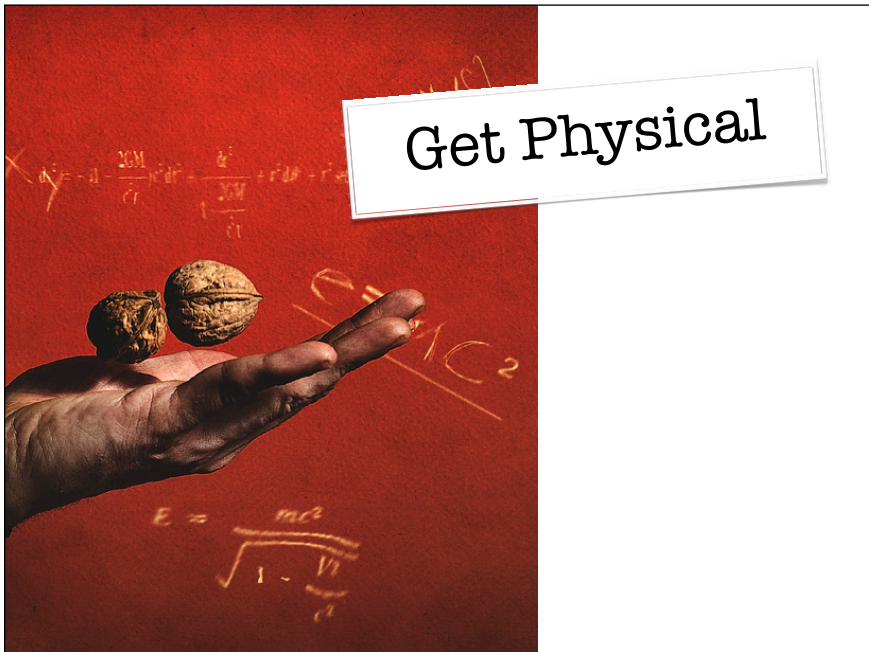




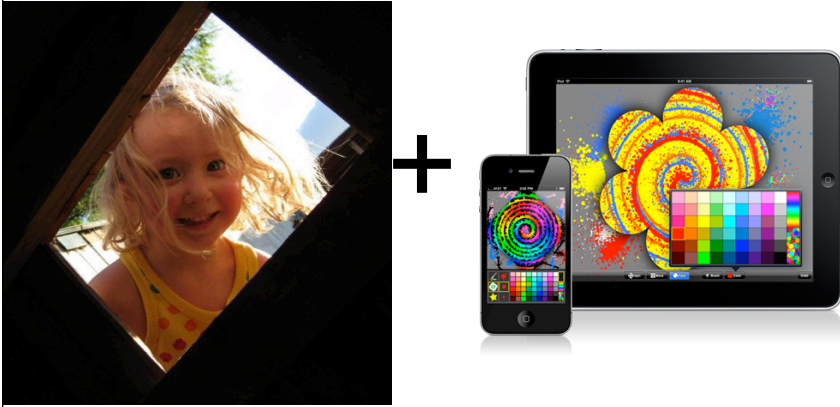
## Session 4 Physicality

1



2

## The Illusion of Physicality



3

## Design for Physicality

Whenever possible, add a realistic, physical dimension to your application.

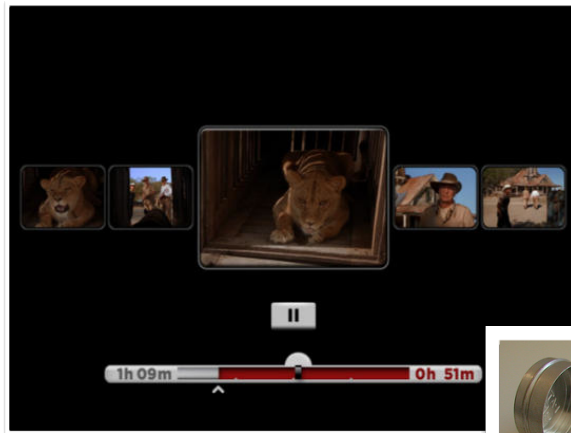
- Apple HIG

4

# Use Metaphors to Embody Physicality

5

## Physicality as Metaphor

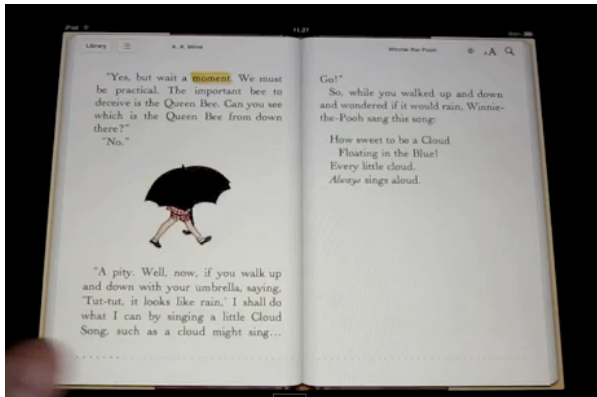


Film Strip



6

# Physicality as Metaphor



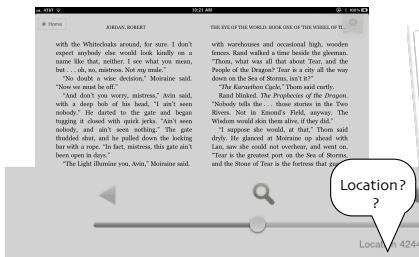
book

“Books have pages”

“Pages turn”

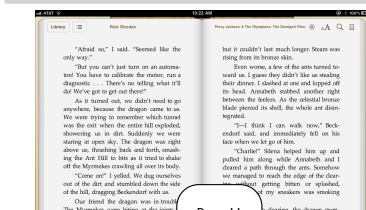
7

# Anti-Pattern: Broken Metaphor



Don't break the metaphor for the underlying implementation model.

The user's mental model is the experience cushion.

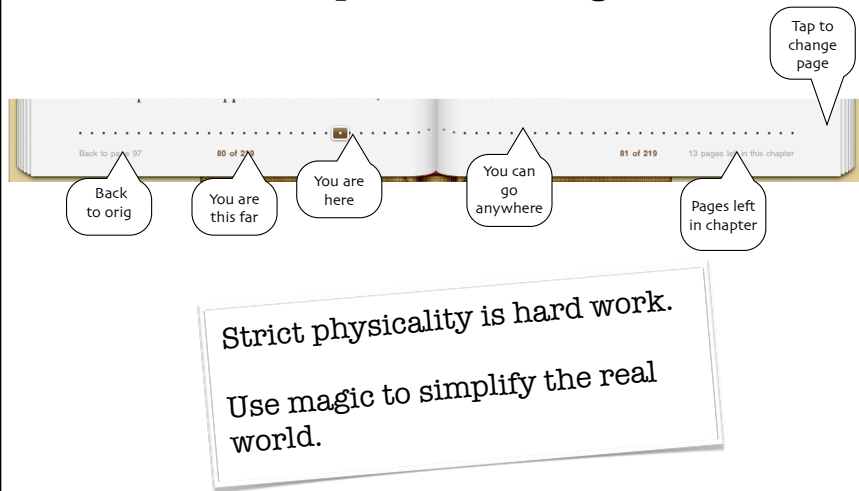


“Books have pages”

8

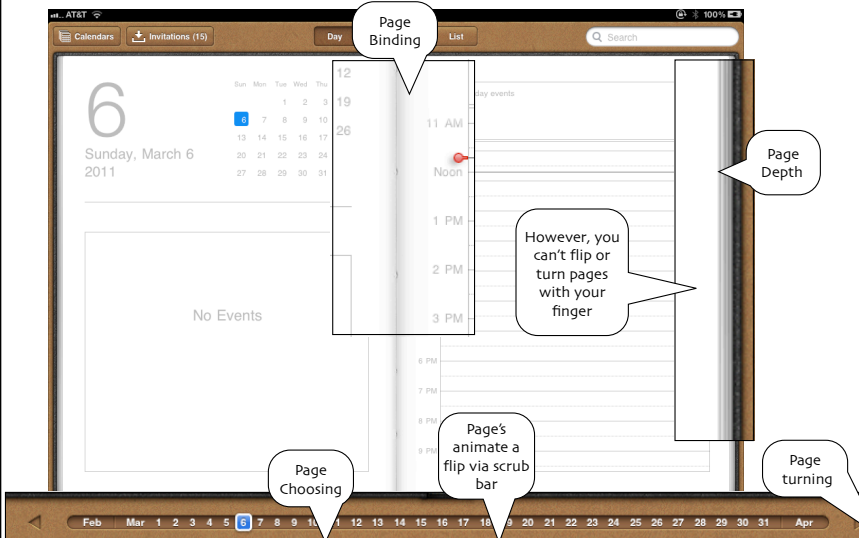


## Break the Metaphor with Magic



9

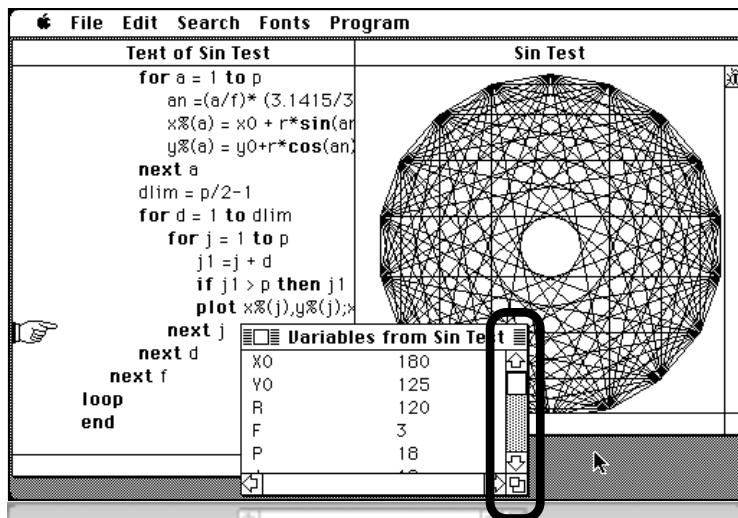
## To Flick or not to Flick



10

# Use Directness to Simulate Physicality

11



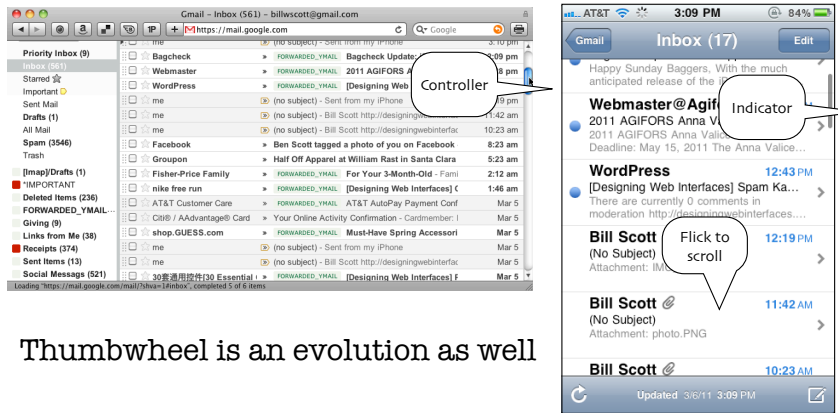
in 1984, this was physicality - the scrollbar

12

# Scrollbar Evolution

From Controller to Indicator

Content is scrolled instead of scrollbar



Thumbwheel is an evolution as well

13

It must feel real

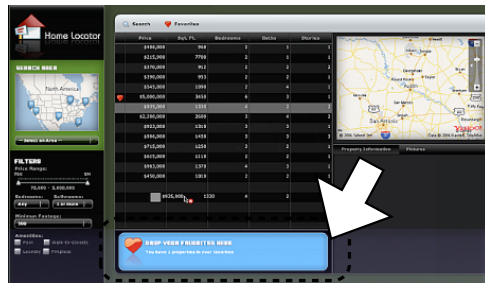


Make sure event handling is consistent

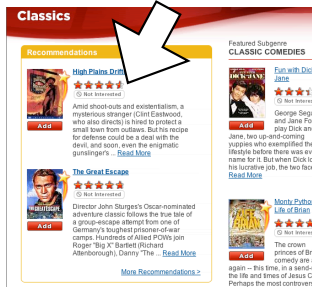
Remember fingers are fat. Real estate is

14

## Anti-Pattern: Mismatched Metaphor



anti-pattern: artificial construct



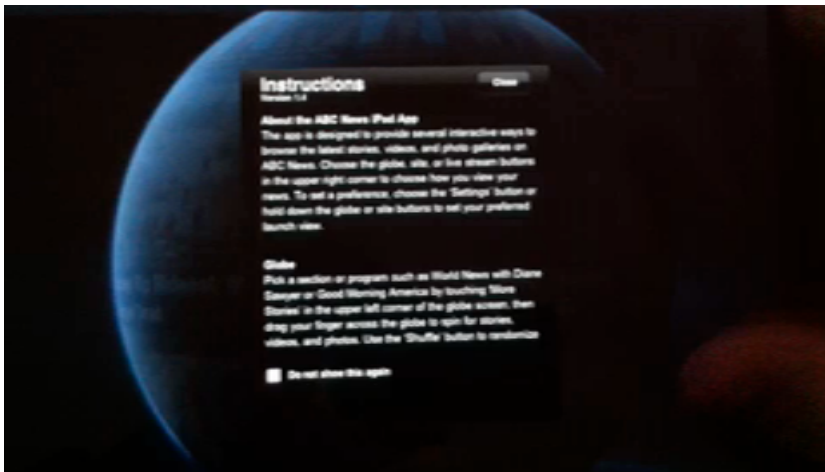
netflix. rate an object. KISS.



Beware of constructing artificial visual interfaces to support drag and drop

15

## Anti-Pattern: Mismatched Metaphor



(Metaphors Gone Wild)

16

## How Fat is Your Input?

	Targeting Size
Web (Pointer)	16 pixels (but accurate as 1 pixel)
Mobile/Tablet (Finger)	44 pixels*
Remote (LRUD)	44 pixels
Remote (Pointer)	44 pixels

\* Josh Clark's recommendation - Tapworthy

17



18

## Editing Moments



Interesting Moments:

- Yellow spotlight/invitation
- Tooltip invitation
- Explicit Save/Cancel buttons



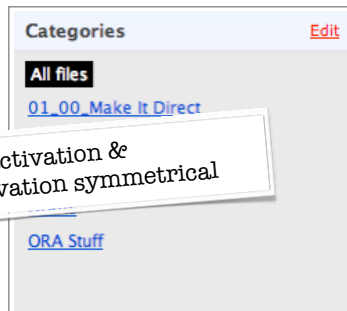
19

## Activation/Deactivation Moments



anti-pattern. non-symmetrical. iphone

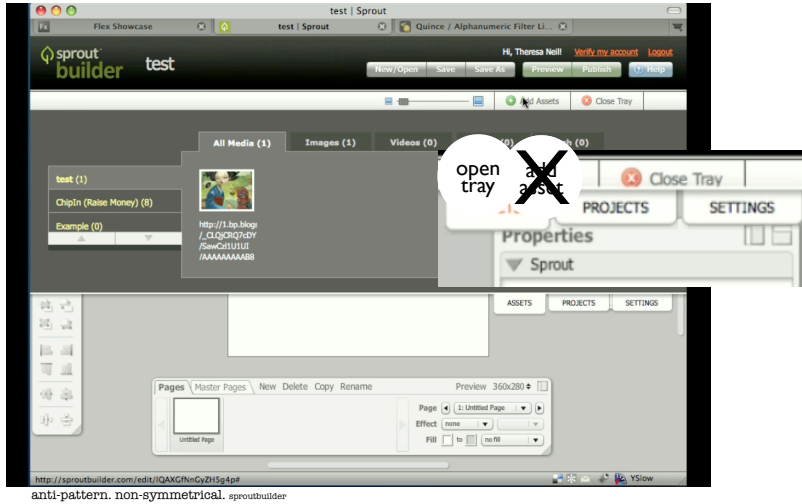
Keep activation & deactivation symmetrical



symmetrical interaction. basecamp

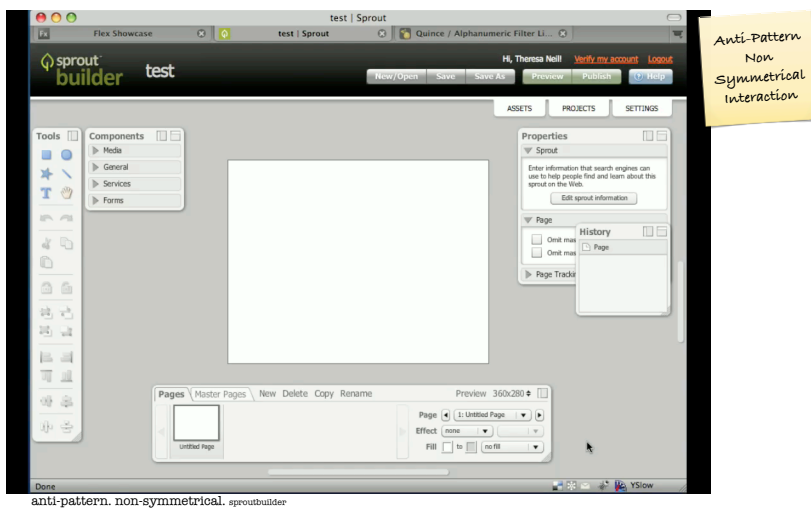
20

## Activation/Deactivation Moments



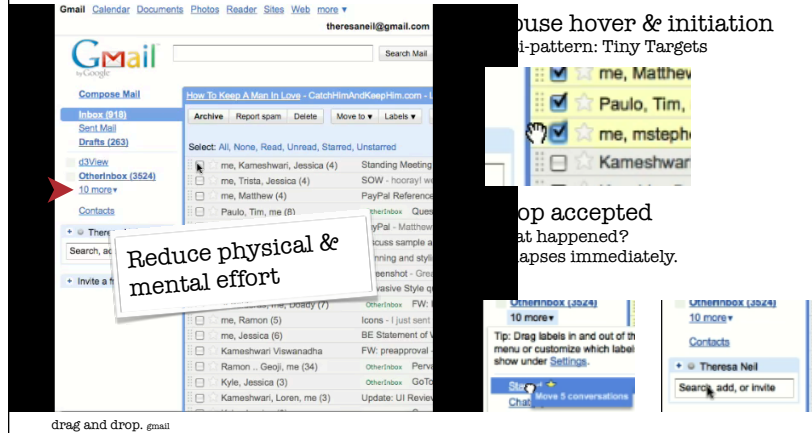
21

## Non-Symmetrical Interaction



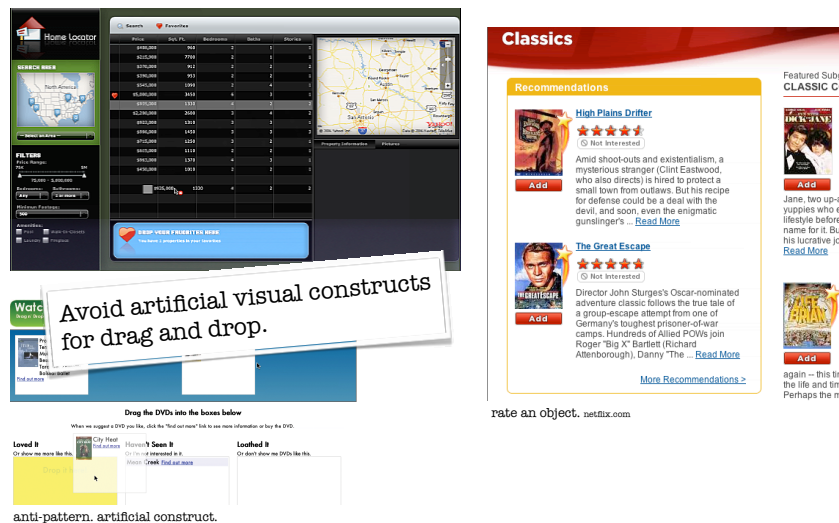
22

# Drag & Drop Moments



23

# Artificial Moments



24



# Fitts Law & Moments

## Step 1. Selecting a Volcano


Topographic maps are available for all the volcanoes in the United States. Topographic maps are also sold at outdoor recreation stores. The model made by the USGS about Mount St. Helens. Click here for a slide show of major dome building episodes. Your map

## Step 2. Creating a Pattern.



Print the page with the simplified topographic map. The highlighted lines will be printed in yellow. The highlighted lines will be printed in yellow. The highlighted lines will be printed in yellow.

yahoo teachers




science for a changing world

### Hawaiian Volcano Observatory

Volcano Hazards

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



Photograph by C. Heliker on November 12, 1992.

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

Kilauea

Mono Loa

Earthquakes

Other Volcanoes

Volcano Hazards

Types of Lava

Zones

About HVO

YAHOO! GOBBLER

Projects (8)

Geography: Land...

Birds' Nests

Scratchpad

Return to Y! Teachers

25

# Make it Lightweight to Defy Gravity

26



27

## Unnecessary Moments

sorting by: [ newest | [oldest](#) | [most digs](#) | [least digs](#) ]

### [IBM, AMD, Sony boost chip speeds by 24%](#)

"IBM and AMD have found a way to improve transistor performance by up to 24% without increasing the power draw - using a tweaked implementation of Big Blue's 'strained silicon' process."

[ [dig this story](#) | [comment](#) | by: anonymous ]

original digg site. digg.com 1.0

180  
digs

Are Lost's New Times...

popular  
heads  
worms.

digg it

Remove barriers

keep our  
new can of

25 Comments

Share

Bury

msaleem made popular 9 min ago

in-page action. digg.com

28

# Unnecessary Moments

Yelp Food brought to you by MGD 64

## Mi Tierra Foods

★ ★ ★ ★ ★ based on 35 reviews [Rating Details](#)

Categories: [Grocery](#), [Specialty Food](#), [Mexican](#) [\[Edit\]](#)

2082 San Pablo Avenue  
(between Addison  
Berkeley, CA 94702  
(510) 540-8946

**Don't add unnecessary steps.**

Price Range: \$

Good for Kids: Yes  
Take-out: Yes  
Outdoor Seating: No

Accepts Credit Cards: Yes  
Attire: Casual  
Takes Reservations: No  
Waiter Service: No  
Good for: Lunch

Parking: Street, Private Lot  
Good for Groups: No  
Delivery: No  
Wheelchair Accessible: Yes  
Alcohol: None

[Edit Business Info](#) [Is this your business?](#) [First to Review](#) [Amy J.](#)

[Send to Friend](#) [Bookmark](#) [Send to Phone](#) [Write a Review](#) [Print version](#)

anti-pattern. idiot box. yelp.com

29

# Avoid Unnecessary Steps

**Jerry Sherman** - Add to circles

**Mads Soegaard** - Add to circles

**Joel Sass** - Jul - Acquaintance

**Maya Venkatram** - Add to circles

**Grace Mase** - Jul - Acquaintance

**Brian Christensen** - Acquaintance

Messages 107 Invitations 16

Add connections Accept Ignore

Select: All None

✓ You and Sidney de Koning are now connected.  
[See Sidney's 363 connections](#) · [View profile](#) · [Send a message](#)

☐ **Joe Sondow** · Senior Software Engineer at Netflix  
I'd like to add you to my professional network. - Joe  
[Accept](#) [Ignore](#) [Report Spam](#)

☐ **Rob Tilney** · Sr. Desktop Support Analyst at Netflix  
I'd like to add you to my professional network. - Rob  
[Accept](#) [Ignore](#) [Report Spam](#)

☐ **nitheesh nath s pillai** · therd officer at doehl danautic  
[Accept](#) [Ignore](#) [Report Spam](#)

☐ **David Bender** · Sr. Design Manager, Global Marketing at Netflix  
David has indicated you are a Colleague at Netflix  
[Accept](#) [Ignore](#) [Report Spam](#)

☐ **Matt Trunnell** · Improving the Silverlight player at Netflix

30

# Heavy Moments

Be mindful of the “click weight.”

- # of interaction steps
- Decision time
- Seek time
- Second guessing
- Wait time

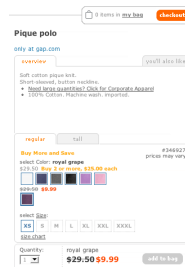
<http://genesisconduit.wordpress.com/2008/07/13/click-weight/>  
<http://www.amazon.com/Designing-Both-Sides-Screen-Collaborate/dp/0672321513>

31

# Visible Moments

in-page action. digg.com

**282** [Fixing the Mighty Mouse](#)  
submitted by [yassidmac](#) 1 day 1 hour ago (via [http://mac](#))  
The Apple Mighty Mouse brings a slew of great feat with most new Mac systems it is becoming a comm one for close to a year now, I have found that the ut Scroll Ball far outweigh its quirks.  
[60 comments](#) [like this](#) [email this](#) category: [apple](#)



remembered collections. [gap.com](#)

Make primary actions visible

rating an object. [yinznews](#), [netflix](#)

RECOMMEND THIS STORY  
Recommend It: [☆☆☆☆☆](#) Average (63 votes)

**Classics**

**Recommendations**

**Fun with Dick and Jane**  
★★★★★  
A fun, irreverent comedy that takes a look at the lives of a middle-class family in the 1930s. George S. Cline and Jane Fonda star in this classic comedy. [Read More](#)

**The Great Escape**  
★★★★★  
A classic war movie about a group of prisoners who attempt to escape from a German POW camp. [Read More](#)

**My Grade: A**  
Rate this Movie!  
Select grade to the right  
[write a review](#)

**The Critics: B-**  
14 reviews

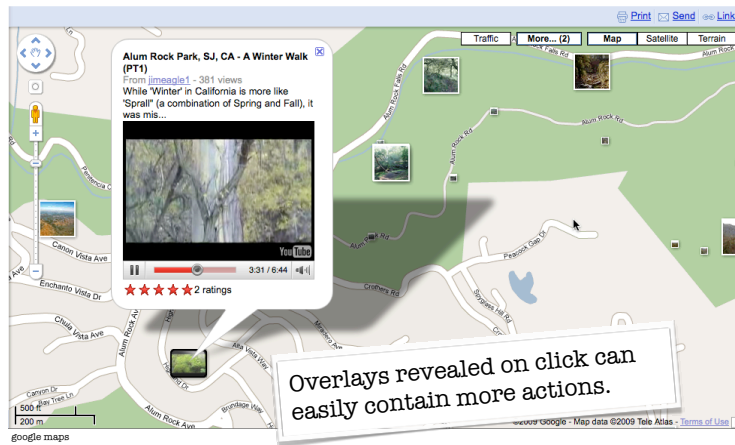
**Yahoo! Users: B+**  
13199 ratings

Answer hidden due to its low rating [Show](#)  
Total rating: -16 [32](#) [48](#)

rating an object. [yimovies](#), [yianswers](#)

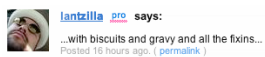
32

## On Click Moments



33

## On Hover Moments



Preserve readability by initially hiding secondary actions.

(Some HTML is OK.)

contextual tool menu. flickr.com

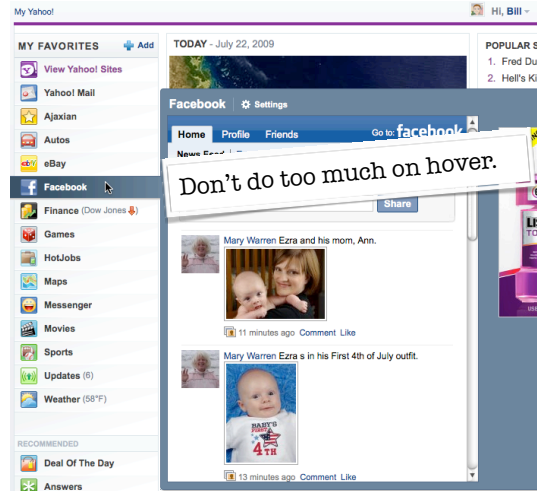
### Pick Up at the Store

- ☐ Milk
- ☐ Orange Juice
- ☐ Tomatoes
- ☐ Lettuce
- ☐ Bread
- ☐ Chips

contextual tool actions. backpackit

34

# On Hover Moments



embedded application overlay - hover activated. yahoo.com 2009

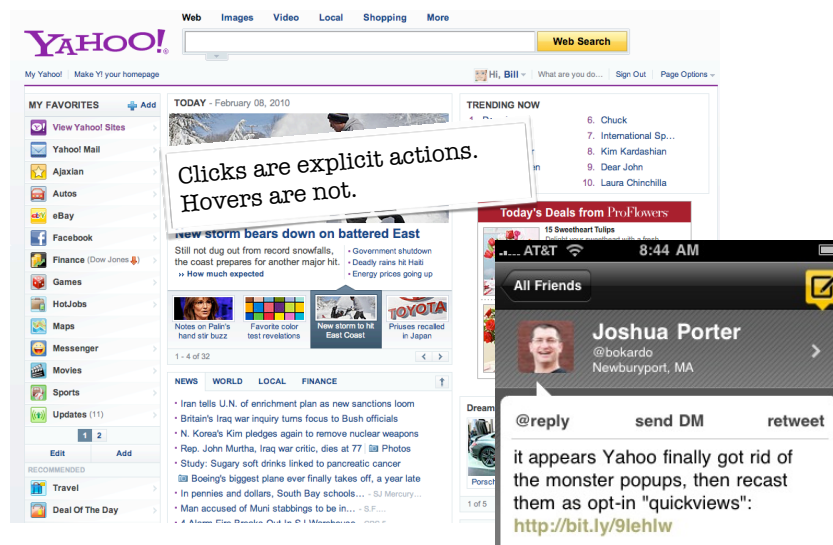
See also: Jakob Nielsen's research on "Mega Menus": <http://tr.im/twnC>

**bokardo**

I like the idea of the left-hand nav on Yahoo's new home page, but my guess is the gigantic hovers won't last long.  
<http://yahoo.com>  
20 minutes ago from TweetDeck

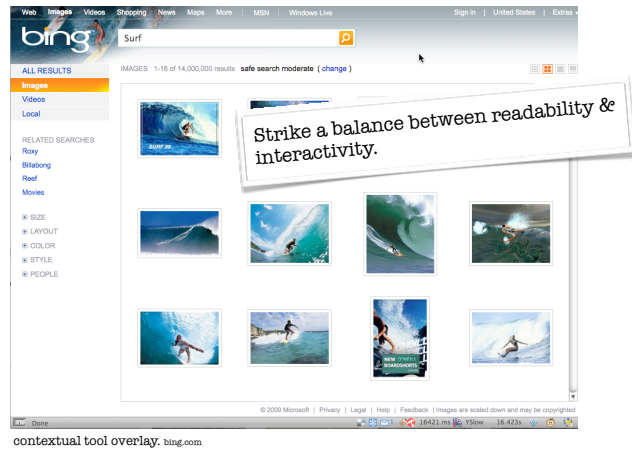
35

# Yahoo! Refactored



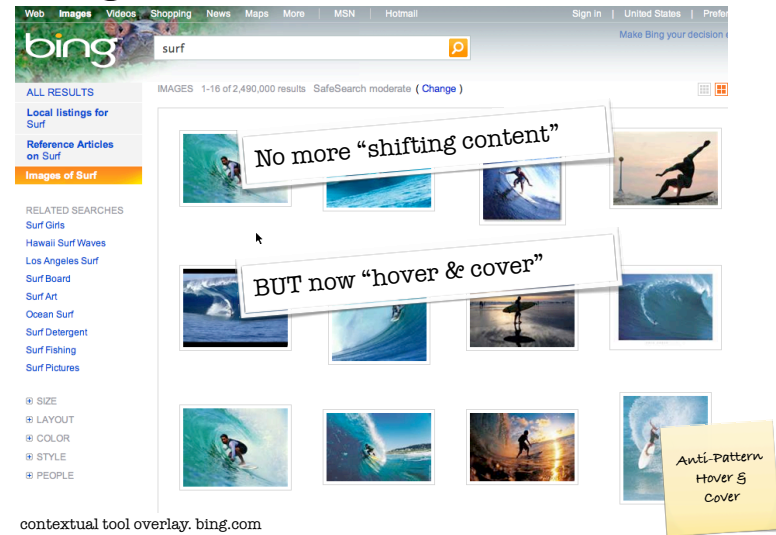
36

# Distracting Moments



37

# Bing Refactored



38

## Refactoring Distracting Moments

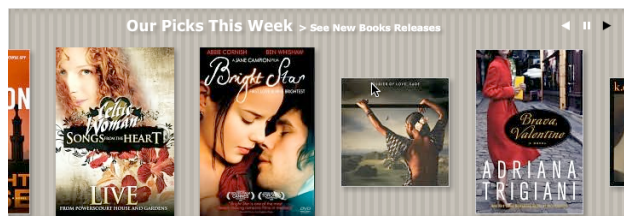


Provide breathing room for contextual tools.

hover & cover resolved. y! teachers

39

## Delicate Balance Broken



barnes and nobles

Anti-Pattern  
Hover &  
Cover

Anti-Pattern  
Needless  
Fanfare

Anti-Pattern  
Mouse  
Trap

Anti-Pattern  
Tiny  
Target

Anti-Pattern  
Novel  
Notion

40



# Exercise

(15 minute)

41

Present Your Favorite  
App That Illustrates  
These Principles

42