expanded view.

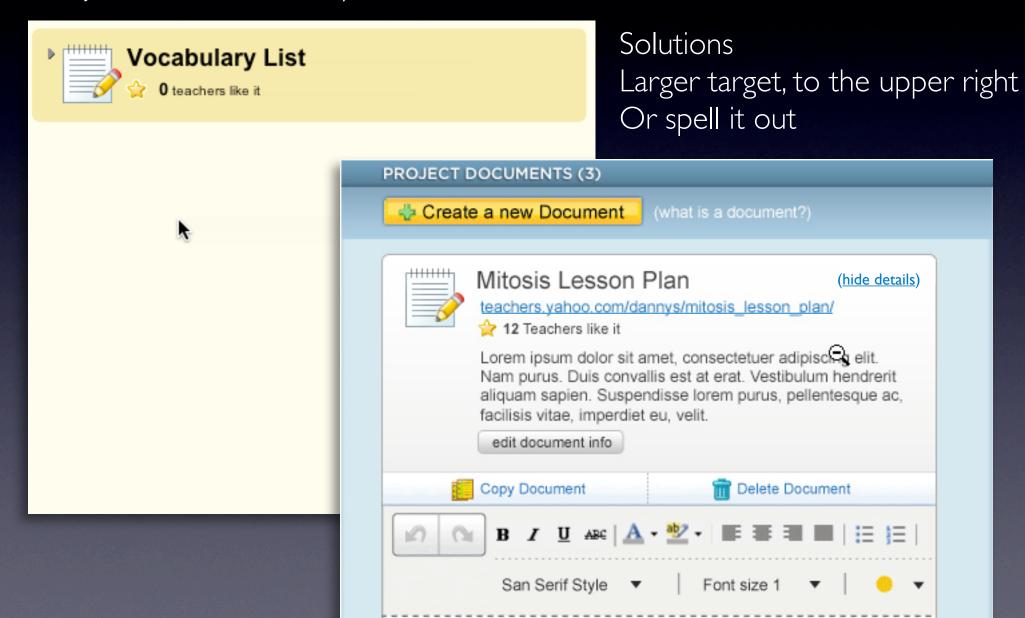


Divot for expand/collapse is hidden Shown on picture hover only



Divot is small (8x8)

Ambiguity in targeting Is it just the divot? Or anywhere in the title?



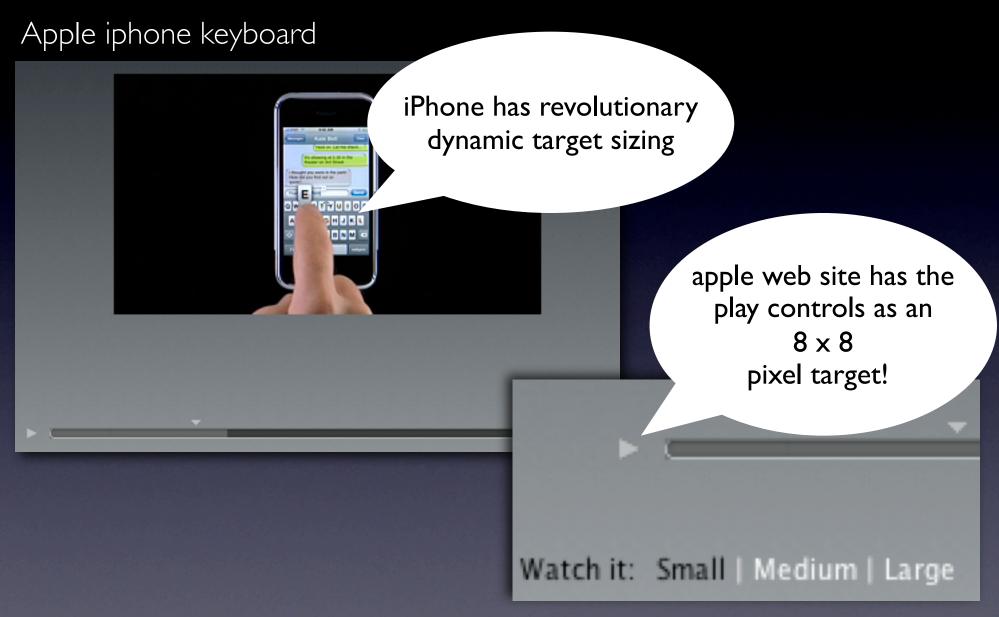
The Yahoo! Gobbler has done well in tests due to the larger nature of the project drop targets.

pouring into the ocean. Countless deltas have formed

Issue: small text drag target







strategies. tiny targets

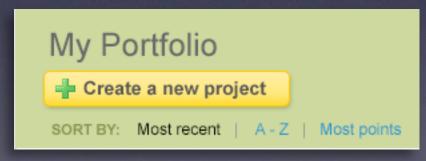
Activation targets and important commands need to be **large enough**, **visually distinct** and in **proximity** to operation.

Use in-context tools to support proximity.

Use "Call to Action" style buttons for most important operations.

If titles will expand/collapse, at least **use hyperlink** underline when hover happens to provide a bigger target.

Never use 8x8 for targeting



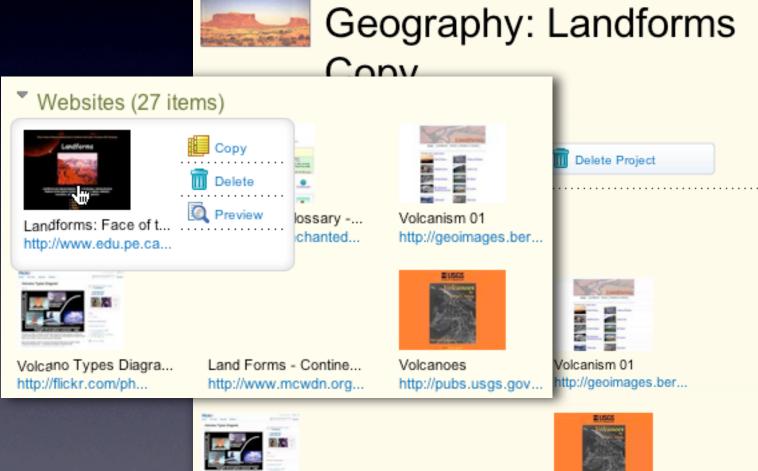
summary

Hover reveal of information and actions has become more and more popular. Hover & Cover is when the hover actually hides important contextual information around the object or gets in the way of other actions.

Volcano Types Diagra...

http://flickr.com/ph...

Original hover was extremely annoying as it Covered the item to the right (natural flow is left to right) Partially covers text edit area (bug: sticks open)

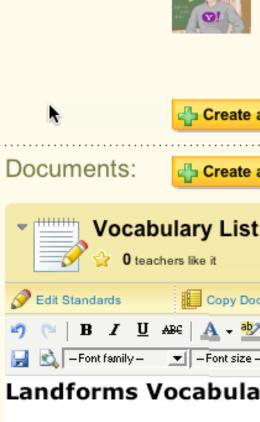


Land Forms - Contine...

http://www.mcwdn.org...

Volcanoes

http://pubs.usgs.gov...



Volcano

Example from plum.com

football

Drop down menu shows on hover and gets in the way. Too easy to accidentally turn it on.

▼ Click to filter by: alternative, alternative & punk, art, da vinci code, example, flowers, flowers%2c%20plum%2c%20crocus, introduction, music, norway, plum, restaurant, rock, san francisco, summer, sunset, travel, vacation, video stamp, youtube

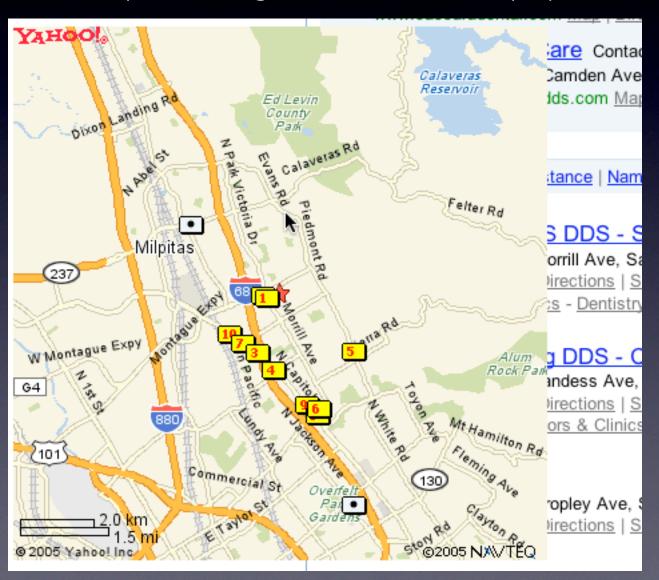
more...

1 through 20 of 33,883 results

CoolBlueClouds

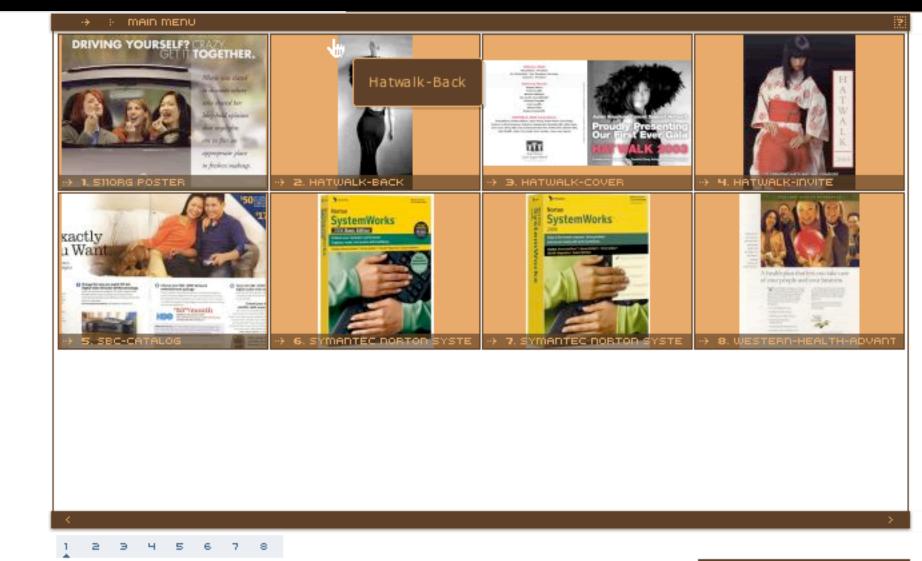
Yahoo! Local orginally had this hover beast.

Thankfully it no longer functions this way :-)



This one almosts leads to a new anti-pattern-- hover madness

Seriously what were they thinking?



refactoring. hover & cover

Use click for tools that will cover context

Song Zalisten. now. the music search engine & internet jukebox

Songza lets you listen to any song or band. Search for it:

sam cooke

Search

search results:

Sam Cooke (chain gang)

Sam Cooke - Touch The Hem Of His Garment

Sam Cooke - A Change Is Gonna Come

Sam Cooke tribute Bryan Adams and Smokie Robinson

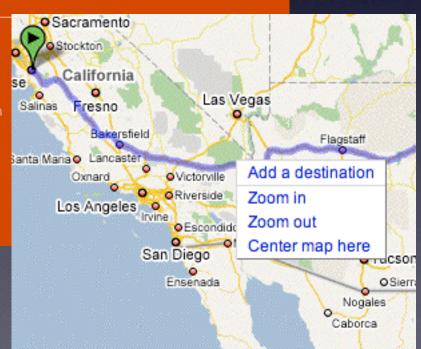
Cooke Sam - A Change Is Gonna Come

Sam Cooke - You Send Me

sam cooke you send me

Sam Cooke - Wonderful World

Sam Cooke - A Change Is Gonna Come



refactoring. hover & cover

Reserve same space for both hovered and non-hovered state

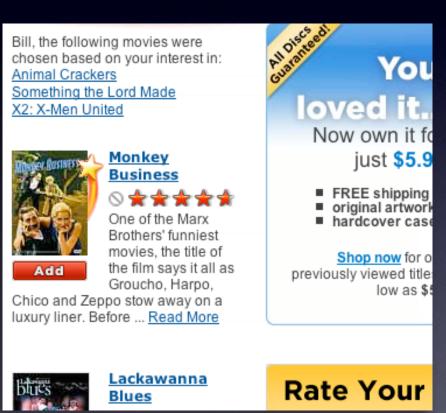


For hover details, allow a slight delay before activation

For hover details don't cover important context.

For in-context tools, show immediately and hide immediately





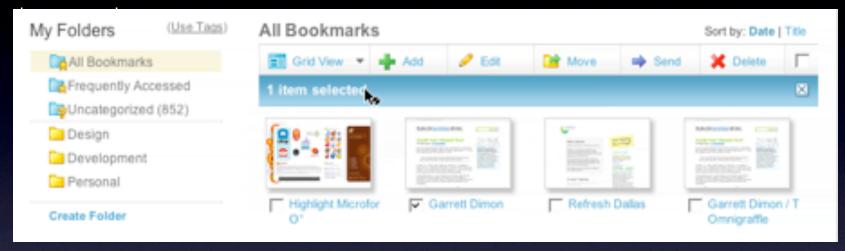
summary

Not all idioms play well together. Some idioms are more powerful than others. For example, tree controls, drag and drop, selection mechanisms all set up an "interaction theme".

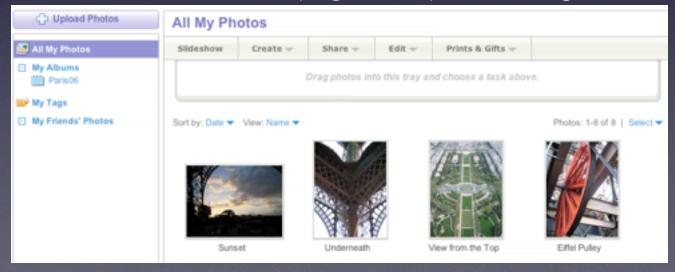
Just like visual styles need to be consistent, interaction styles also need to be consistent throughout the entirety of the interface

Borg Idiom is the phenomonon of an idiom (once adopted) assimulating the rest of the interface. Sometimes the assimulation is just the fact that one idiom dominates due to the way the interface clues the user to their presence.

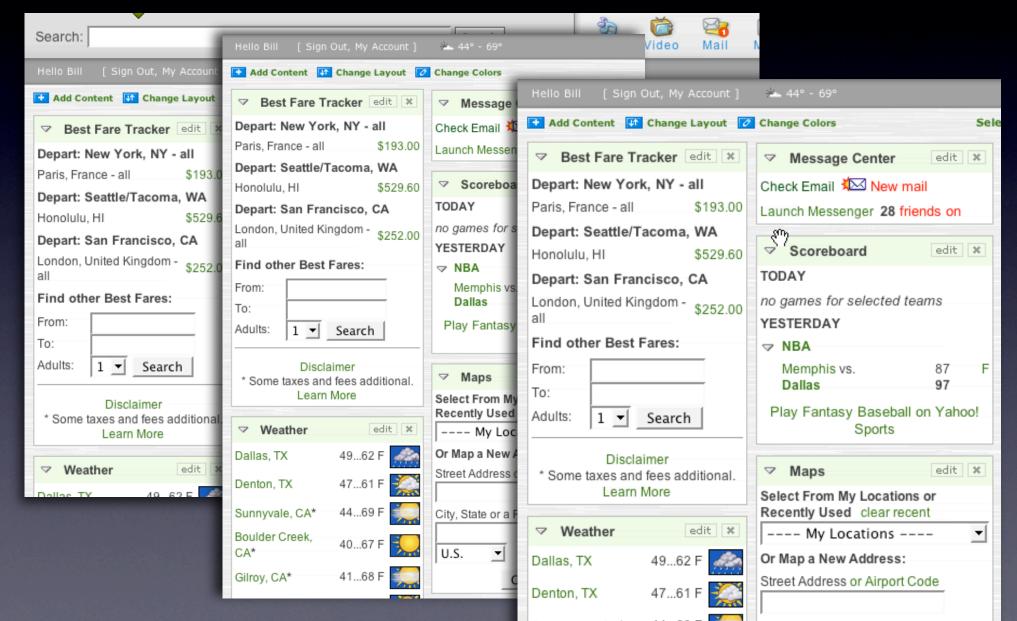
Here was an early attempt on Yahoo! Bookmarks to blend drag and drop with item selection (checkbox idiom). It has odd side effects during the



In Yahoo! Photos (no longer available) drag selection was implemented well. One issue was the page metaphor + drag selection + a tray idiom.

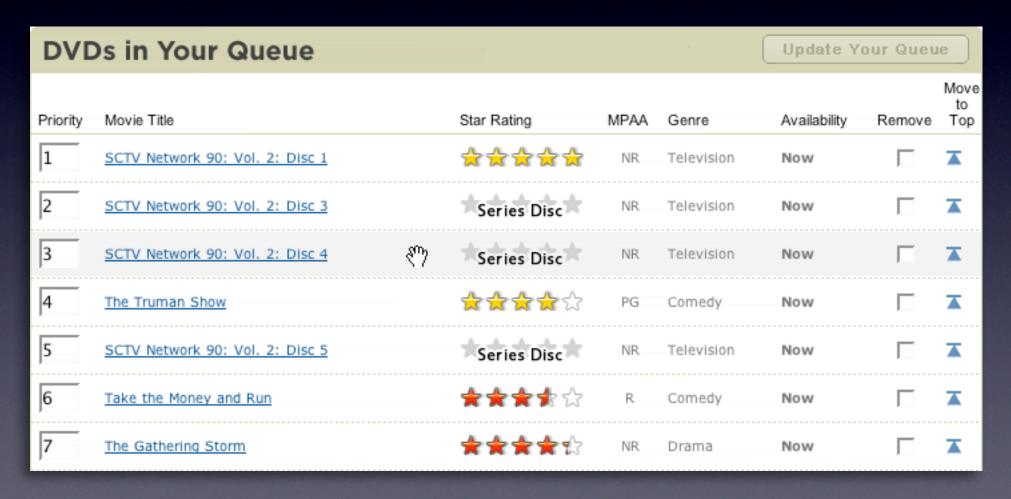


Three idioms living in parallel with each other. The old style overwhelms the other two.

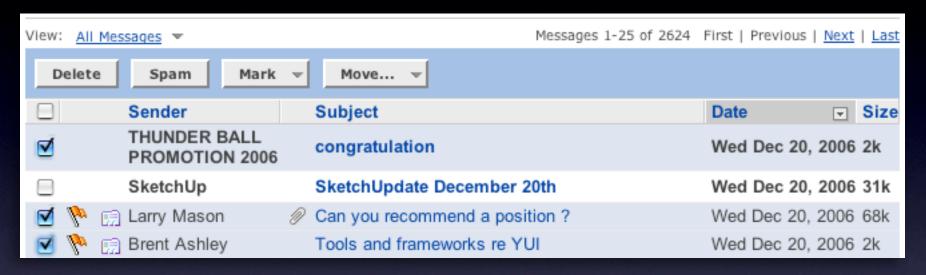


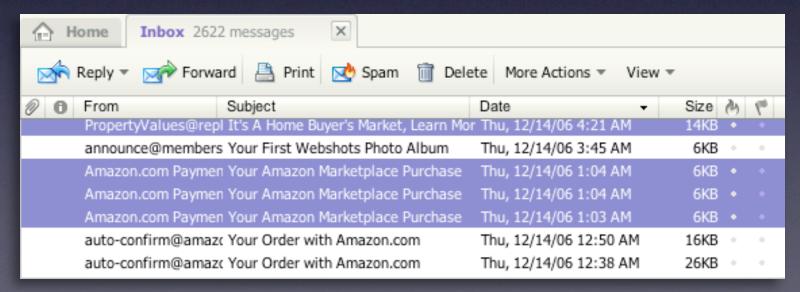
Netflix recently added drag/drop to their movie queue.

Notice they were able to mix two idioms without one taking over from the other.

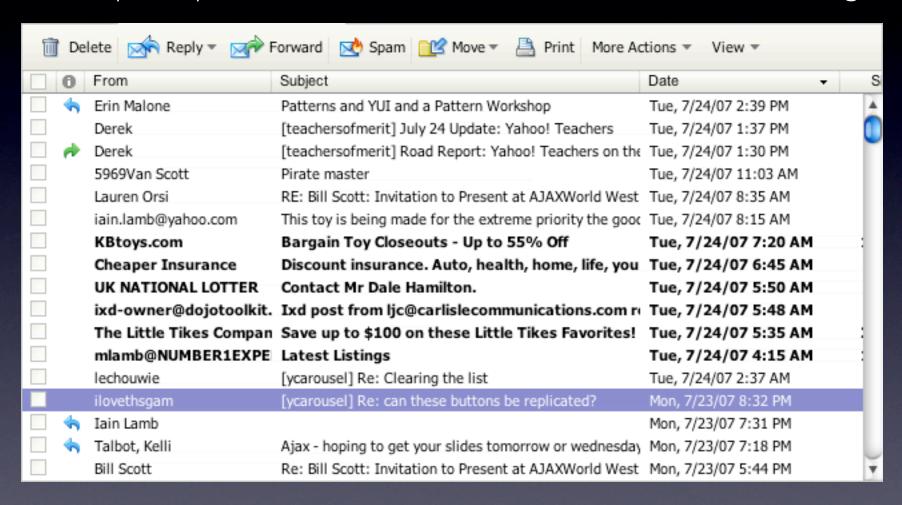


Two approaches. Object selection (highlight idiom). Item selection (checkbox idiom). Is it possible to marry the two?





Current Yahoo! Mail successfully married the two interaction idioms. It did it in a way that you can use either idiom as both have their advantages.



refactoring. borg idiom

For content-oriented rich sites, avoid becoming control-heavy. Stay away from the tree control and other strong desktop style controls.

Make your content interactive, thus making the content the control.

Before adding any interaction style, **make sure it will scale** across all know parts of your interface.

Watch out when mixing drag and drop with checkbox style selection.

Avoid mixing selection styles.

anti-pattern. novel notion

summary

Creating a new interface for a common idiom that is more confusing than the original. Sometimes it is just misusing a component for a new purpose.

examples

Using drag and drop for simple attribute setting; using odd navigation schemes for some supposed effect

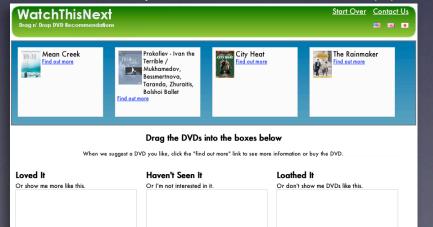
This is just bizarre. Especially the "Search Jobs" link. And it plays music ;-)



This guy won an award! Look it's just marking stuff as 'favorite'.



And this is yet another novel approach to favorites



Already solved.

Classics





The Great Escape

Not Interested

Director John Sturges's Oscar-nominated adventure classic follows the true tale of a group-escape attempt from one of Germany's toughest prisoner-of-war camps. Hundreds of Allied POWs join Roger "Big X" Bartlett (Richard Attenborough), Danny "The ... Read More

More Recommendations >

Featured Subg



Add

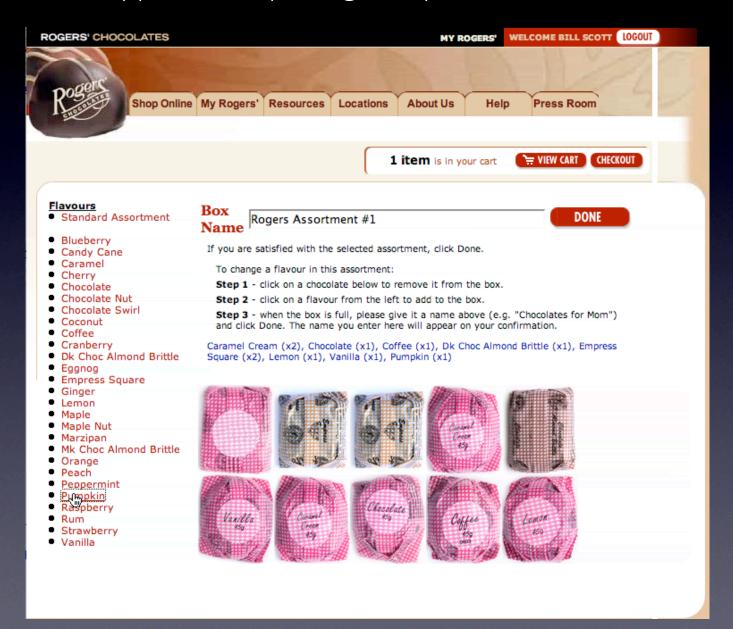
Jane, two up-ai yuppies who ex lifestyle before name for it. But his lucrative job Read More



Add

again -- this tim the life and time Perhaps the mo

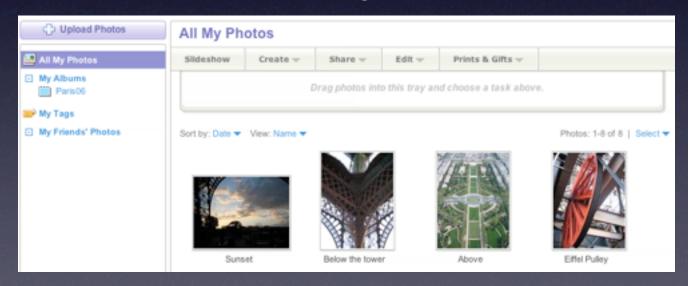
novel approach to putting candy in a box... how about drag and drop?



Yahoo! Photos (going away) tried a novel approach to selection. It involved the new concept of a "tray" for holding temporarily selected items.

Technically perfect. But design-wise misguided. Created two targets for commands: selected items and items in the tray.

As a result the menu commands were duplicated for the tray and for the current selection. Confusing.



editors have some graphic capabilities, they're L limitations. Buzzword, however, can flow text around To place a graphic into this document, open the Image the Insert Image icon. Or, you can select Image... from



the age

rag

on

refactoring. novel notion

Understand the purpose of each type of component

- Carousels do not replace scrolled lists
- Drag and drop is not for single attribute setting

Don't construct an artificial interface to support an idiom (don't create the house for the nail)

A novel approach will work if it is intuitive (but what is intuitive?)

If you think you need something never created before, **think twice** about it

anti-pattern. linkitus

summary

The syndrome of having no idea where a link will lead you. could be an in page action, could reveal information, could take you to new page, could popup something, could engage on hover. Can also be aggravated by inconsistent use of links on the same page.

examples

yahoo.com inconsistent use of links on main page, teachers.yahoo.com around id card

anti-pattern. linkitus

On the home page, there are three kinds of links:

- Reveal other content in context
- Take you to the article
- Expose area (hover to reveal, click to go to tool)



anti-pattern. linkitus

Bizarre use of links. Hover reveals information. Click does nothing.

Very close to being a candidate for Novel Notions.

KFOX Kihncert
On The Green
July 1, 2007

Rest, Relax, & Get Ready For Fireworks! July 2, 2007

Day On The Meadow July 3, 2007 NBC11 Festival For Independence July 4, 2007

ON STAGE . DIRECTIONS . EHC LIFEBUILDERS . SPONSORS . VOLUNTEER . EVENT MAP FAQ



The Bay Area's

GENERAL INFORMATION

About The Event Beneficiary Hours Tickets

GETTING THERE

<u>Directions</u> <u>Public Transportation</u> <u>Parking</u>

AT THE FESTIVAL

ATM Locations
Audio/Video
Bathrooms
Beverages/Food
Children At The Festival
Fireworks
First Aid
Information
Lost & Found
Merchandise
On Stage
Performing or Selling



To begin using the FAQ page, simply move your mouse over the blue title of any topic to the left for additional information. If you still have questions that we haven't answered here, just give us a call at the event hotline 408.294.2100 x444 or Email Us!



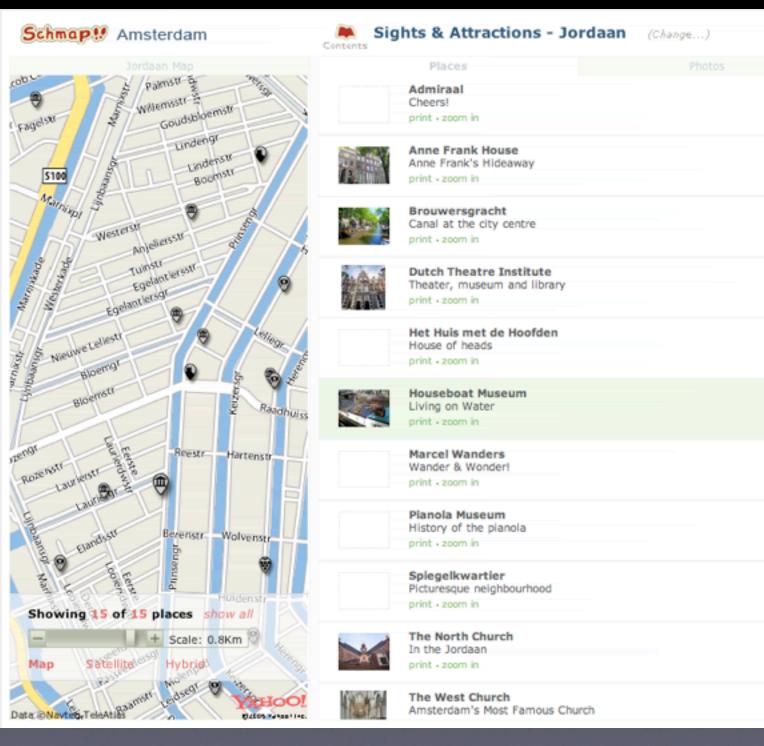












Photo: Bill Scott

Houseboat Museum

Prinsengracht 296 Amsterdam, 1016 HW Tel: +31 (0)20 427 0750 info@houseboatmuseum.nl www.houseboatmuseum.nl

This museum is located on the Hendrik Maria, a former commercial sailing ship built in 1914. On board, the visitor obtains information on the nature of th special lifestyle, living on a boat that never moves, which is so unique to Amsterdam. The deckhouse, where the shipper's family resided, is still in place including the cupboard bed. The former cargo hold has now been converted into comfortable living space. Ship's models photos and slides complete the tour. See website for photos, routes, visitor details and more.

Review © 2007, Wcities



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Bookmark

- Atlantis 'Go' for Dec. 6 Launch
- NASA Scientist Confirms Light Show on Venus
- Youthful Star Sprouts Planets Early



NASA's Spitzer Space Telescope has spotted a stellar prodigy which may provide insight into when planets began to form in our own solar system. > Read More

















NASA TV (Live)

NASA TV & Video

Video On Demand

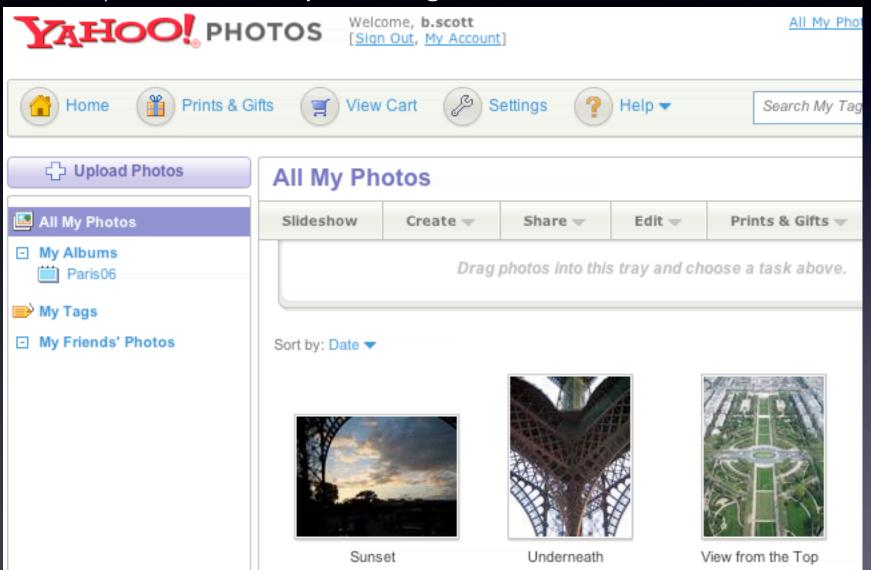
Popular Content

nasa tv

anti-pattern. windows aplenty

summary

The practice of throwing up unnecessary idiot boxes. So many reasons this is just wrong...



summary

Animation effects that become the central focus instead of being part of reinforcing a message.

examples

amazon carousel, tab animation, (stuff from transition talk)

Why the extra little slide in?



Step Eleven

Water thoroughly so the soil is moist to a depth of 6 to 8 inches.



Step Twelve

Keep the seed bed moist (but not soggy) until sod roots knit with soil below. In hot weather, you may have to water more than once a day.

Tips & Warnings





Lay the sod on dry soil to avoid a muddy mess.



When laying sod, kneel on a piece of plywood so you don't disturb soil or damage sod, and use kneepads to keep your knees from getting sore.



Laying sod is hard work. Enlist the help of friends, and use a wheelbarrow to cart pieces around.

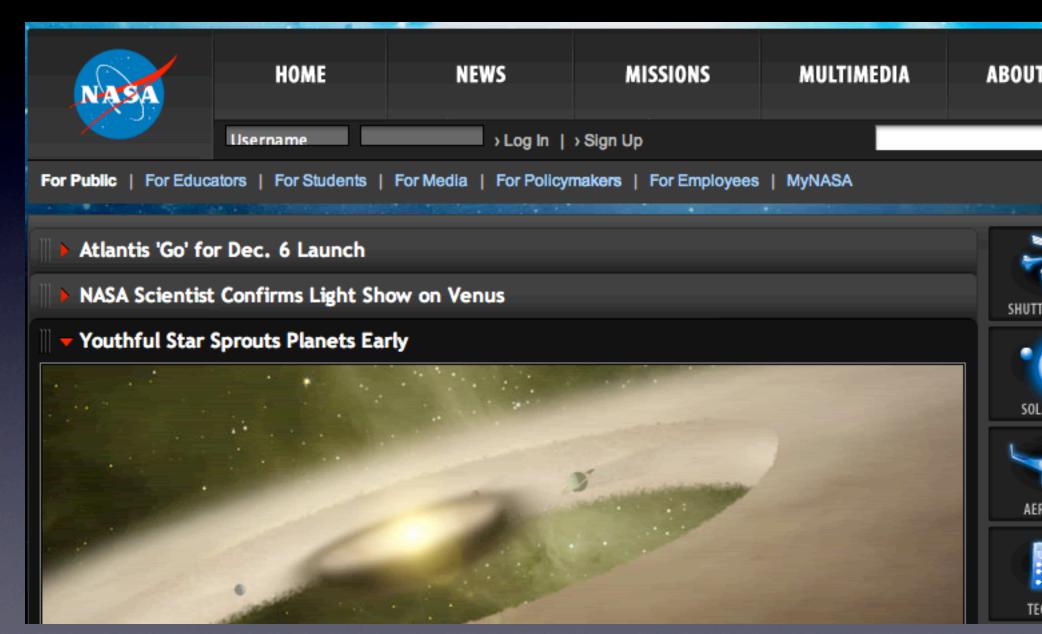


Keep <u>pets</u> and kids off your new lawn by enclosing it with stakes and string.

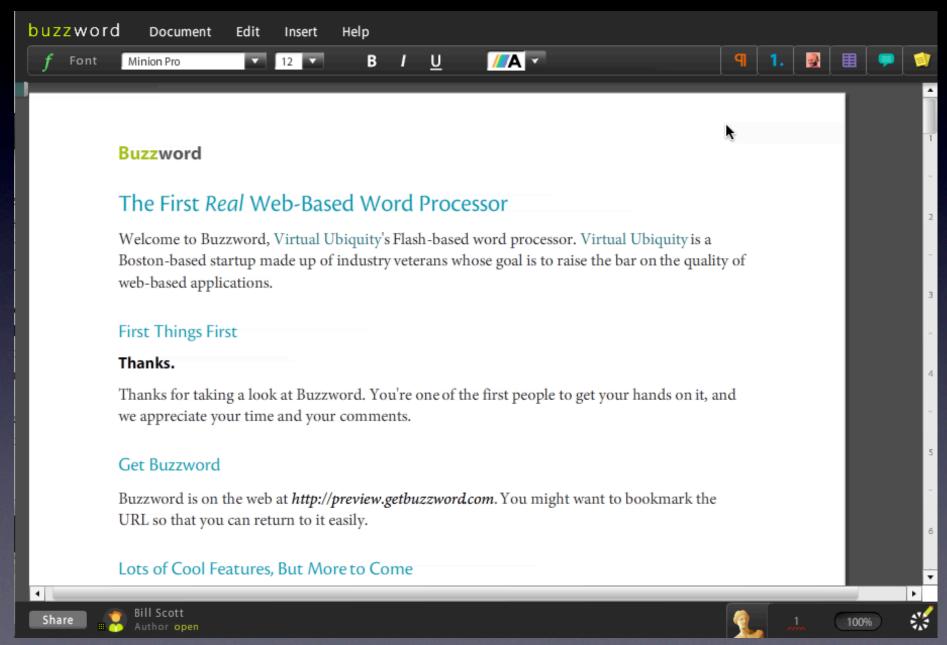


Avoid letting sod dry out, whether it's stacked in a pile or already laid. Occasionally sprinkle with water from a handheld hose to keep it moist,

animated menus... so 90's



too many things animating on hover



Wow! What more can I say?

Seems to be either a pixel at a time or going so fast you can't use it



More from the gratuitous animation department...



AFI's 100 Years...100 Movies — 10th Anniversary Edition

A new decade, a new countdown.

AFI reveals the 100 greatest movies of all time

AFI Home

About AFI

Become a Member AFI Insiders



Not sure how much animation does for a tab control -- tab-o-sel? Candidate for Novel Notions



Terminal: built right in.

OK, it's not very sexy. In fact, it's quite the opposite. But Coda is all about the little things that make your web development a squidgeon easier. If you need to SSH into a server and run some MySQL queries, or restart Apache, or debug some PHP in real time, there's only one way you're gonna do it: terminal. Coda's got a terminal one mouse click away.



egrep 'bellslwhistle' /usr/share/dict/web2

Features? Our terminal has 'em. Connect to a local shell or connect via SSH to a remote server. Put a Terminal in a split, or put a Terminal in its own tab. Copy and paste from the output, or scroll back into the buffer. It's a terminal! And it's convenient!

export CLICOLOR=1

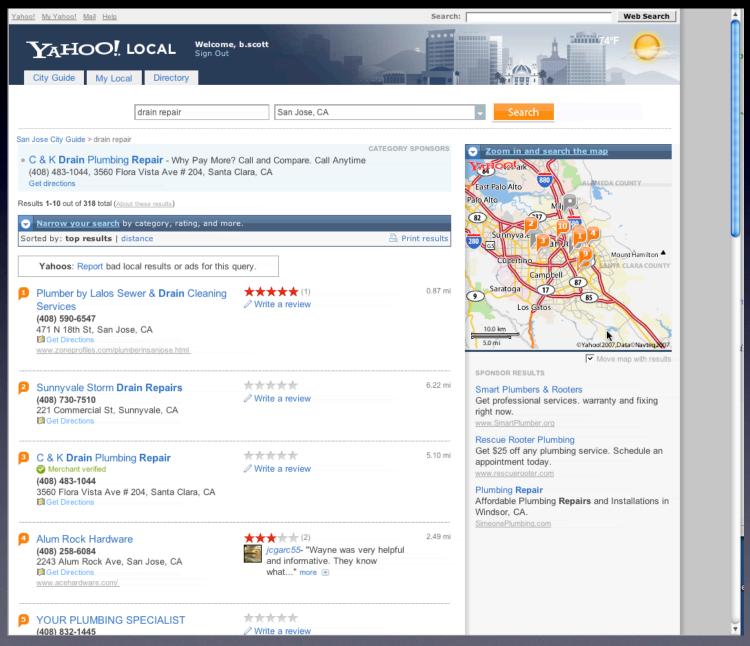
Wait! There's kind of more! ANSI colors also work! You can also, via the preferences, change the font and background colors, or the terminal font itself. Unfortunately, you can't yet set the background to a picture of Arwyn. But e-mail us, we'll always consider it.





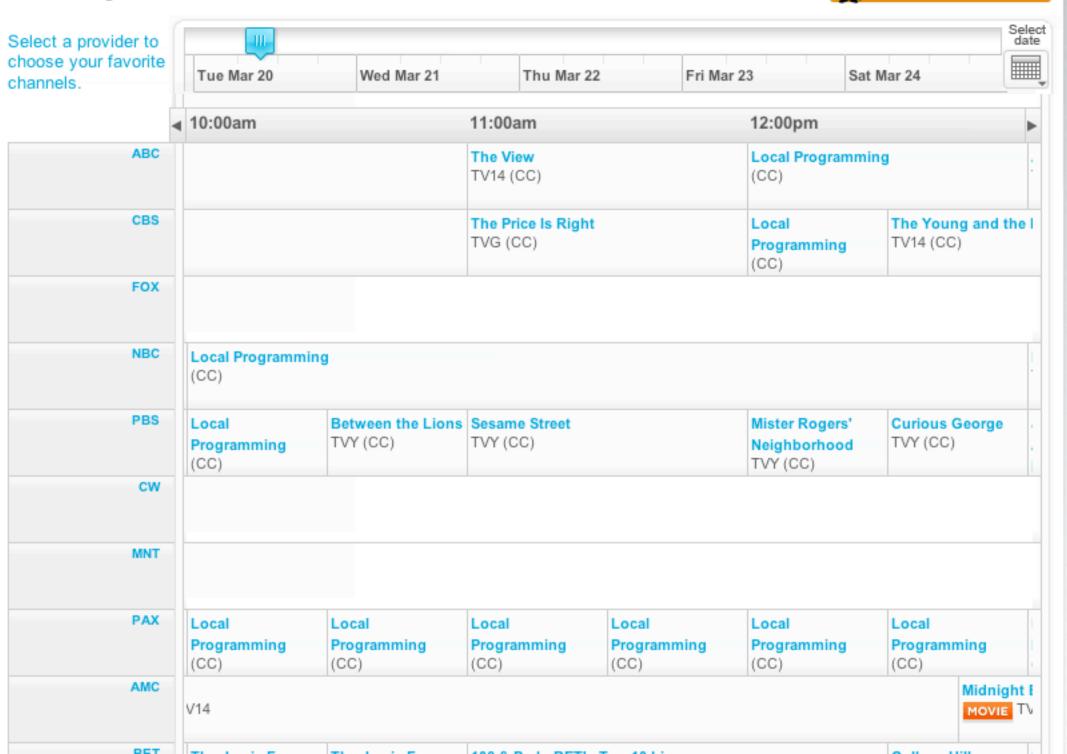


the stalker pattern. can also see an example from Netflix community.



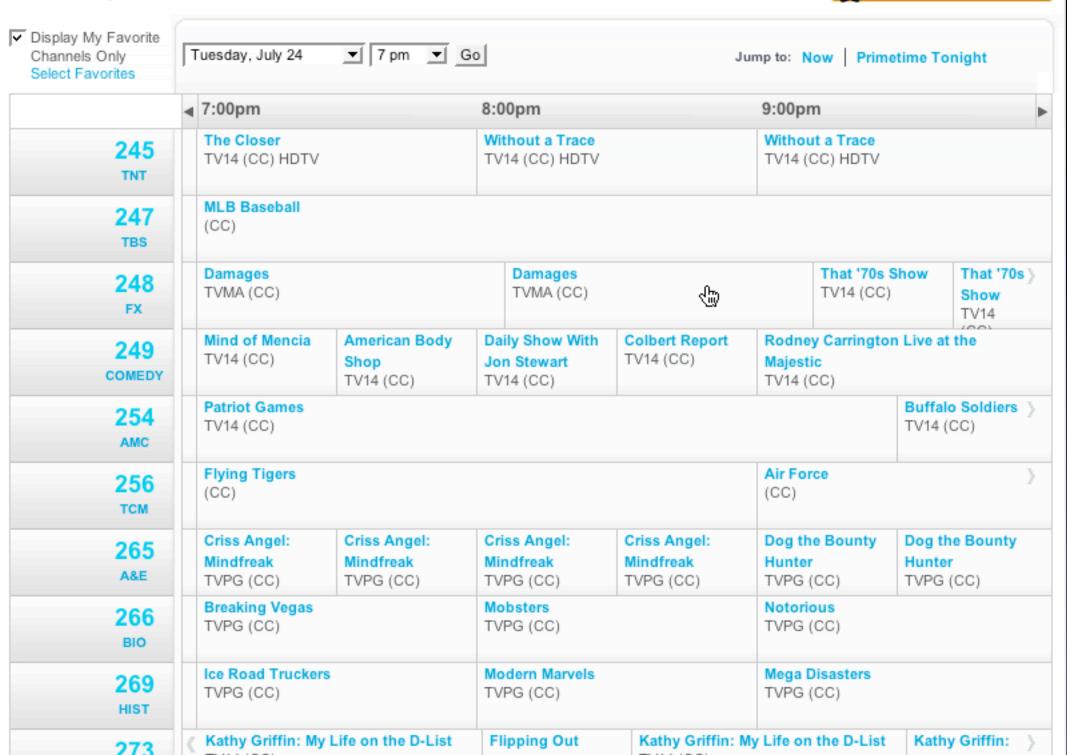
TV Listings





TV Listings





refactoring. animation gone wild

Transitions should mean something. They communicate.

Understand the hierarchy of transition communication

Rapid movement Rapid color change Slow movement Slow color change

If you are refactoring a wild interface, simply **turn off all animations** and start by communicating fully without it, then **add it back in one at a time**.

summary

Not providing feedback throughout an interaction. These missed moments can confuse the user about what to do.

examples

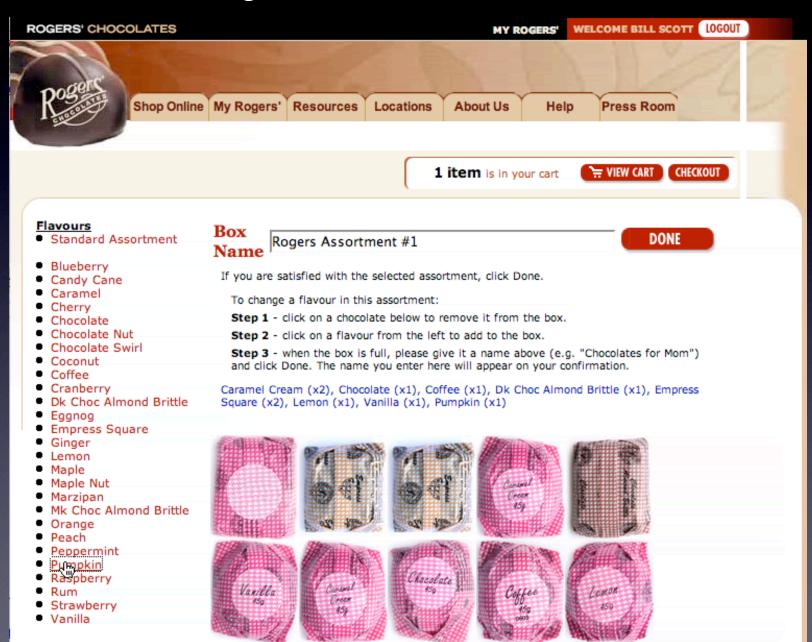
Drag and drop is classic example.

solutions

Use interesting moments grid to think through each moment

	Page Generation	Mouse Hover	Drag Initiated	Drag over Valid	Drag over Invalid	Drag over Original	Drop Accepted	Drop Rejected	Drop on Original
Page Content	Hint	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cursor	Normal	Move Cursor	Move Cursor	Move Cursor	Move Cursor	Move Cursor	Normal	Normal	Normal
Drag Object	Normal	Normal	Reduced Opacity & Tracking	Reduced Opacity δι Tracking	Reduced Opacity & Tracking + Invalid Badge	Reduced Opacity & Tracking	2. Modules animates into the area just below insertion bar 3. Module comes to rest in new area 4. Modules slide up in a self-healing transition to close hole	Normal Opacity + Zoom Back to Original	Normal Opacity + Zoom Back to Original
Orig Location	Normal	Normal	Hole Opens	Hole Remains	Hole Remains	Hole Remains	Hole Remains	Hole refilled with drag object	Hole refilled with drag object
Drop Target	Normal	Normal	Normal	Insertion Bar	N/A	N/A	1. Insertion Bar Removed	N/A	N/A
Drop Target	Normal	Normal	Normal	Insertion Bar	N/A	N/A	1. Insertion Bar Removed	with drag object N/A	with drag object N/A

no feedback during interaction... less "learnable"





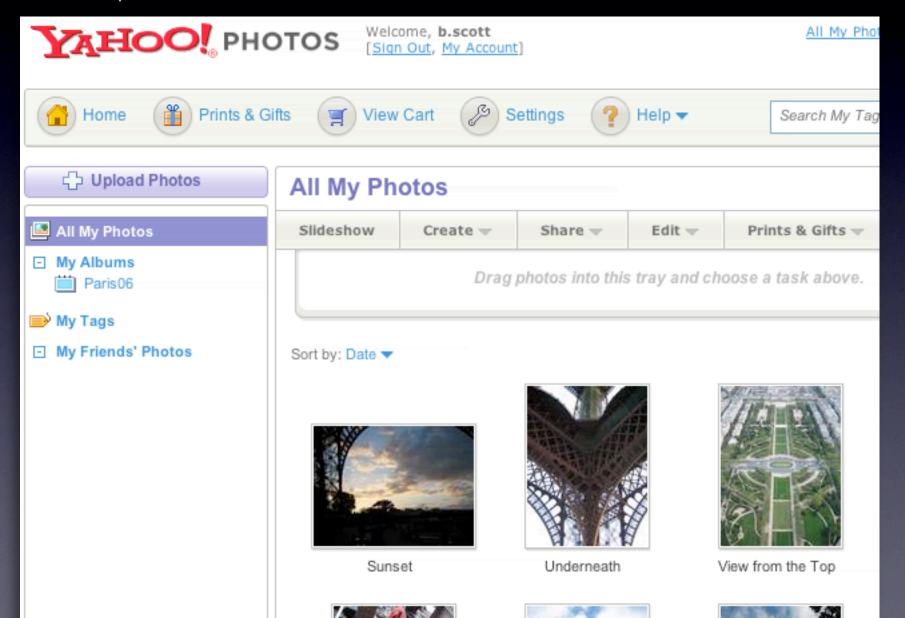
Charles I

in the





Using Y! Photos as example again. Notice missing feedback at key point piles on the problems.



Turns out that a number of events exist during drag and drop that we can use to our advantage.



delta indicates that several small lava flows are

refactoring. missed moments

Map out all the interesting moments.

Use the interaction matrix or other technique to map events to actors on the page.

Use the moments to communicate.

Its the nuance that matters.

Think... "interactive directions"

Moment-by-moment directions are the key. Users get lost easily

anti-pattern. one at a time

summary

When you can only update small pieces of the interface instead of doing things in a group.

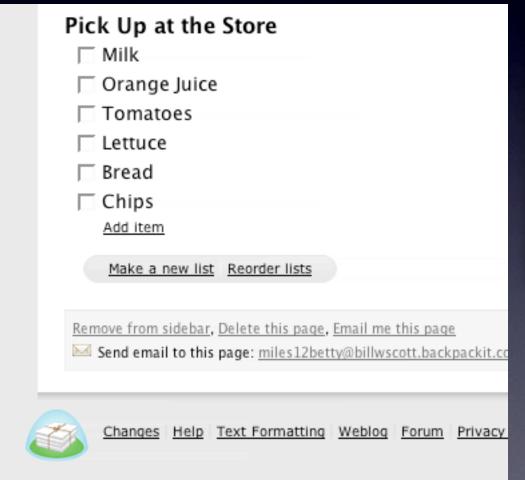
examples

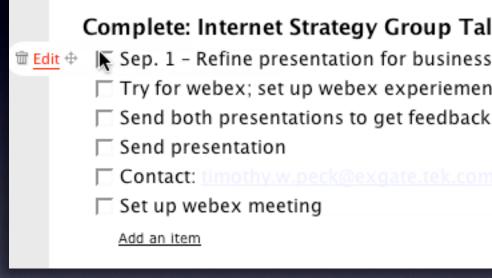
backpackit

anti-pattern. one at a time

Key is what is the workflow? One at a time or mutiple operations allowed.

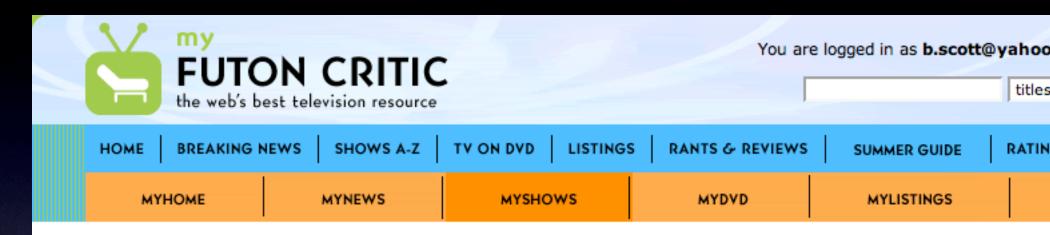
These kind of interfaces (in context tools) always present a problem for doing operations on multiple items.





anti-pattern. one at a time

Takes one at a time check box to the extreme



Q SHOWATCH					
series	alert me?	date start/end	network	time slot	status
AMAZING RACE, THE	Г	9/5/01 - ???	CBS	completed airing its current season	returning next seaso (2007-2008 season)
AMERICAN INVENTOR		3/16/06 - ???	ABC	wednesdays (9:00 PM-10:00 PM EST)	returning this summ (yet to premiere)
AMERICA'S FUNNIEST HOME VIDEOS	V	1/14/90 - ???	ABC	completed airing its current season	returning next seaso (2007-2008 season)
AMERICA'S GOT TALENT	<u>v</u>	6/21/06 - ???	NBC	tuesdays (8:00 PM-9:00 PM EST)	returning this summ (yet to premiere)
AMERICA'S MOST WANTED: AMERICA STRIKES BACK	<u>~</u>	2/7/88 - ???	FOX	saturdays (9:00 PM-10:00 PM EST)	currently airing (2006-2007 season)

refactoring. one-at-a-time

Think about what happens when the data/information scales It affects space issues but also affects interaction density.

Think about doing multiple operations at once

Balance with immediacy

Watch out for in-context tools, in-page actions

These give immediacy but also will trap you into not handling multiple items at once.

Don't forget about the lowly checkbox

Not as sexy, but very serviceable.

anti-patterns

big ball of mud. meandering way.

borg idiom. tiny targets. mystery meat.

buried treasure. hover and cover.

pogo stick navigation. novel notions.

against the flow metaphor mismatch jabberwocky. double duty. **linkitus**. blind type.

windows aplenty. animation gone wild.

misguided misdirections. unmarked hazards. missed

moments. missing scene.

one at a time. non-symmetrical actions.

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Visual/Interaction Designers
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