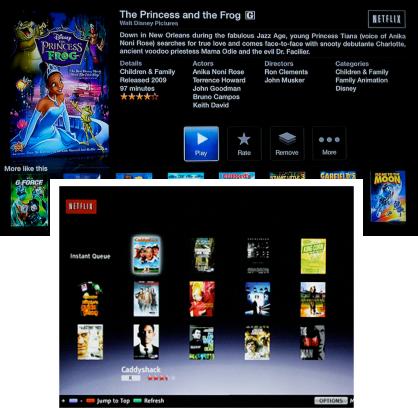




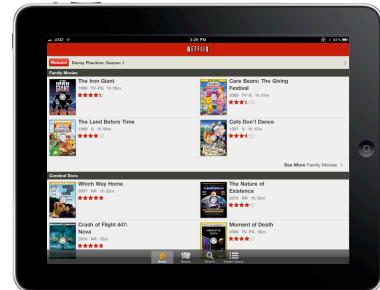
Designing for Mice & Men*

Bill Scott, Netflix

Current Experience Chaos (400 SKUs)



Netflix "Owned" Experience Across Devices



Netflix Across Devices (in-house products)

Web

Tablet

Mobile

TV

Netflix Across Devices (in-house products)

HTML5

HTML5

HTML5

HTML5

Common Platform Across Devices

Web Browser

iOS Webkit

iOS Webkit

**QT Webkit &
Skia Webkit**

Why own the experience?

Known for valuing UX -- can't do it if you don't own it

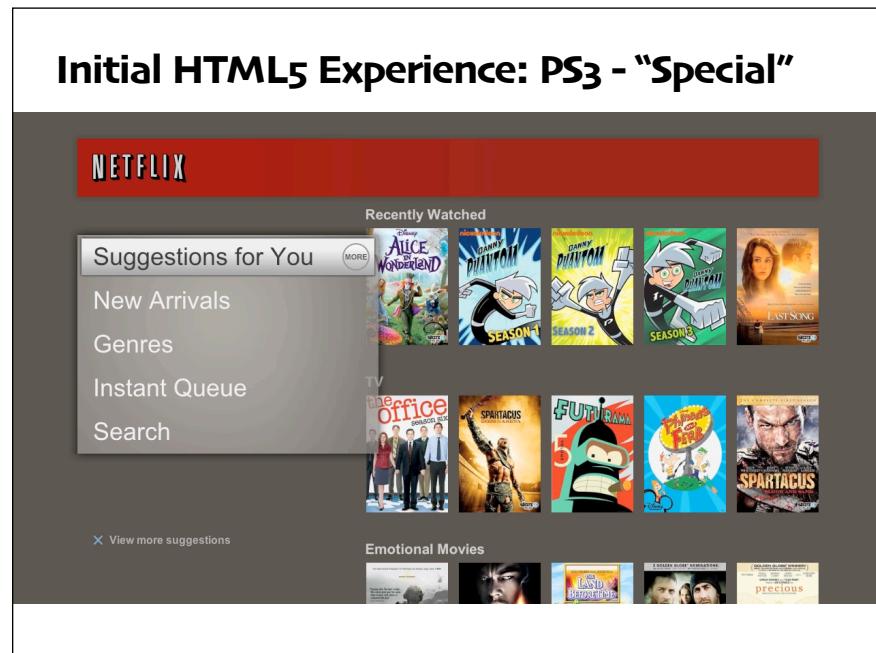
Love server-driven, testable, dynamic UIs

Like agile Web better than rigid CE firmware process

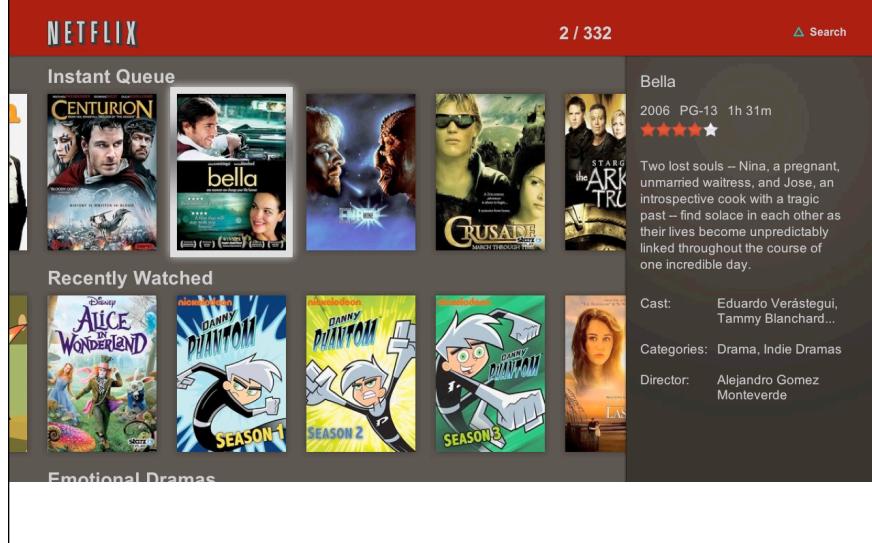
Value "Learn Fast/Fail Quickly"

The reality is any other path is chaos

Initial HTML5 Experience: PS3 - "Special"



Alternate HTML5 Experience: PS3 - "Plus"



Designing Across Platforms

Chose a portability layer (html5, css3, JS)

However, don't use progressive enhancement since want the freedom to experiment with different UX on different platforms

Design for user posture, input capabilities, navigation styles and display capabilities

Embrace the constraints (design for mobile first!)

Designing for Mice & Men

Web	TV 10' UI	Mobile	Tablet
Input Indirect. Pointer/keyboard	Input Indirect. LRUD/OSK	Input Direct. Gesture/OSK	Input Direct. Gesture/OSK
Navigation Controls & windows	Navigation Panes	Navigation Panes	Navigation Panes & Slideouts
Posture Stationary Working	Posture Lean Back Relaxing	Posture On-the-go In Hand	Posture On-the-go Lean back Shared
Display Hi-Rez Large, Near	Display Hi-Rez Large Far-away	Display Hi-Rez Small Near	Display Hi-Rez Medium, Near



So what's common?

design principles

fundamental, universal ideas
that underpin good design
across different input methods,
display capabilities and user
posture

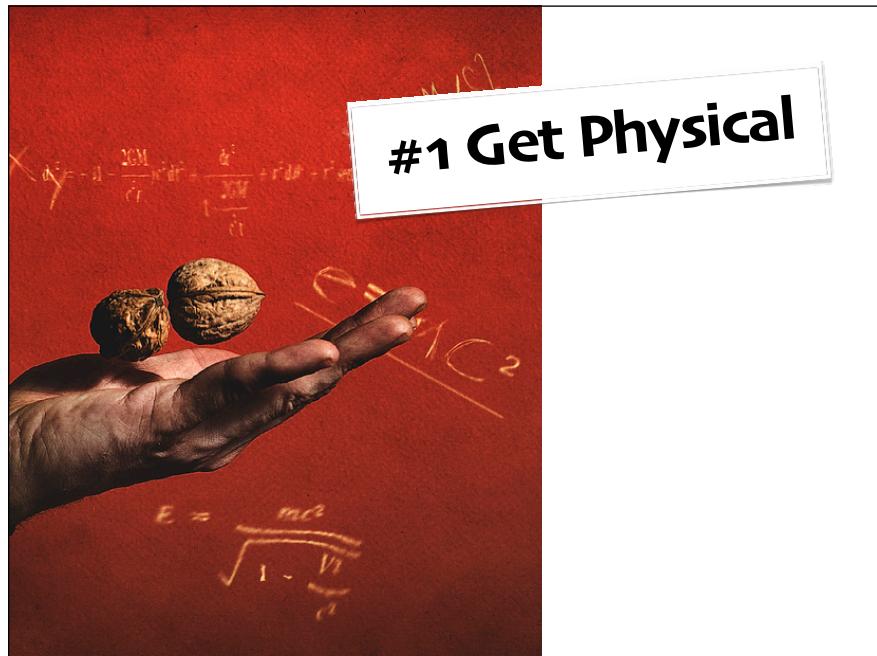
but the application of principles
varies across

- **input**
- **posture**
- **navigation**
- **display**

Three Principles

common design principles for
multiple platform design

#1 Get Physical



The Illusion of Physicality



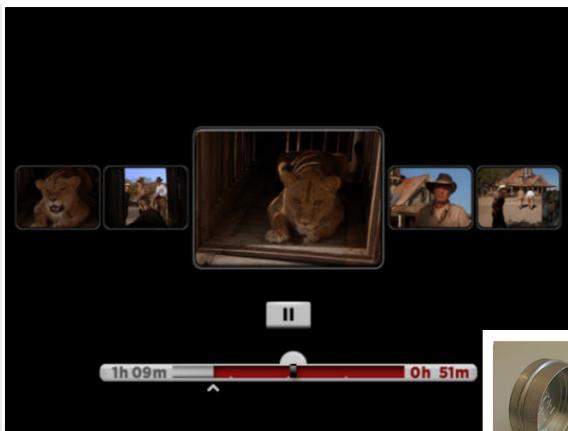
Design for Physicality

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

- Apple HIG

Use Metaphors to Embody Physicality

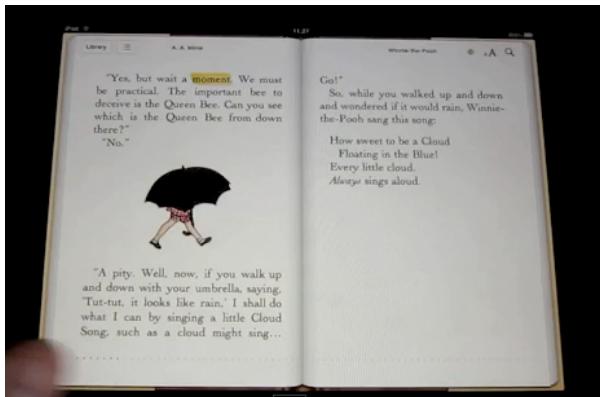
Physicality as Metaphor



Film Strip



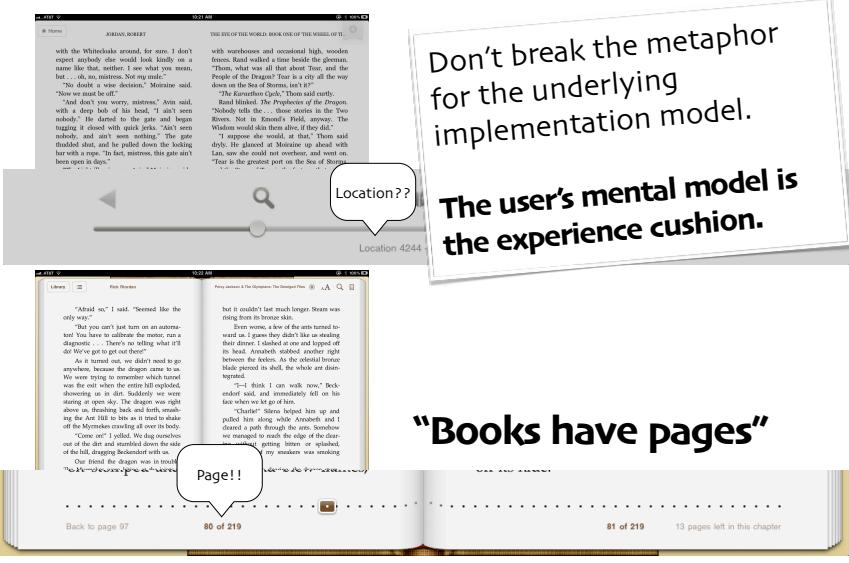
Physicality as Metaphor



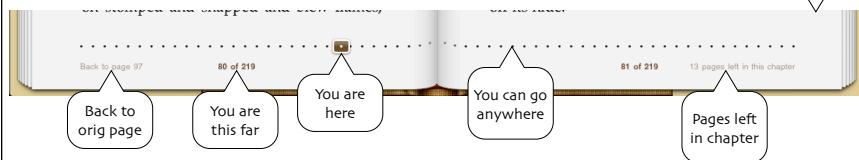
"Books have pages"

"Pages turn"

Anti-Pattern: Broken Metaphor

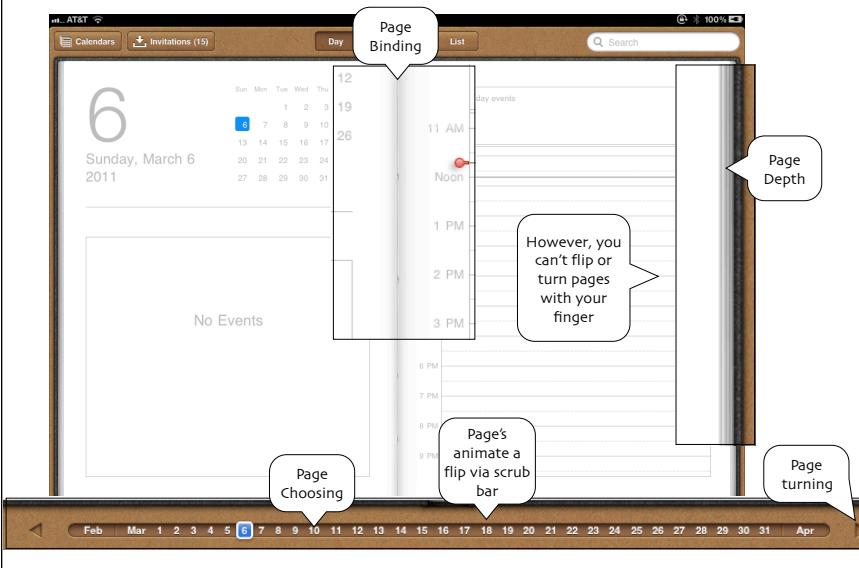


Break the Metaphor with Magic



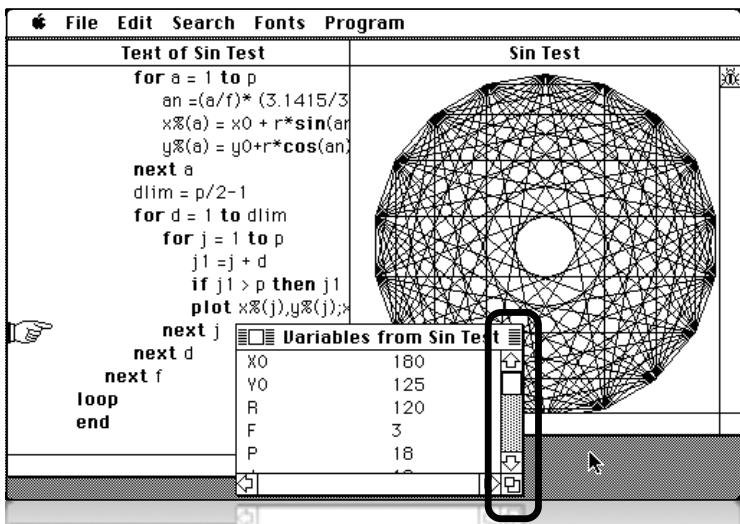
Strict physicality is hard work.
Use magic to simplify the real world.

To Flick or not to Flick



However, you can't flip or turn pages with your finger

Use Directness to Simulate Physicality

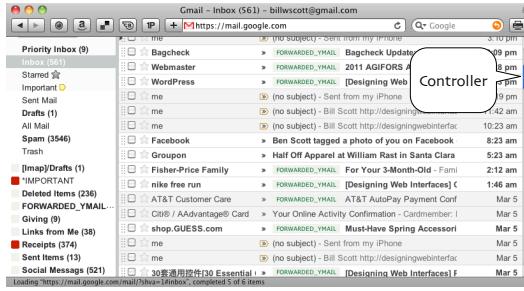


in 1984, this was physicality - the scrollbar

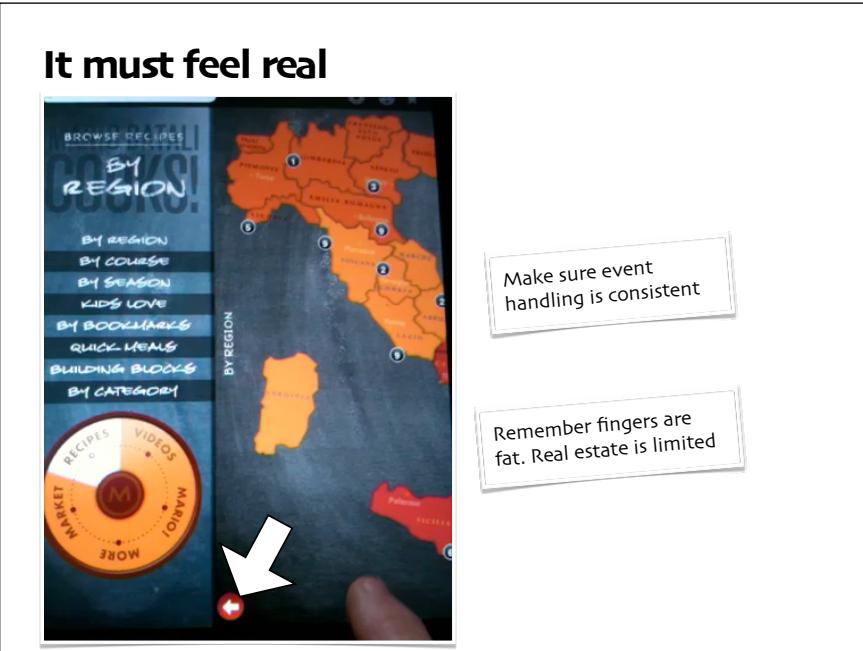
Scrollbar Evolution

From Controller to Indicator

Content is scrolled instead of scrollbar



Thumbwheel is an evolution as well

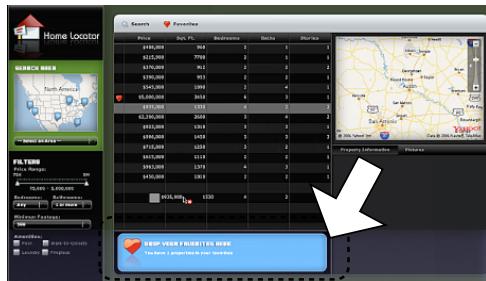


It must feel real

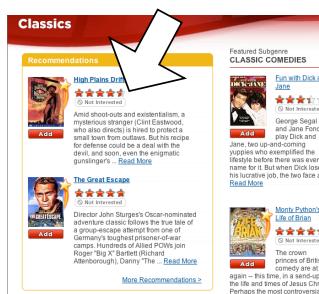
Make sure event handling is consistent

Remember fingers are fat. Real estate is limited

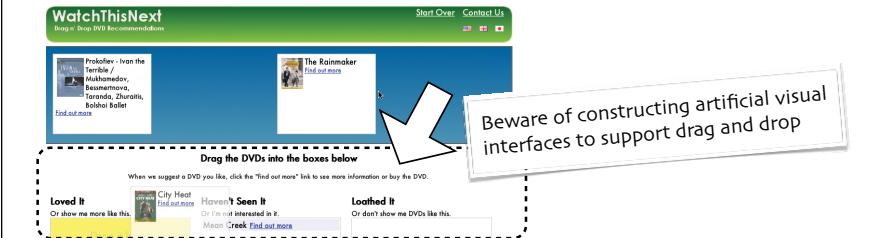
Anti-Pattern: Mismatched Metaphor



anti-pattern: artificial construct

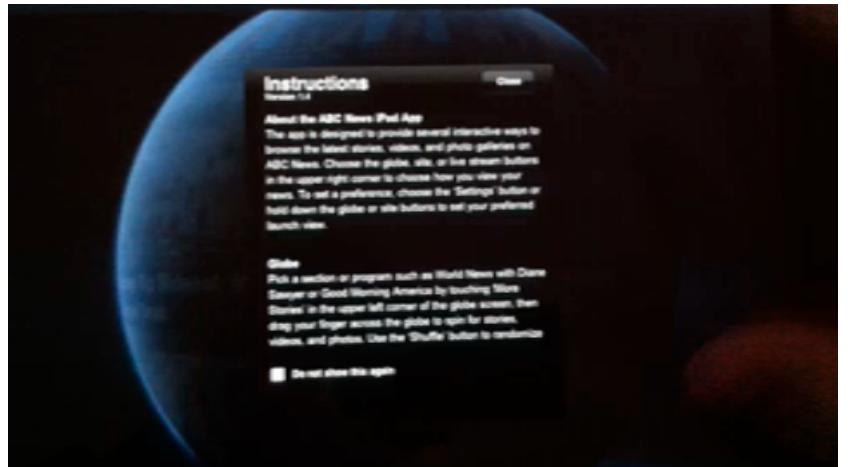


netflix. rate an object. KISS.



Beware of constructing artificial visual interfaces to support drag and drop

Anti-Pattern: Mismatched Metaphor



(Metaphors Gone Wild)

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

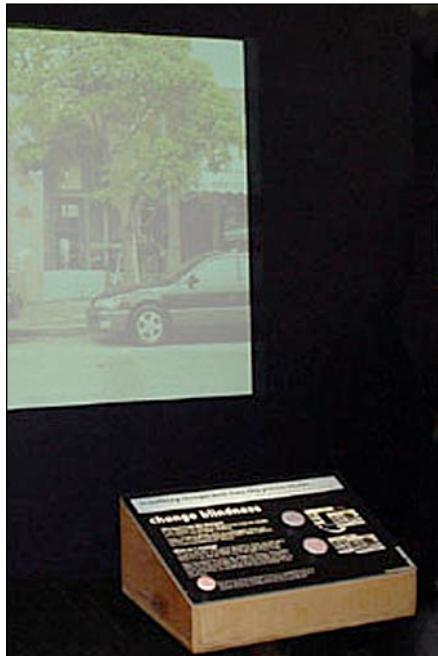
* Josh Clark's recommendation - Tapworthy

Physicality Across Platforms

	Input
Web	Pointer Indirect Fine-grained (pixel)
Tablet	Finger Direct Course-grained (finger)
Mobile	Finger Direct Course-grained (finger)
TV	Remote Control Indirect Course-grained (1 object at a time)



#2 Maintain Flow



Exploratorium Exhibit

Spot the differences



Now try again...

Change blindness



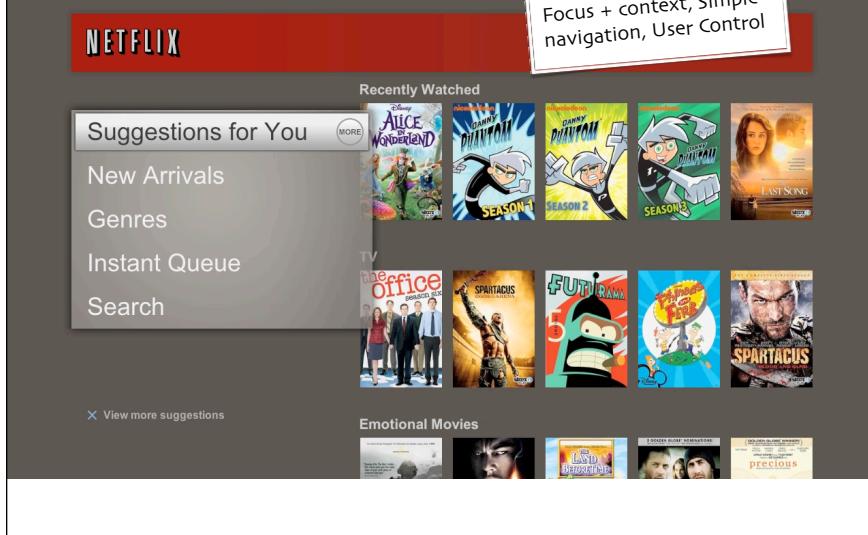
Change Blindness

The brain cannot see a change happening to an element that it has not yet stored - Wikipedia

In other words, it doesn't expect the world to be discontiguous.

**Reduce Page
Switching
to Maintain Flow**

“Special” Experience



NETFLIX

Recently Watched

Suggestions for You

New Arrivals

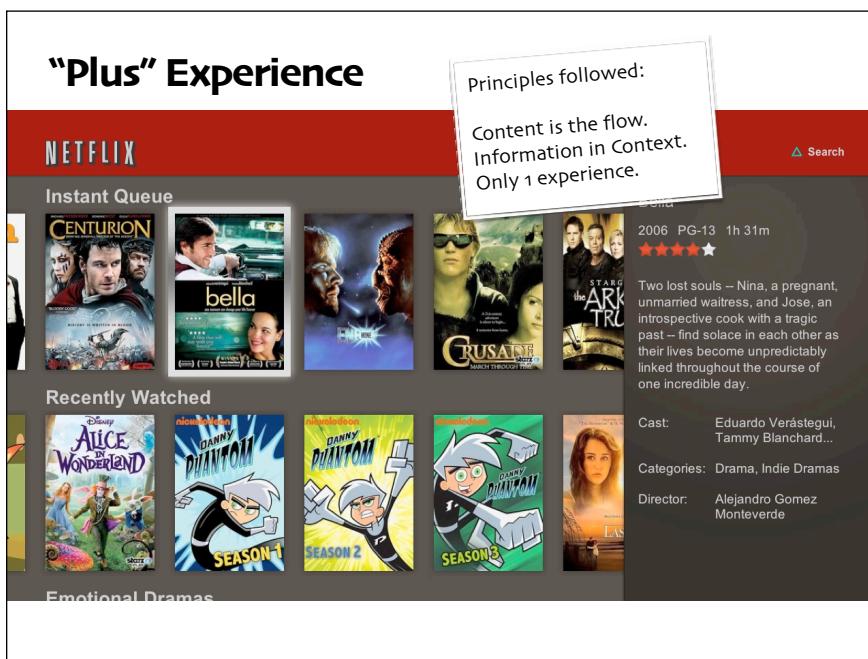
Genres

Instant Queue

Search

Principles followed:
Focus + context, Simple navigation, User Control

“Plus” Experience



NETFLIX

Instant Queue

Recently Watched

Emotional Dramas

Principles followed:
Content is the flow.
Information in Context.
Only 1 experience.

2004 PG-13 1h 31m
★★★★★

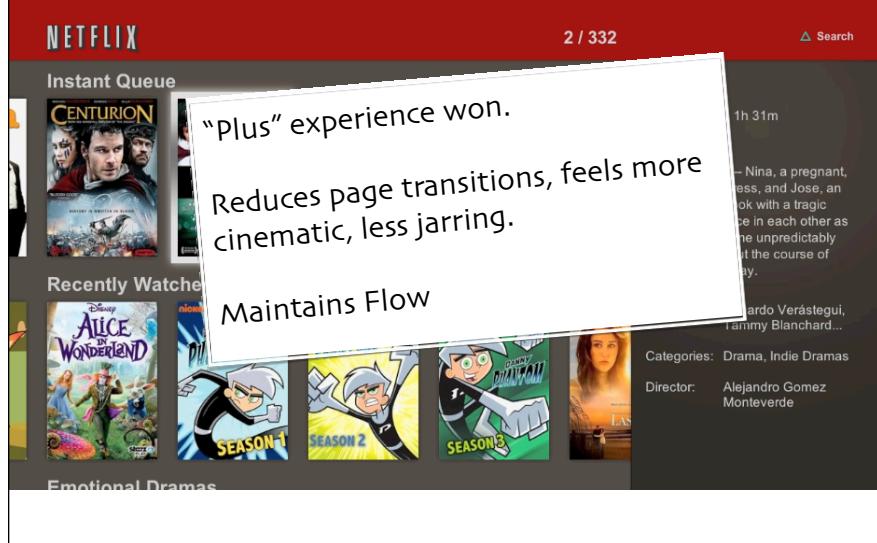
Two lost souls – Nina, a pregnant, unmarried waitress, and Jose, an introspective cook with a tragic past – find solace in each other as their lives become unpredictably linked throughout the course of one incredible day.

Cast: Eduardo Verástegui, Tammy Blanchard...

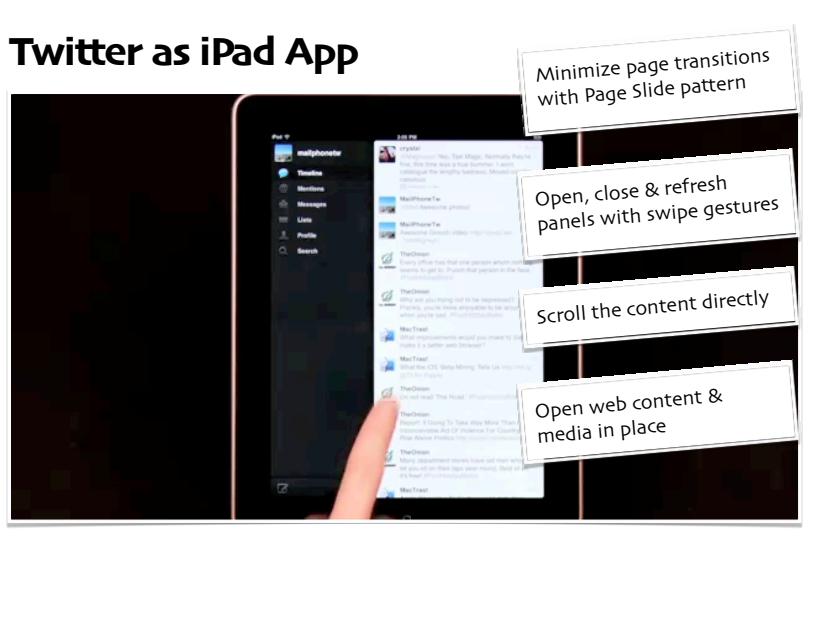
Categories: Drama, Indie Dramas

Director: Alejandro Gomez Monteverde

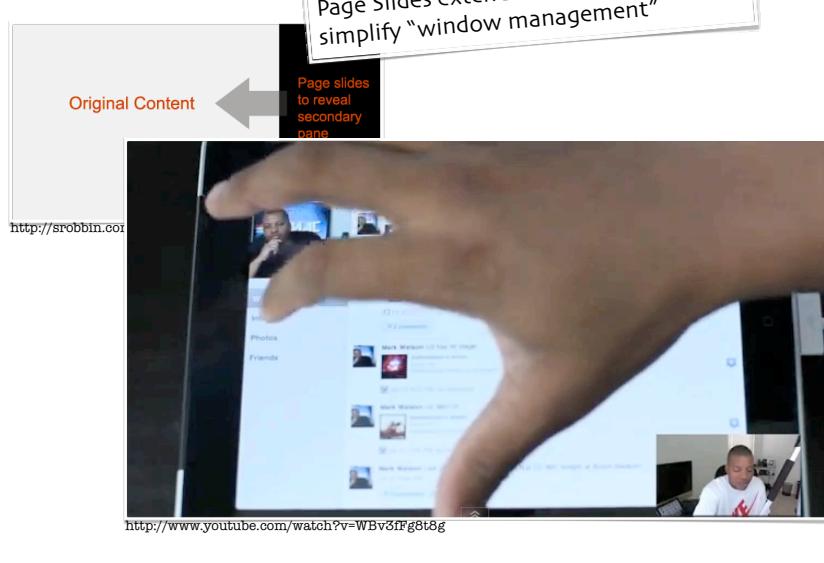
Which Won?



Twitter as iPad App



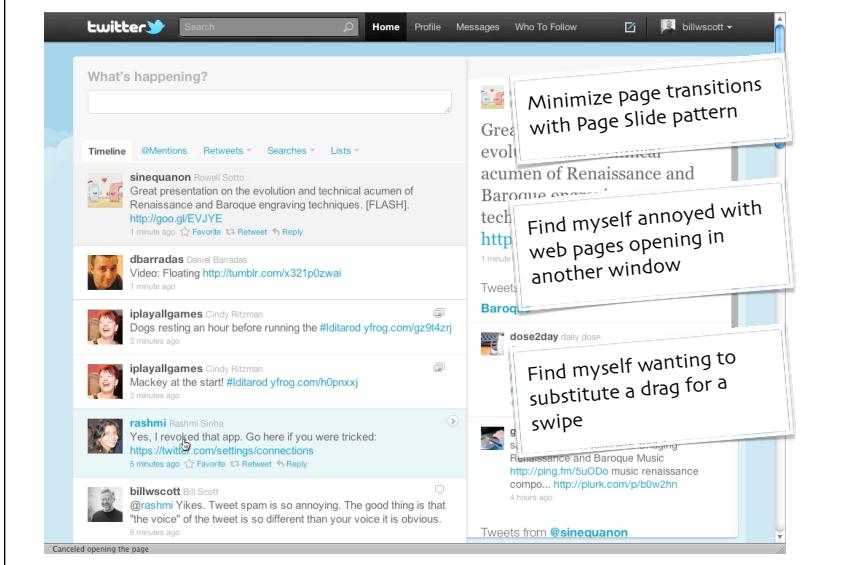
Page Slide



Twitter as Mac App



Twitter as Web App



The screenshot shows the Twitter web interface with several tweets listed. Overlaid on the tweets are several semi-transparent, rounded rectangular boxes, each containing a different tip or observation. One box at the top left says 'Minimize page transitions with Page Slide pattern'. Another box in the center says 'Find myself annoyed with web pages opening in another window'. A third box on the right says 'Find myself wanting to substitute a drag for a swipe'. These boxes are likely part of a user study or design critique.

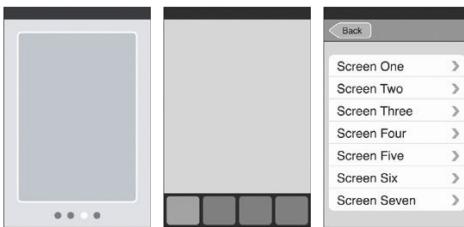
Vs Hover & Cover



The screenshot shows the Twitter web interface with a single tooltip box overlaid on a tweet. The tooltip box has a 'cover' effect, meaning it covers the underlying tweet content without obscuring the entire tweet card. Inside the tooltip box, the text reads 'Where possible replace annoying hover details with dedicated detail panes'. This is a comparison to the 'hover' effect seen in the previous screenshot, where multiple tooltip boxes overlap.

Keep Navigation Simple to Maintain Flow

Mobile Navigation



Three types of iPhone navigation: Flat, Tab, Tree
- Josh Clark (Tapworthy)



Gowalla: Tab + Flat
- Josh Clark (Tapworthy)

Source: Tapworthy by Josh Clark

Pulse & Flipboard iPad Apps



Maintaining Flow Across Platforms

	Navigation
Web	Page, Tab, Back Button
Mobile	Flat, Tab & Tree. 1 level back.
Tablet	Flat, Tab, Master/Detail. 1 level-back
TV	Flat, Tab, Tree, Master/Detail



#3 Be Responsive

**Use Transitions/
Animations
to Create
Responsiveness**



Animation Can... Be really, really annoying

TurboTax Deluxe

Personal Info Federal Taxes Federal Review State Taxes Print & File

Federal Tax Due: **\$10,533**
CA Tax Due: **\$4,973**

Enter Your Interest Paid to Some Lender
Deductible interest paid in 2008. See [qualifications and limitations](#).

(Box 1 on your 1098)

Federal Tax Due **\$10,533**
CA Tax Due **\$4,973**



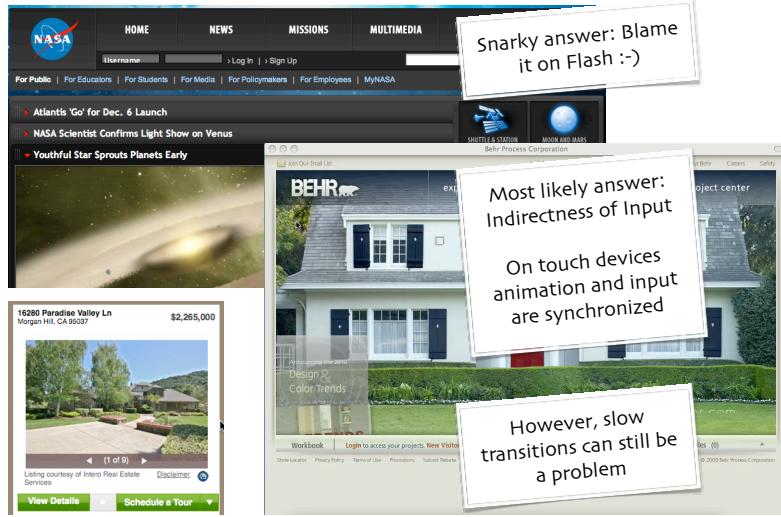
What can be done with less is done in vain with more.
- Occam

PREVIOUS WEIGHT

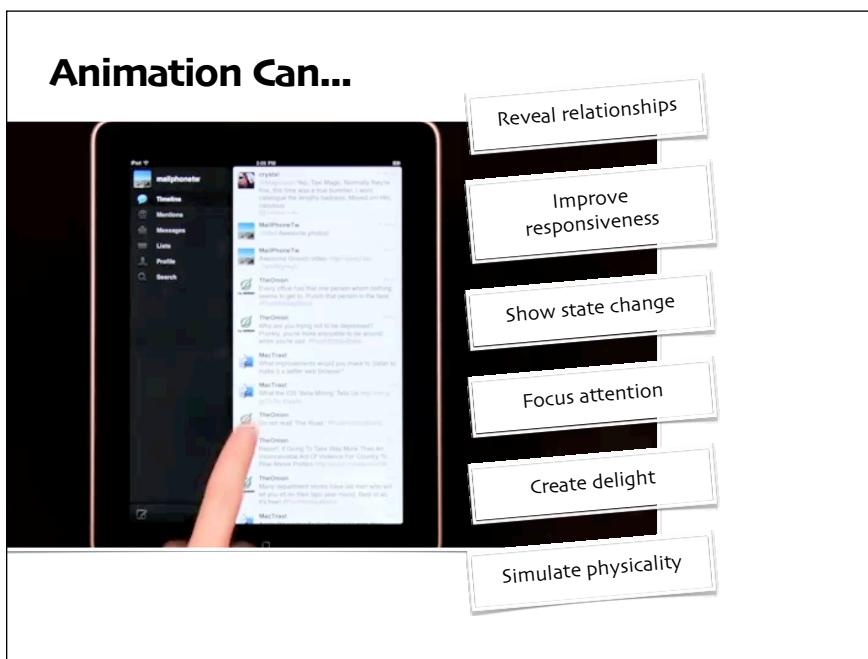
Make all visual distinctions as subtle as possible, but still clear and effective.
- Tufte "Smallest Effective Difference"

nbc.com

Web Apps Seem Prone to This

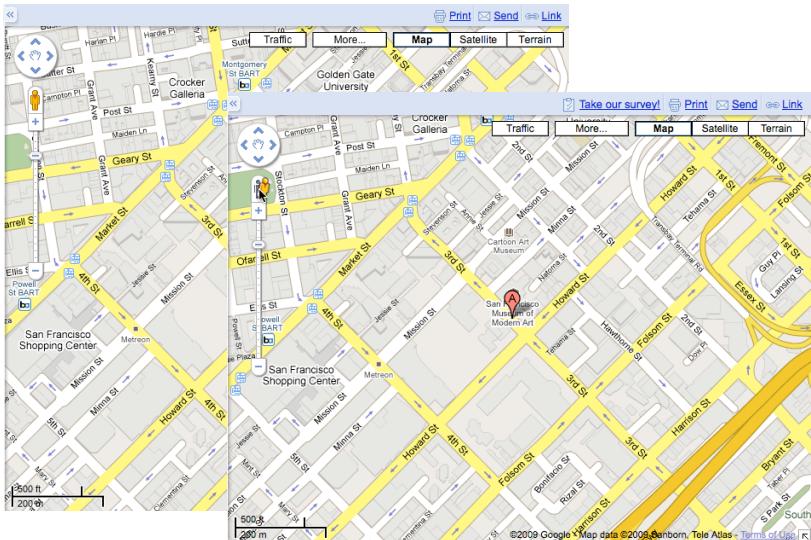


Animation Can...

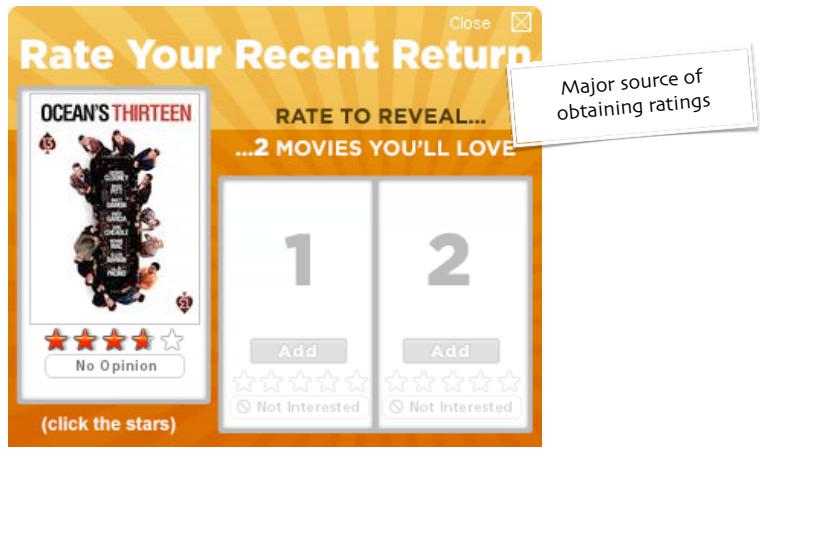


Use Invitations to Create Responsiveness

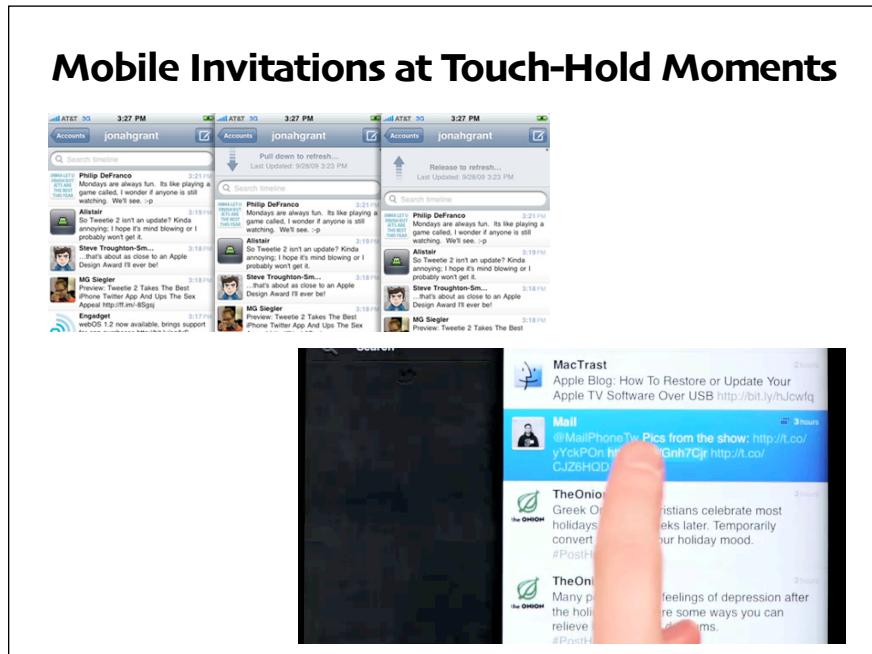
Just in Time Invitations at Drag Moments



Invitations at Reward Moments



Mobile Invitations at Touch-Hold Moments

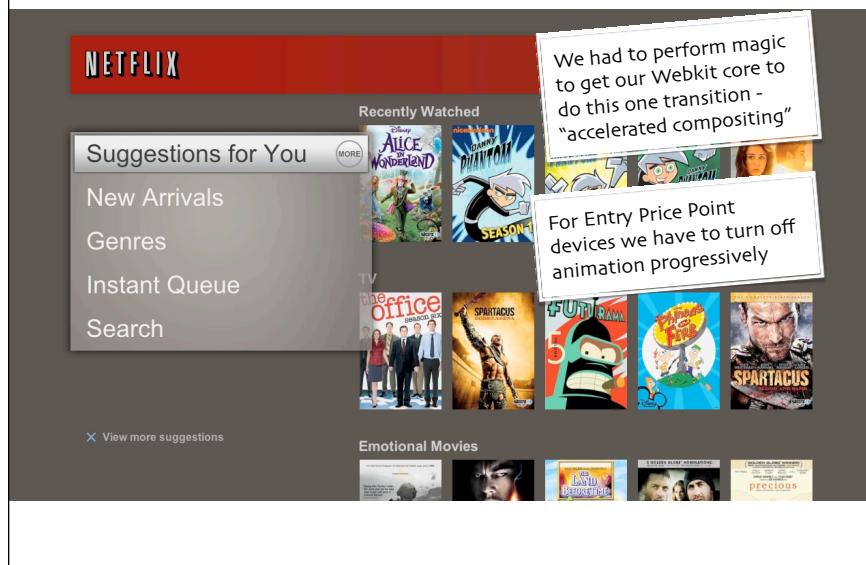


Content as an Invitation



Be Snappy
to
Be Responsive

Performance is Not Always a Given



Advances in HTML5

Scrollability, New iOS Physics Project from Facebook for iPhone Creator, Joe Hewitt

By Sarah Perez / May 20, 2011 6:58 AM / 6 Comments

[Tweet](#) 224 [Recommend](#) 8 [Hacker News](#) [Share & Save](#)

This post is part of our *ReadWriteMobile* channel, which is dedicated to helping its community understand the strategic business and technical implications of developing mobile applications. This channel is sponsored by *Alcatel-Lucent*. As you're exploring these resources, check out this helpful resource from our sponsors: *Cultivating a Developer Ecosystem: Understanding Their Needs*



Joe Hewitt, the creator of the Facebook iPhone app, Firebug, and former contributor to Mozilla's Firefox, announced earlier this month that he was leaving Facebook to go build "tools." What sorts of tools? Not just mobile tools, but "tools for writers, designers, programmers, whatever," he wrote on his personal [blog](#).

Since then, many developers have been eagerly anticipating the tools Hewitt will create. Today, we get to see what one of those is: [Scrollability](#), a script that brings native scrolling to mobile Web applications.

What's Scrollability?

According to the project's website, Scrollability is a single script, that's small, and with no external dependencies. You "drop it into your page, add a few CSS classes to scrollable elements, and scroll away," the site explains.

Arnulfo Heriberto Hao
Elbert Murray Heartsill

Responsiveness Across platforms

	Input
Web	Pointer Indirect
Tablet/ Mobile	Fingers Direct
TV	Remote Indirect

TV Experiences...

The screenshot shows the Netflix mobile application interface. At the top, there is a red header bar with the Netflix logo on the left and a search icon on the right. The text "2 / 332" is displayed in the center of the header. Below the header, the main content area is divided into sections. On the left, there is a "Instant Queue" section showing thumbnails for several movies: "CENTURION", "bella", "BIRK", "CRUSADE", and "STARGATE: THE ARK OF TRUTH". To the right of this, a movie detail page is displayed for the film "Bella". The title "Bella" is at the top, followed by the release year "2006", rating "PG-13", runtime "1h 31m", and a 4-star rating. A summary text describes the plot: "Two lost souls – Nina, a pregnant, unmarried waitress, and Jose, an introspective cook with a tragic past – find solace in each other as their lives become unpredictably linked throughout the course of one incredible day." Below the summary, there is a "Cast" section listing "Eduardo Verástegui, Tammy Blanchard..." and a "Categories" section listing "Drama, Indie Dramas". At the bottom of the detail page, there is a "Director" section listing "Alejandro Gomez Monteverde". At the very bottom of the screen, there is a dark footer bar with the text "Emotional Dramas".

NETFLIX

Bill Scott | Your Account & Help

Watch Instantly | Browse DVDs | Your Queue | Suggestions For You

Genres | New Arrivals | Starz Play | Instantly to your TV

You recently watched:

- Danny Phantom: Ssn 2: Reality Tr ... ★★★★★
- Heroes: Ssn 1: Homecoming ★★★★★
- Alice in Wonderland ★★★★★

Play Next | Resume | 2m 43m

Resume | 0m 108m

Bill, rate what you've seen to reveal suggestions just for you

Rate Heroes: Season 1 ★★★★★ Haven't Seen It

Suggestion 1 | Suggestion 2 | Suggestion 3

Suspenseful Conspiracy Action & Adventure

See all >

Your taste preferences created this row.

Suspenseful Action & Adventure

As well as your interest in...

24: Season 2 | Chain Reaction | Westbound | Boxer's Adventure

Can Influence Website Experience >

Presentation
billwscott.com/share/presentations/2011/aol

Blogs
<http://looksgoodworkswell.com>
<http://designingwebinterfaces.com>

Follow me on twitter!
@billwscott

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<http://designingwebinterfaces.com>

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<http://oreil.ly/dwivideo>

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<http://www.flickr.com/photos/miradesunaficionad/4519236888/sizes/z/>
<http://www.flickr.com/photos/zetson/>
<http://www.flickr.com/photos/spencereholaway/1411877351/in/photostream/>
<http://creativecommons.org/ns>