



Designing for Mice & Men*

Bill Scott, Netflix

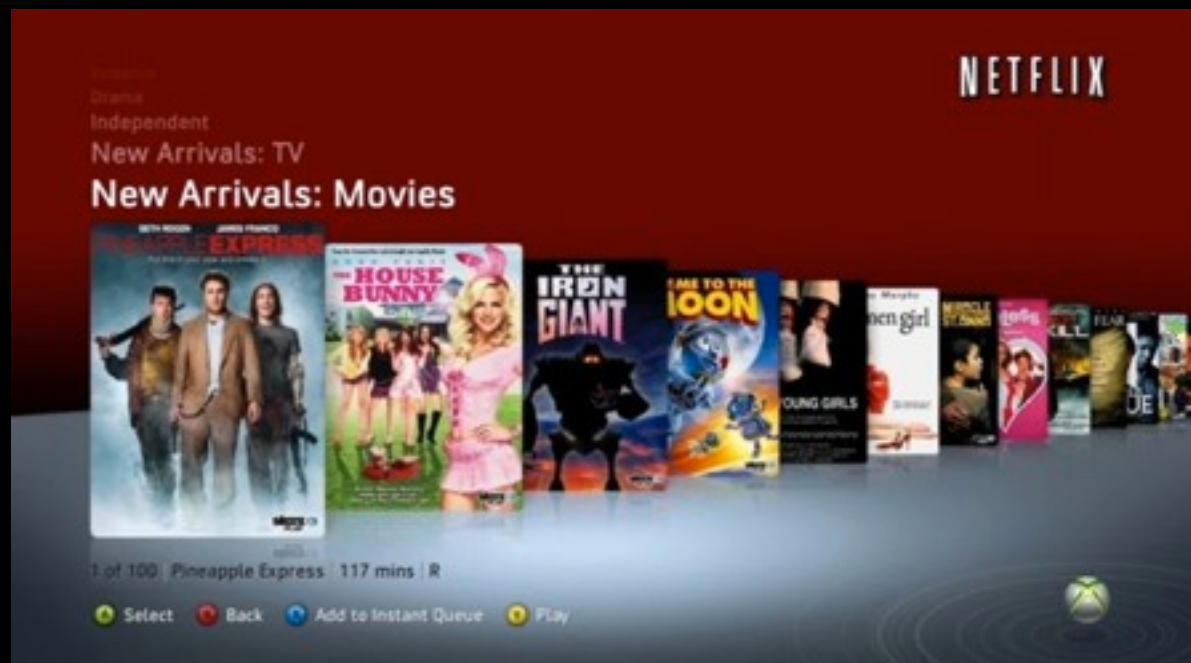
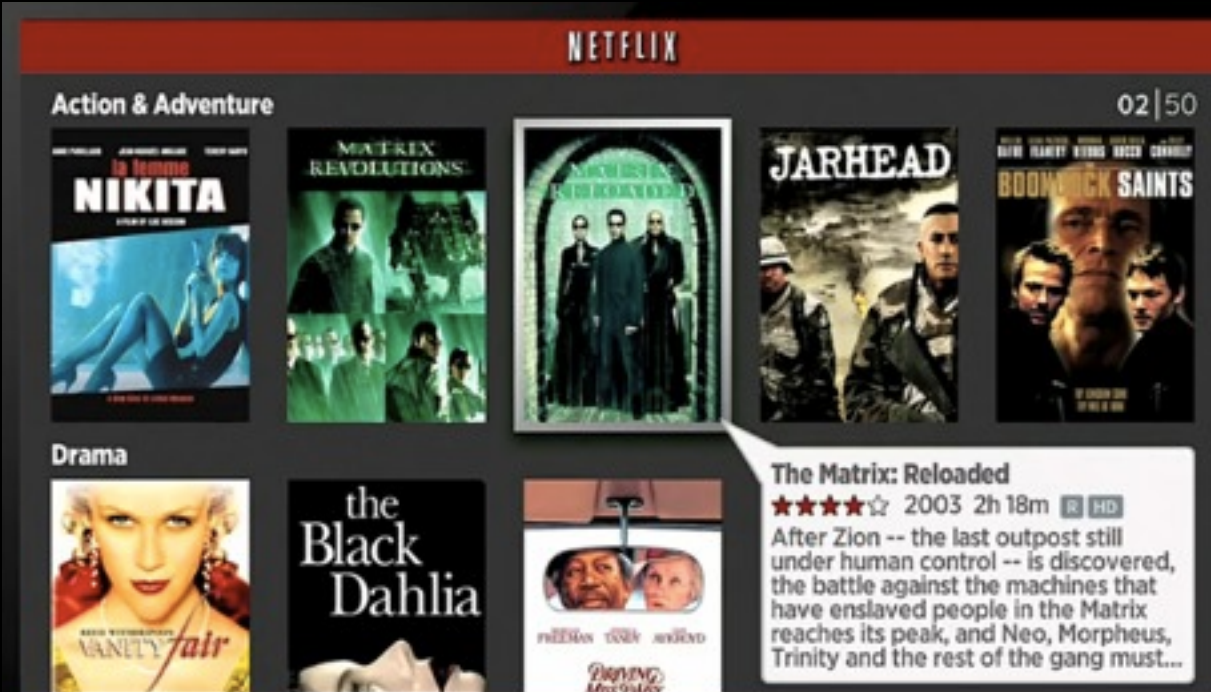


Designing for Mice & Men*

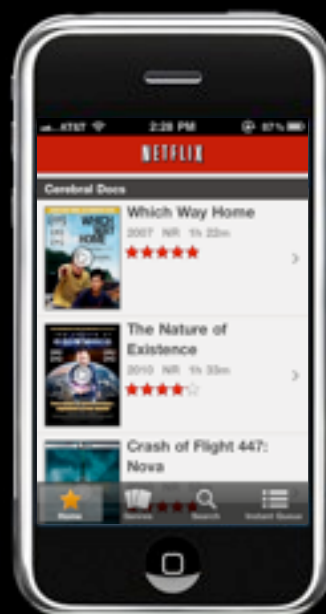
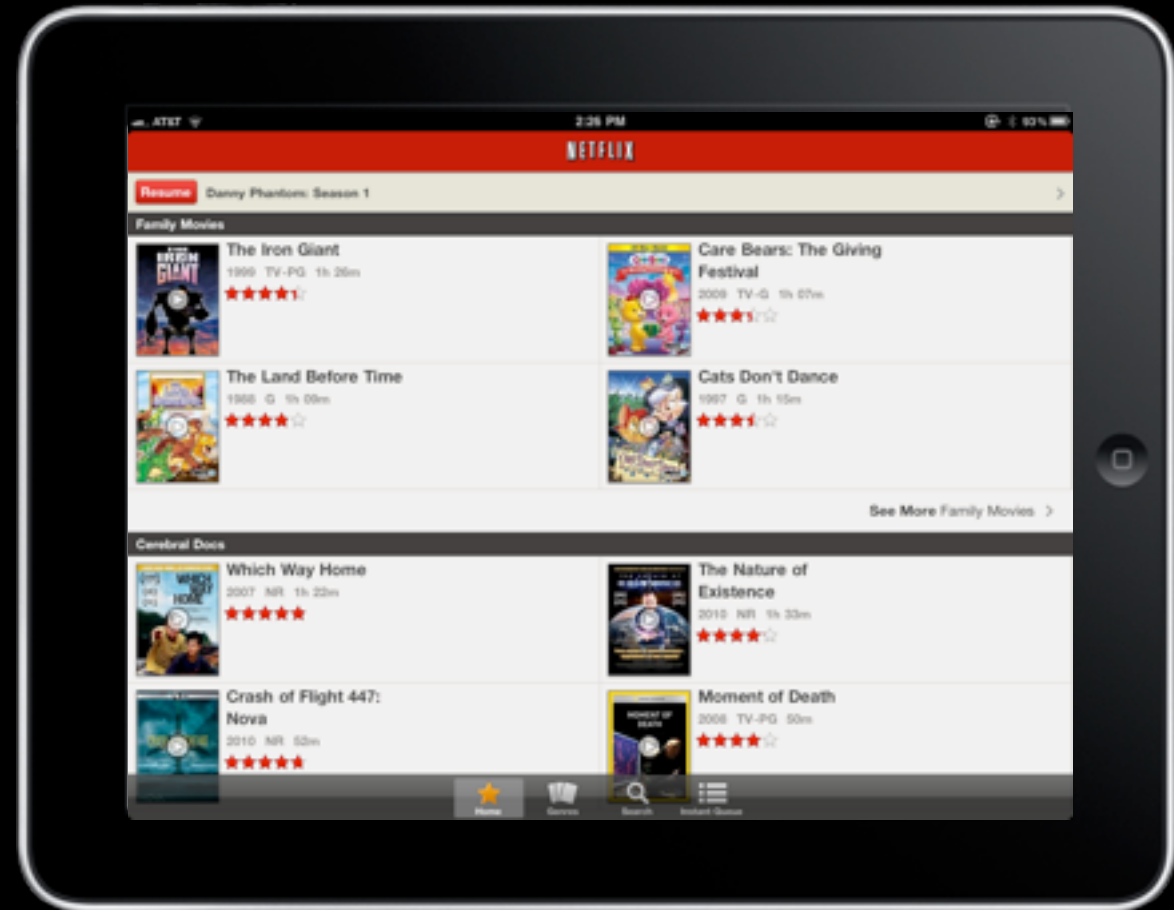
***and women too!**

Bill Scott, Netflix

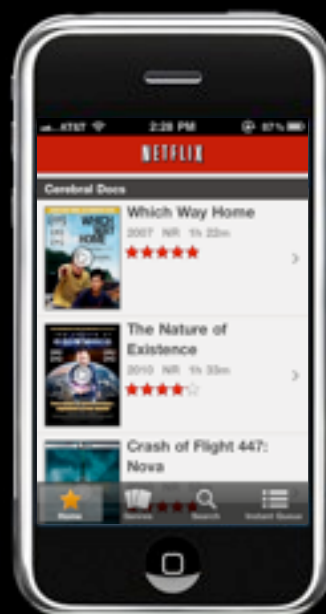
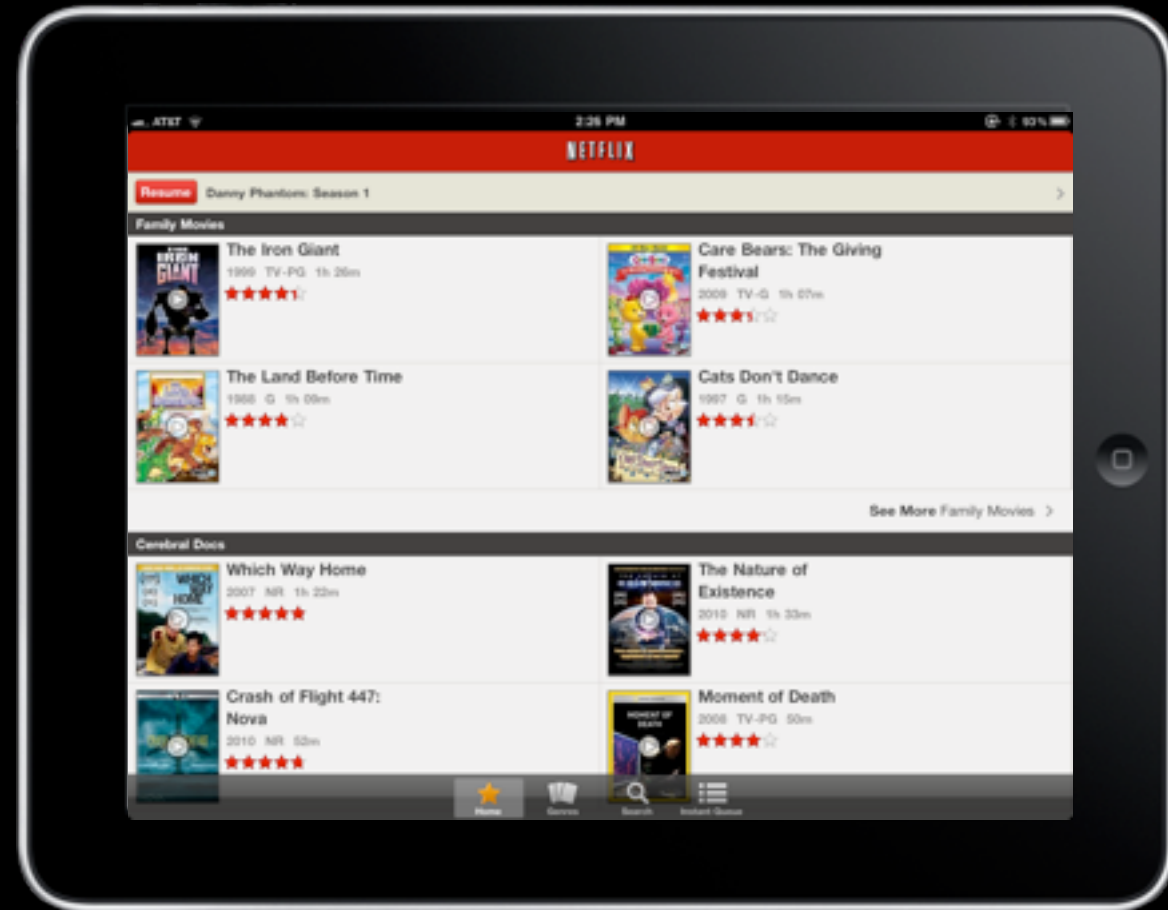
Current Experience Chaos (400 SKUs)



Netflix "Owned" Experience Across Devices



Netflix Across Devices (in-house products)



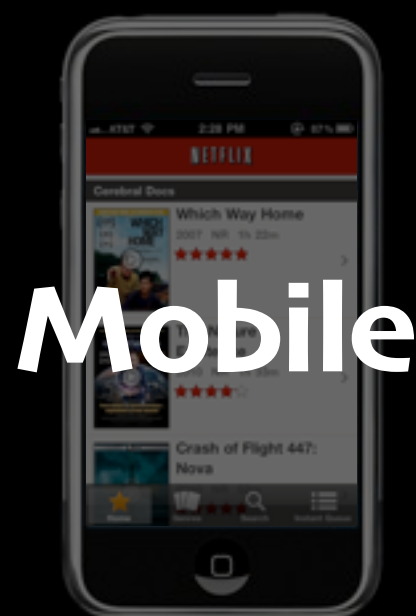
Netflix Across Devices (in-house products)



Web



Tablet

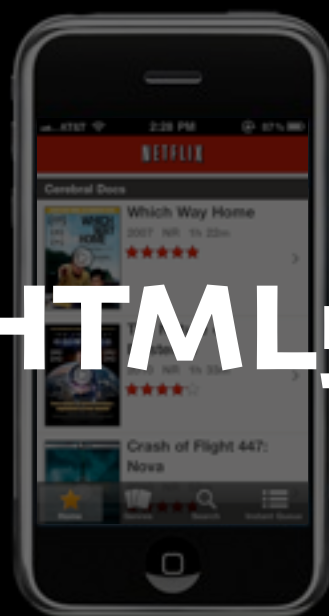
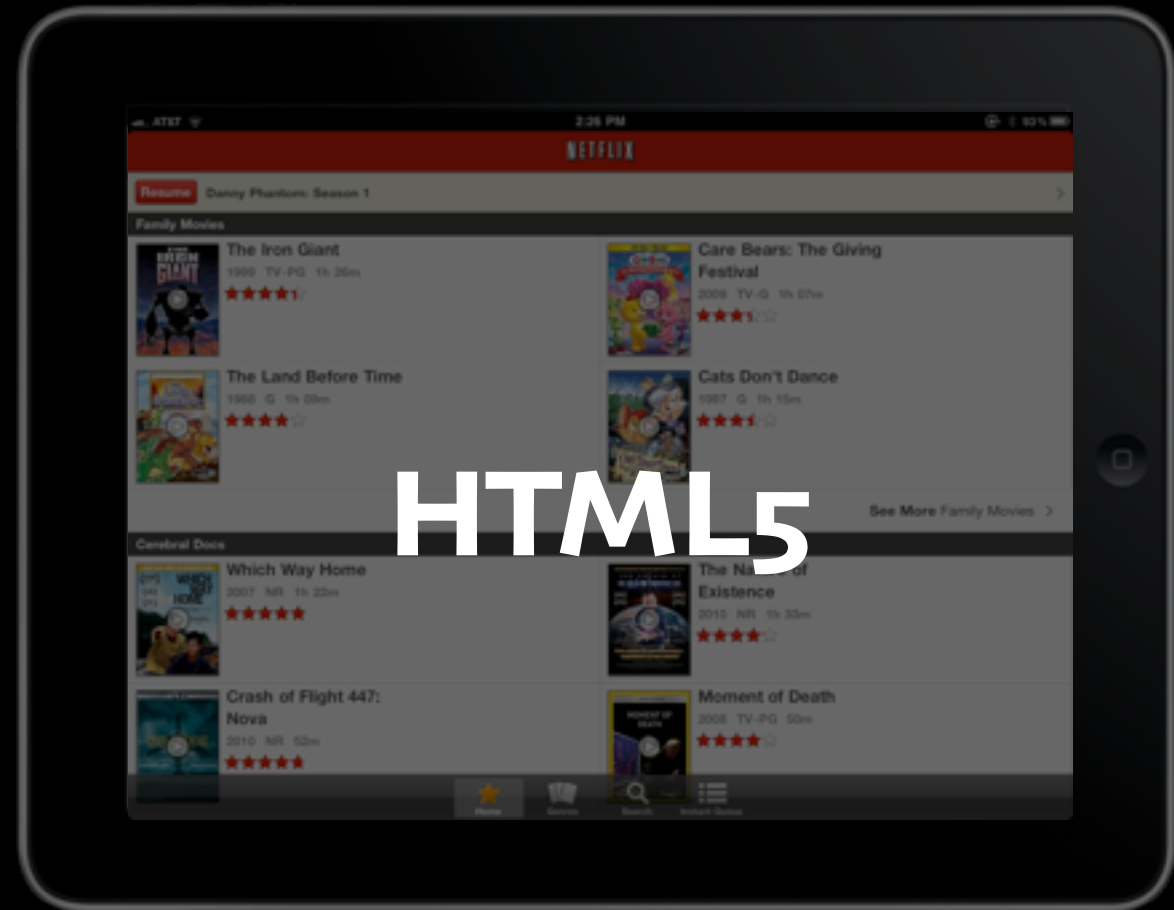


Mobile



TV

Netflix Across Devices (in-house products)



Common Platform Across Devices



Why do we want to own the experience?

Why do we want to own the experience?

We are known for valuing UX -- can't do it if you don't own it

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We love server-driven, testable, dynamic UIs

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We value "Learn Fast/Fail Quickly"

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The reality is any other path is chaos

Initial HTML5 Experience: PS3 - "Special"

NETFLIX

Recently Watched

Suggestions for You

MORE

New Arrivals

Genres

Instant Queue

Search

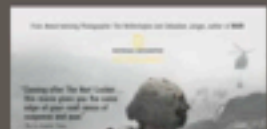


TV



✕ View more suggestions

Emotional Movies



Alternate HTML5 Experience: PS3 - "Plus"

NETFLIX

2 / 332

Search

Instant Queue



Bella

2006 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

Recently Watched



Emotional Dramas

Designing Across Platforms

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We chose a portability layer (html5, css3, JS)

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Designing Across Platforms

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We design for user posture, input capabilities, navigation styles and display capabilities

Try to embrace the constraints (design for mobile first!)

Designing for *Mice & Men*

Designing for Mice & Men



Web

Input

Indirect.

Pointer/keyboard

Navigation

Controls & windows

Posture

Stationary

Working

Display

Hi-Rez

Large,

Near

Designing for Mice & Men



Web

Input
Indirect.
Pointer/keyboard

Navigation
Controls & windows

Posture
Stationary
Working

Display
Hi-Rez
Large,
Near



TV
10' UI

Input
Indirect.
LRUD/OSK

Navigation
Panes

Posture
Lean Back
Relaxing

Display
Hi-Rez
Large
Far-away

Designing for Mice & Men



Web

Input
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TV
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Display
Hi-Rez
Large
Far-away



Mobile

Input
Direct.
Gesture/OSK

Navigation
Panes

Posture
On-the-go
In Hand

Display
Hi-Rez
Small
Near

Designing for Mice & Men



Web

Input
Indirect.
Pointer/keyboard

Navigation
Controls & windows

Posture
Stationary
Working

Display
Hi-Rez
Large,
Near



TV
10' UI

Input
Indirect.
LRUD/OSK

Navigation
Panes

Posture
Lean Back
Relaxing

Display
Hi-Rez
Large
Far-away



Mobile

Input
Direct.
Gesture/OSK

Navigation
Panes

Posture
On-the-go
In Hand

Display
Hi-Rez
Small
Near



Tablet

Input
Direct.
Gesture/OSK

Navigation
Panes & Slideouts

Posture
On-the-go
Lean back
Shared

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

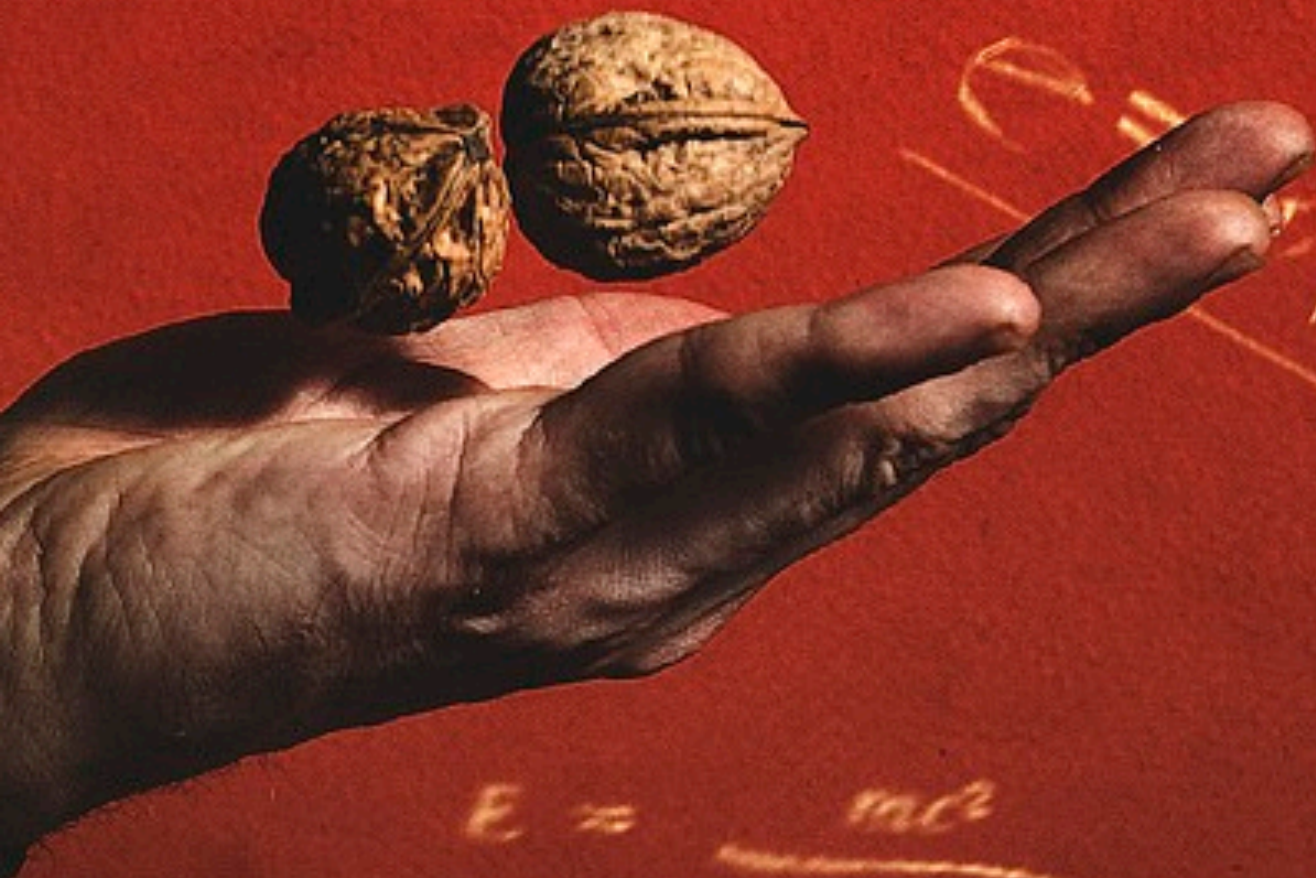
- **input**
- **posture**
- **navigation**
- **display**

Three Principles

Three Principles

common design principles for
multiple platform design

#1 Get Physical



The Illusion of Physicality



The Illusion of Physicality



+



Design for Physicality

Design for Physicality

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

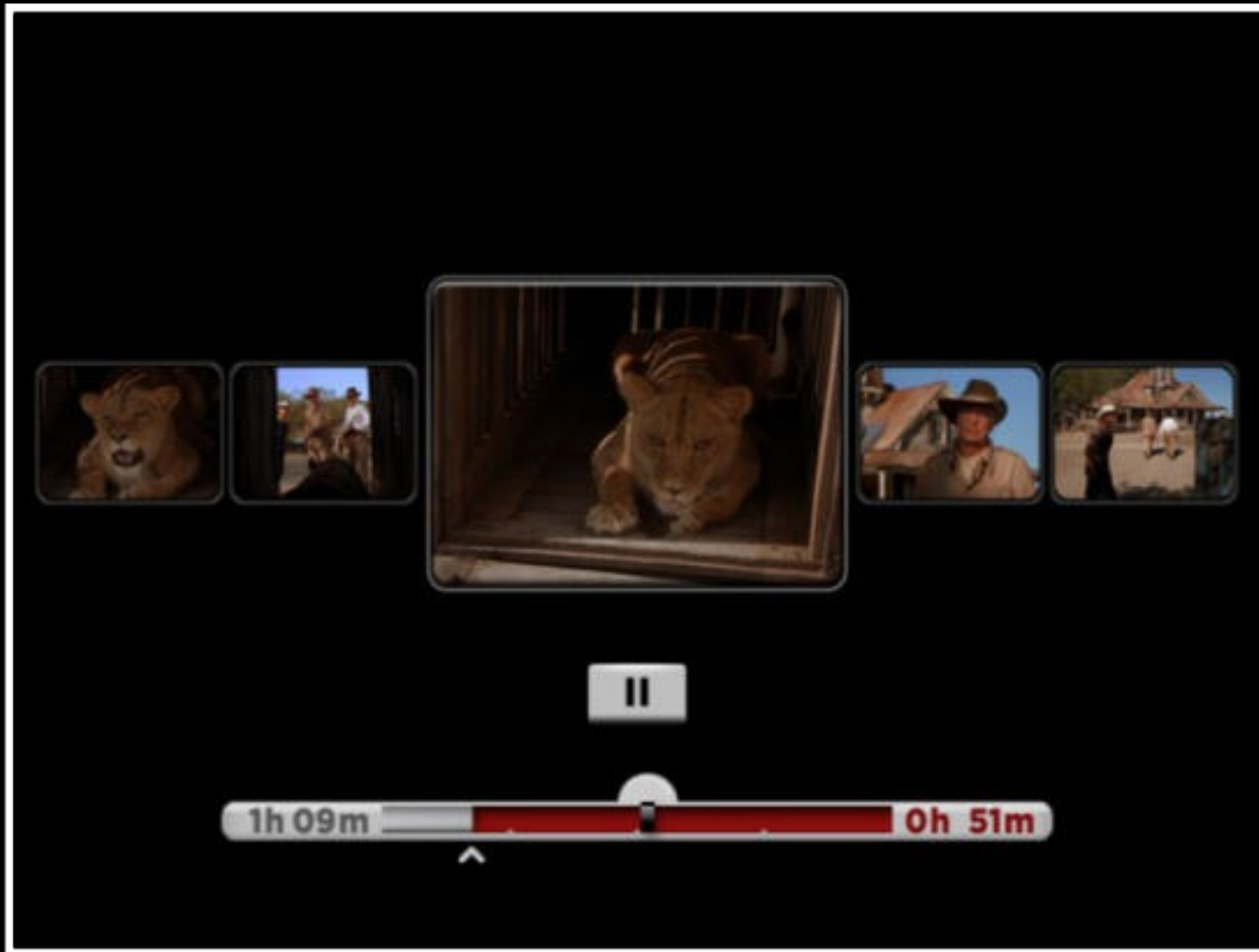
Design for Physicality

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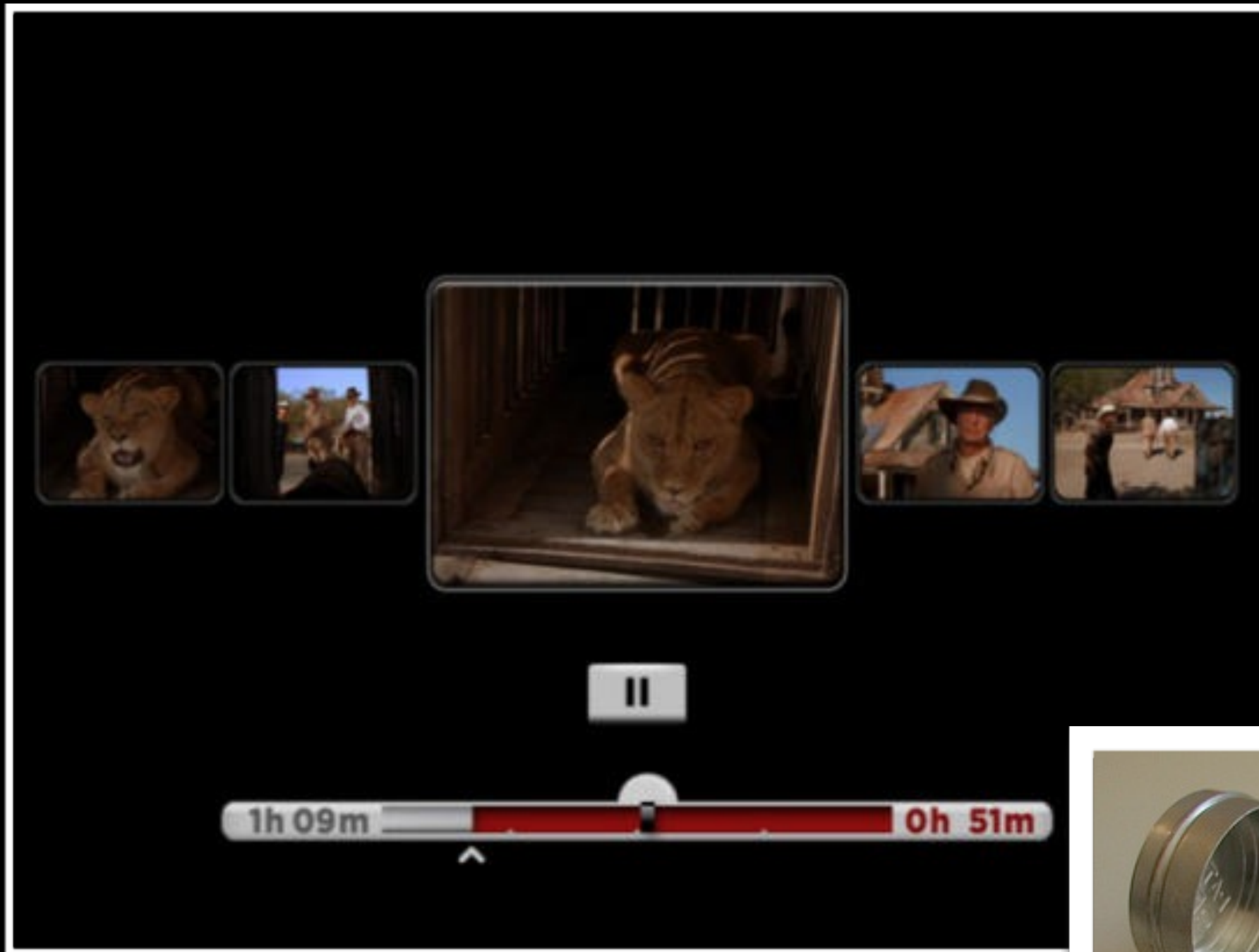
- Apple HIG

Use Metaphors
to Embody
Physicality

Physicality as Metaphor



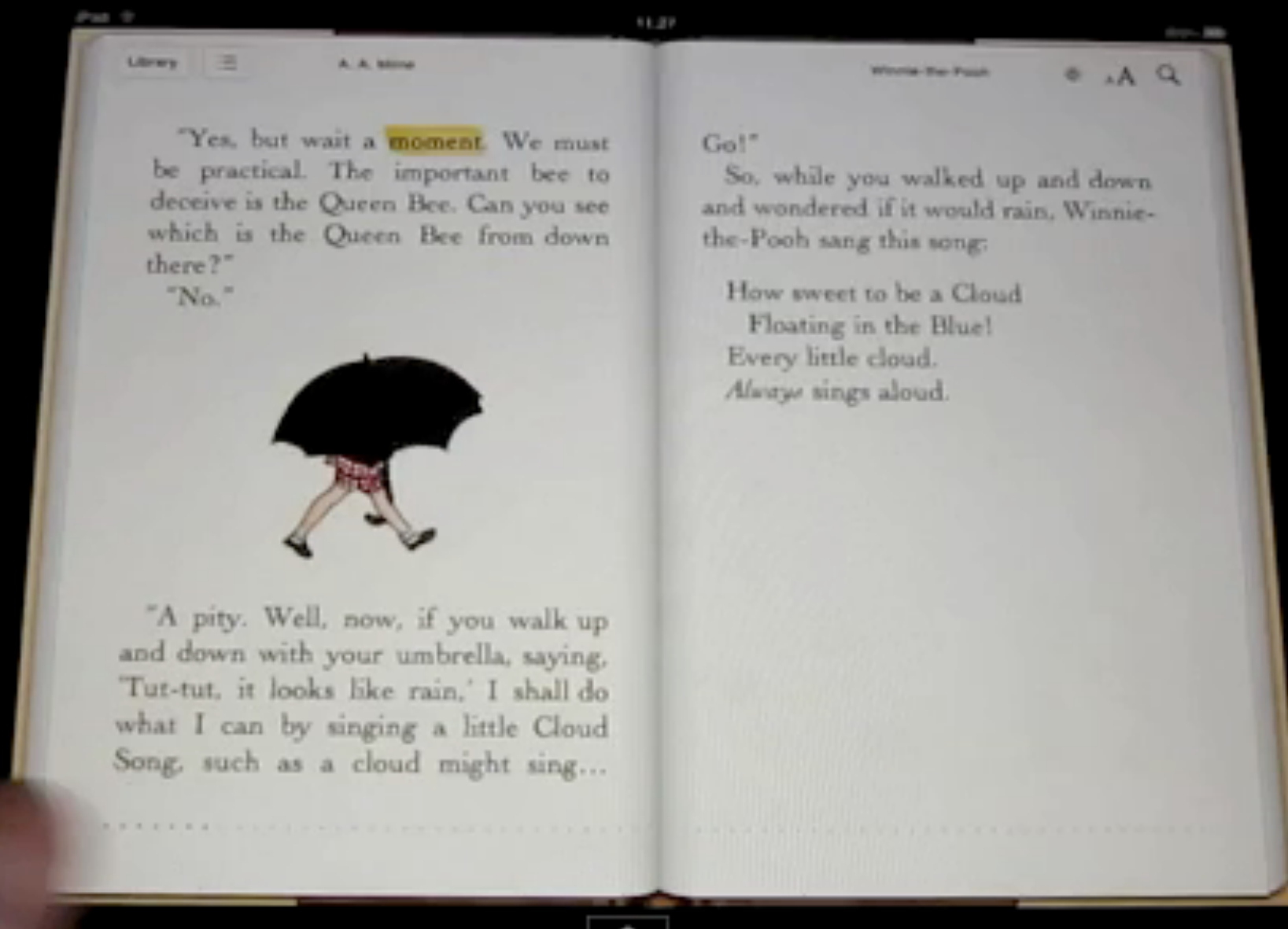
Physicality as Metaphor



Film Strip

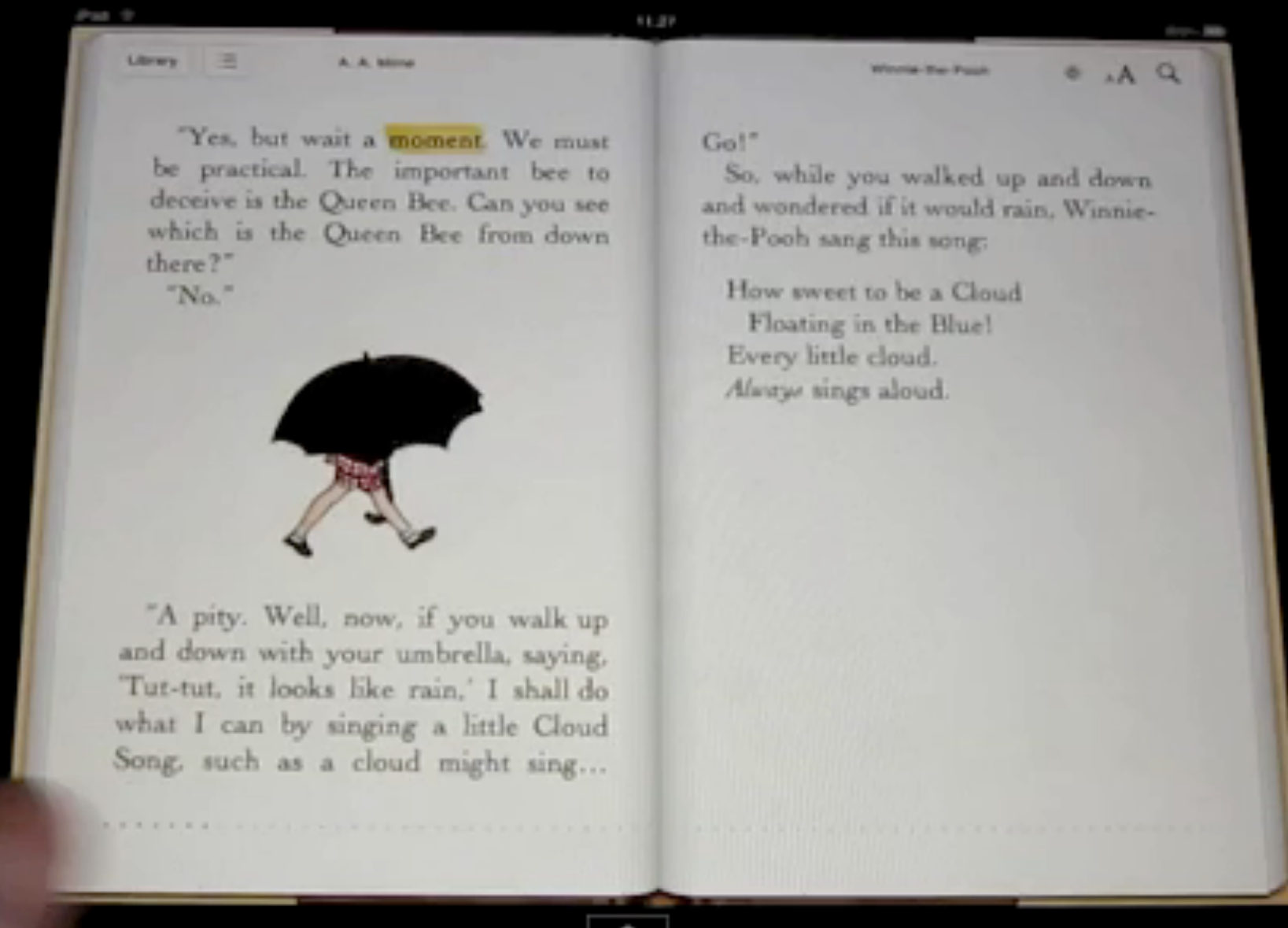


Physicality as Metaphor



Book

Physicality as Metaphor

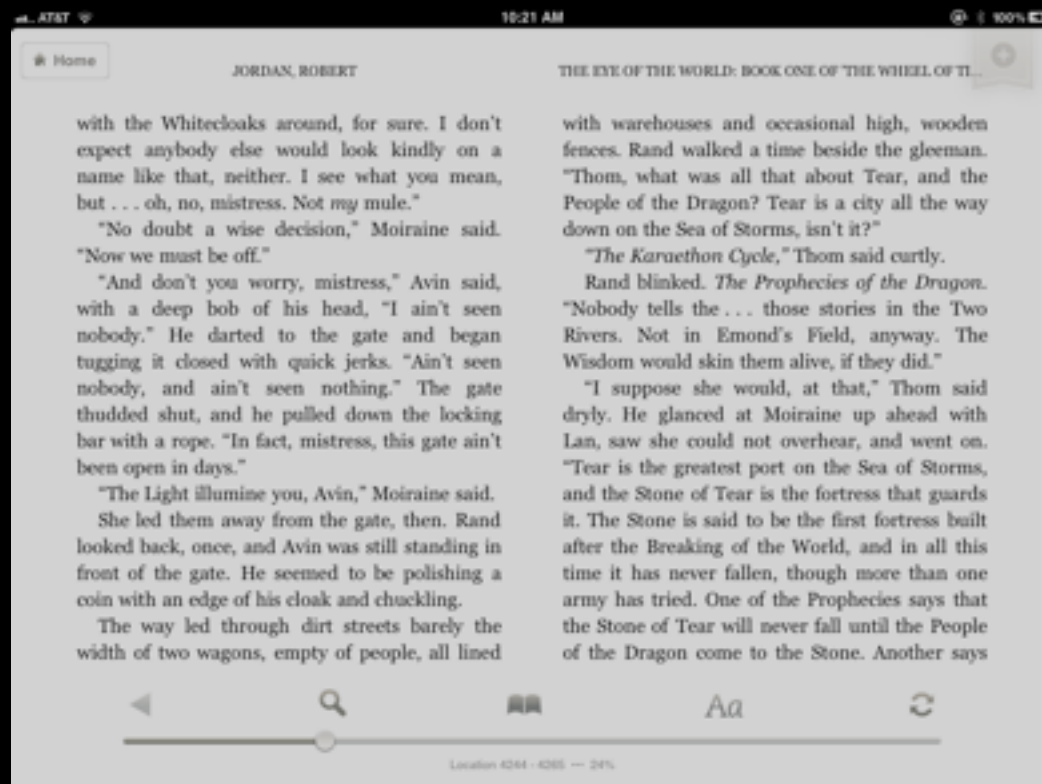


Book

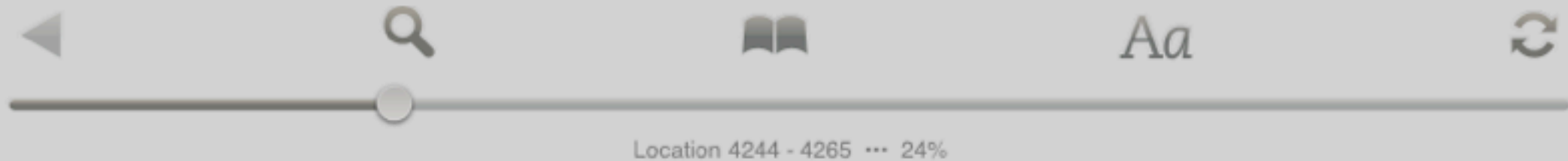
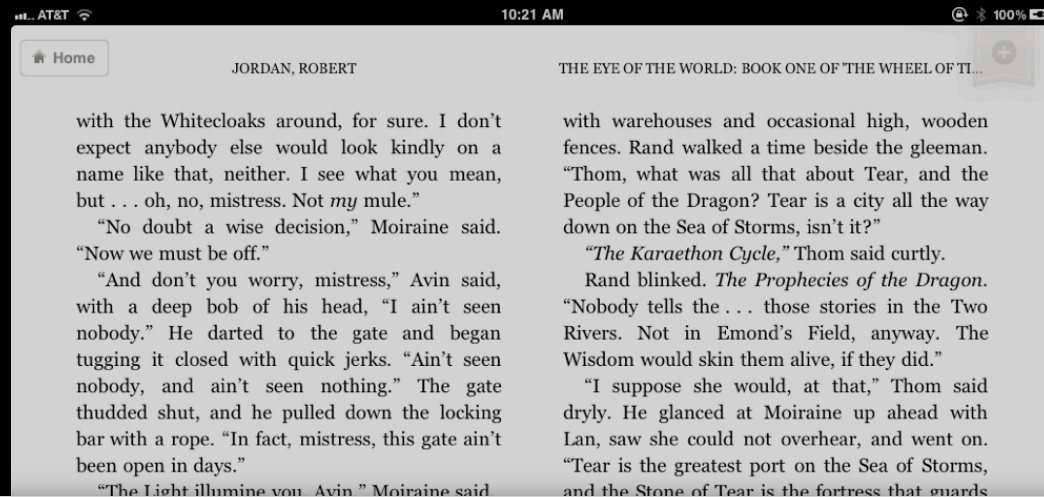
"Books have pages"

"Pages turn"

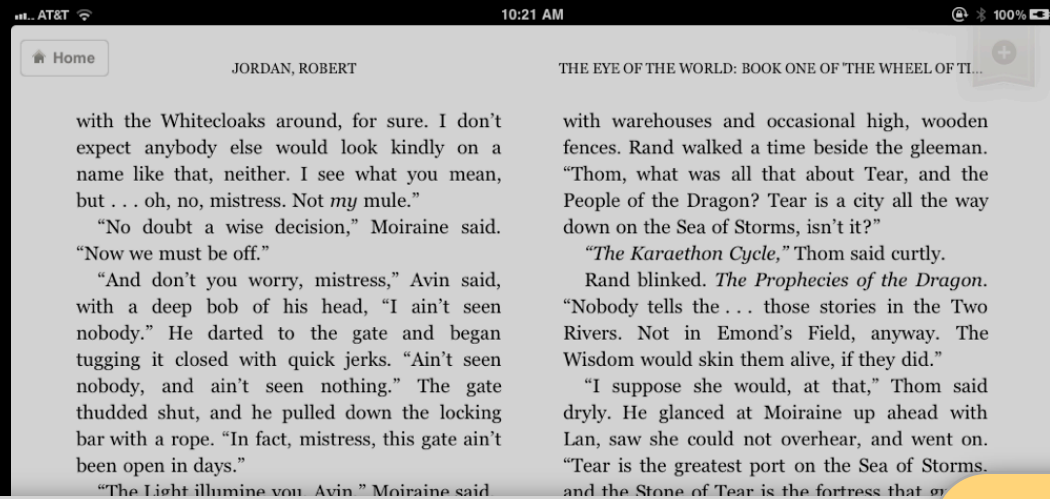
Anti-Pattern: Broken Metaphor



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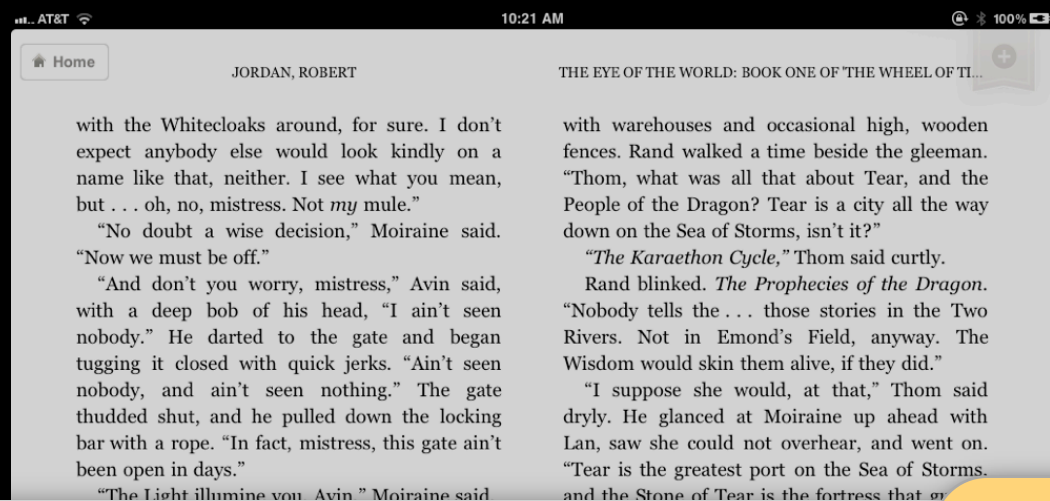
Anti-Pattern: Broken Metaphor



Location??

Location 4244 - 4265 ... 24%

Anti-Pattern: Broken Metaphor

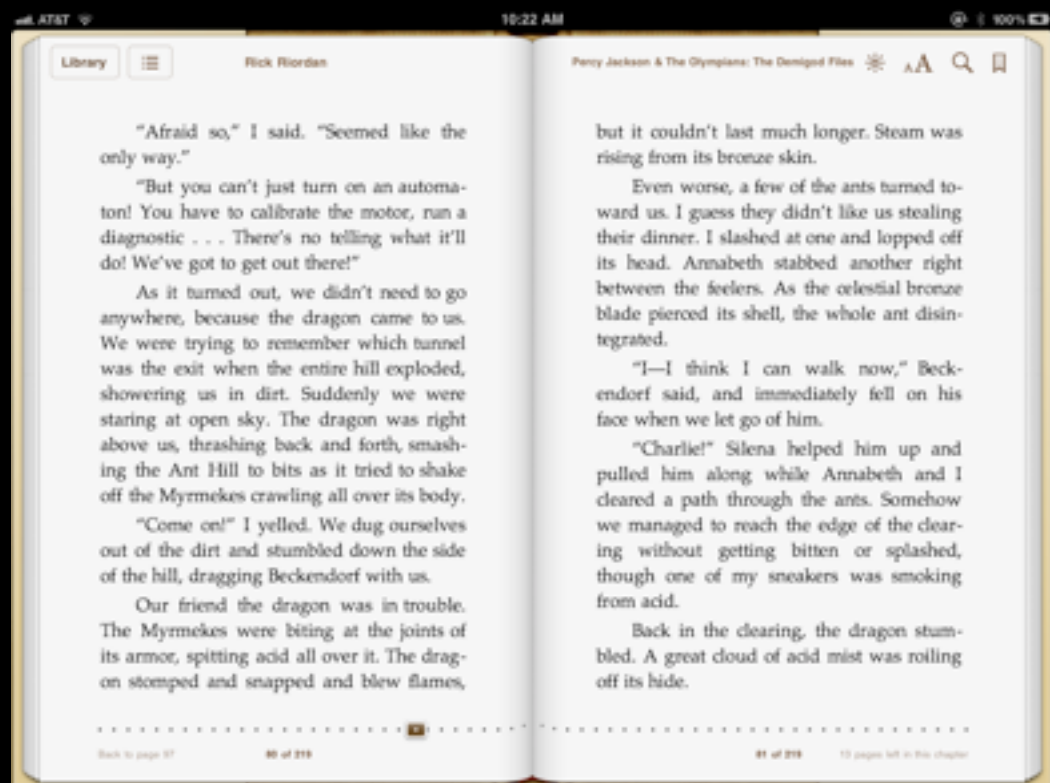


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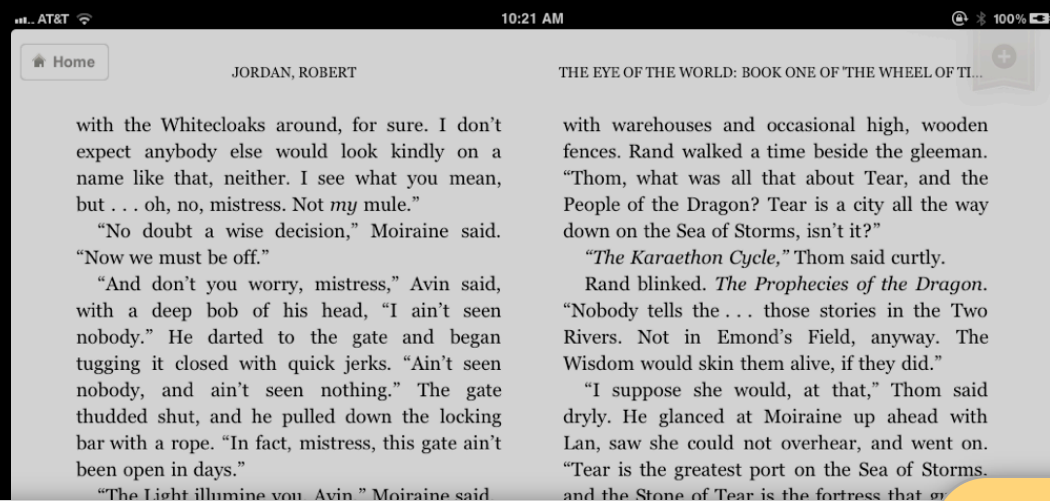
Aa



Location 4244 - 4265 ... 24%



Anti-Pattern: Broken Metaphor

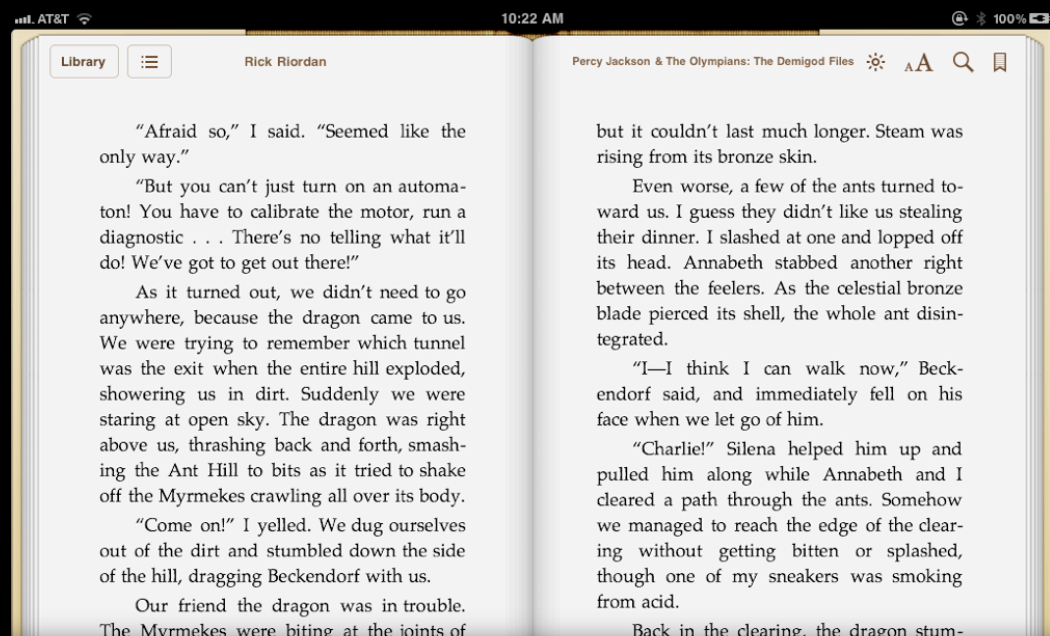


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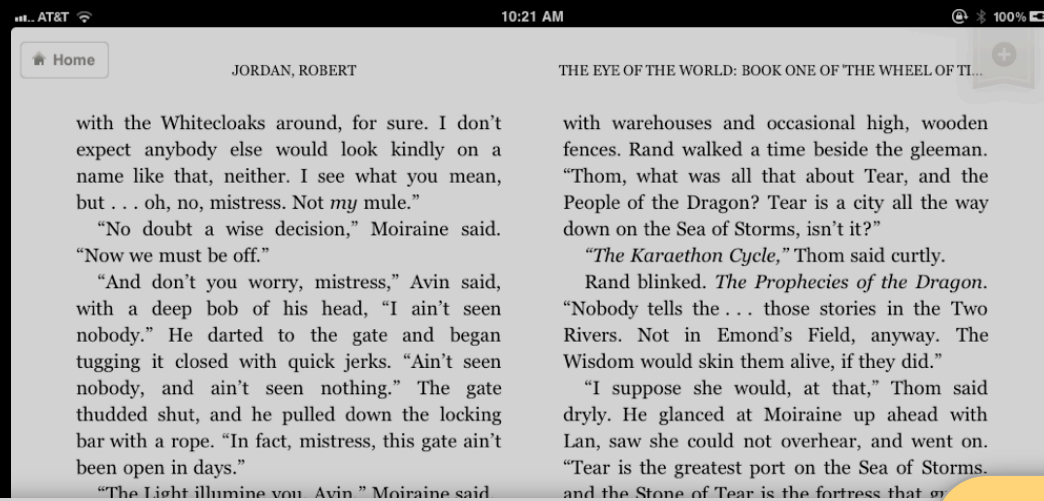
Back to page 97

80 of 219

81 of 219

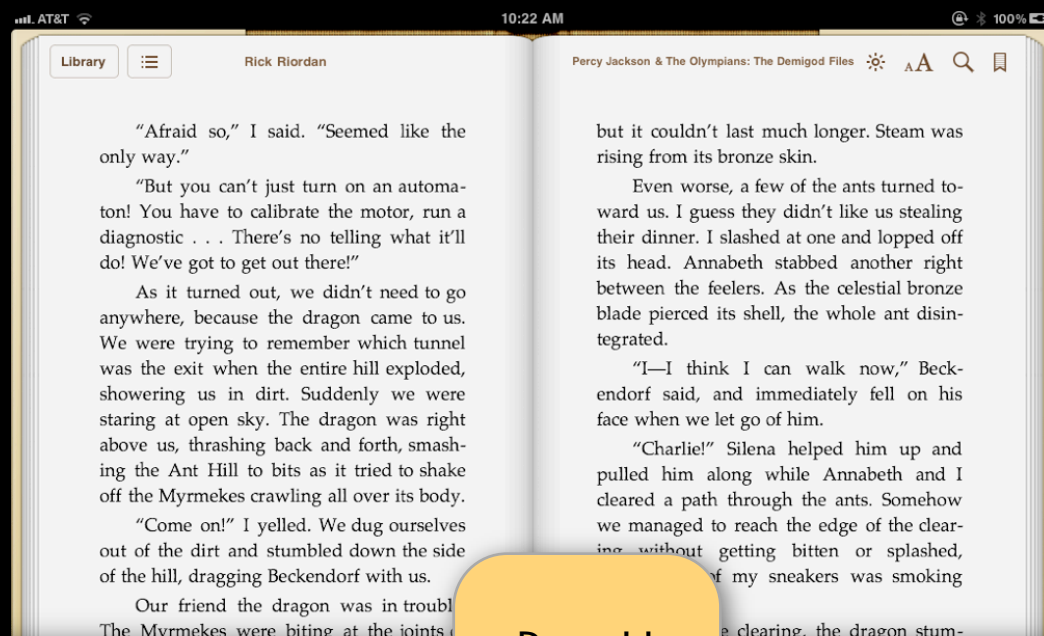
13 pages left in this chapter

Anti-Pattern: Broken Metaphor



Location??

Location 4244 - 4265 ... 24%



Page!!

"Books have pages"

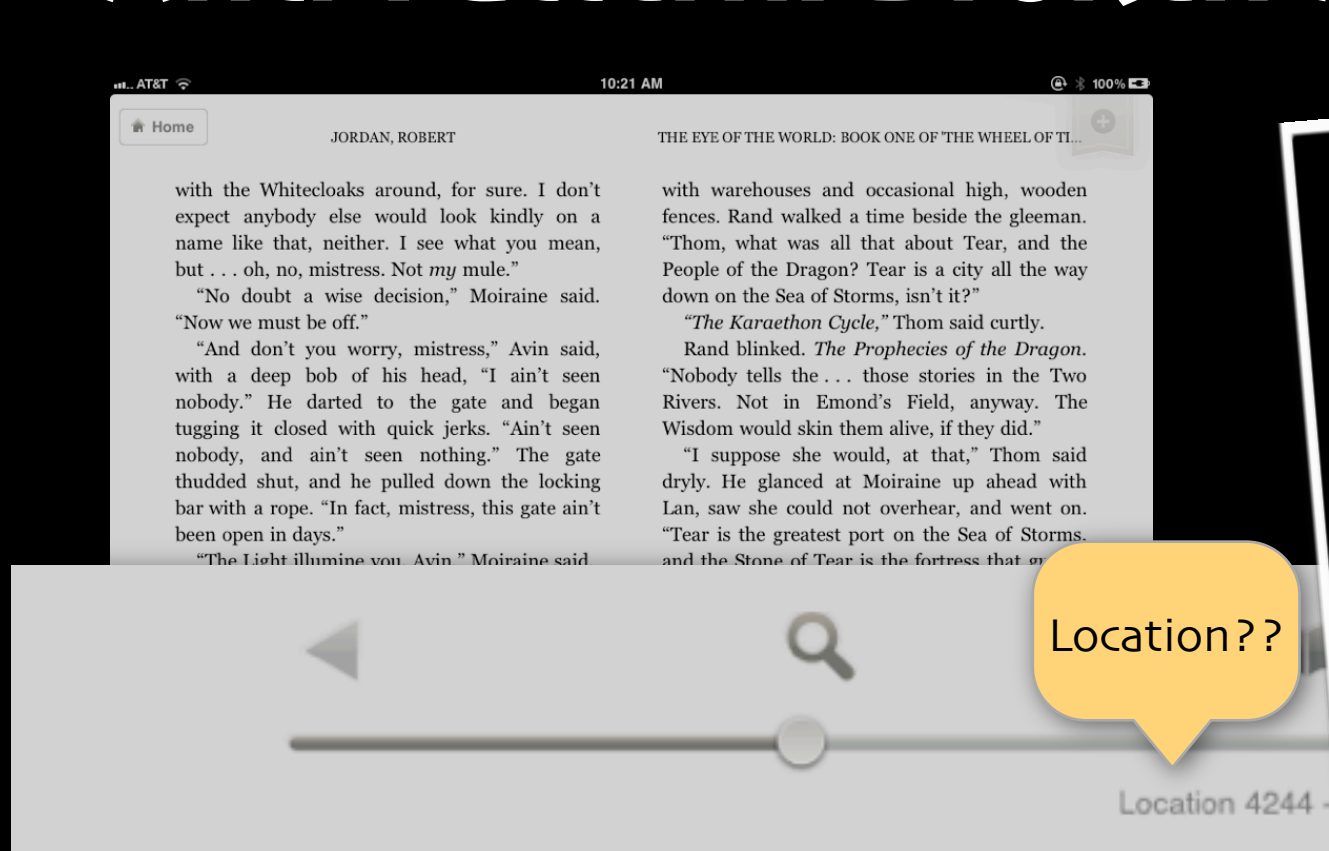
Back to page 97

80 of 219

81 of 219

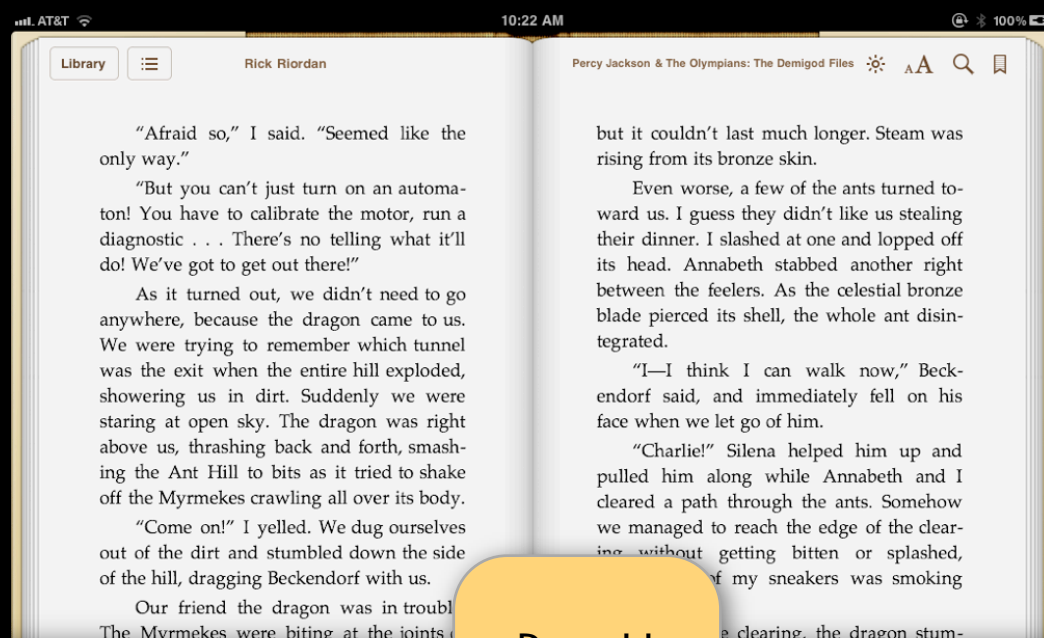
13 pages left in this chapter

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"

Break the Metaphor with Magic

Break the Metaphor with Magic



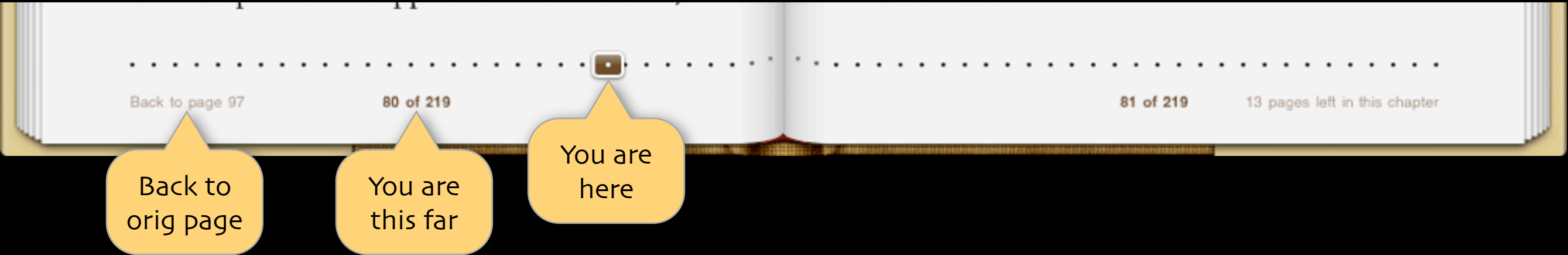
Break the Metaphor with Magic



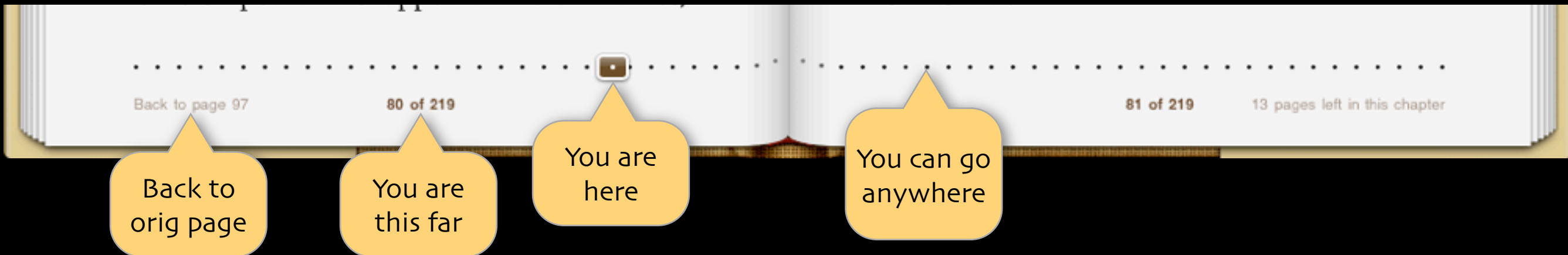
Break the Metaphor with Magic



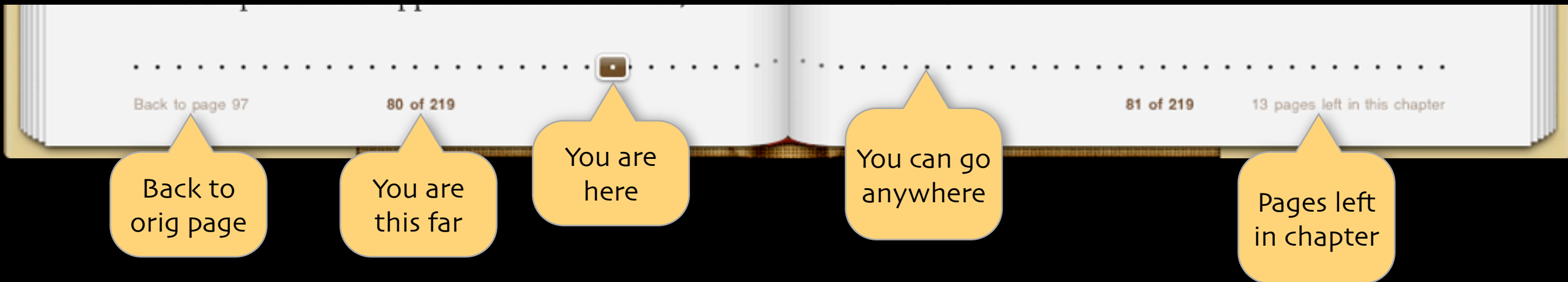
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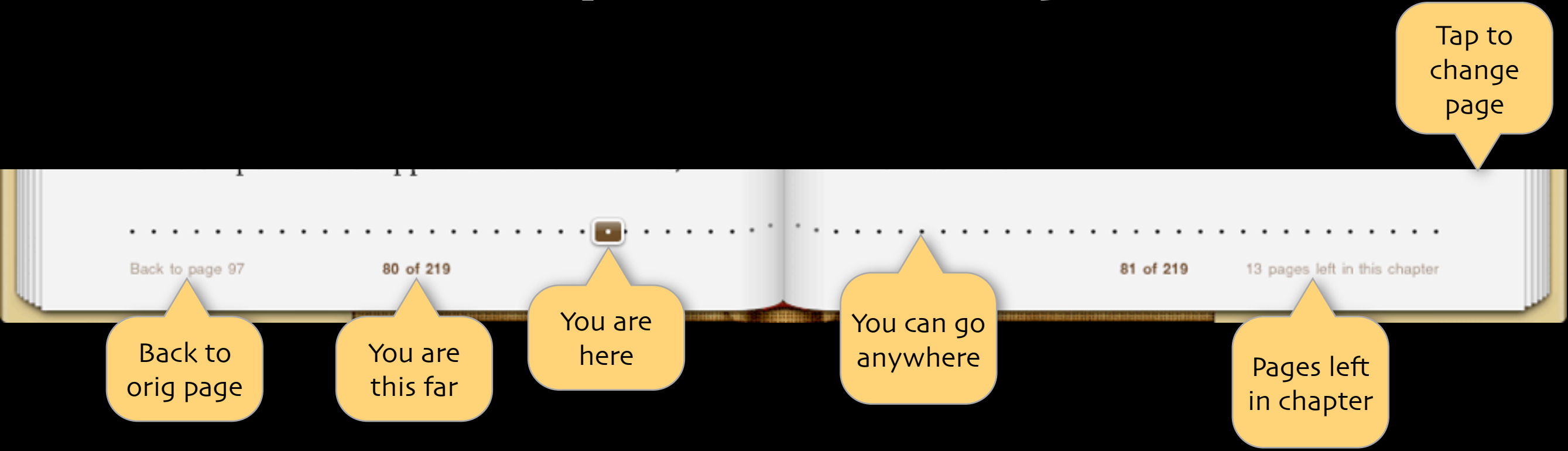
Break the Metaphor with Magic



Break the Metaphor with Magic



Break the Metaphor with Magic



Break the Metaphor with Magic

Tap to
change
page

Back to page 97

80 of 219

You are
here

You can go
anywhere

81 of 219

13 pages left in this chapter

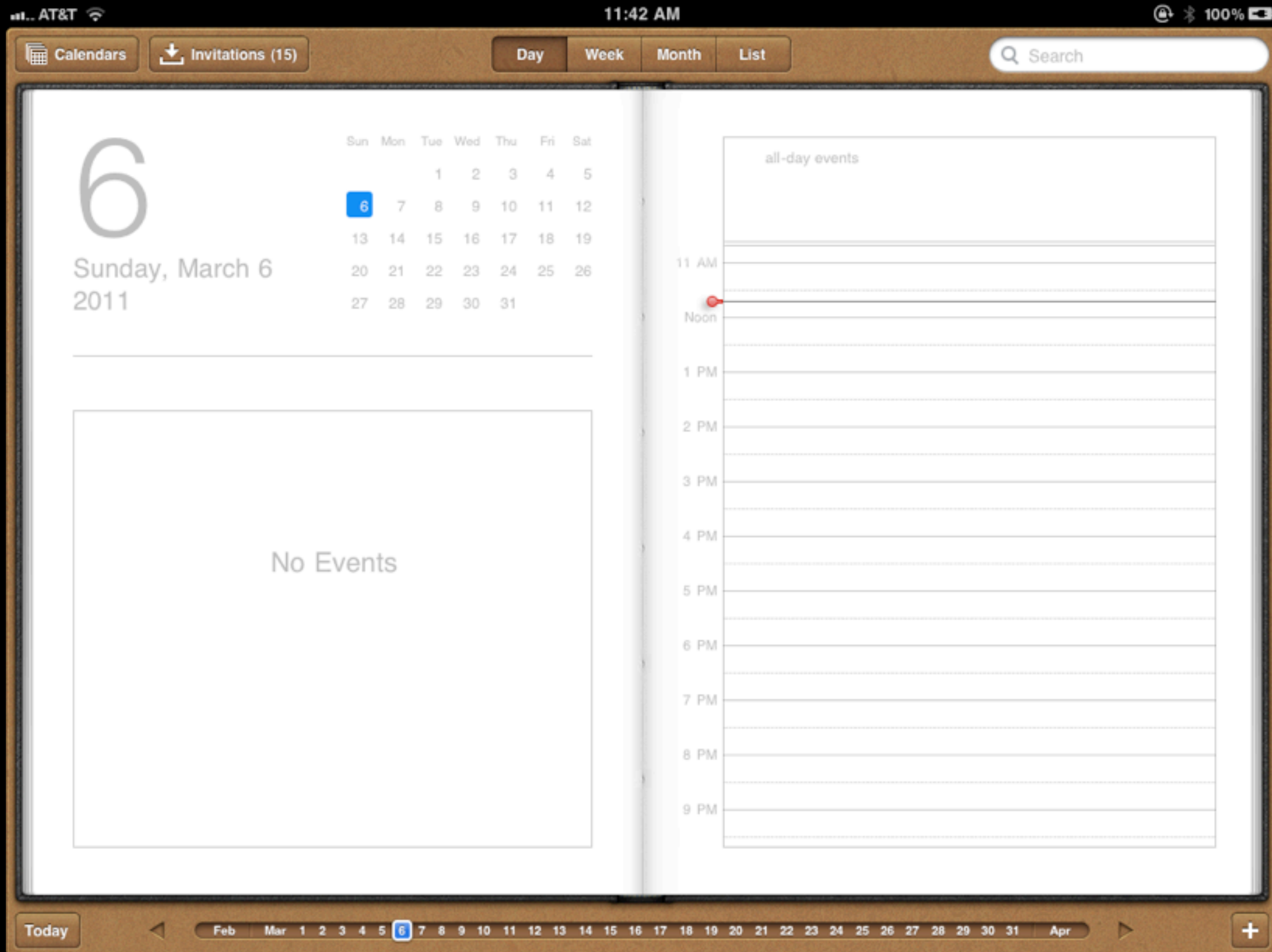
Back to
orig page

You are
this far

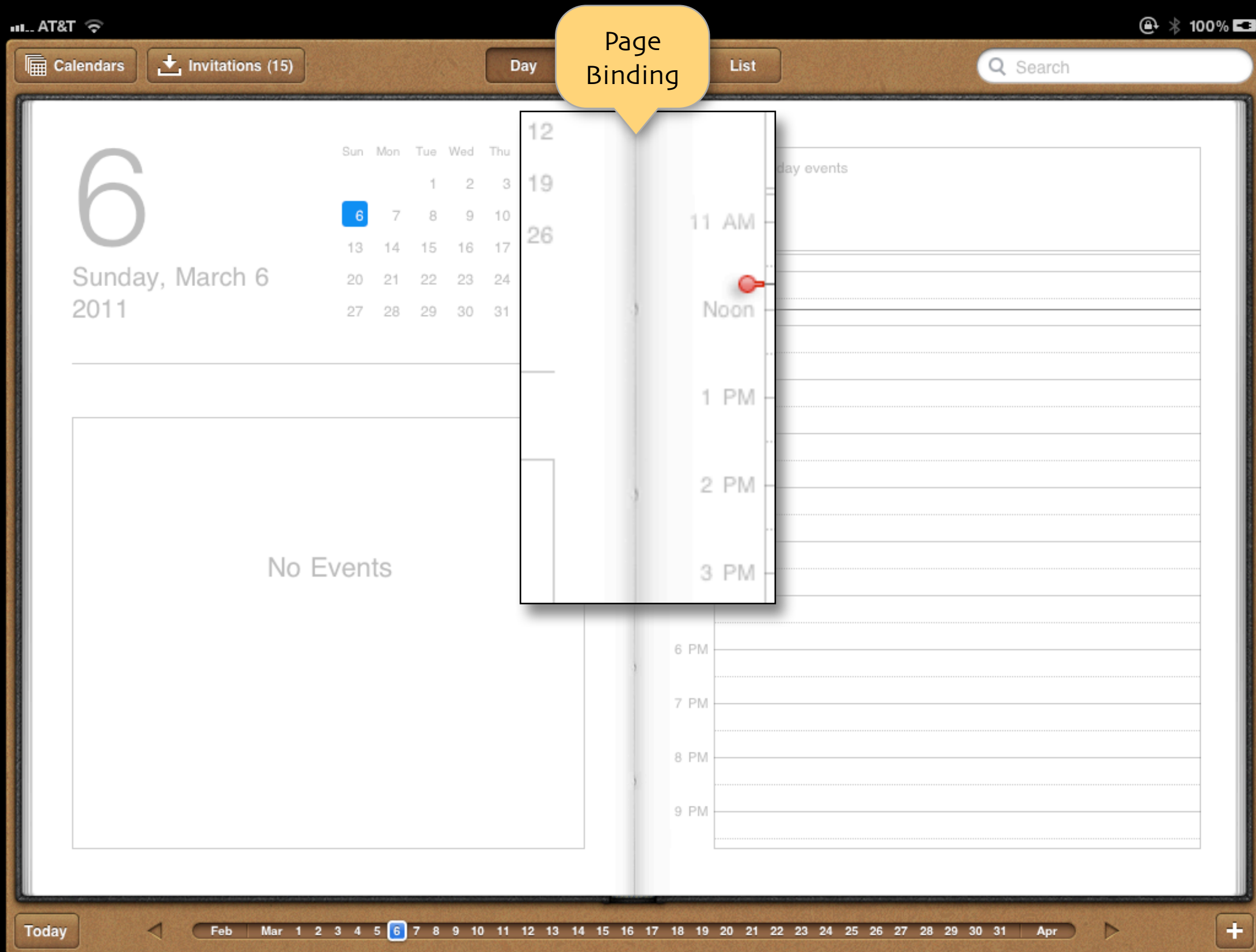
Pages left
in chapter

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

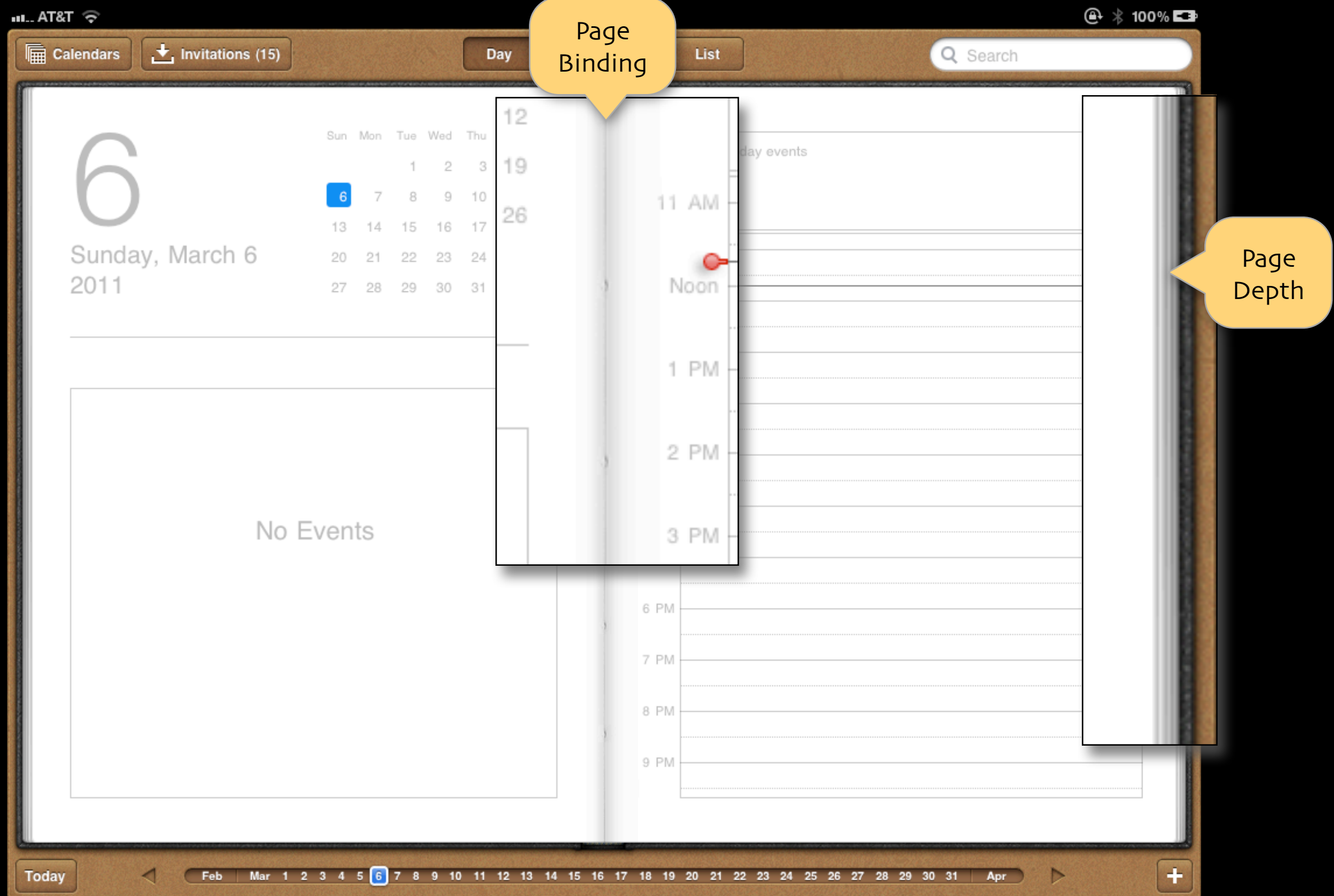
To Flick or not to Flick



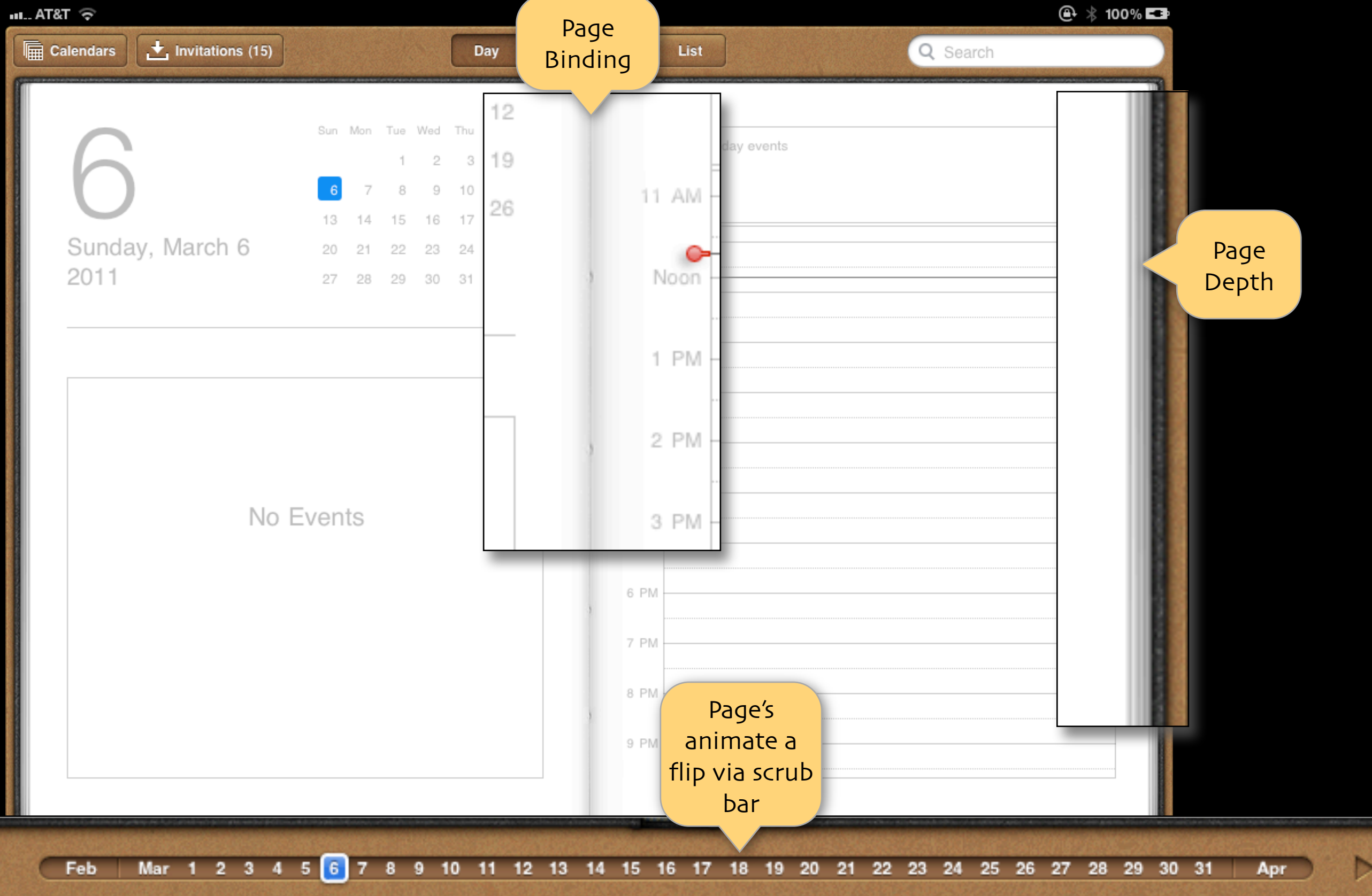
To Flick or not to Flick



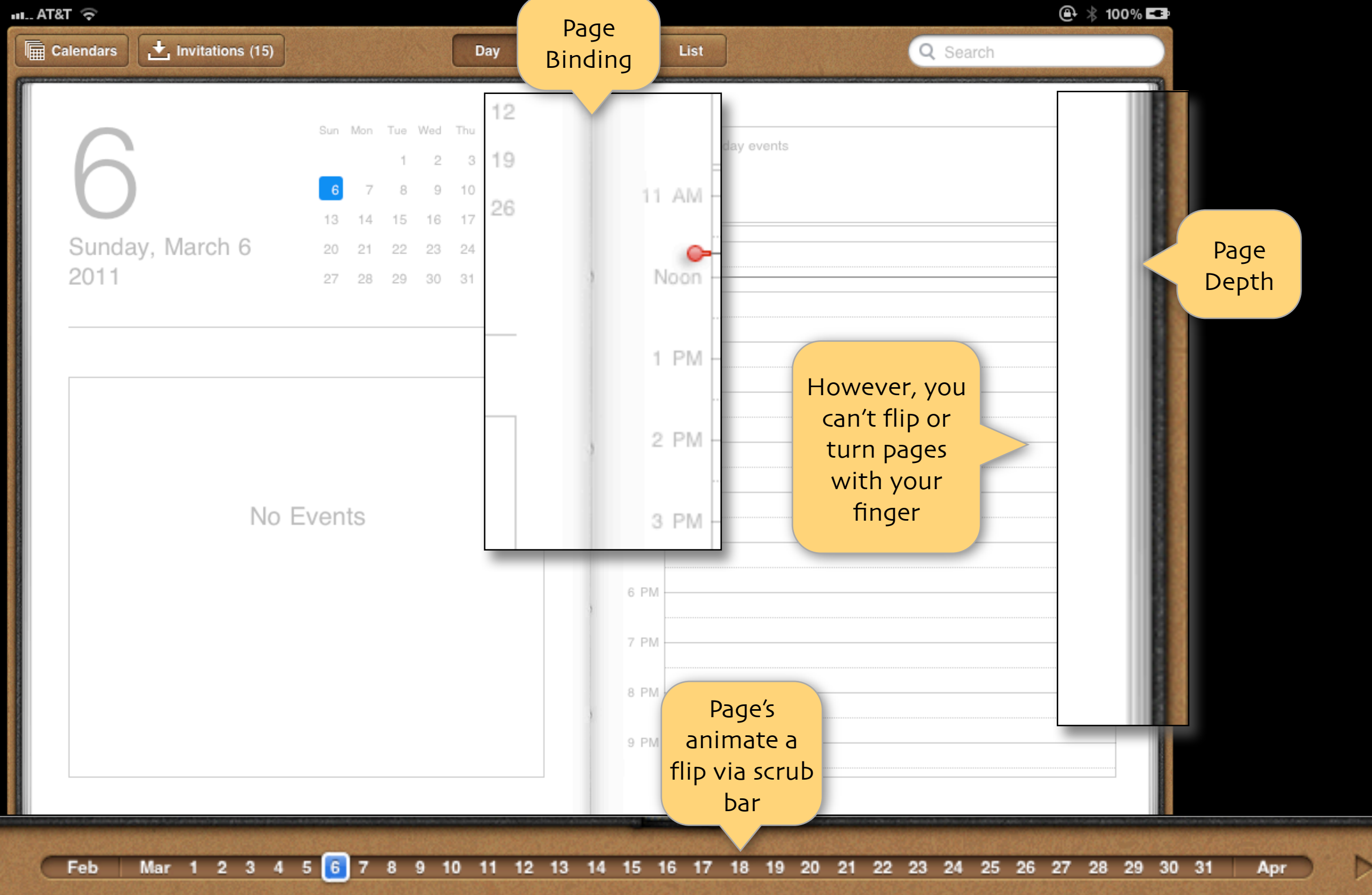
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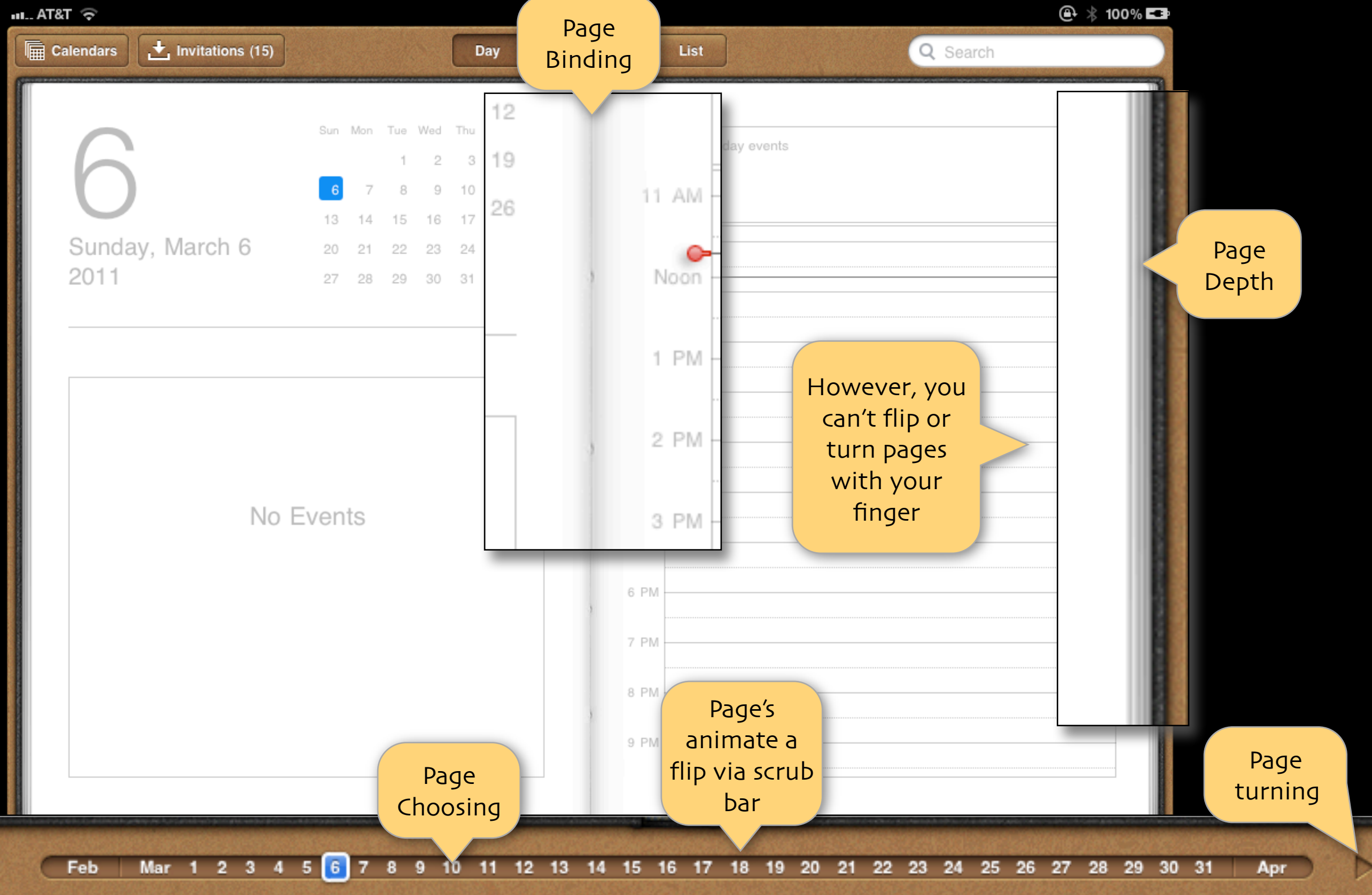
To Flick or not to Flick



To Flick or not to Flick



To Flick or not to Flick



Use Directness
to Simulate
Physicality

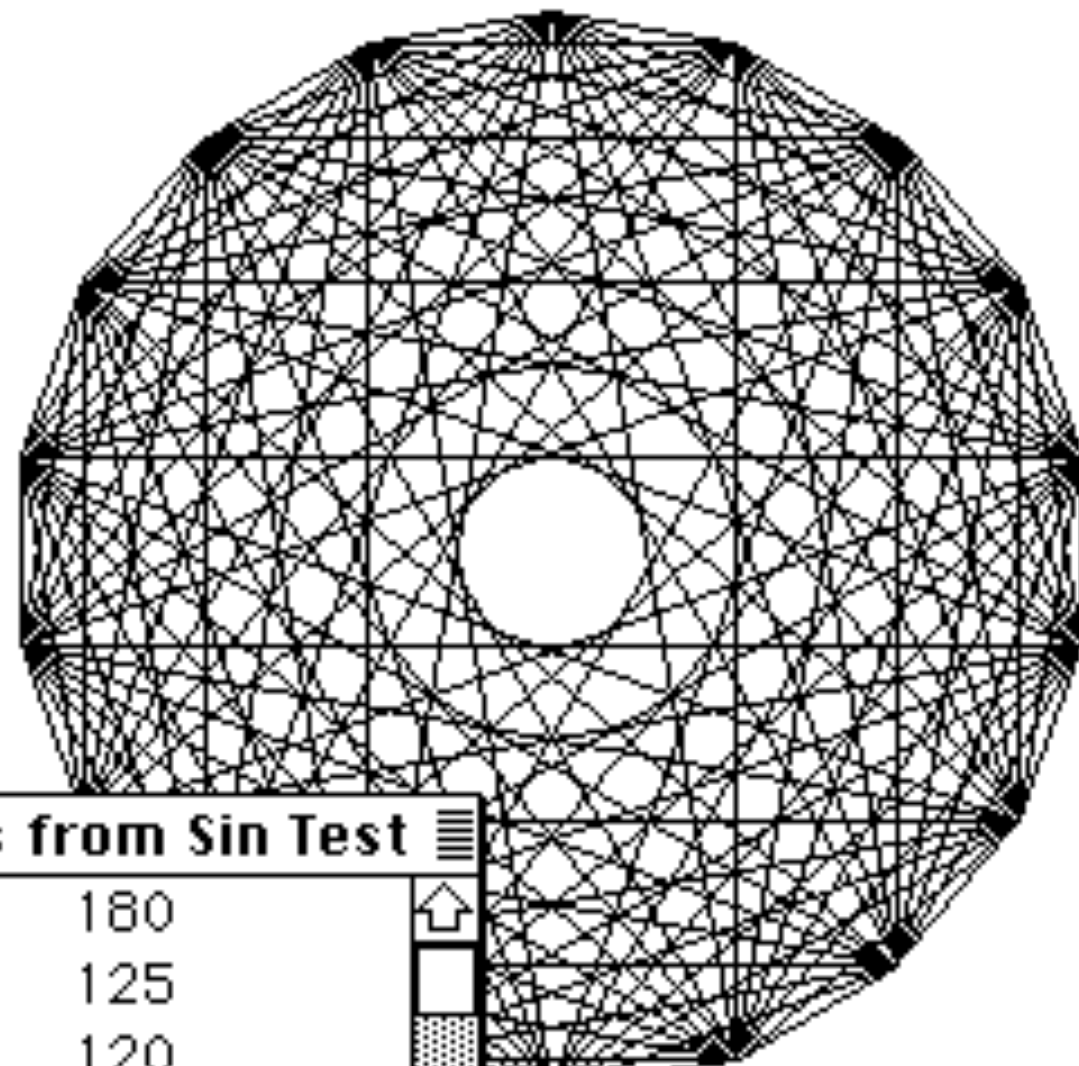
Text of Sin Test

```

for a = 1 to p
  an =(a/f)* (3.1415/3
  x%(a) = x0 + r*sin(an)
  y%(a) = y0+r*cos(an)
next a
dlim = p/2-1
for d = 1 to dlim
  for j = 1 to p
    j1 =j + d
    if j1 > p then j1
    plot x%(j),y%(j);x
  next j
next d
next f
loop
end

```

Sin Test



Variables from Sin Test	
X0	180
Y0	125
R	120
F	3
P	18
	18

	18
b	18
t	3

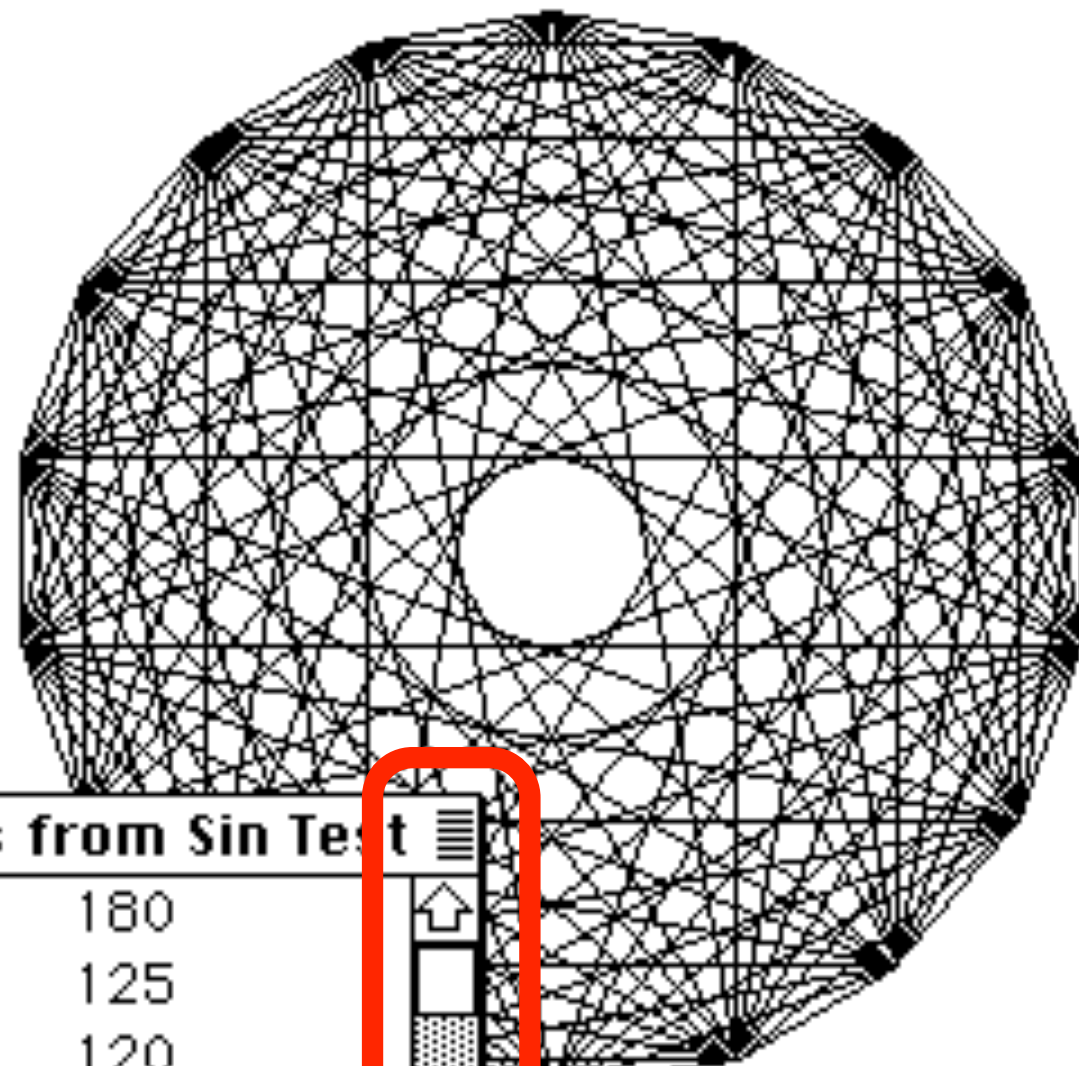
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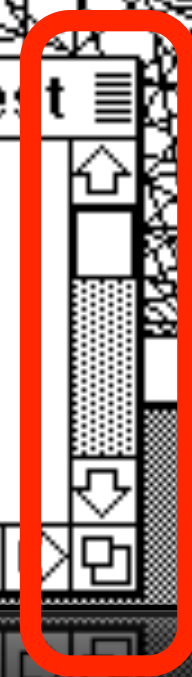
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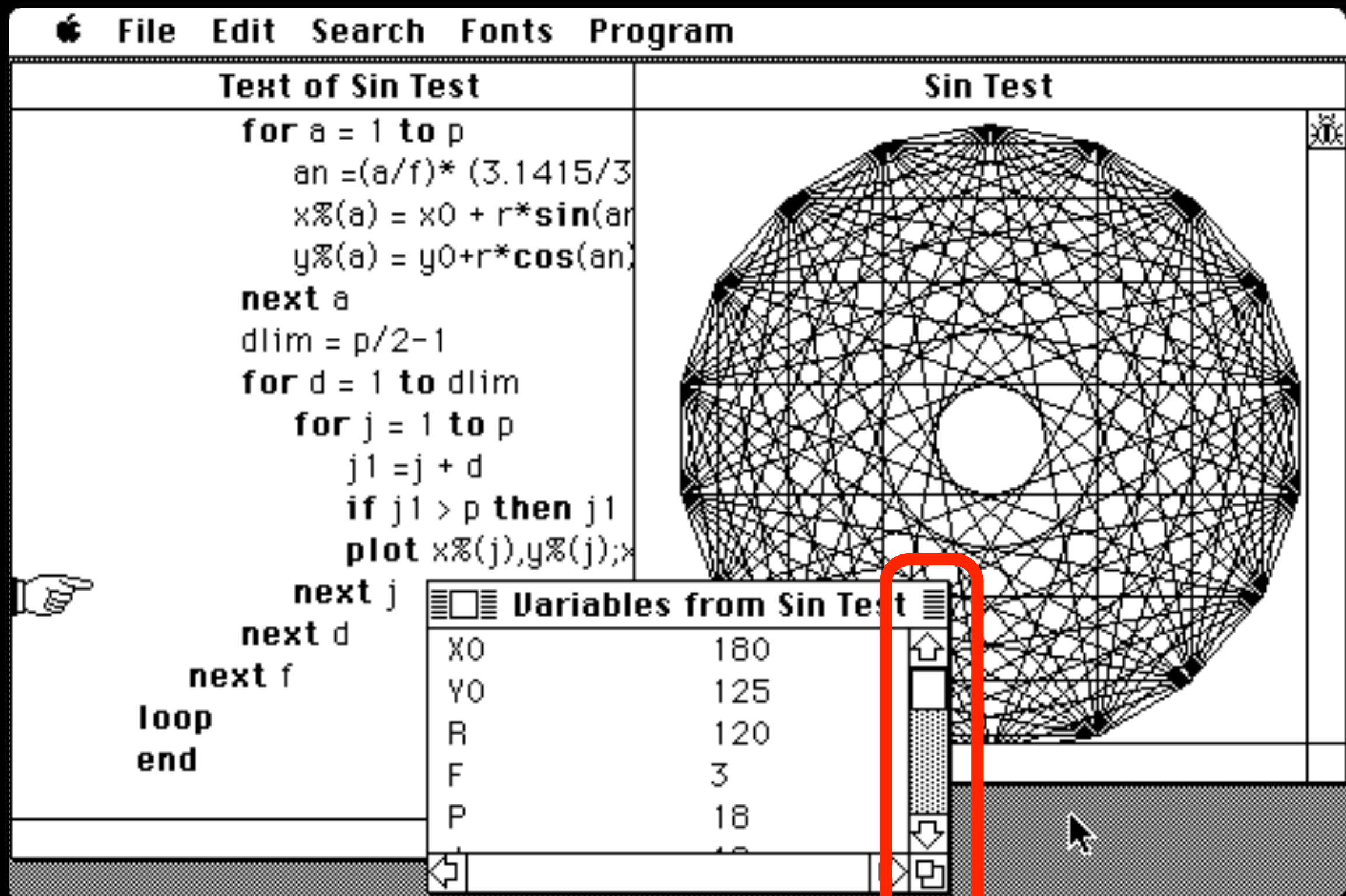
```

Sin Test



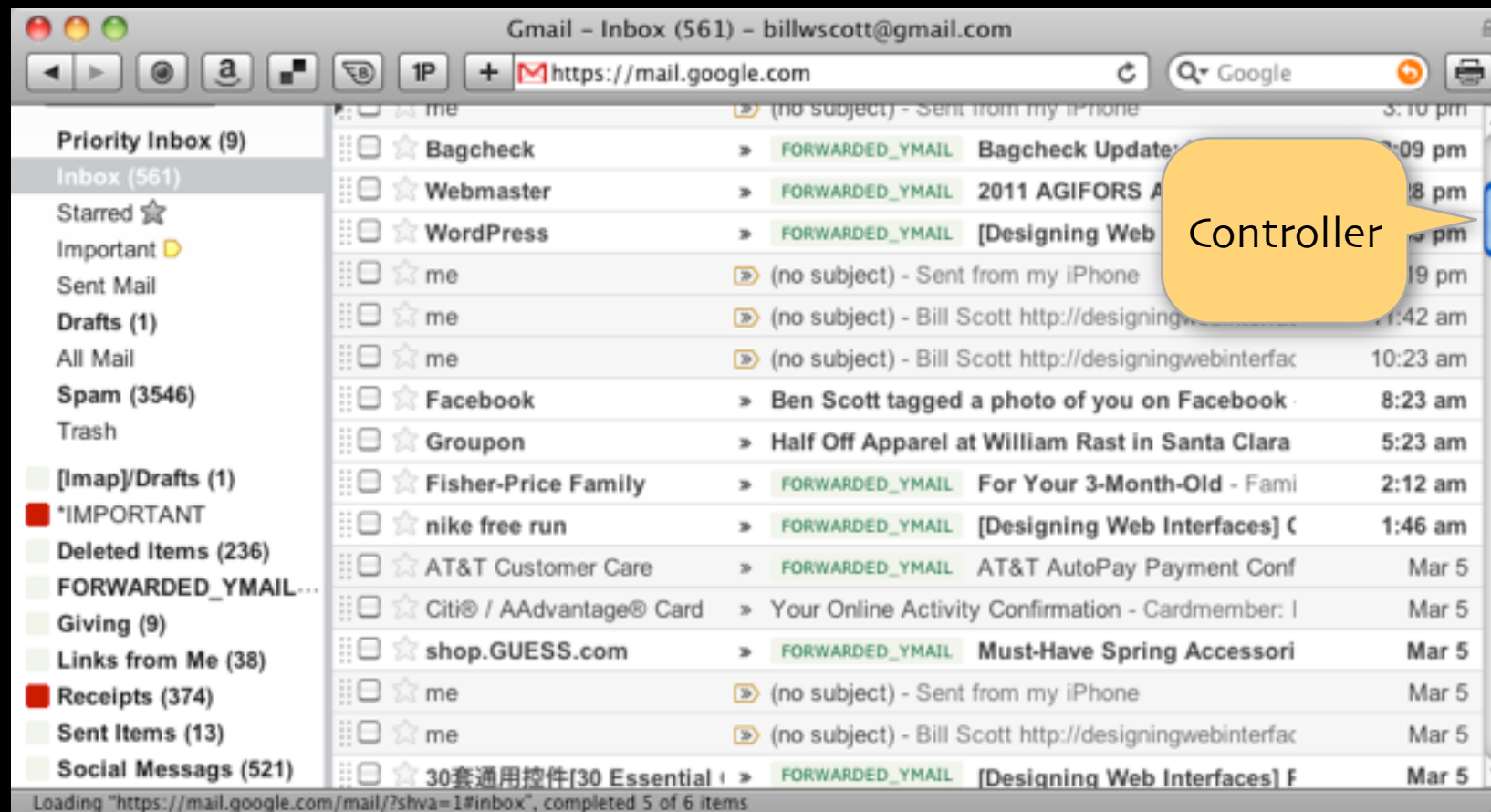
Variables from Sin Test	
X0	180
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P	18





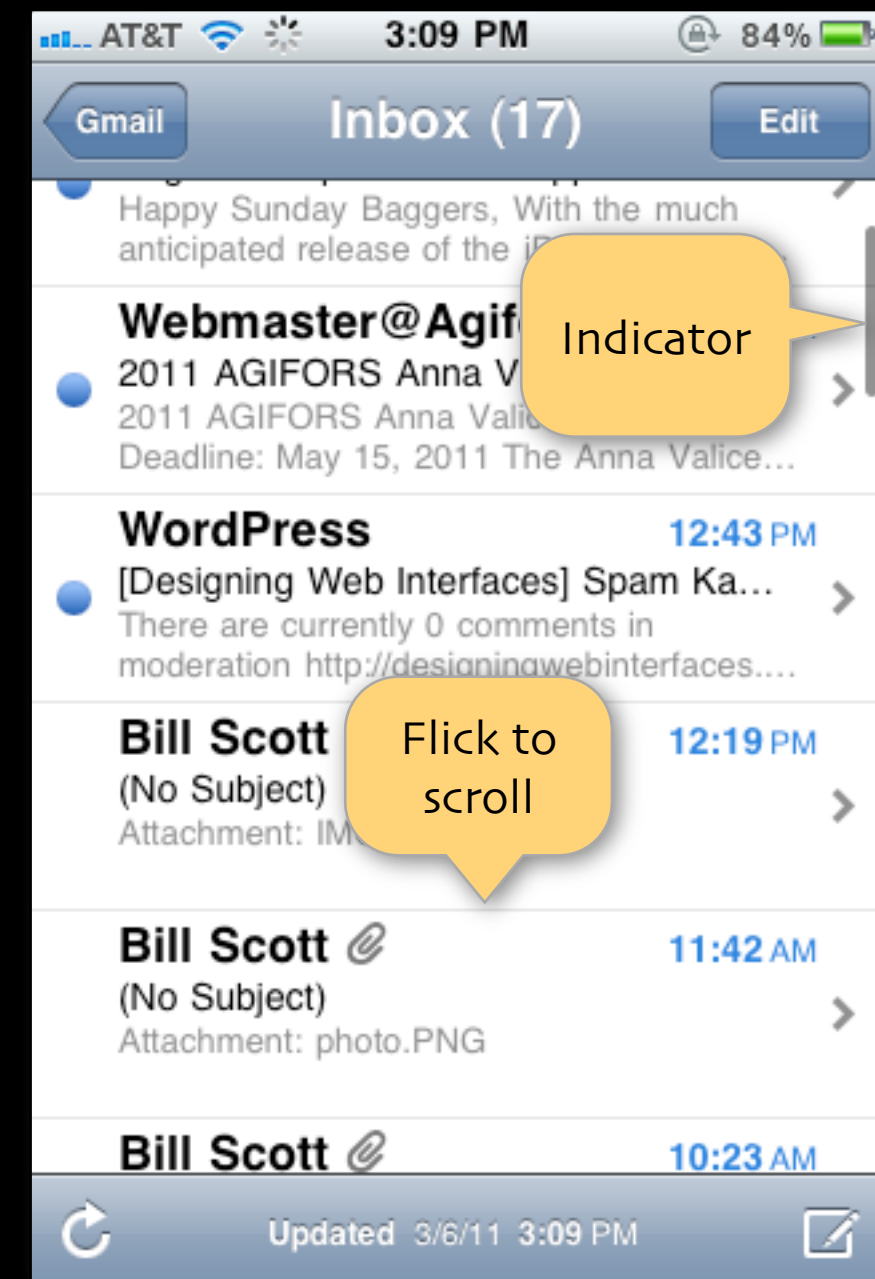
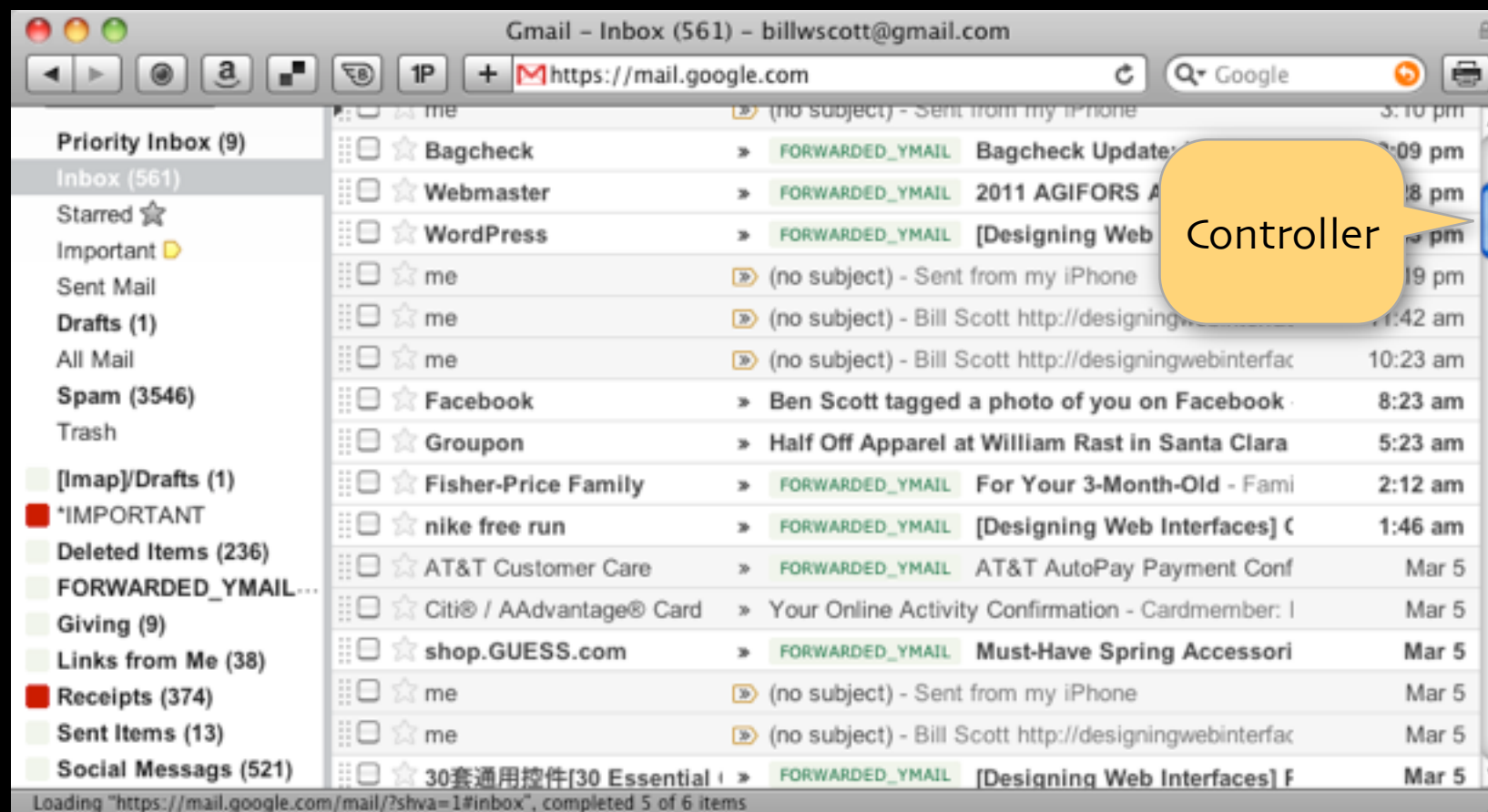
in 1984, this was physicality - the scrollbar

Scrollbar Evolution



Scrollbar Evolution

From **Controller** to **Indicator**
Content is scrolled instead of scrollbar



Thumbwheel is an evolution as well

It must feel real



It must feel real



Make sure event handling is consistent

It must feel real



Make sure event handling is consistent

Remember fingers are fat. Real estate is limited

It must feel real



Make sure event handling is consistent

Remember fingers are fat. Real estate is limited

Anti-Pattern: Mismatched Metaphor

The screenshot shows a web application titled "Home Locator" with a search interface. The interface includes a search bar, a map of North America, and a table of properties. The table has columns for Price, Sq. Ft., Bedrooms, Baths, and Stories. A red heart icon is next to the first row of the table. The map shows the United States with a red pin in the Southwest. The filters section on the left includes a price range slider, a dropdown for bedrooms, and checkboxes for amenities like Pool, Walk-in Closets, Laundry, and Fireplace.

Home Locator

SEARCH HERE

North America

— Select an Area —

FILTERS

Price Range: 75K - 5M

Bedrooms: Any 2 or more

Minimum Footage: 500

Amenities: ☐ Pool ☐ Walk-in Closets ☐ Laundry ☐ Fireplace

Price	Sq. Ft.	Bedrooms	Baths	Stories
\$488,000	968	2	1	1
\$215,000	778	2	1	1
\$270,000	912	2	2	2
\$390,000	953	2	2	1
\$345,000	1099	2	4	1
\$5,000,000	3459	6	3	1
\$171,000	1335	4	2	2
\$2,390,000	2689	3	6	2
\$821,000	1319	3	3	1
\$884,000	1439	3	3	2
\$715,000	1159	3	2	1
\$617,000	1119	2	2	1
\$981,000	1379	4	3	1
\$450,000	1019	2	2	1
\$435,000	1100	4	2	2

DESP. VERN FRUSTRATED HERE
You have 1 properties in your favorites

Anti-Pattern: Mismatched Metaphor

The screenshot shows a real estate website interface. On the left is a sidebar with a 'Home Locator' logo, a 'SEARCH AREA' map of North America, and 'FILTERS' for Price Range, Bedrooms, Bathrooms, and Amenities. The main area features a table of property listings with columns for Price, Sq. Ft., Bedrooms, Baths, and Stories. A map on the right shows the location of the selected property. A blue banner at the bottom indicates 'DEEP VEEN FAVORITES HERE' with a heart icon and the text 'You have 1 properties in your favorites'.

Price	Sq. Ft.	Bedrooms	Baths	Stories
\$488,000	968	2	1	1
\$215,000	7788	2	1	1
\$270,000	912	2	2	2
\$390,000	953	2	2	1
\$345,000	1099	2	4	1
\$5,880,000	3458	6	3	1
\$171,000	1335	4	2	2
\$2,390,000	2688	3	6	2
\$821,000	1318	3	3	1
\$884,000	1438	3	3	2
\$715,000	1158	3	2	1
\$817,000	1118	2	2	1
\$981,000	1378	4	3	1
\$450,000	1018	2	2	1
\$435,800	1100	4	2	2

Anti-Pattern: Mismatched Metaphor

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Home Locator

SEARCH HERE

North America

— Select an Area —

FILTERS

Price Range: 75K - 5M

75,000 - 5,000,000

Bedrooms: 1 - 5

Baths: 1 - 5

Minimum Footage: 500

Amenities: Pool, Walk-in Closets, Laundry, Fireplace

Price	Sq. Ft.	Bedrooms	Baths	Stories
\$488,000	968	3	1	1
\$215,000	7788	2	1	1
\$270,000	912	2	2	2
\$390,000	953	2	2	1
\$345,000	1099	2	4	1
\$5,000,000	3459	6	3	1
\$921,000	1319	3	3	1
\$886,000	1459	3	3	2
\$716,000	1189	3	2	1
\$617,000	1119	2	2	1
\$861,000	1379	4	3	1
\$490,000	1019	2	2	1
\$931,000	1339	4	2	2
\$931,000	1332	4	2	2

DESP. VERN FAVORITEN HIER
You have 2 properties in your favorites

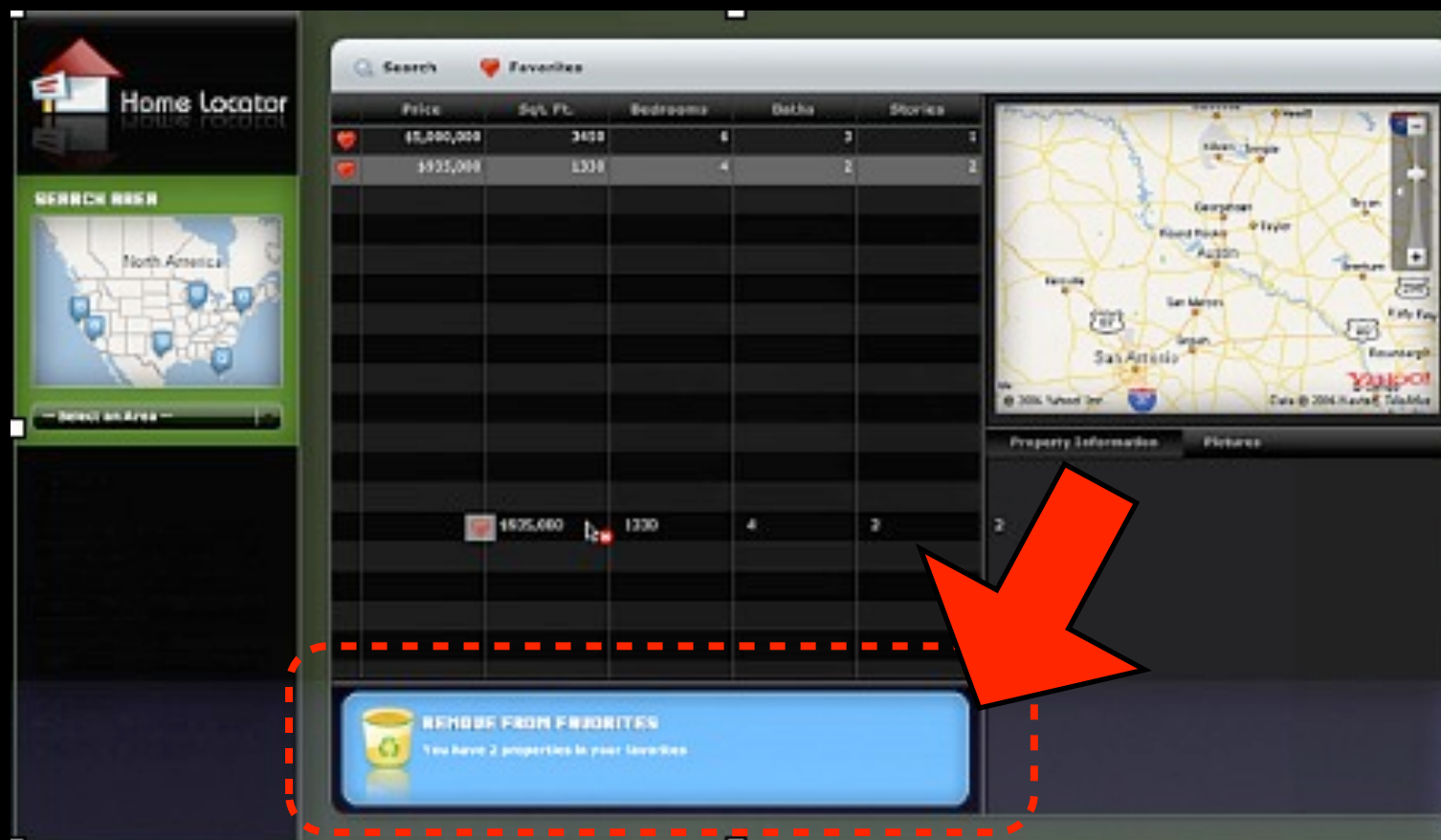
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anti-pattern: artificial construct

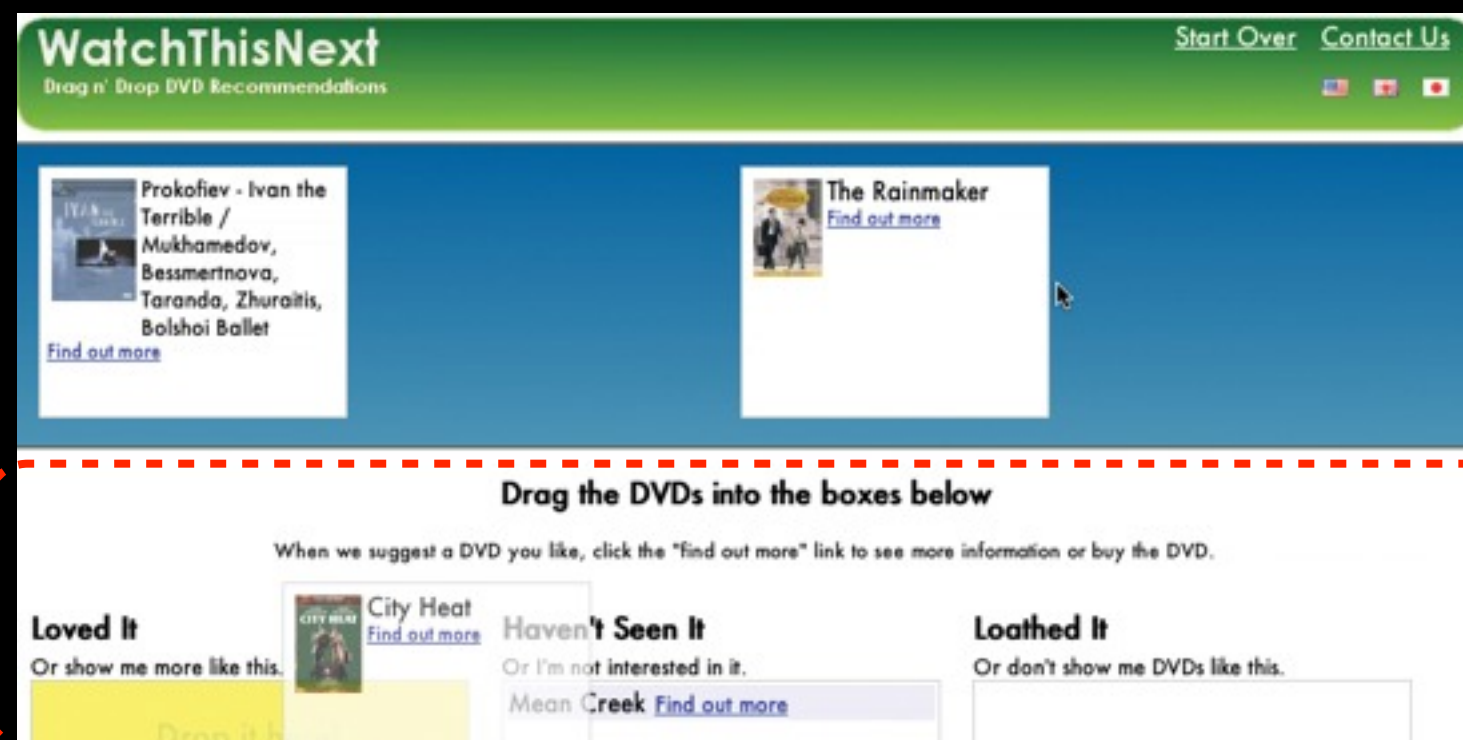
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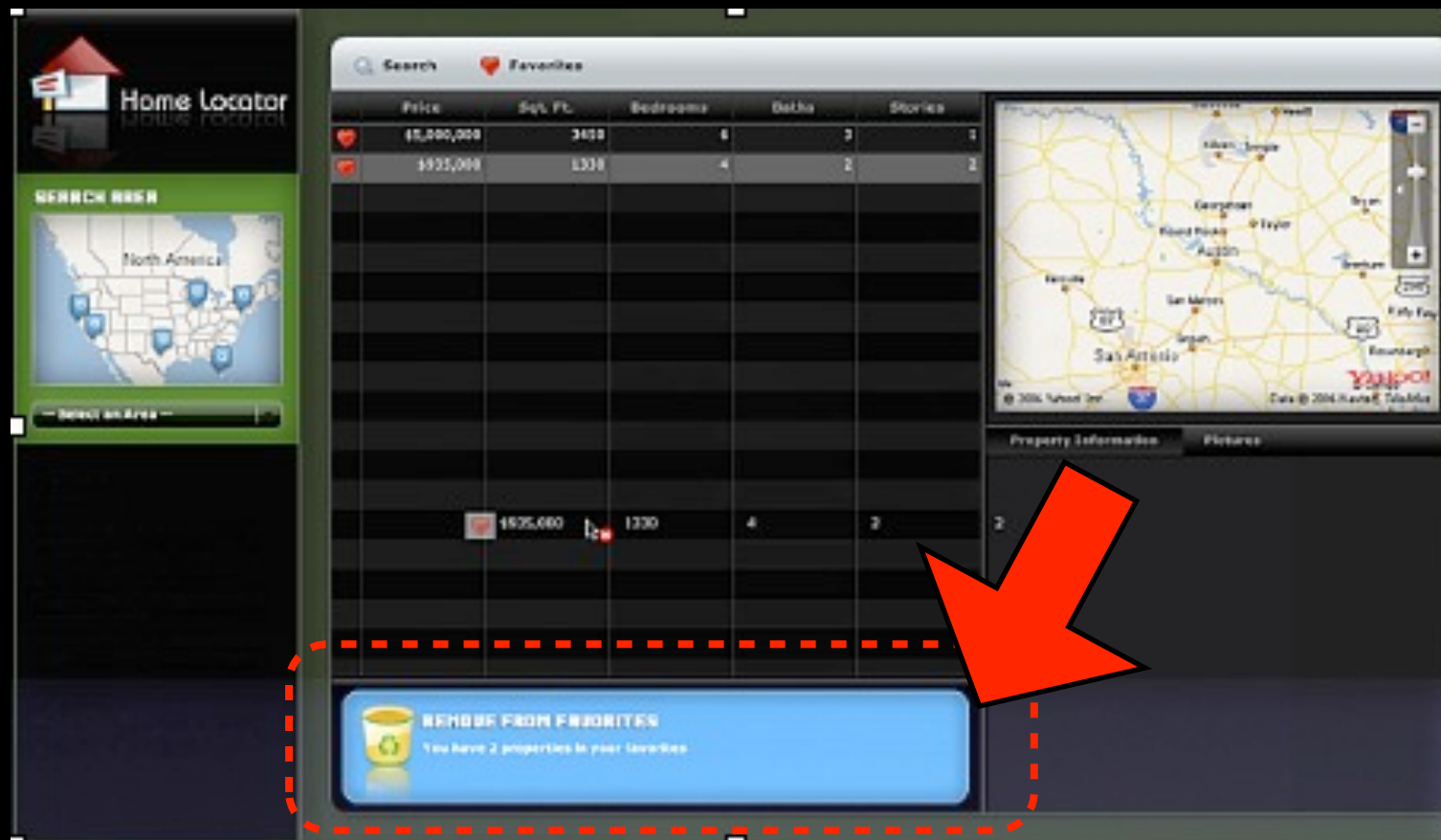
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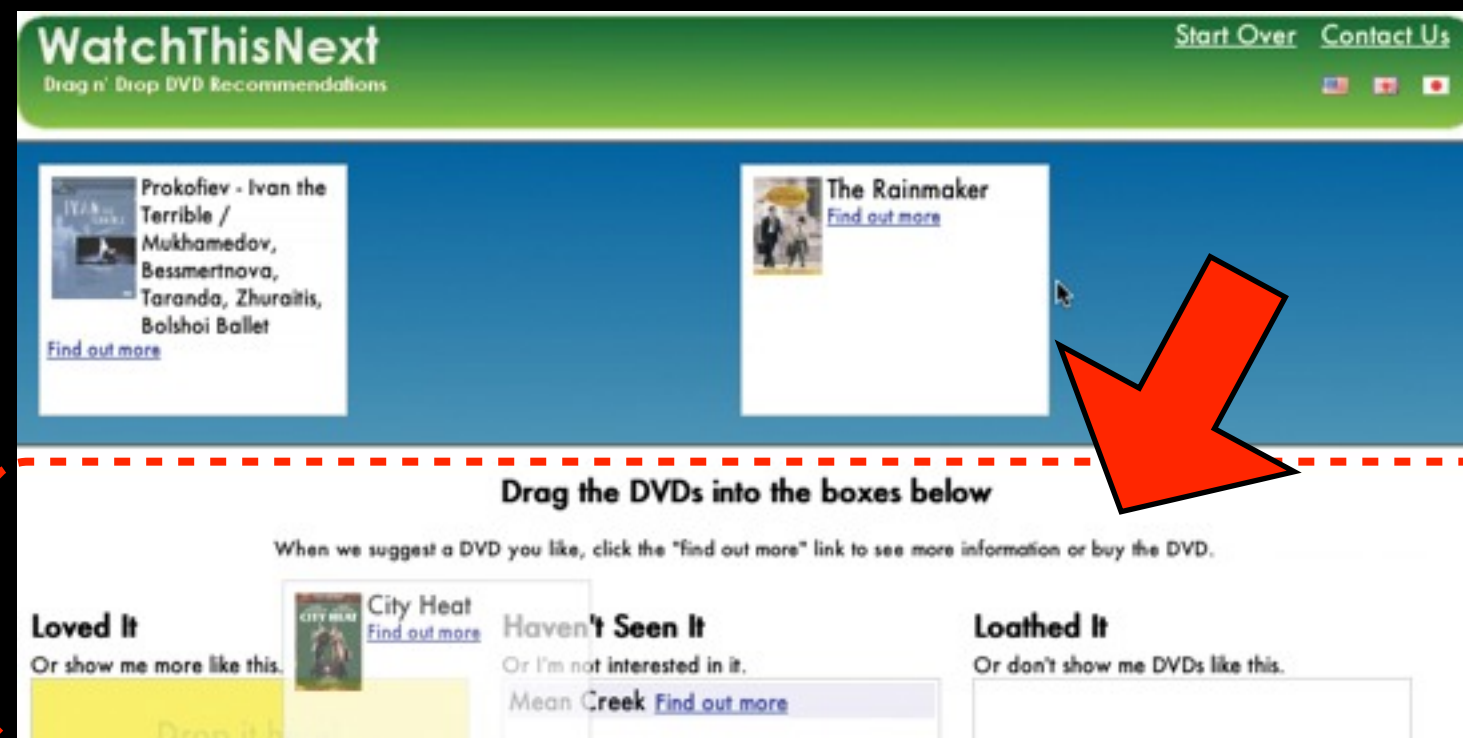
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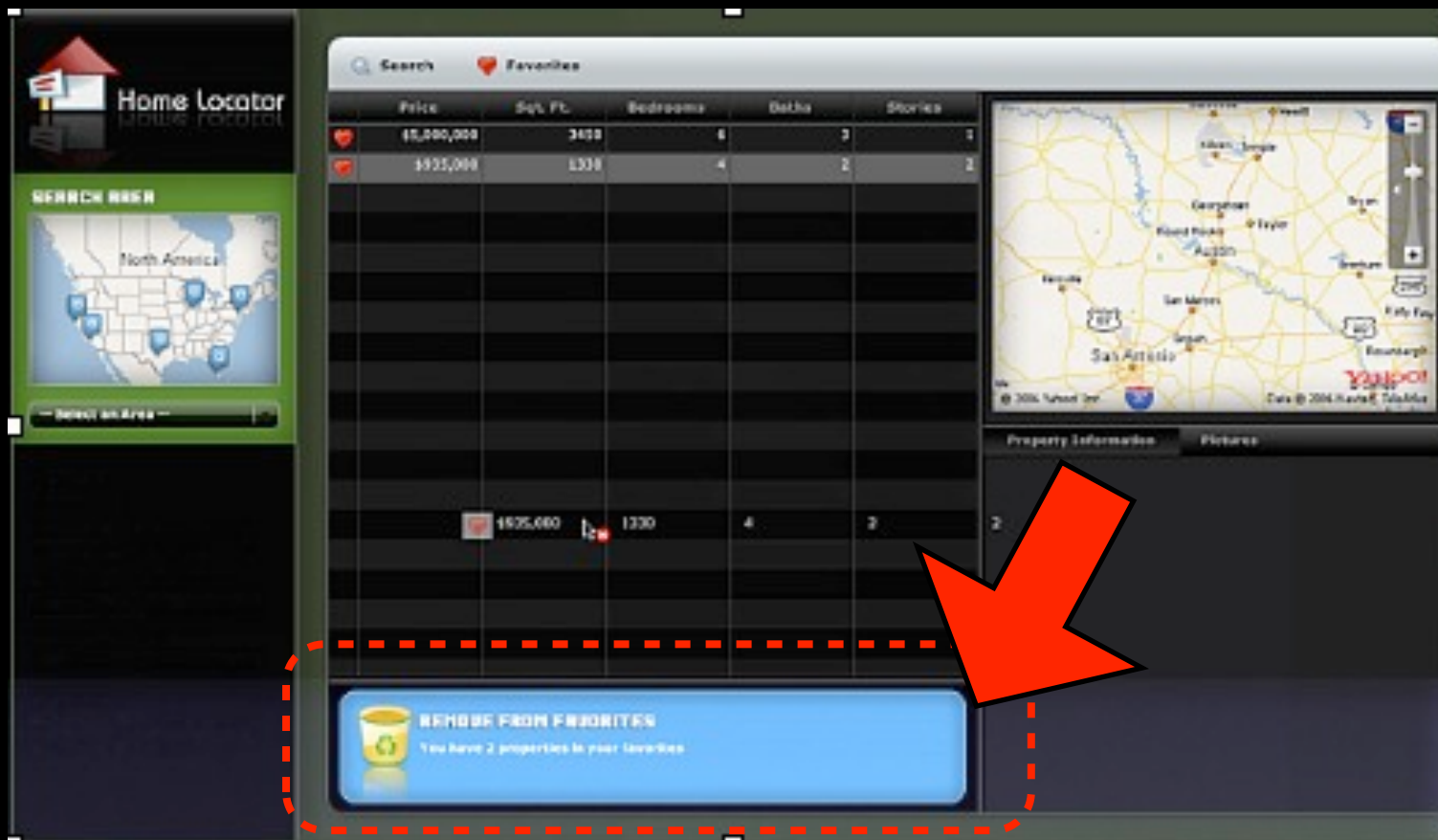
Anti-Pattern: Mismatched Metaphor



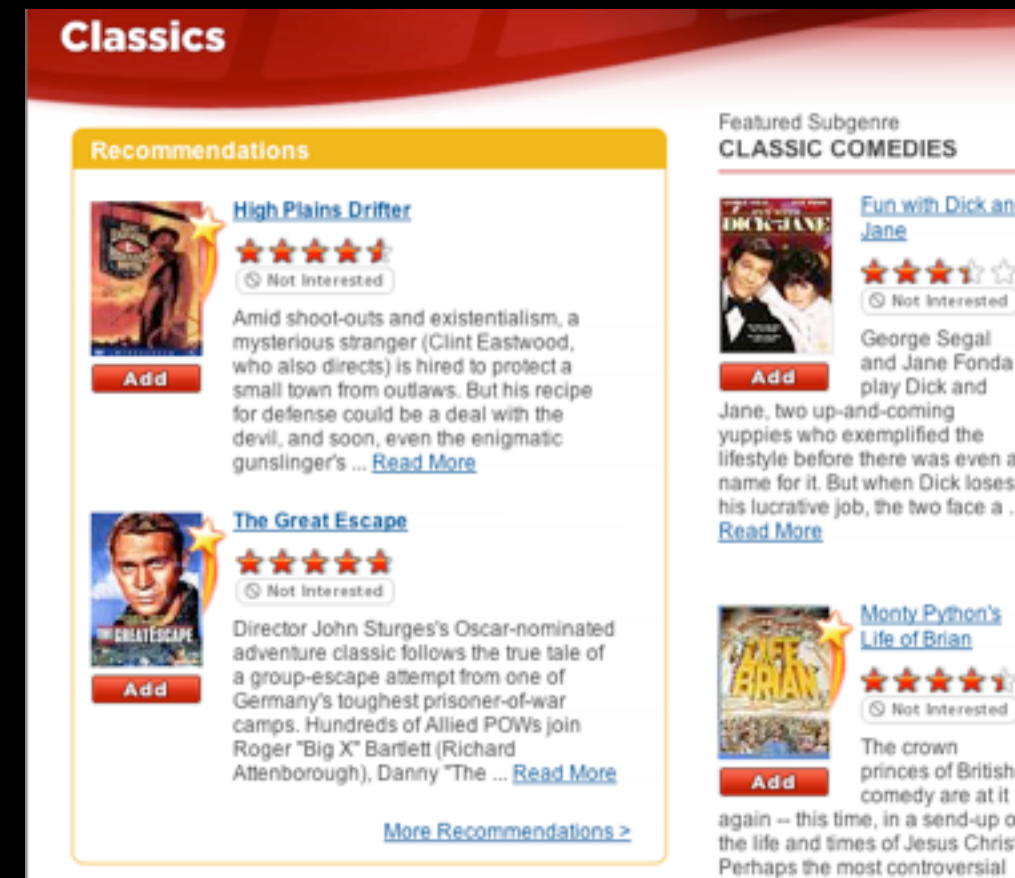
anti-pattern: artificial construct



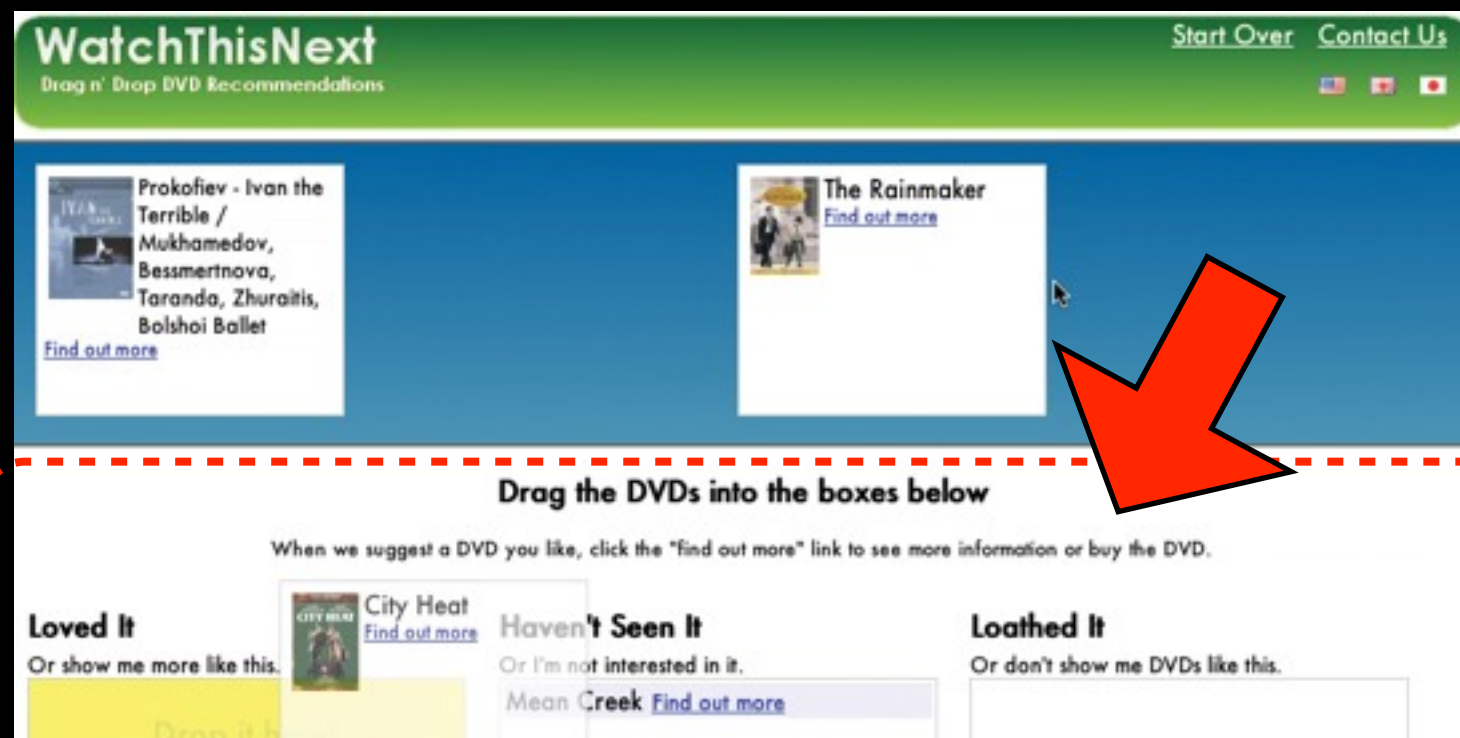
Anti-Pattern: Mismatched Metaphor



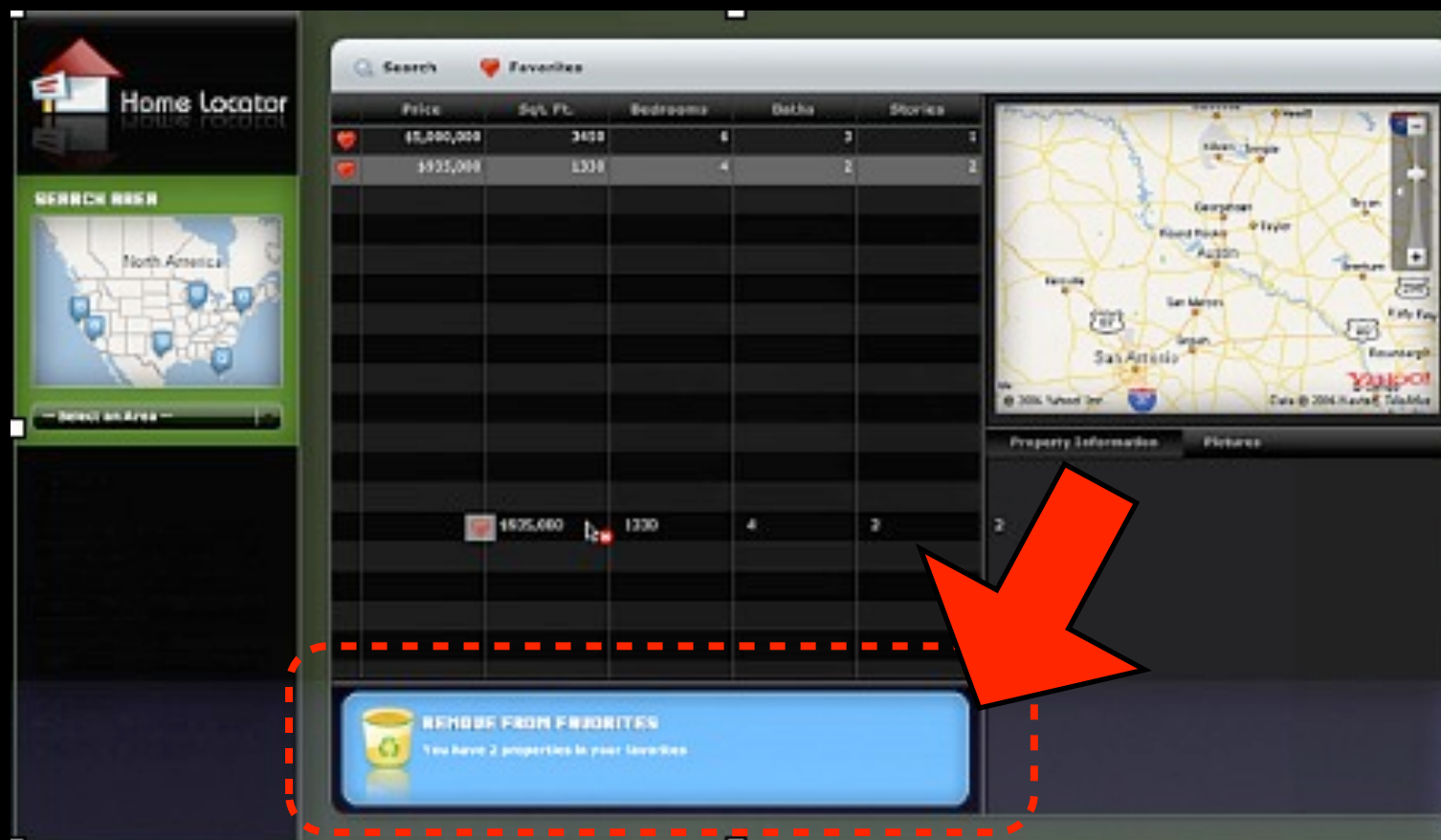
anti-pattern: artificial construct



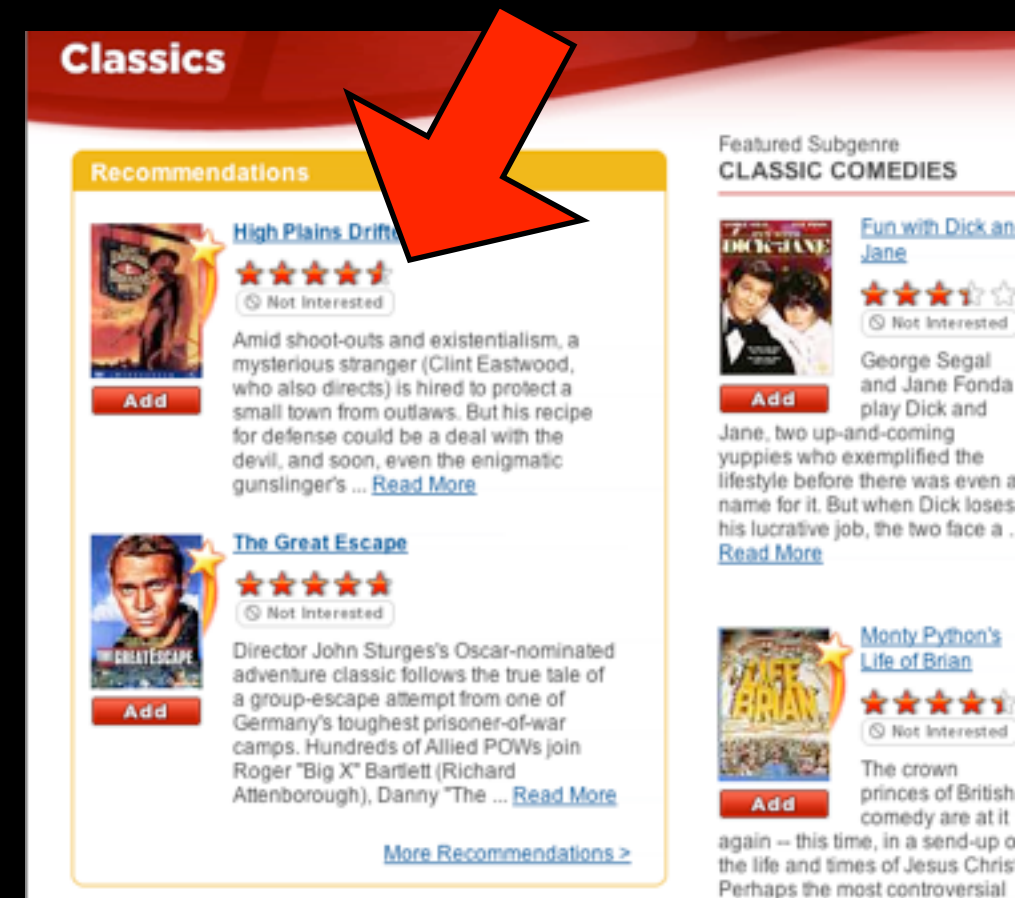
netflix. rate an object. KISS.



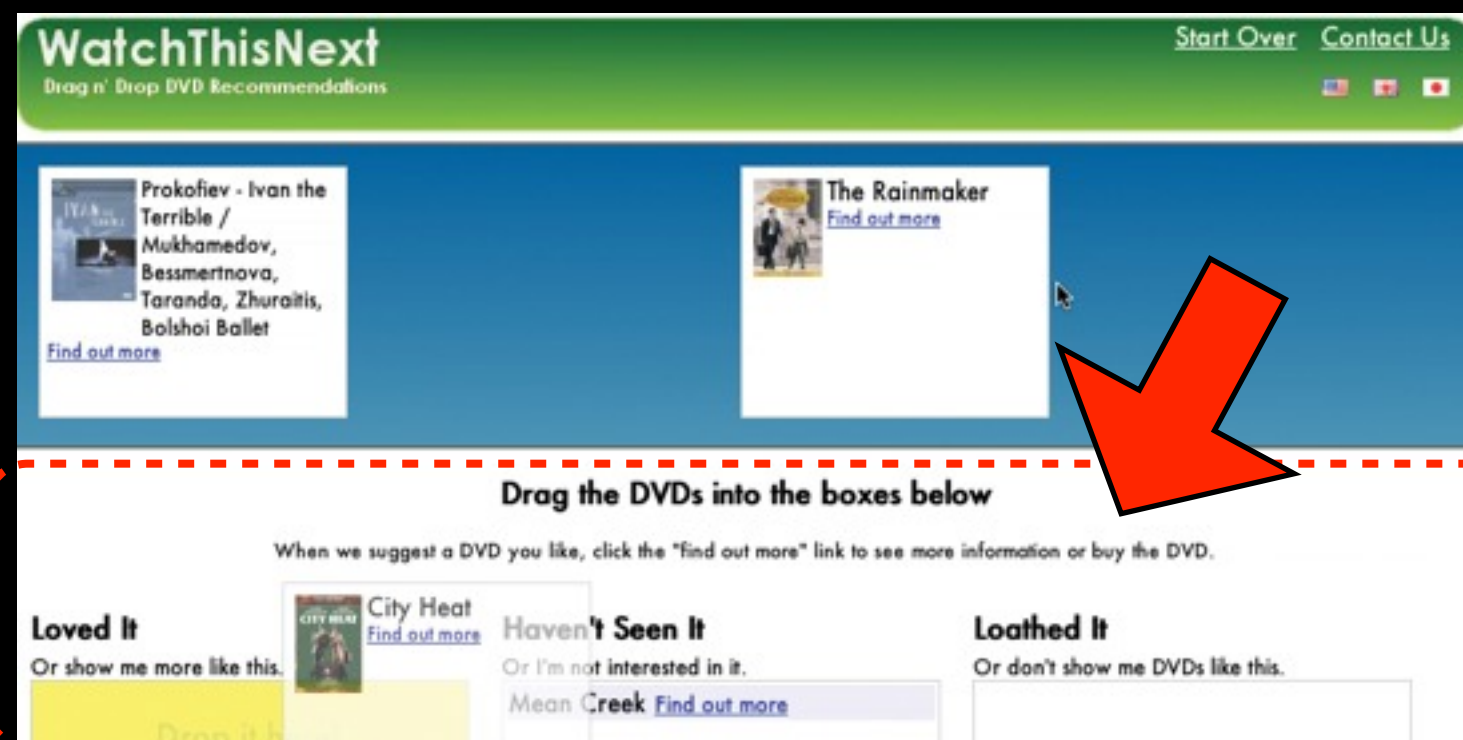
Anti-Pattern: Mismatched Metaphor



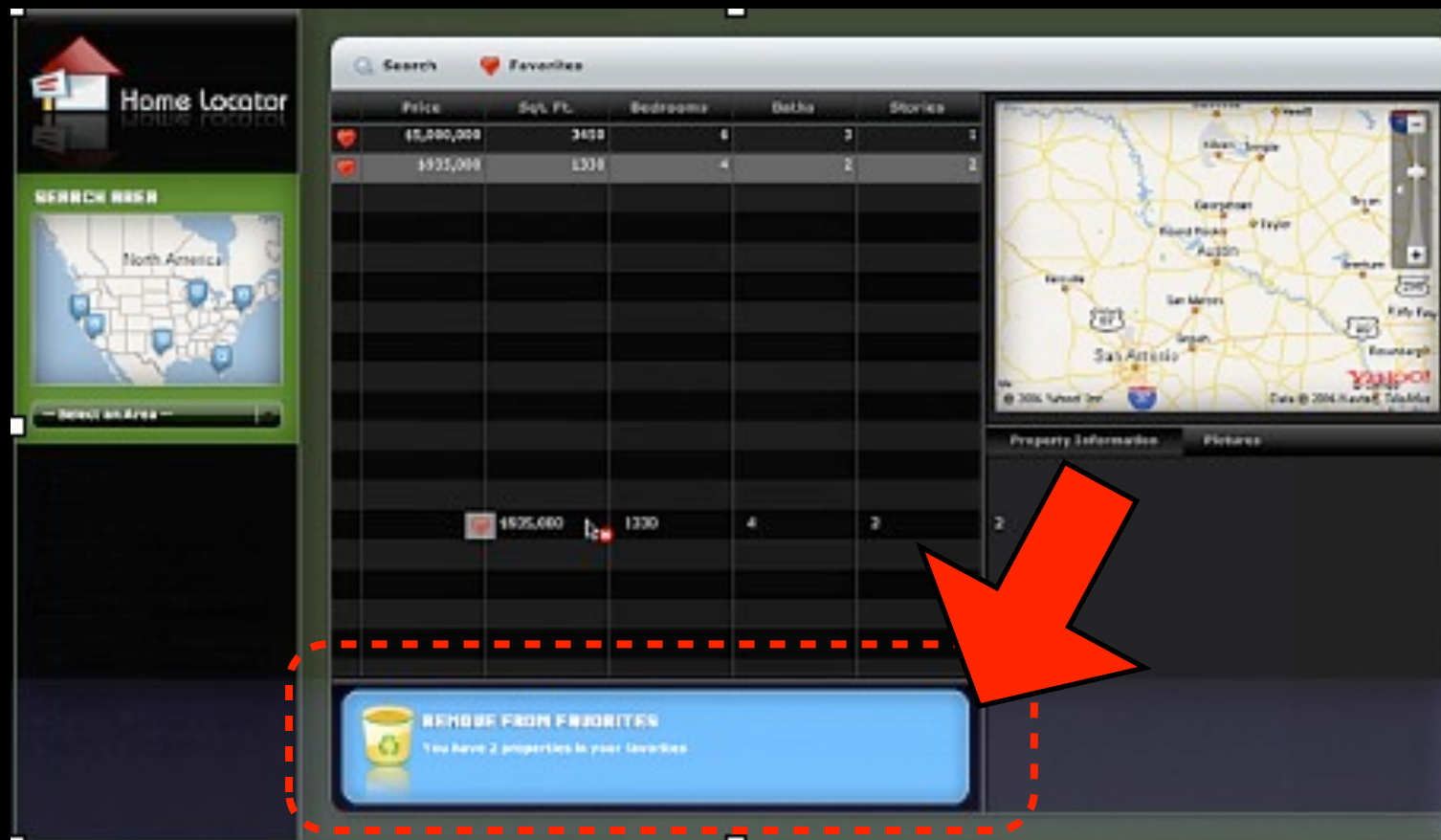
anti-pattern: artificial construct



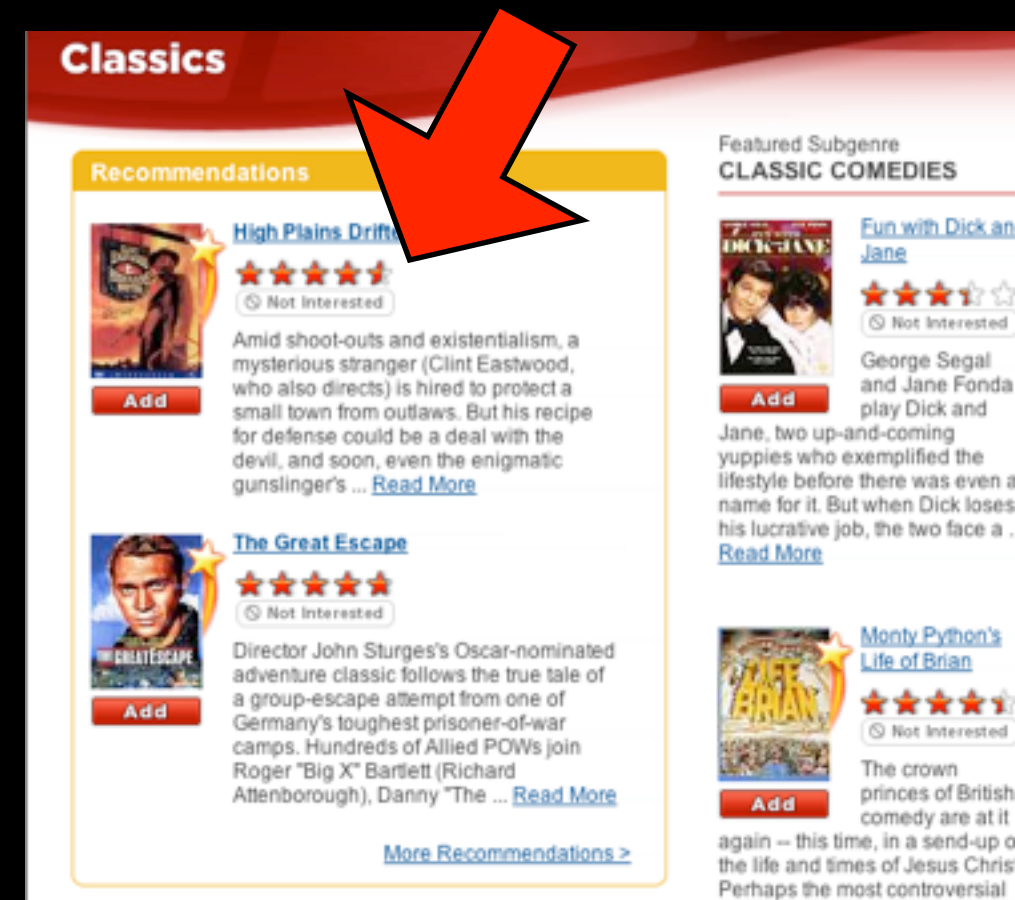
netflix. rate an object. KISS.



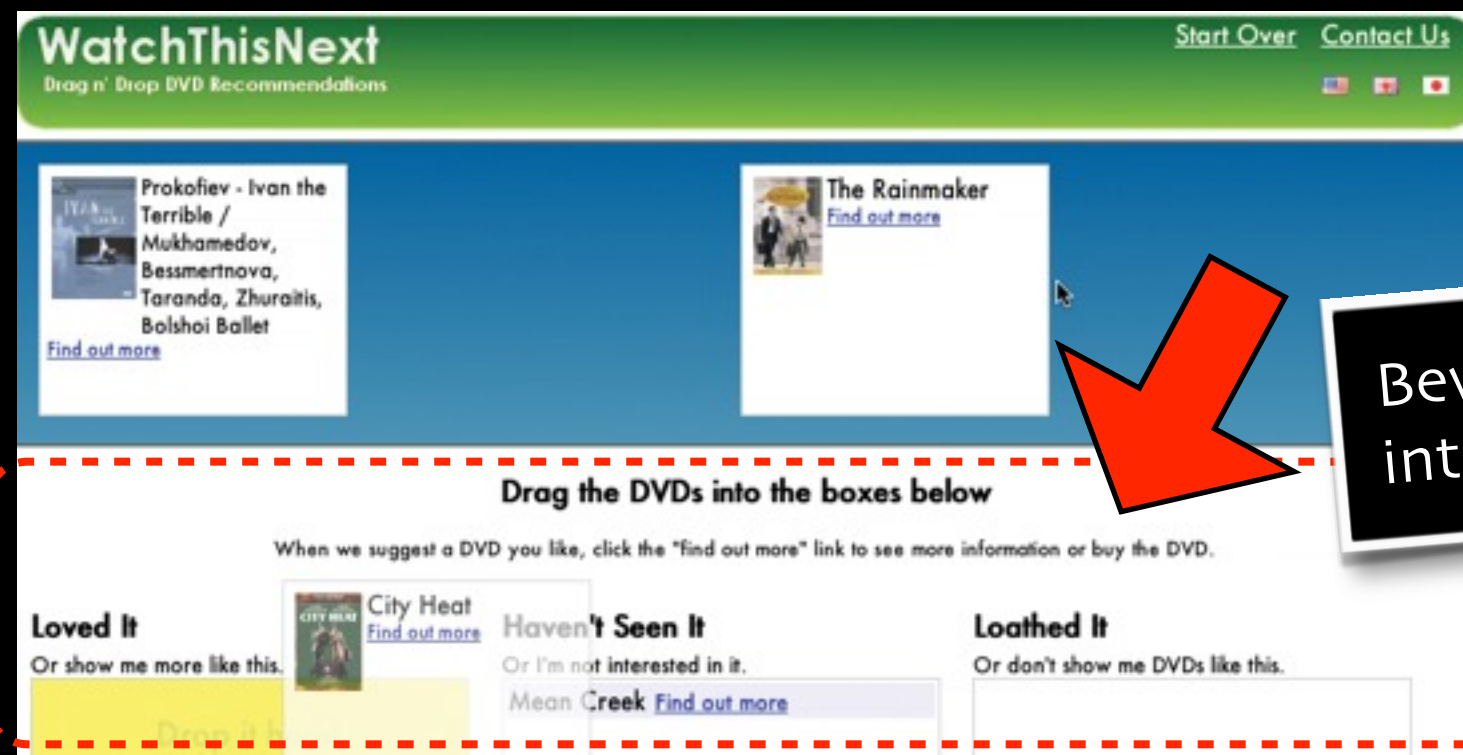
Anti-Pattern: Mismatched Metaphor



anti-pattern: artificial construct

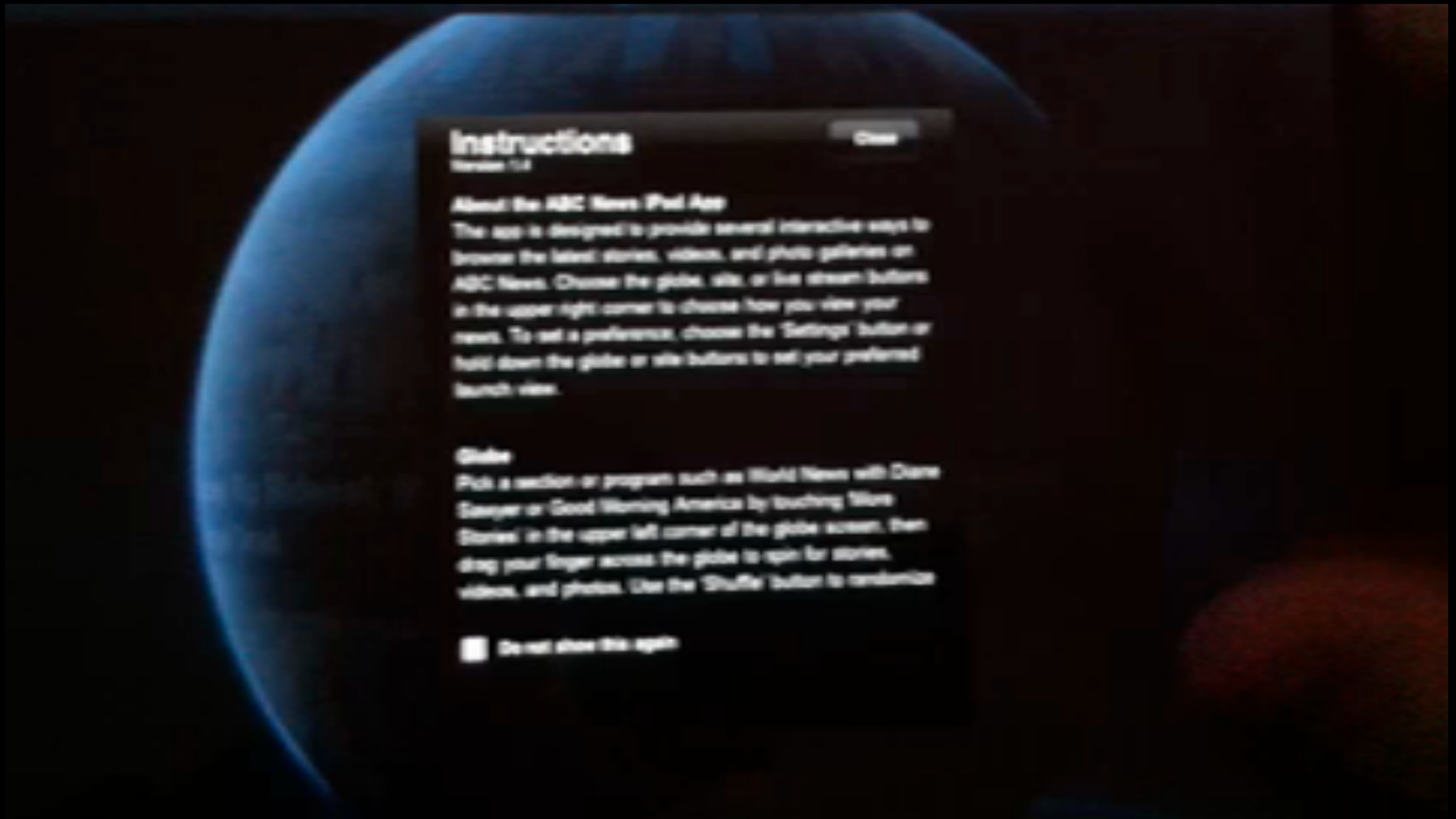


netflix. rate an object. KISS.



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)

Physicality Across Platforms

	Input	Posture
Web	Pointer Indirect Fine-grained (pixel)	Stationary (can support sovereign apps)
Tablet	Finger Direct Course-grained (finger)	On-the-go (Single Purpose Apps)
Mobile	Finger Direct Course-grained (finger)	On-the-go (Single Purpose Apps)
TV	Remote Control Indirect Course-grained (1 object at a time)	Leisure (supports consumption, media apps)

Physicality Across Platforms

	Input	Posture	Navigation
Web	Pointer Indirect Fine-grained (pixel)	Stationary (can support sovereign apps)	Windows Menus, Tabs & Links
Tablet	Finger Direct Course-grained (finger)	On-the-go (Single Purpose Apps)	Panes Buttons & Gestures
Mobile	Finger Direct Course-grained (finger)	On-the-go (Single Purpose Apps)	Panes & Buttons
TV	Remote Control Indirect Course-grained (1 object at a time)	Leisure (supports consumption, media apps)	Panes & Content

Physicality Across Platforms

	Input	Posture	Navigation	Display
Web	Pointer Indirect Fine-grained (pixel)	Stationary (can support sovereign apps)	Windows Menus, Tabs & Links	Large size High resolution Near
Tablet	Finger Direct Course-grained (finger)	On-the-go (Single Purpose Apps)	Panes Buttons & Gestures	Medium size High resolution Near
Mobile	Finger Direct Course-grained (finger)	On-the-go (Single Purpose Apps)	Panes & Buttons	Small size High resolution Near
TV	Remote Control Indirect Course-grained (1 object at a time)	Leisure (supports consumption, media apps)	Panes & Content	Large size High resolution Far away



#2 Maintain Flow

Spot the differences

Spot the differences



Now try again...

Now try again...



Now try again...

Change blindness



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 discontinuous.

**Reduce Page
Switching
to Maintain Flow**

"Special" Experience

NETFLIX

Recently Watched

Suggestions for You

MORE

New Arrivals

Genres

Instant Queue

Search

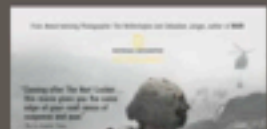


TV



✕ View more suggestions

Emotional Movies



"Special" Experience

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

NETFLIX

Recently Watched

Suggestions for You

MORE

New Arrivals

Genres

Instant Queue

Search

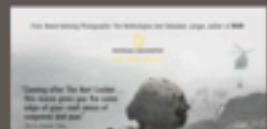


TV



✕ View more suggestions

Emotional Movies



"Plus" Experience

NETFLIX

2 / 332

Search

Instant Queue



Bella

2006 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

Recently Watched



Emotional Dramas

"Plus" Experience

NETFLIX

Instant Queue



2006 PG-13 1h 31m



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Cast: Eduardo Verástegui, Tammy Blanchard...

Categories: Drama, Indie Dramas

Director: Alejandro Gomez Monteverde

Recently Watched



Emotional Dramas

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

Search

Which Won?

Which Won?

NETFLIX

2 / 332

Search

Instant Queue



Bella

2006 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

Recently Watched



Emotional Dramas

Which Won?

NETFLIX

2 / 332

Search

Instant Queue



Recently Watched



Emotional Dramas



“Plus” experience won.

Reduces page transitions, feels more cinematic, less jarring.

Maintains Flow

1h 31m

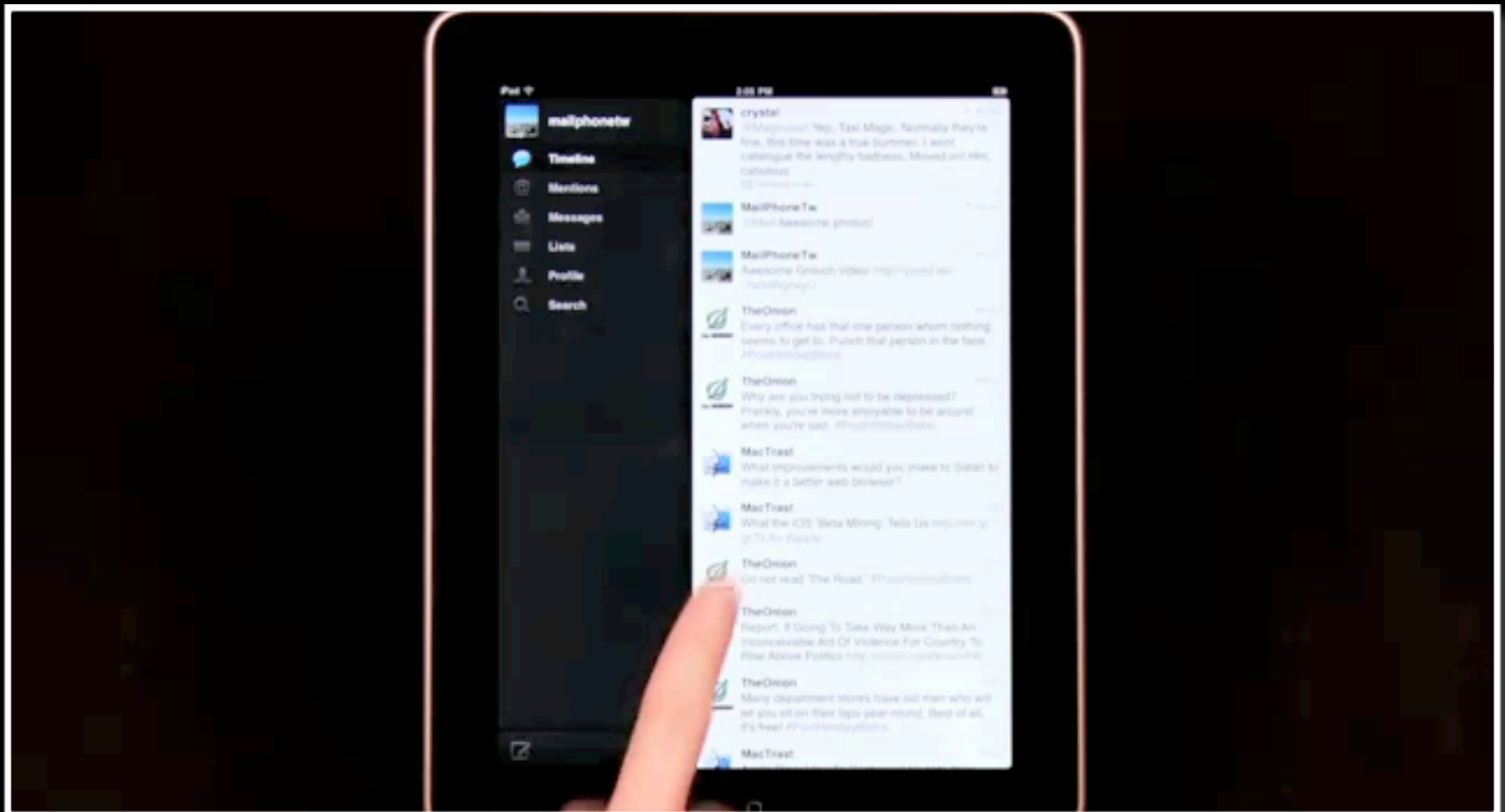
— Nina, a pregnant, mess, and Jose, an look with a tragic ce in each other as ne unpredictably ut the course of ay.

Ricardo Verástegui, Tammy Blanchard...

Categories: Drama, Indie Dramas

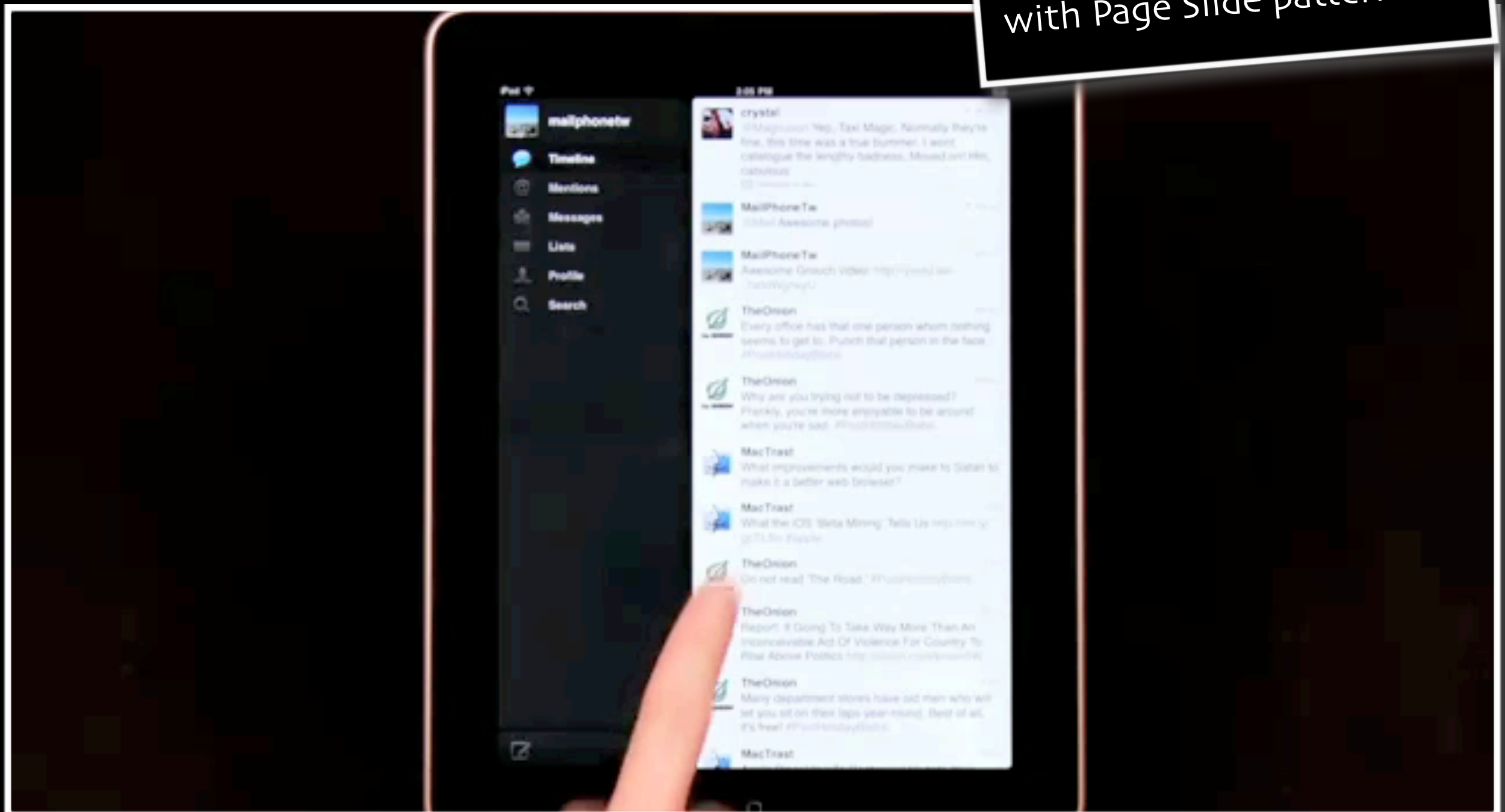
Director: Alejandro Gomez Monteverde

Twitter as iPad App



Twitter as iPad App

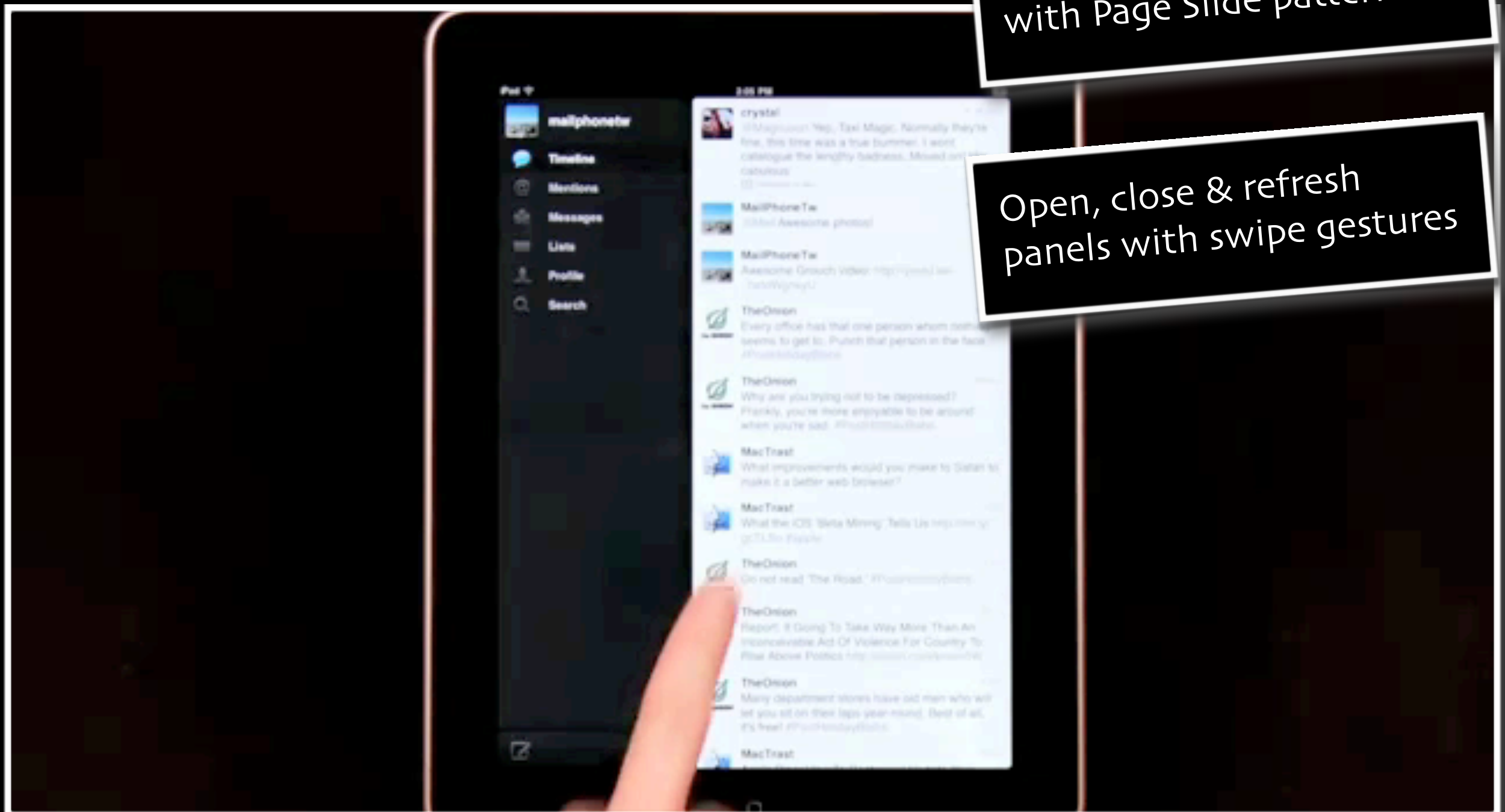
Minimize page transitions
with Page Slide pattern



Twitter as iPad App

Minimize page transitions with Page Slide pattern

Open, close & refresh panels with swipe gestures

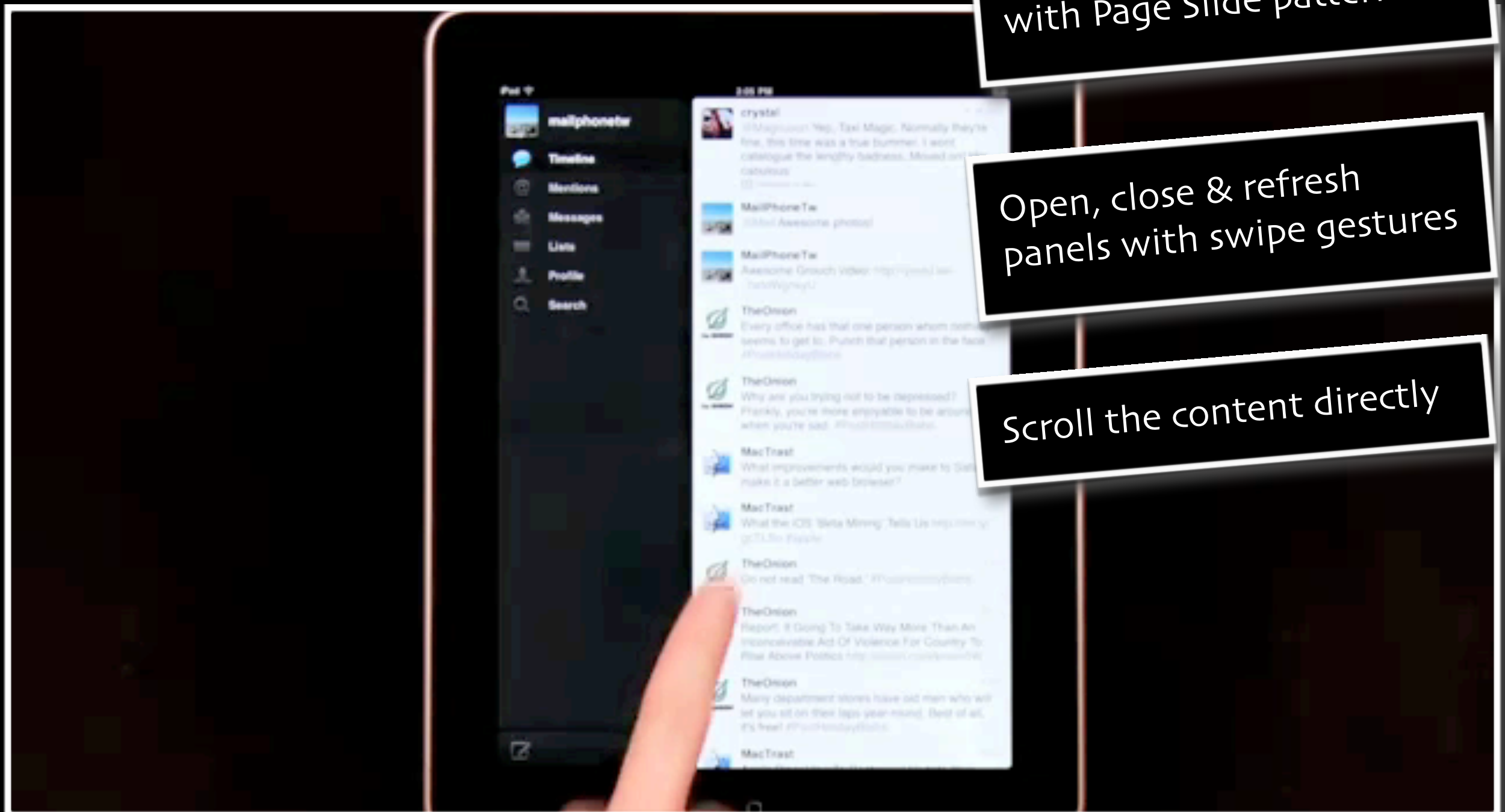


Twitter as iPad App

Minimize page transitions with Page Slide pattern

Open, close & refresh panels with swipe gestures

Scroll the content directly



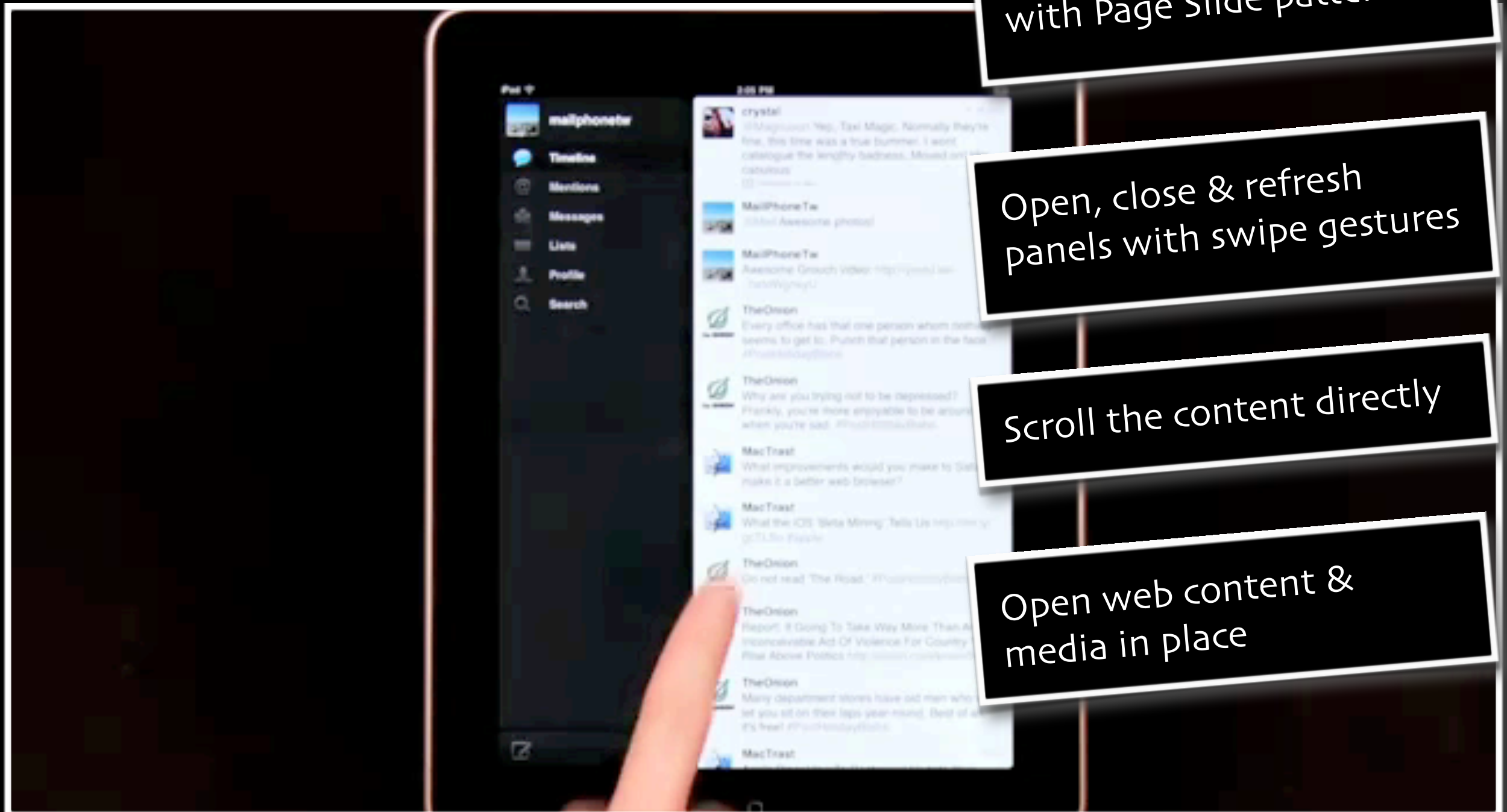
Twitter as iPad App

Minimize page transitions with Page Slide pattern

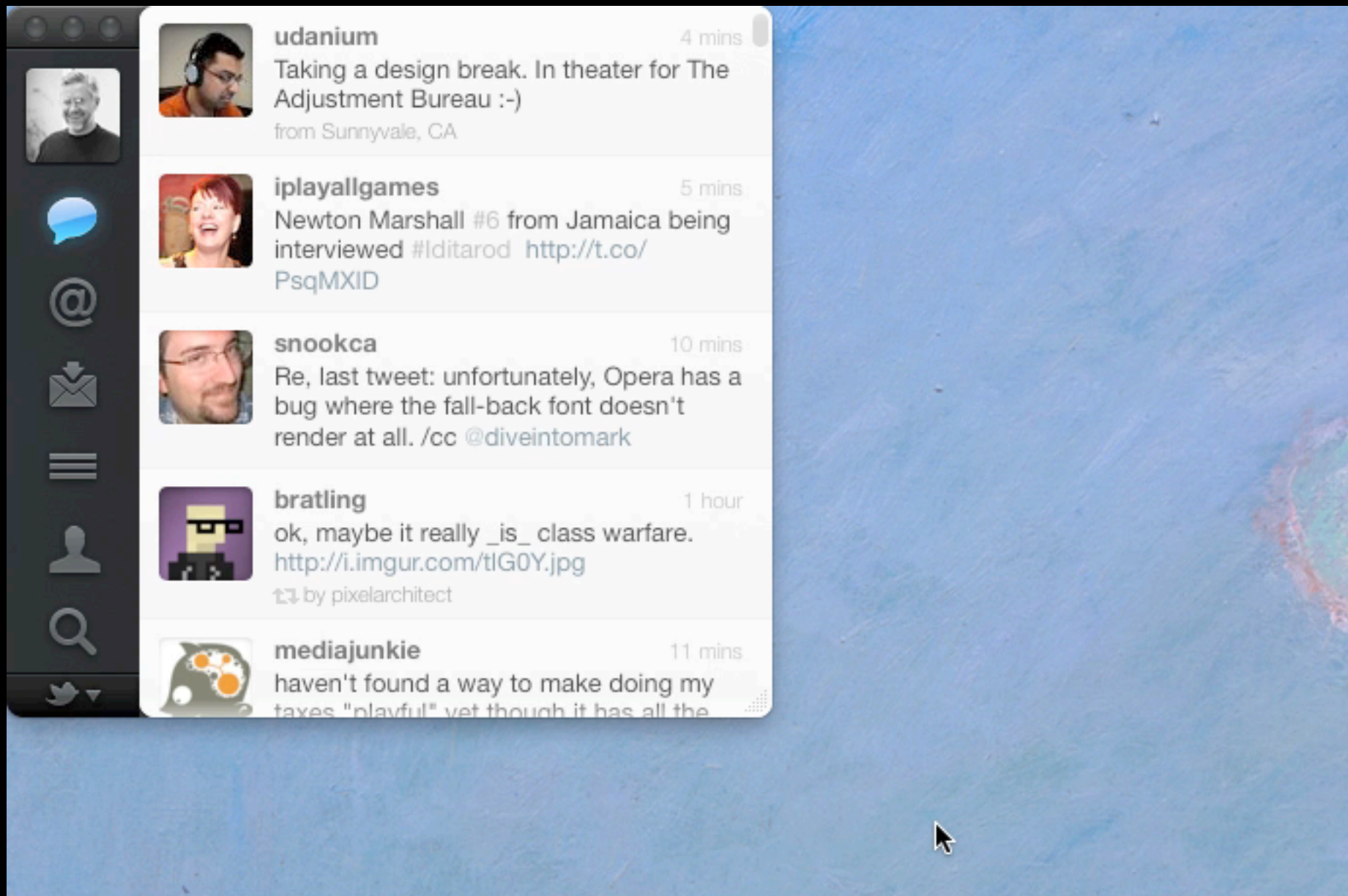
Open, close & refresh panels with swipe gestures

Scroll the content directly

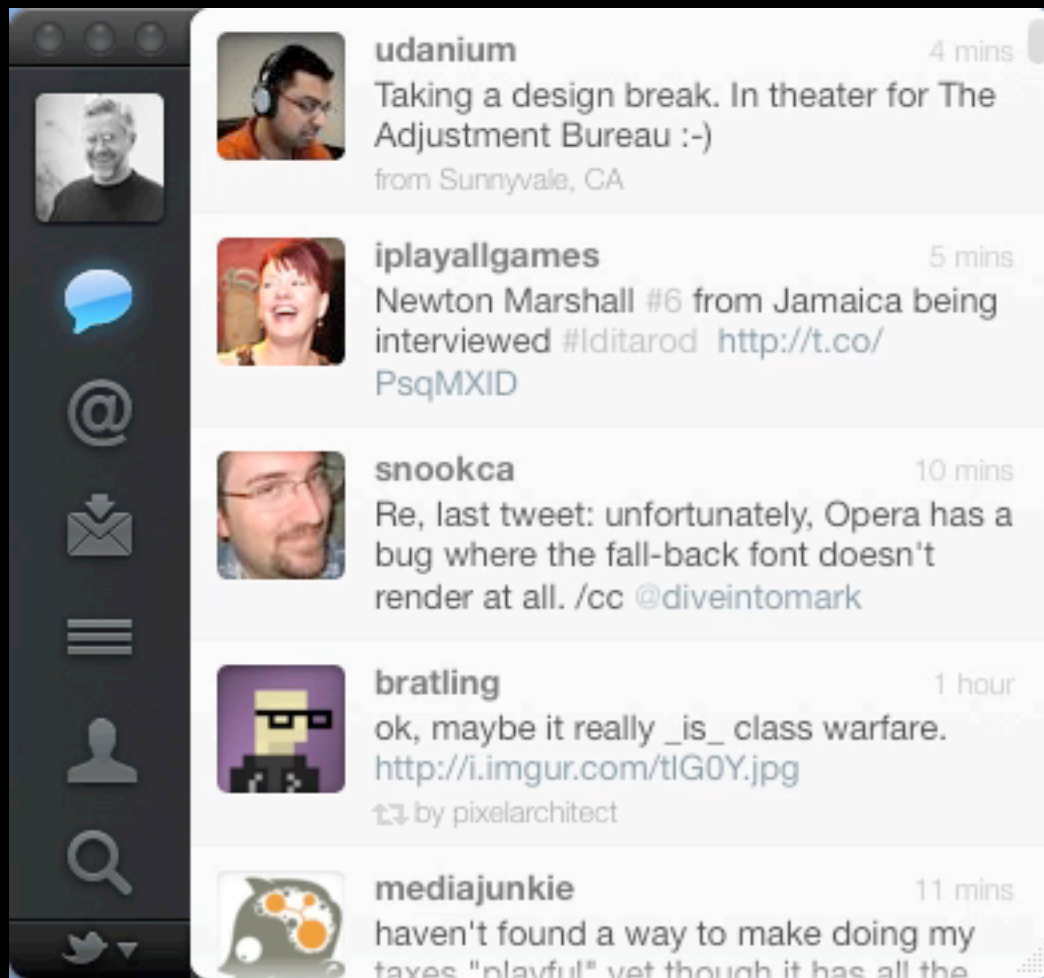
Open web content & media in place



Twitter as Mac App

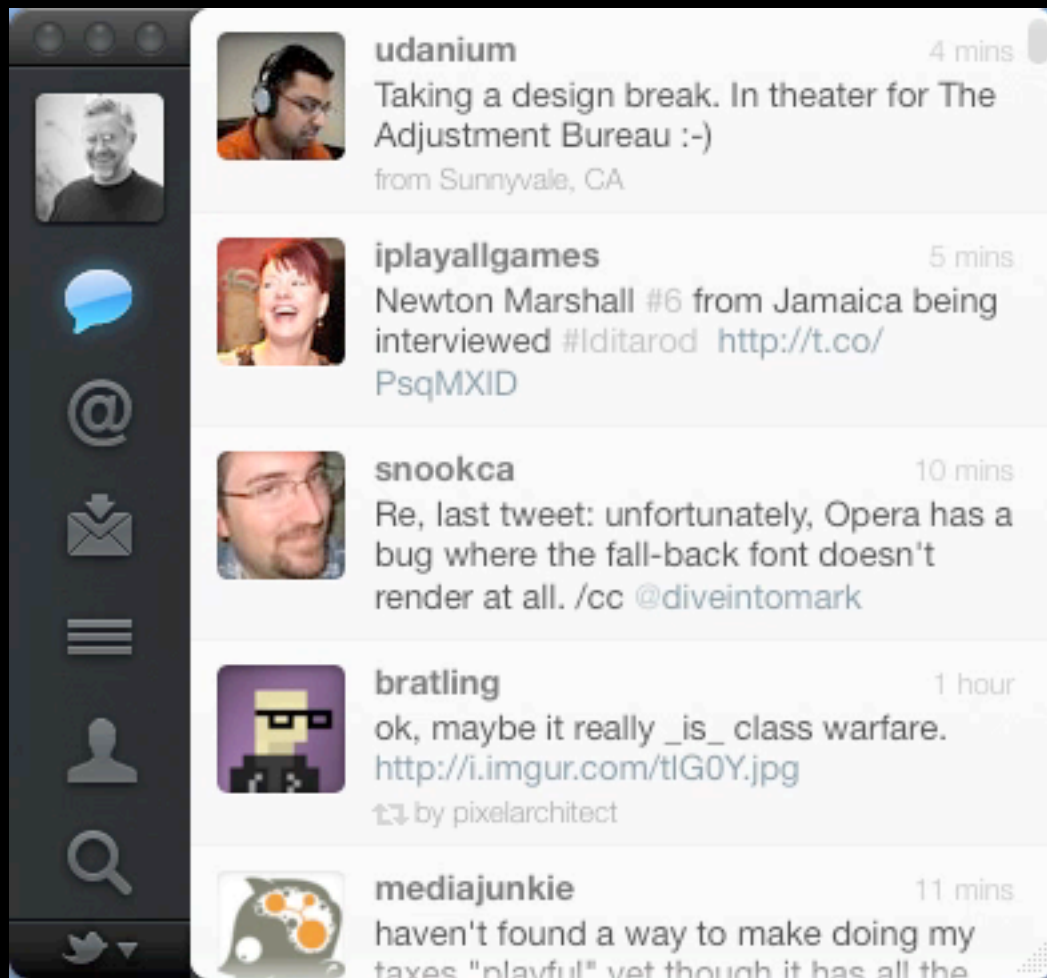


Twitter as Mac App



Navigate to other areas
using smooth transitions
(make flow visible)

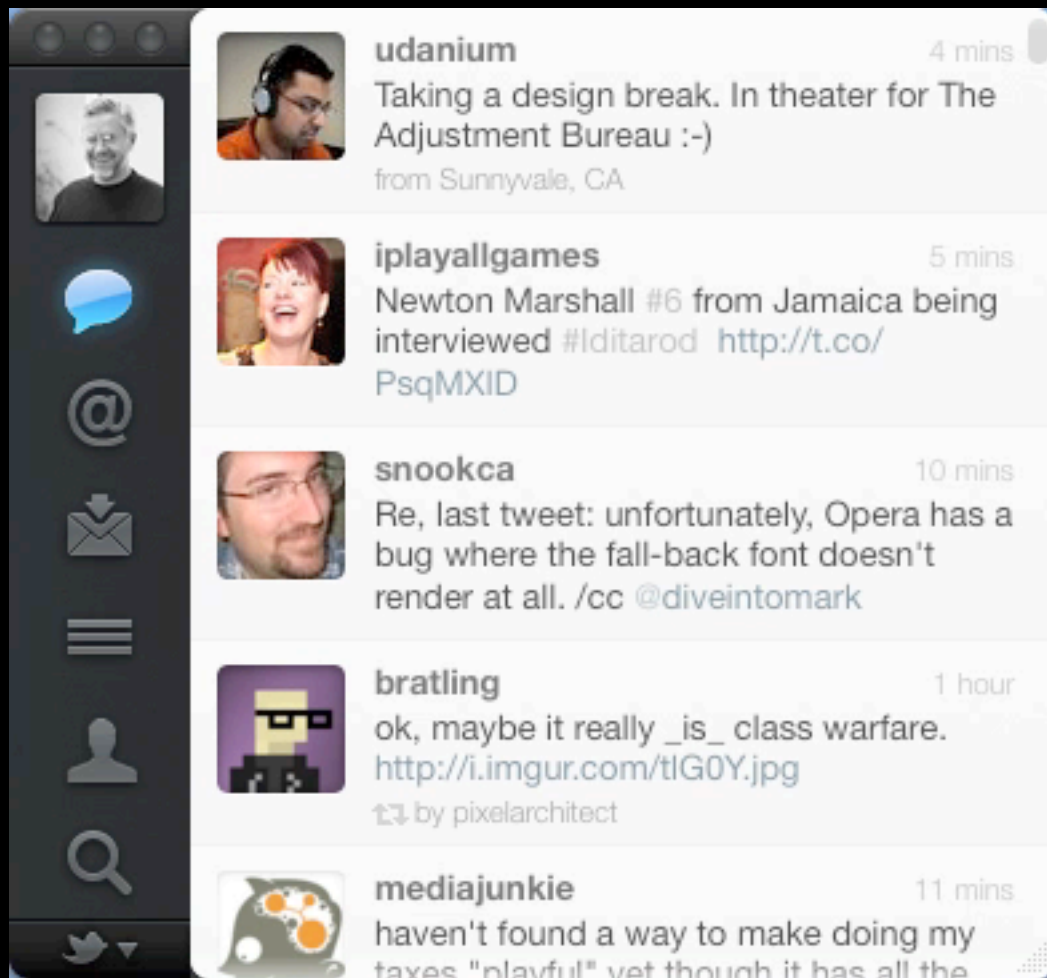
Twitter as Mac App



Navigate to other areas
using smooth transitions
(make flow visible)

Anti-Pattern: breaking the
flow with menus &
popouts.

Twitter as Mac App



Navigate to other areas
using smooth transitions
(make flow visible)

Anti-Pattern: breaking the
flow with menus &
popouts.

Rethink desktop apps to
use real estate more
creatively

Twitter as Web App

The screenshot displays the Twitter web application interface. At the top, there is a navigation bar with the Twitter logo, a search bar, and links for Home, Profile, Messages, and Who To Follow. The user's name, billwscott, is visible in the top right corner.

The main content area is divided into two columns. The left column shows a timeline of tweets. The right column shows a detailed view of a tweet from @sinequanon.

Timeline:

- sinequanon** Rowell Sotto: Great presentation on the evolution and technical acumen of Renaissance and Baroque engraving techniques. [FLASH]. <http://goo.gl/EVJYE> 1 minute ago
- dbarradas** Daniel Barradas: Video: Floating <http://tumblr.com/x321p0zwei> 1 minute ago
- iplayallgames** Cindy Ritzman: Dogs resting an hour before running the #lditarod yfrog.com/gz9t4zrj 3 minutes ago
- iplayallgames** Cindy Ritzman: Mackey at the start! #lditarod yfrog.com/h0pnxxj 3 minutes ago
- rashmi** Rashmi Sinha: Yes, I revoked that app. Go here if you were tricked: <https://twitter.com/settings/connections> 5 minutes ago
- billwscott** Bill Scott: @rashmi Yikes. Tweet spam is so annoying. The good thing is that "the voice" of the tweet is so different than your voice it is obvious. 6 minutes ago

Tweet Detail View (from @sinequanon):

Great presentation on the evolution and technical acumen of Renaissance and Baroque engraving techniques. [FLASH]. <http://goo.gl/EVJYE> 1 minute ago via web

Tweets containing **Renaissance and Baroque**

dose2day daily dose: Girolamo Frescobaldi: Bridging Renaissance and Baroque Music <http://www.redgag.com/c-ljglid> #music #renaissance #composers 4 hours ago

gd2know gd2know: says Girolamo Frescobaldi: Bridging Renaissance and Baroque Music <http://ping.fm/5uODo> music renaissance compo... <http://plurk.com/p/b0w2hn> 4 hours ago

Tweets from **@sinequanon**

Canceled opening the page

Twitter as Web App

The screenshot displays the Twitter web application interface. At the top, there is a navigation bar with the Twitter logo, a search bar, and links for Home, Profile, Messages, and Who To Follow. The user's name, billwscott, is visible in the top right corner. The main content area is divided into two columns. The left column shows a timeline of tweets, including a tweet from sinequanon about Renaissance and Baroque engraving techniques, a video from dbarradas, and a tweet from iplayallgames about dogs. The right column shows search results for the terms 'Renaissance and Baroque', featuring tweets from dose2day and gd2know about Girolamo Frescobaldi. A black callout box with white text is overlaid on the right side of the image, stating: 'Minimize page transitions with Page Slide pattern'. At the bottom left, a status bar indicates 'Canceled opening the page'.

twitter

Search

Home Profile Messages Who To Follow

billwscott

What's happening?

Timeline @Mentions Retweets Searches Lists

sinequanon Rowell Sotto
Great presentation on the evolution and technical acumen of Renaissance and Baroque engraving techniques. [FLASH].
<http://goo.gl/EVJYE>
1 minute ago ☆ Favorite ↻ Retweet ↩ Reply

dbarradas Daniel Barradas
Video: Floating <http://tumblr.com/x321p0zwei>
1 minute ago

iplayallgames Cindy Ritzman
Dogs resting an hour before running the #lditarod yfrog.com/gz9t4zrj
3 minutes ago

iplayallgames Cindy Ritzman
Mackey at the start! #lditarod yfrog.com/h0pnxxj
3 minutes ago

rashmi Rashmi Sinha
Yes, I revoked that app. Go here if you were tricked:
<https://twitter.com/settings/connections>
5 minutes ago ☆ Favorite ↻ Retweet ↩ Reply

billwscott Bill Scott
@rashmi Yikes. Tweet spam is so annoying. The good thing is that "the voice" of the tweet is so different than your voice it is obvious.
6 minutes ago

Great evolution of technical acumen of Renaissance and Baroque engraving techniques. [FLASH].
<http://goo.gl/EVJYE>
1 minute ago via web ☆ Favorite ↻ Retweet ↩ Reply

Tweets containing **Renaissance and Baroque**

dose2day daily dose
Girolamo Frescobaldi: Bridging Renaissance and Baroque Music
<http://www.redgag.com/c-ljglid> #music #renaissance #composers
4 hours ago

gd2know gd2know
says Girolamo Frescobaldi: Bridging Renaissance and Baroque Music
<http://ping.fm/5uODo> music renaissance compo... <http://plurk.com/p/b0w2hn>
4 hours ago

Tweets from **@sinequanon**

Minimize page transitions with Page Slide pattern

Canceled opening the page

Twitter as Web App

The image shows a screenshot of the Twitter web application interface. The top navigation bar includes the Twitter logo, a search bar, and links for Home, Profile, Messages, and Who To Follow. The user's name, billwscott, is visible in the top right corner. The main content area is titled "What's happening?" and displays a timeline of tweets. The tweets are from various users, including sinequanon, dbarradas, iplayallgames, rashmi, and billwscott. The tweets contain text, links, and images. Two black callout boxes with white text are overlaid on the right side of the interface. The first callout box says "Minimize page transitions with Page Slide pattern" and the second callout box says "Find myself annoyed with web pages opening in another window". At the bottom of the interface, there is a status bar that says "Canceled opening the page".

twitter

Search

Home Profile Messages Who To Follow

billwscott

What's happening?

Timeline @Mentions Retweets Searches Lists

sinequanon Rowell Sotto
Great presentation on the evolution and technical acumen of Renaissance and Baroque engraving techniques. [FLASH].
<http://goo.gl/EVJYE>
1 minute ago ☆ Favorite ↻ Retweet ↩ Reply

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5 minutes ago ☆ Favorite ↻ Retweet ↩ Reply

billwscott Bill Scott
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<http://goo.gl/EVJYE>
1 minute ago

Tweets from **@sinequanon**

Minimize page transitions with Page Slide pattern

Find myself annoyed with web pages opening in another window

Canceled opening the page

Twitter as Web App

The image shows a screenshot of the Twitter web application interface. The top navigation bar includes the Twitter logo, a search bar, and links for Home, Profile, Messages, and Who To Follow. The user's name, billwscott, is visible in the top right corner. The main content area displays a timeline of tweets. Three callout boxes are overlaid on the right side of the interface, each pointing to a specific tweet or feature:

- Callout 1:** "Minimize page transitions with Page Slide pattern" (points to the top of the tweet stream).
- Callout 2:** "Find myself annoyed with web pages opening in another window" (points to a tweet by @sinequanon containing a link).
- Callout 3:** "Find myself wanting to substitute a drag for a swipe" (points to a tweet by @rashmi containing a link).

The tweets visible in the timeline include:

- sinequanon** Rowell Sotto: Great presentation on the evolution and technical acumen of Renaissance and Baroque engraving techniques. [FLASH]. <http://goo.gl/EVJYE> (1 minute ago)
- dbarradas** Daniel Barradas: Video: Floating <http://tumblr.com/x321p0zwai> (1 minute ago)
- iplayallgames** Cindy Ritzman: Dogs resting an hour before running the #lditarod yfrog.com/gz9t4zrj (3 minutes ago)
- iplayallgames** Cindy Ritzman: Mackey at the start! #lditarod yfrog.com/h0pnxxj (3 minutes ago)
- rashmi** Rashmi Sinha: Yes, I revoked that app. Go here if you were tricked: <https://twitter.com/settings/connections> (5 minutes ago)
- billwscott** Bill Scott: @rashmi Yikes. Tweet spam is so annoying. The good thing is that "the voice" of the tweet is so different than your voice it is obvious. (6 minutes ago)

At the bottom left, a status bar indicates "Canceled opening the page".

Vs Hover & Cover

Home



triptych RT @ChevyRay: Doing some final beta testing for @MattThorson's Ogmo Editor, an upcoming freeware level editor. So cool so far!

4 minutes ago via HootSuite



pixelarchitect wow, public comments are ending with the totally random "planter box" advocate

8 minutes ago via Tweetie



triptych RT @metagaming: RT @df_psu: @shapah A great interview with Temple Grandin: <http://bit.ly/aaf5GD> cheers for that one(via @shapah) cheers !

12 minutes ago via HootSuite



michaeljordan On a clear nice night : Look at the moon from binoculars or a telescope. It will blow your mind.

16 minutes ago via web



shauntrennery Amazon.com drops support for IE6 <http://j.mp/9cPSAF>

25 minutes ago via TweetDeck

Vs Hover & Cover

Home



triptych RT @ChevyRay: Doing some final beta testing for @MattThorson's Ogmo Editor, an upcoming freeware level editor. So cool so far!

4 minutes ago via HootSuite



pixelarchitect wow, public comments are ending with the totally random "planter box" advocate

8 minutes ago via Tweetie



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michaeljordan On a clear nice night : Look at the moon from binoculars or a telescope. It will blow your mind.

16 minutes ago via web



shauntrennery Amazon.com drops support for IE6 <http://j.mp/9cPSAF>

25 minutes ago via TweetDeck

Where possible replace annoying hover details with dedicated detail panes

**Keep Navigation
Simple
to Maintain Flow**

Mobile Navigation

Mobile Navigation



Mobile Navigation



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

Mobile Navigation



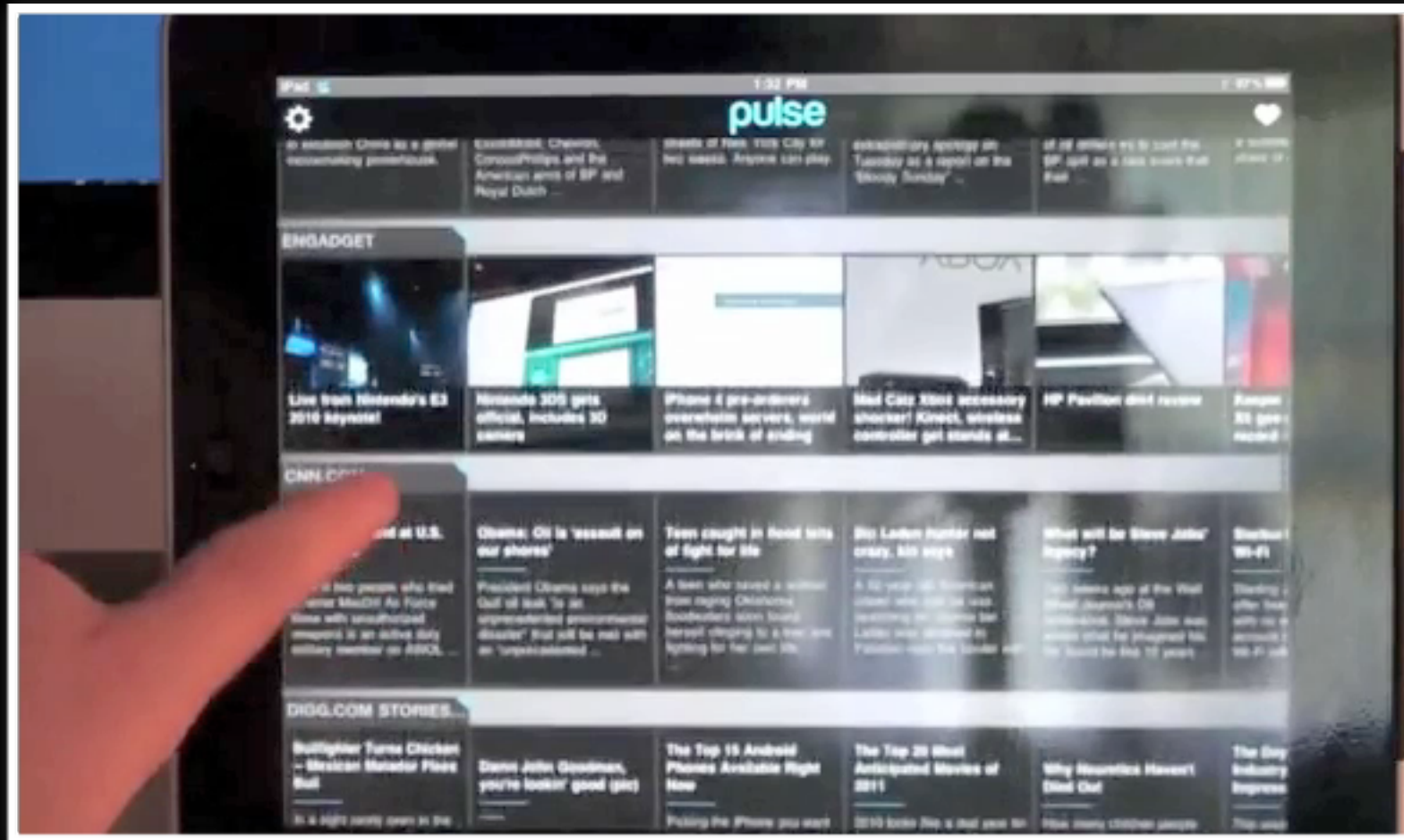
Three types of iPhone navigation: Flat, Tab, Tree
- Josh Clark (Tapworthy)



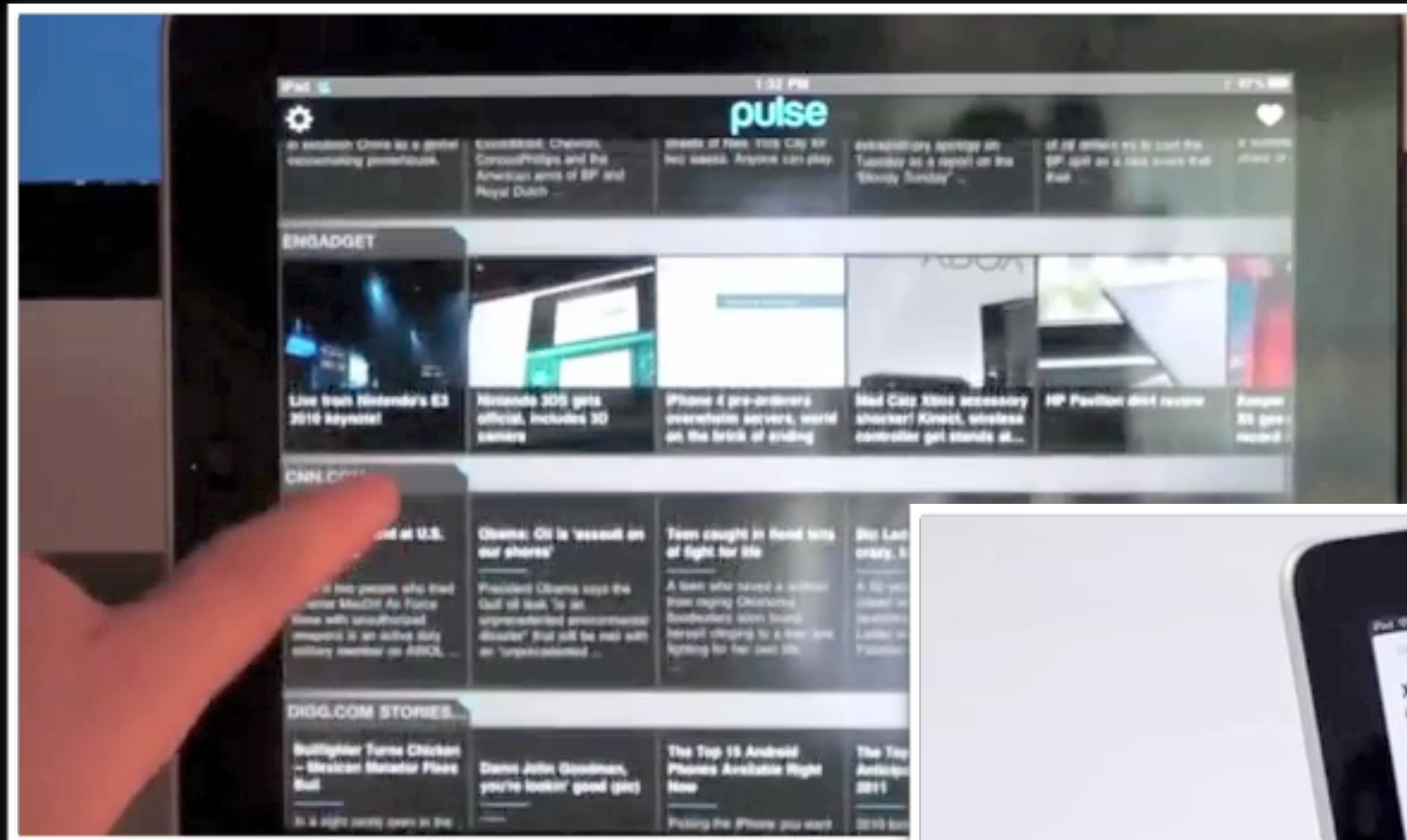
Gowalla: Tab + Flat
- Josh Clark (Tapworthy)

Source: Tapworthy by Josh Clark

Pulse & Flipboard iPad Apps



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

Maintaining Flow Across Platforms

	Navigation	Paging
Web	Page, Tab, Back Button	When page content changes or step by step flow
		Avoid too many page changes
Mobile	Flat, Tab & Tree. 1 level back.	For content, steps in flow
Tablet	Flat, Tab, Master/Detail. 1 level-back	Swiping through pages
		Avoid too many page changes
TV	Flat, Tab, Tree, Master/Detail	When page content changes or step by step flow

Maintaining Flow Across Platforms

	Navigation	Paging	Scrolling
Web	Page, Tab, Back Button	When page content changes or step by step flow Avoid too many page changes	Better than paging (easier on web than on touch)
Mobile	Flat, Tab & Tree. 1 level back.	For content, steps in flow	Question scrolling, prefer Flat
Tablet	Flat, Tab, Master/Detail. 1 level-back	Swiping through pages Avoid too many page changes	Short scrolling or for Sliding content
TV	Flat, Tab, Tree, Master/Detail	When page content changes or step by step flow	Avoid

Maintaining Flow Across Platforms

	Navigation	Paging	Scrolling	Content Slide
Web	Page, Tab, Back Button	When page content changes or step by step flow Avoid too many page changes	Better than paging (easier on web than on touch)	Carousels for media or short relevancy lists
Mobile	Flat, Tab & Tree. 1 level back.	For content, steps in flow	Question scrolling, prefer Flat	Limit use of in-page sliding content
Tablet	Flat, Tab, Master/Detail. 1 level-back	Swiping through pages Avoid too many page changes	Short scrolling or for Sliding content	Nice way to bring in more in-page content
TV	Flat, Tab, Tree, Master/Detail	When page content changes or step by step flow	Avoid	Avoid

Maintaining Flow Across Platforms

	Navigation	Paging	Scrolling	Content Slide	Panel Slide
Web	Page, Tab, Back Button	When page content changes or step by step flow Avoid too many page changes	Better than paging (easier on web than on touch)	Carousels for media or short relevancy lists	Nice way to extend real estate
Mobile	Flat, Tab & Tree. 1 level back.	For content, steps in flow	Question scrolling, prefer Flat	Limit use of in-page sliding content	Avoid (except as transition to replace page)
Tablet	Flat, Tab, Master/Detail. 1 level-back	Swiping through pages Avoid too many page changes	Short scrolling or for Sliding content	Nice way to bring in more in-page content	Nice way to extend real estate
TV	Flat, Tab, Tree, Master/Detail	When page content changes or step by step flow	Avoid	Avoid	Nice way to extend real estate



#3 Be Responsive

**Use Transitions/
Animations
to Create
Responsiveness**

Animation Can...

Animation Can...

The screenshot shows the TurboTax Deluxe software interface. The top navigation bar includes 'Personal Info', 'Federal Taxes' (selected), 'Federal Review', 'State Taxes', and 'Print & File'. Below this, a sub-navigation bar shows 'Wages & Income', 'Deductions & Credits' (selected), and 'Other Tax Situations'. On the left, a summary box displays 'Federal Tax Due' as \$10,533 and 'CA Tax Due' as \$4,973. The main content area is titled 'Enter Your Interest Paid to Some Lender' and includes a link for 'See qualifications and limitations.' Below the title, a text label '(Box 1 on your 1098)' is followed by a text input field containing '0.00'. A mouse cursor is positioned over the input field.

TurboTax Deluxe

Personal Info **Federal Taxes** Federal Review State Taxes Print & File

Wages & Income **Deductions & Credits** Other Tax Situations

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)

Animation Can...

The screenshot shows the TurboTax Deluxe interface. At the top, there's a navigation bar with tabs: Personal Info, Federal Taxes (selected), Federal Review, State Taxes, and Print & File. Below this, there's a sub-navigation bar with tabs: Wages & Income, Deductions & Credits (selected), and Other Tax Situations. On the left side, there's a summary box showing 'Federal Tax Due' as \$10,533 and 'CA Tax Due' as \$4,973. The main area is titled 'Enter Your Interest Paid to Some Lender' with a subtitle 'Deductible interest paid in 2008 See qualifications and limitations.' Below this, there's a text label '(Box 1 on your 1098)' and a text input field containing '0.00'.

TurboTax Deluxe

Personal Info | **Federal Taxes** | Federal Review | State Taxes | Print & File

Wages & Income | **Deductions & Credits** | Other Tax Situations

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)

This is a close-up of the summary box from the previous screenshot. It shows 'Federal Tax Due' as \$10,533 and 'CA Tax Due' as \$4,973. The numbers are displayed in large, bold, red font on a dark gray background.

Federal Tax Due
\$10,533

CA Tax Due
\$4,973

Animation Can...

TurboTax Deluxe

Personal Info | **Federal Taxes** | Federal Review | State Taxes | Print & File

Wages & Income | **Deductions & Credits** | Other Tax Situations

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



nbc.com

upc.com

Animation Can...

Be really, really
annoying

The screenshot shows the TurboTax Deluxe interface. At the top, there's a navigation bar with tabs: Personal Info, Federal Taxes (selected), Federal Review, State Taxes, and Print & File. Below this, a sub-navigation bar includes Wages & Income, Deductions & Credits (selected), and Other Tax Situations. On the left, a sidebar displays 'Federal Tax Due' as \$10,533 and 'CA Tax Due' as \$4,973. The main content area is titled 'Enter Your Interest Paid to Some Lender' with a subtitle 'Deductible interest paid in 2008 See qualifications and limitations.' Below this, there's a text input field labeled '(Box 1 on your 1098)' with the value '0.00' entered.

This is a close-up of the tax due amounts from the TurboTax interface. It shows 'Federal Tax Due' as \$10,533 and 'CA Tax Due' as \$4,973, both displayed in large red numbers on a dark background.



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

- Occam

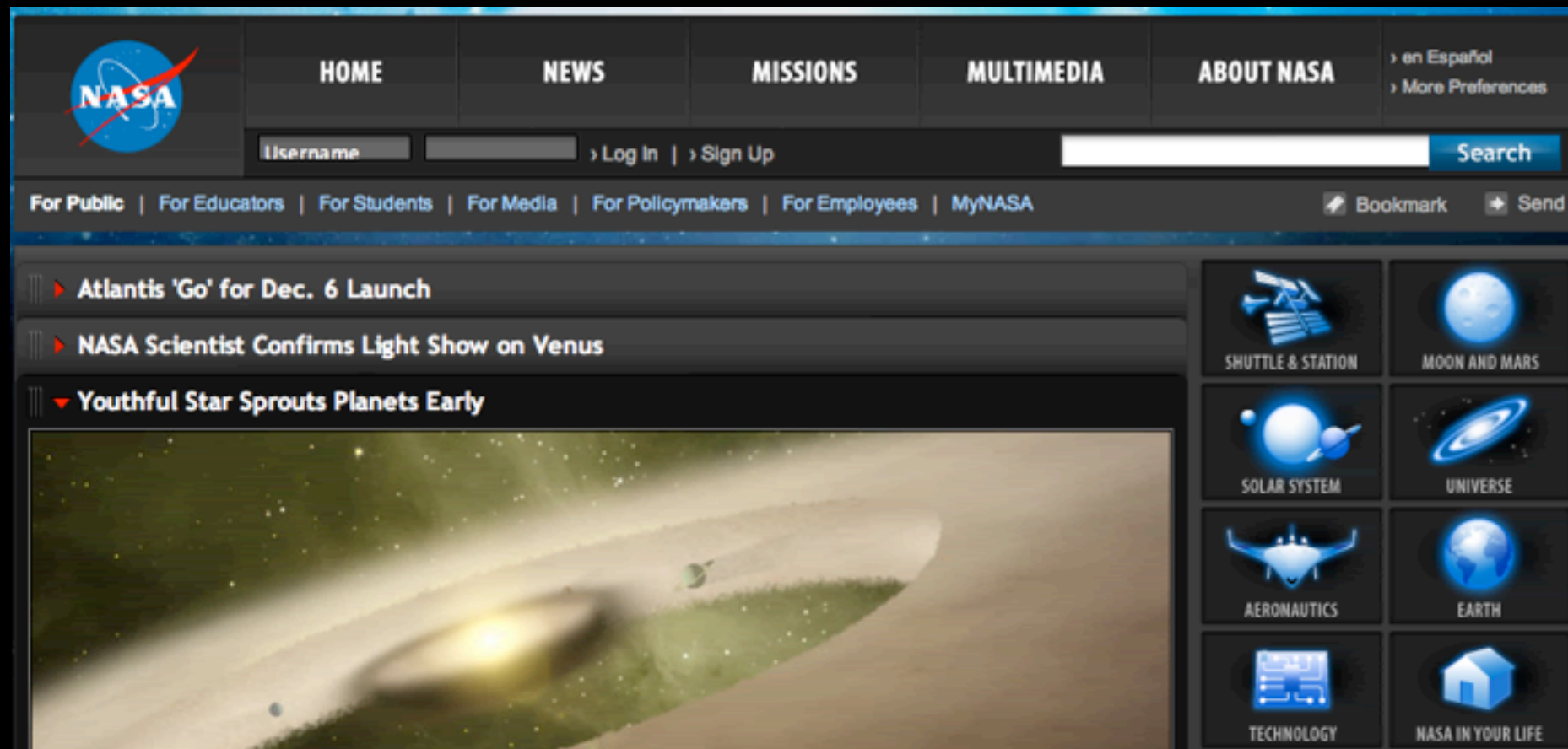
Make all visual distinctions as
subtle as possible, but still clear
and effective.

- Tufte "Smallest Effective Difference"

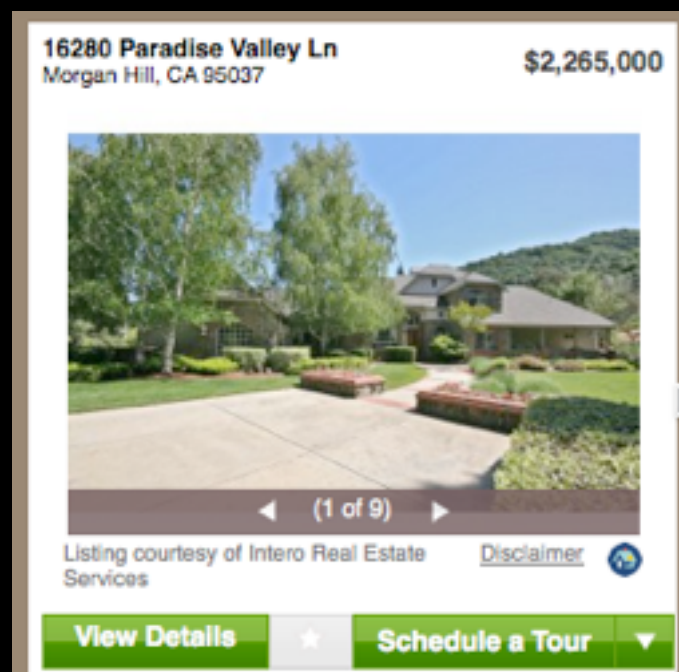
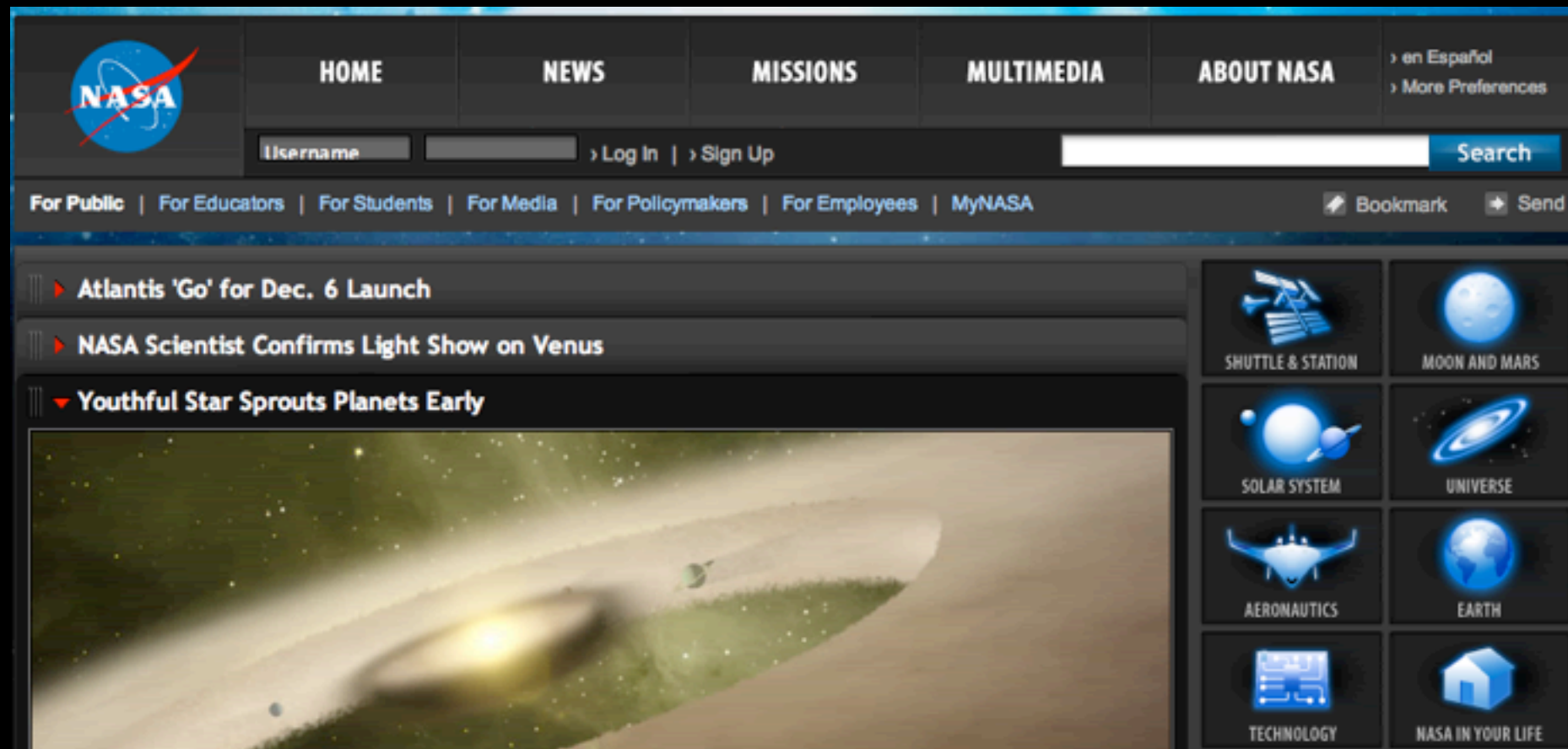
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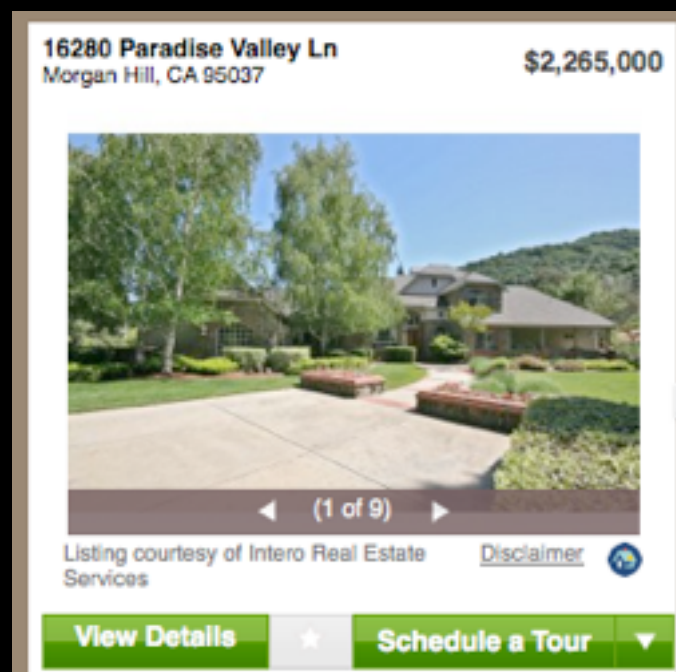
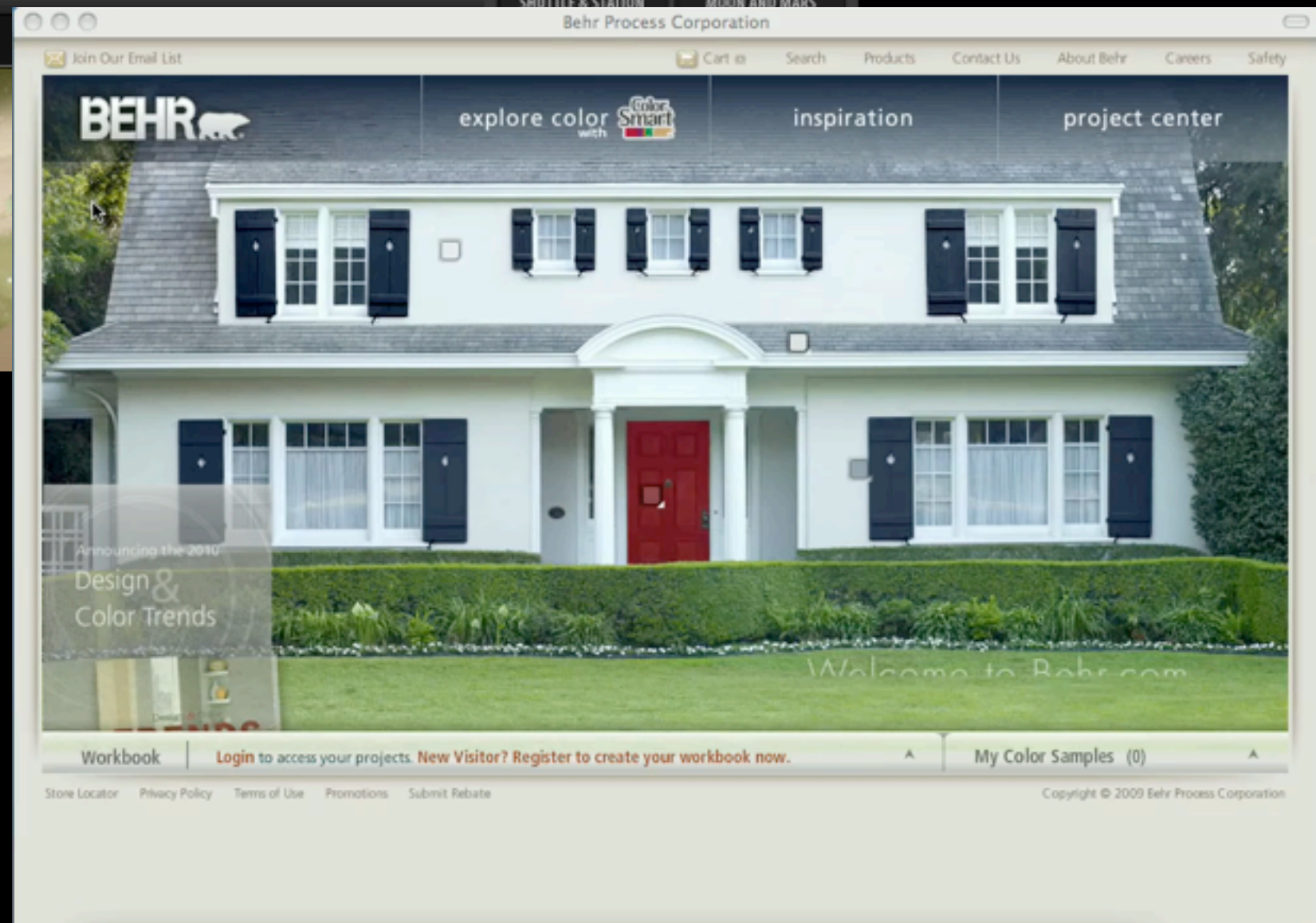
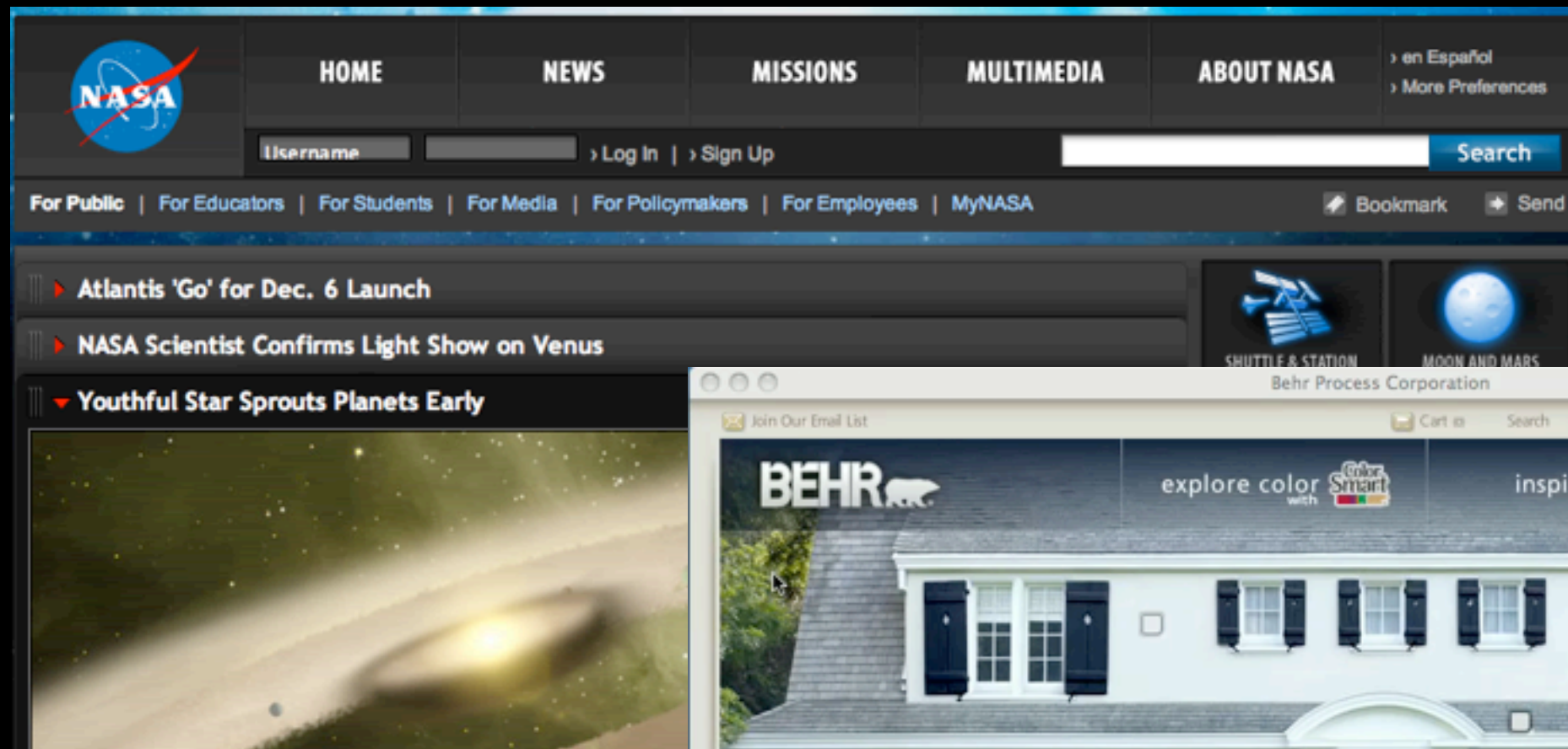
Web Apps Seem Prone to This



Web Apps Seem Prone to This

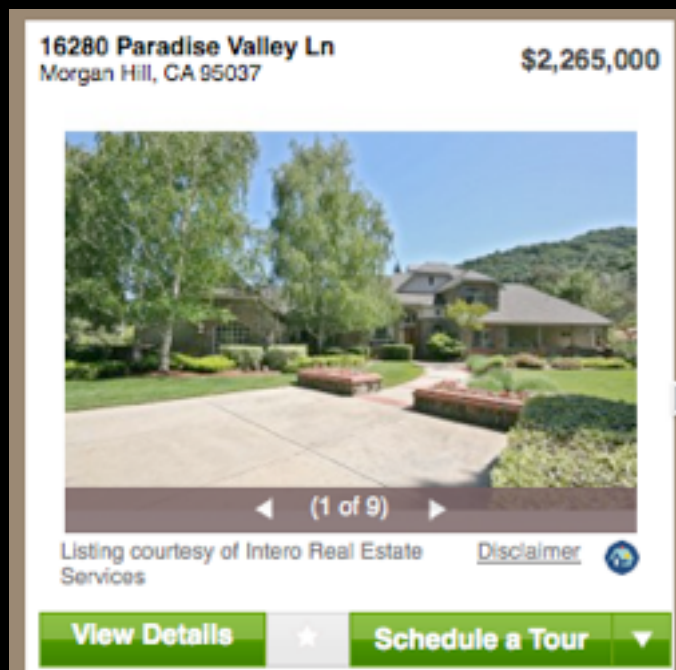
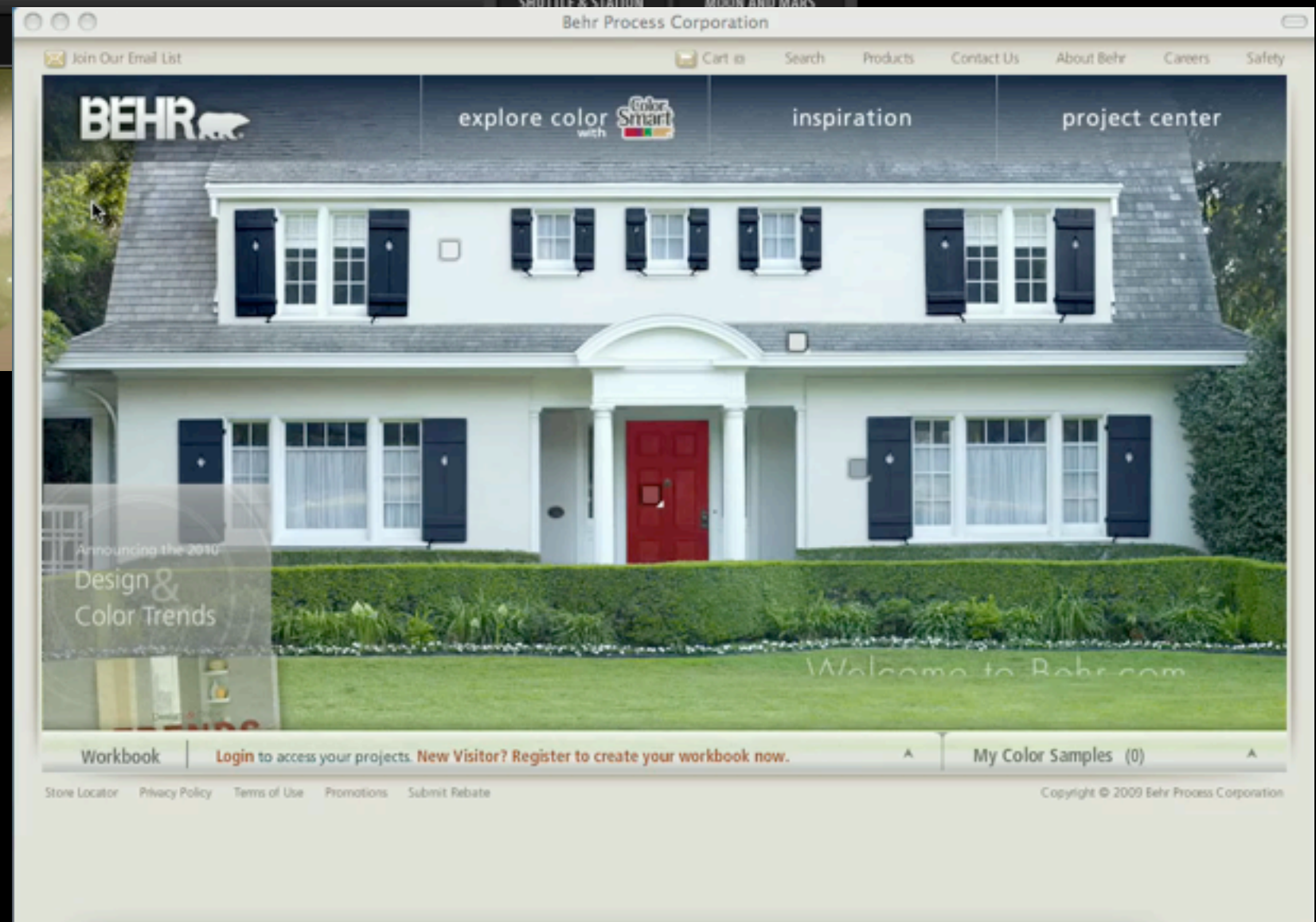
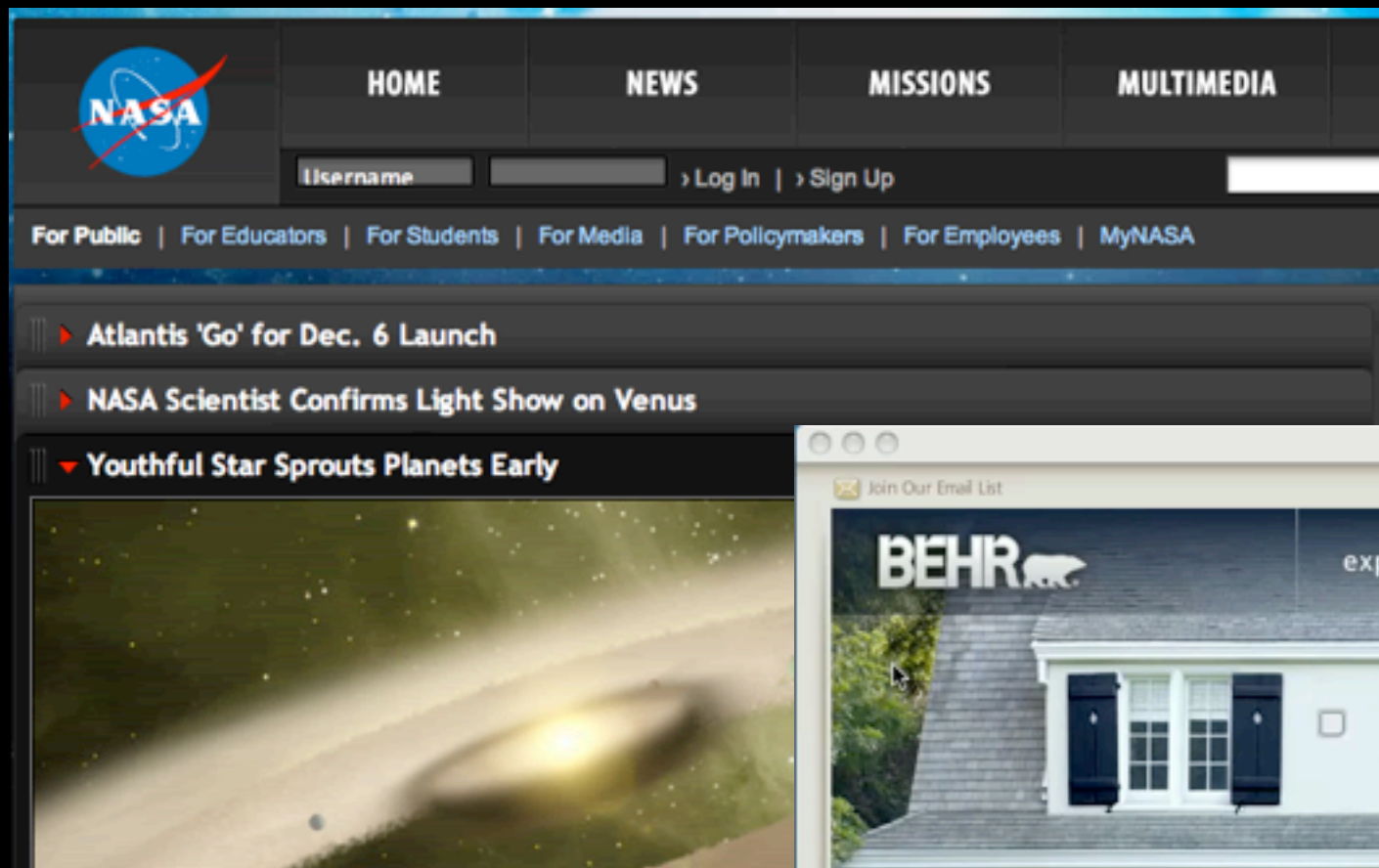


Web Apps Seem Prone to This

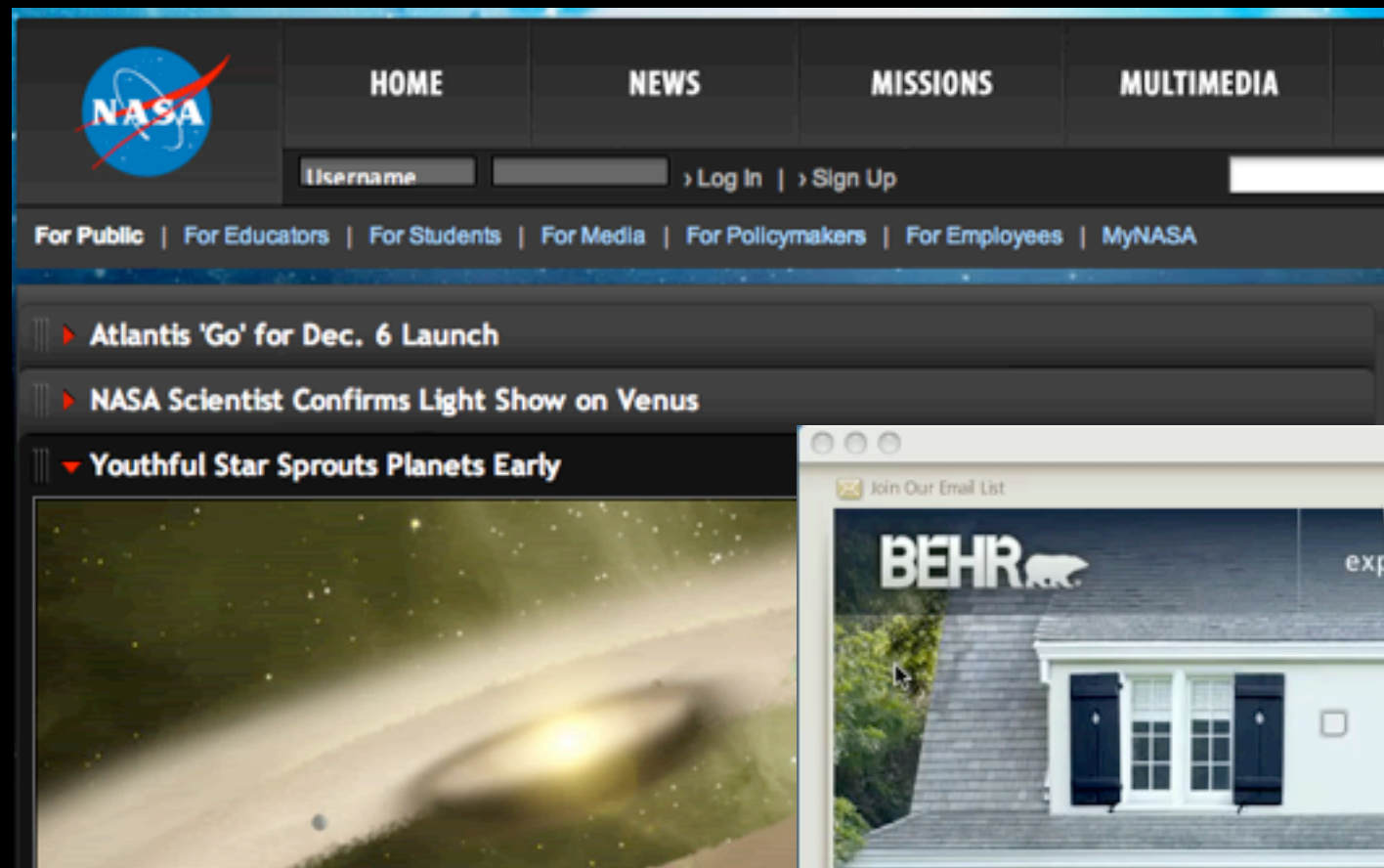


Web Apps Seem Prone to This

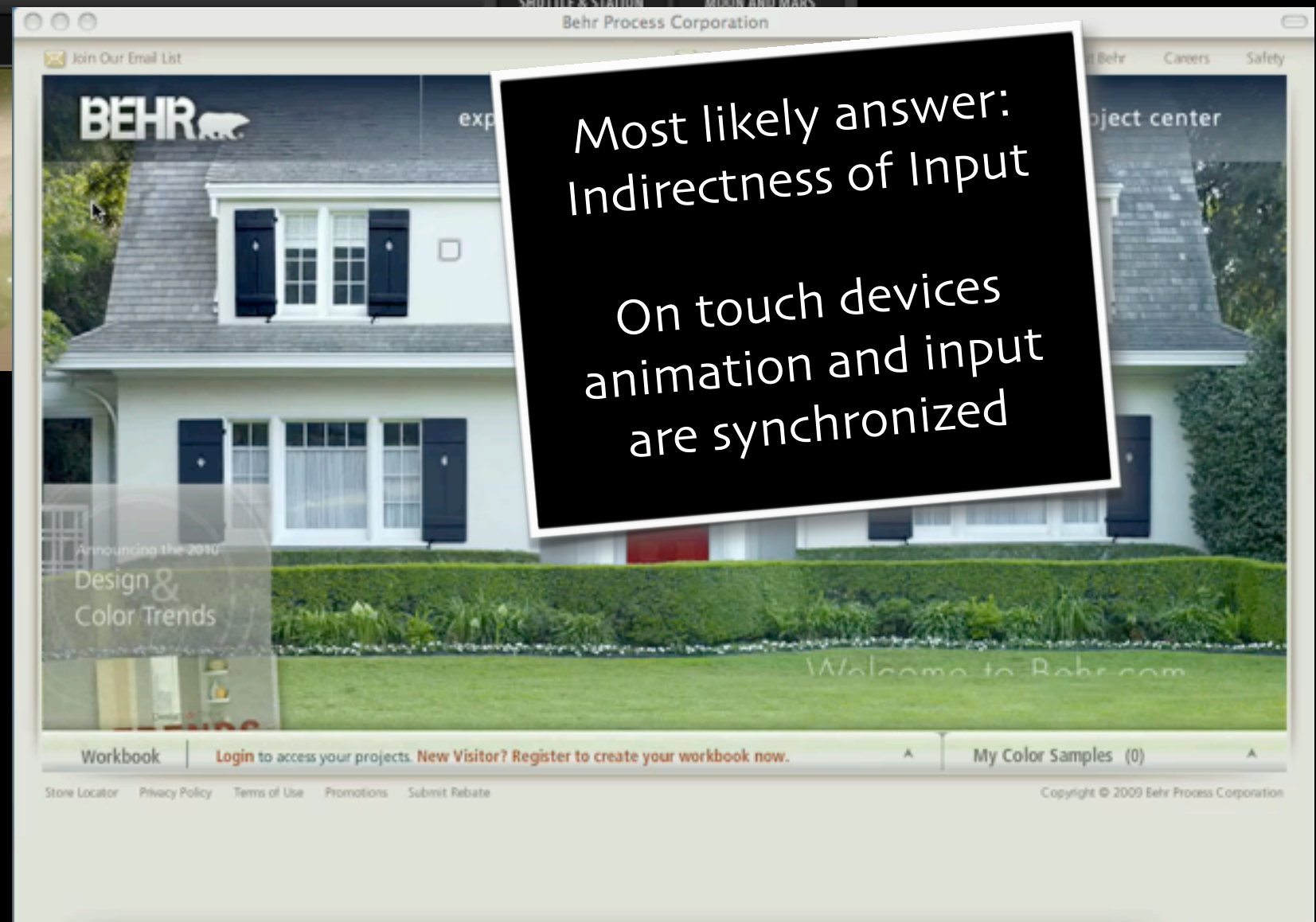
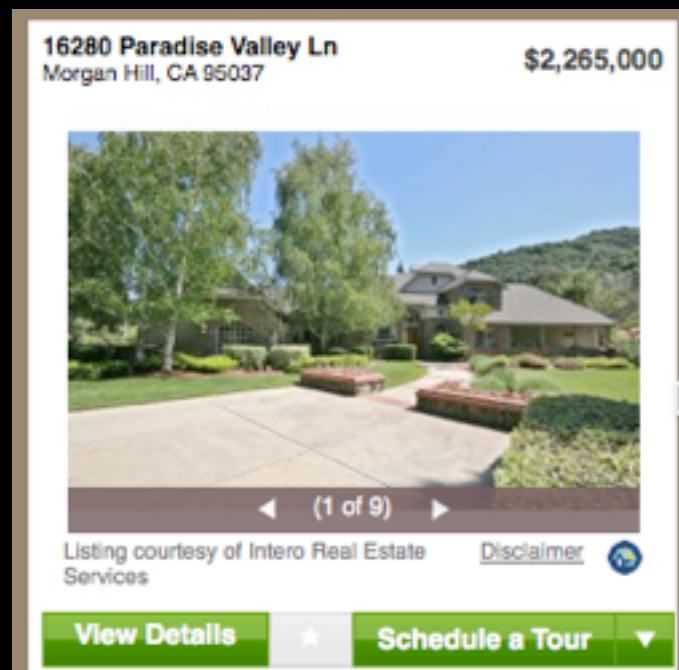
Snarky answer: Blame it on Flash :-)



Web Apps Seem Prone to This



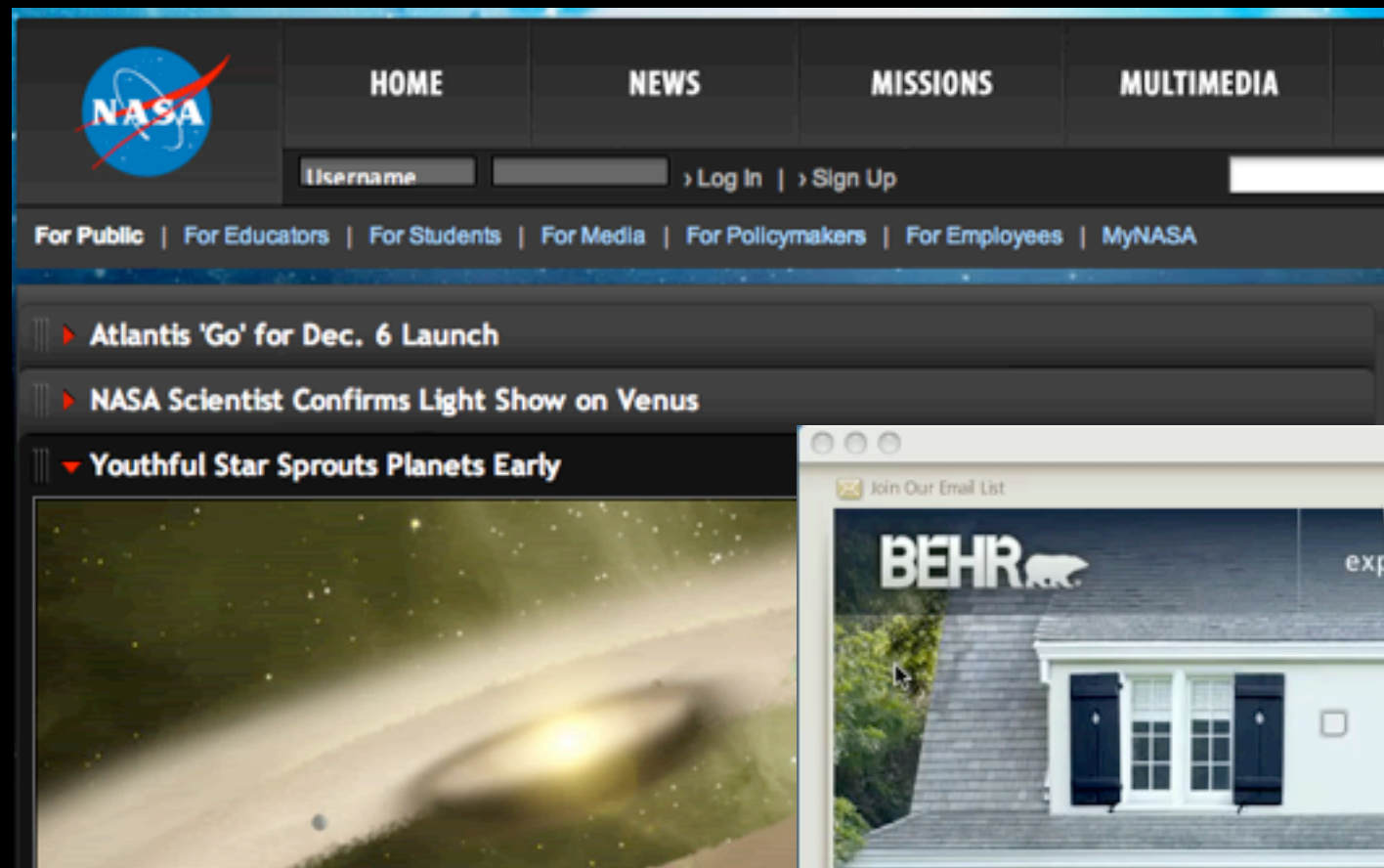
Snarky answer: Blame it on Flash :-)



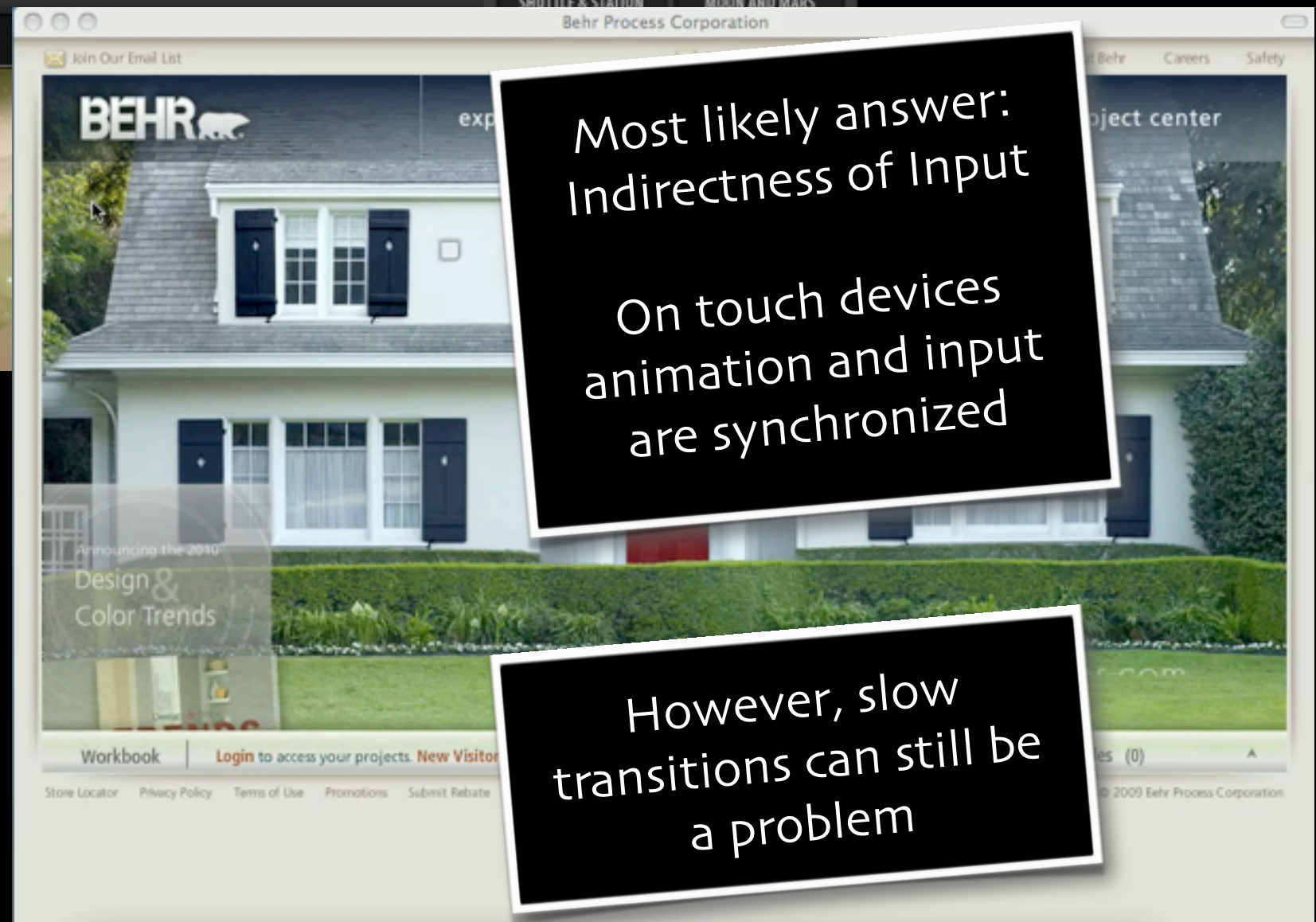
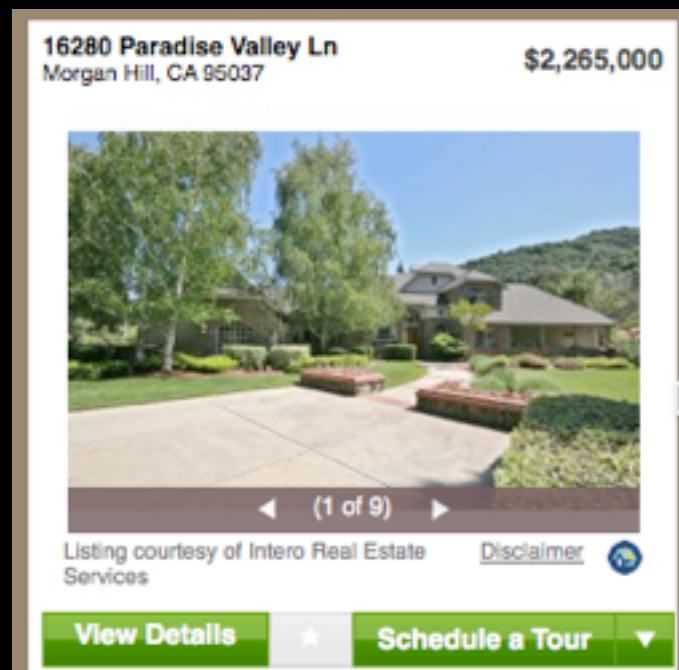
Most likely answer:
Indirectness of Input

On touch devices
animation and input
are synchronized

Web Apps Seem Prone to This



Snarky answer: Blame it on Flash :-)



Most likely answer: Indirectness of Input

On touch devices animation and input are synchronized

However, slow transitions can still be a problem

Animation Can...



Animation Can...

Reveal relationships



Animation Can...

Reveal relationships

Improve
responsiveness



Animation Can...

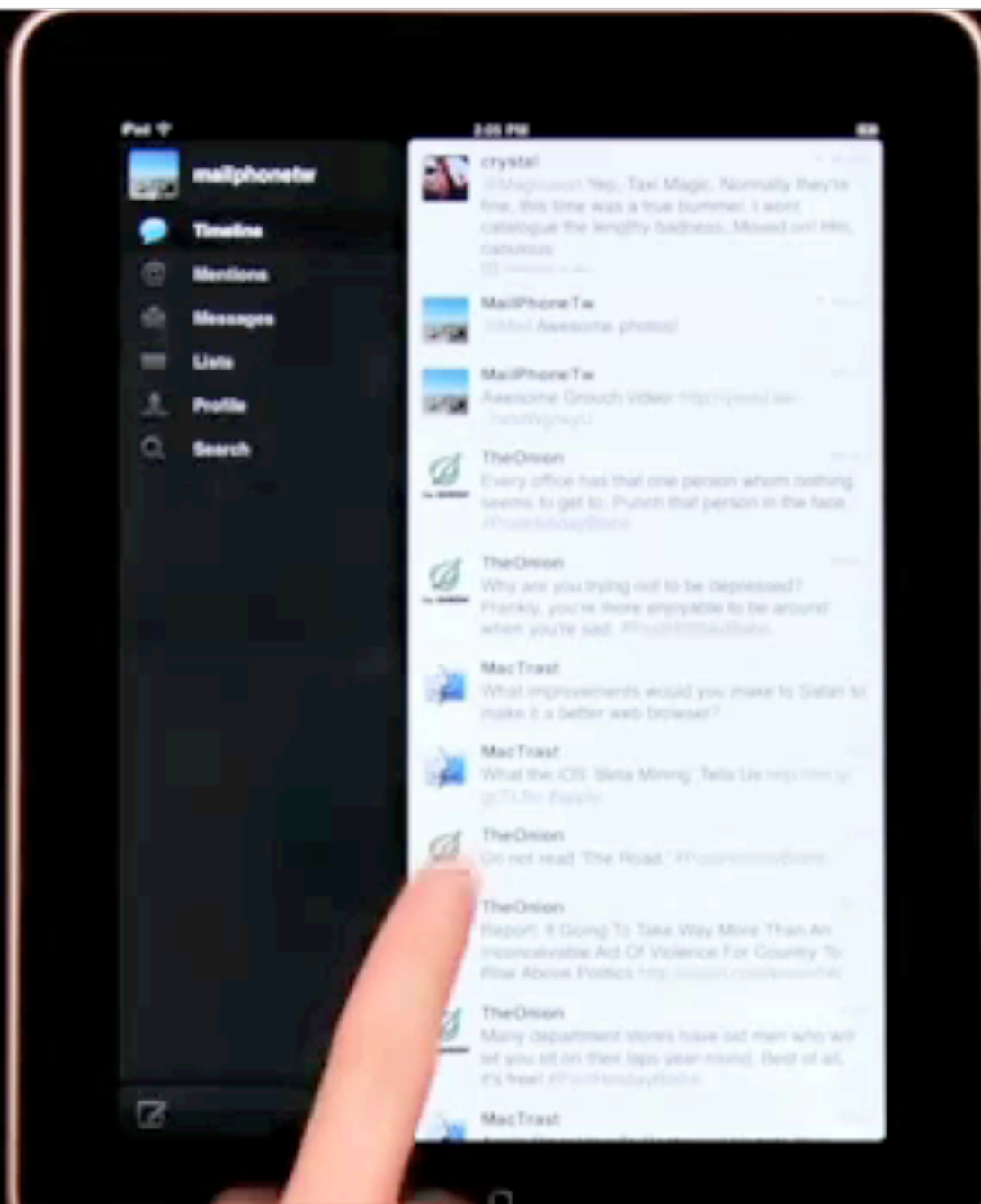
Reveal relationships

Improve
responsiveness

Show state change



Animation Can...



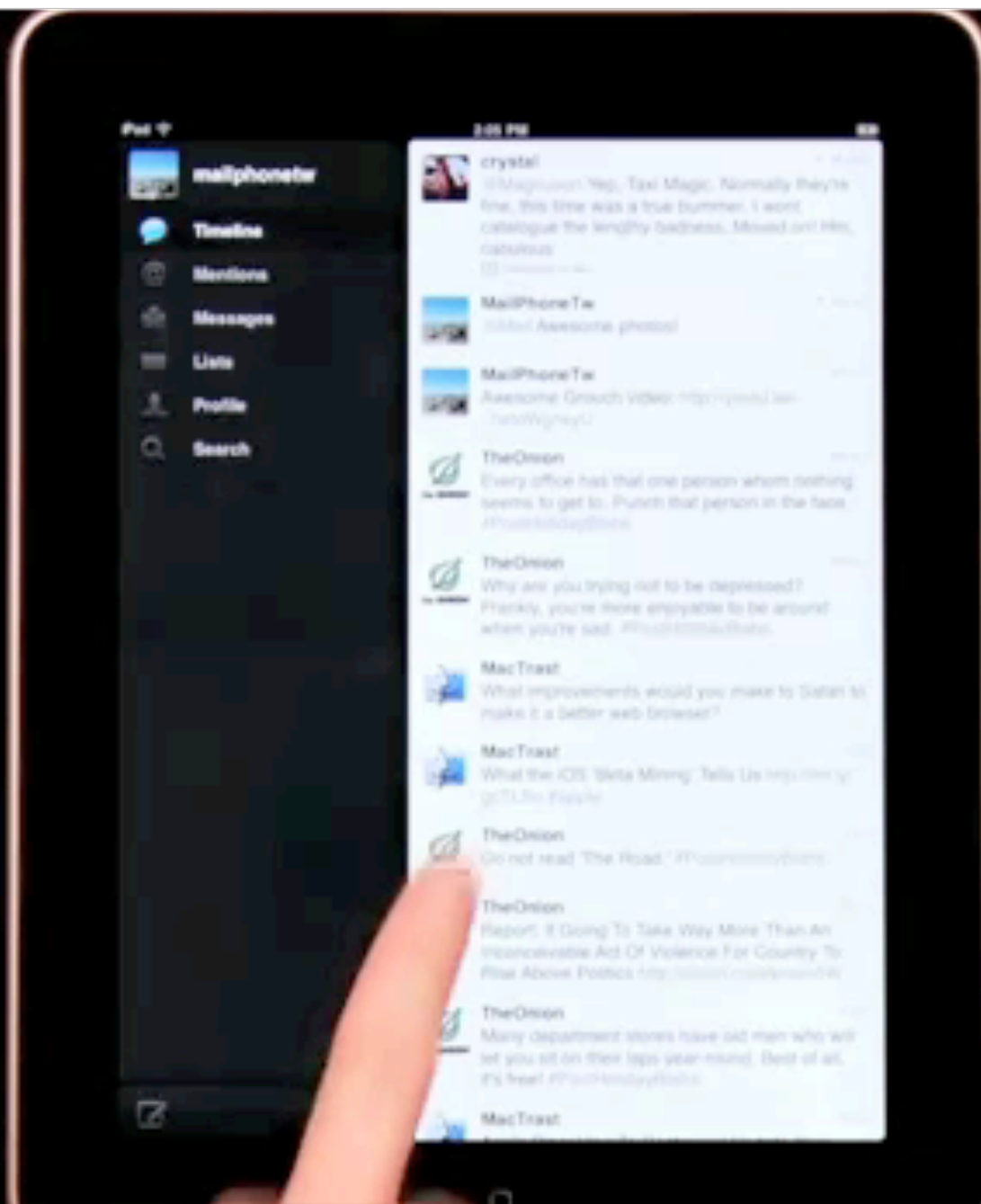
Reveal relationships

Improve
responsiveness

Show state change

Focus attention

Animation Can...



Reveal relationships

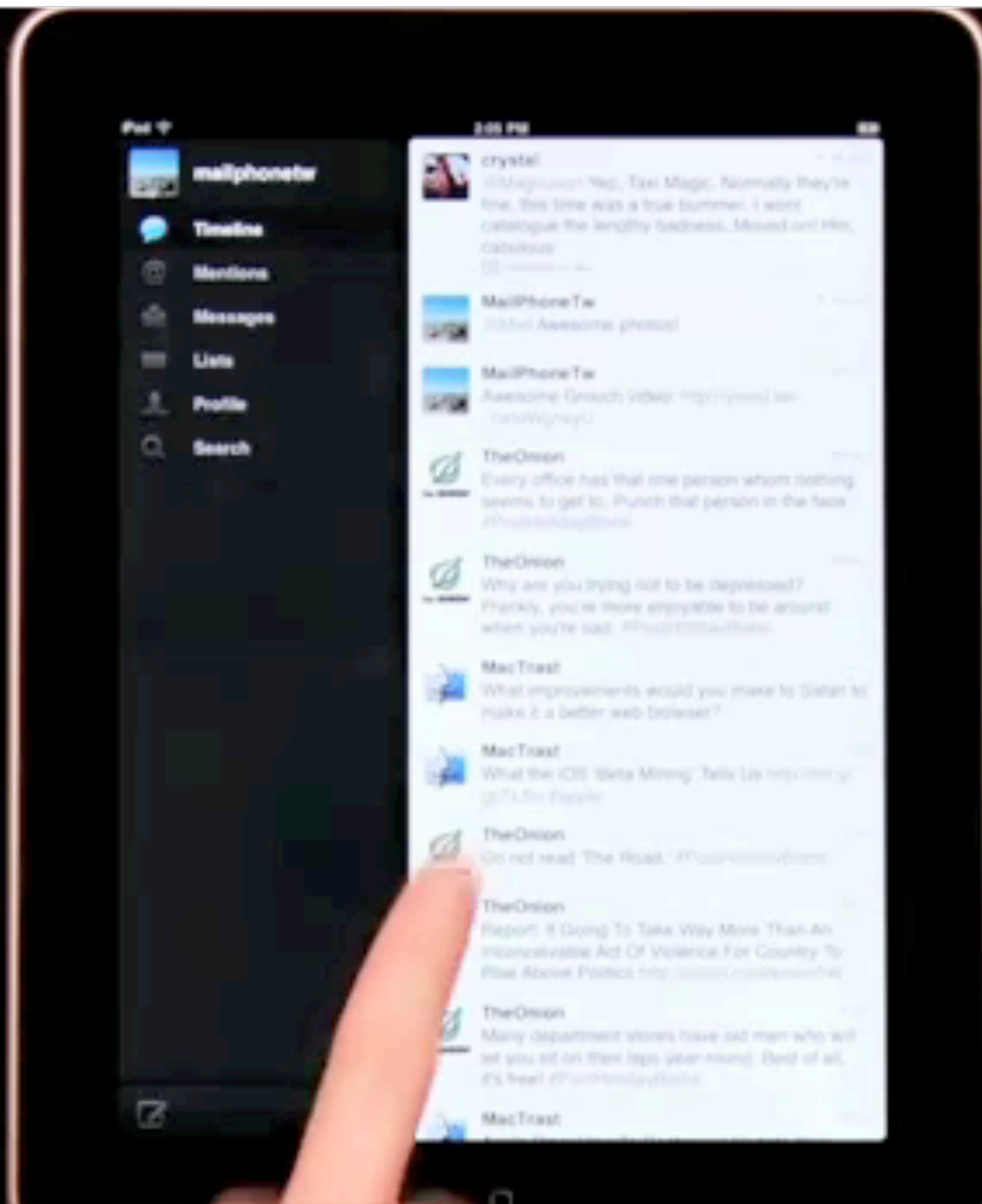
Improve
responsiveness

Show state change

Focus attention

Create delight

Animation Can...



Reveal relationships

Improve
responsiveness

Show state change

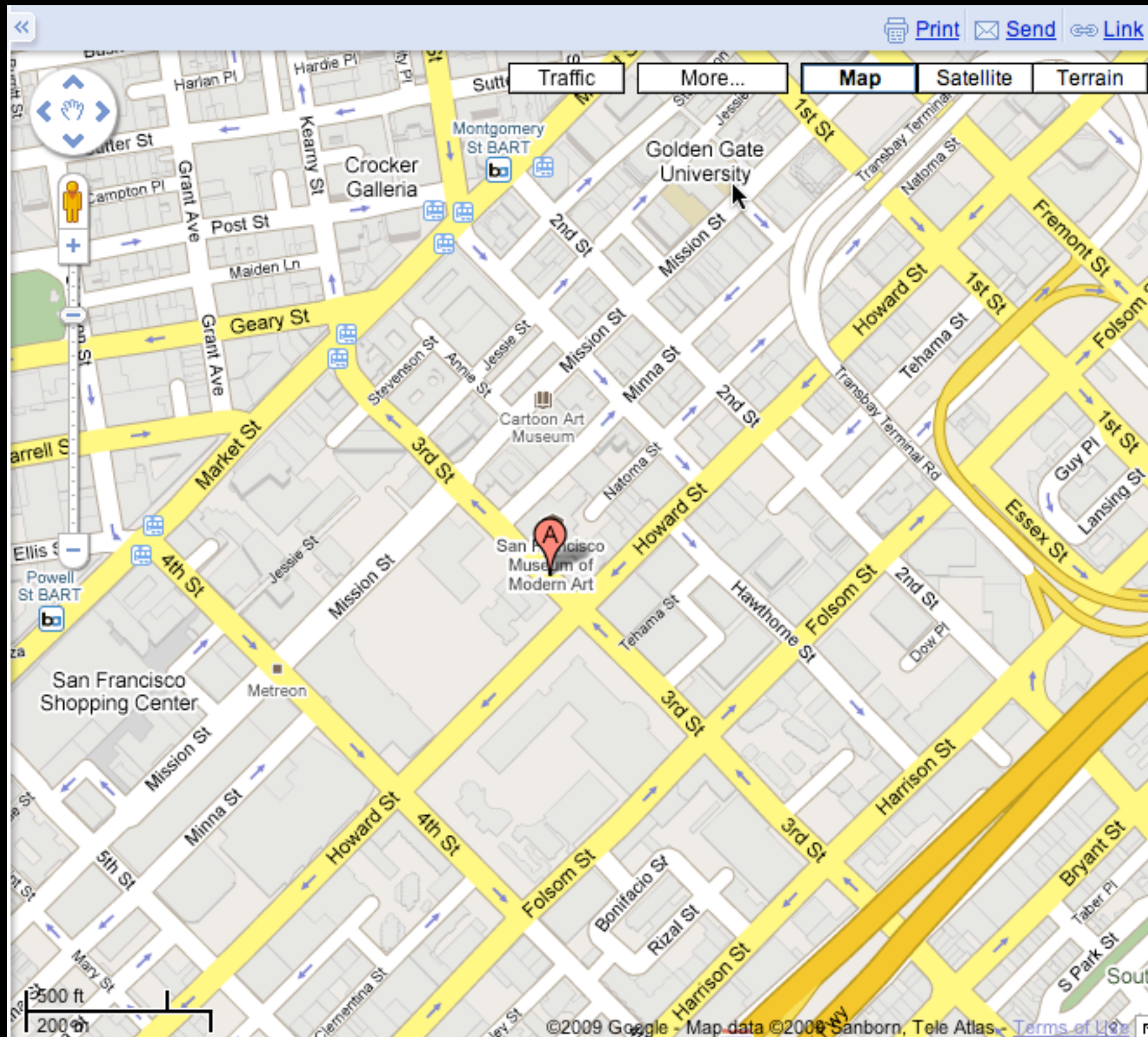
Focus attention

Create delight

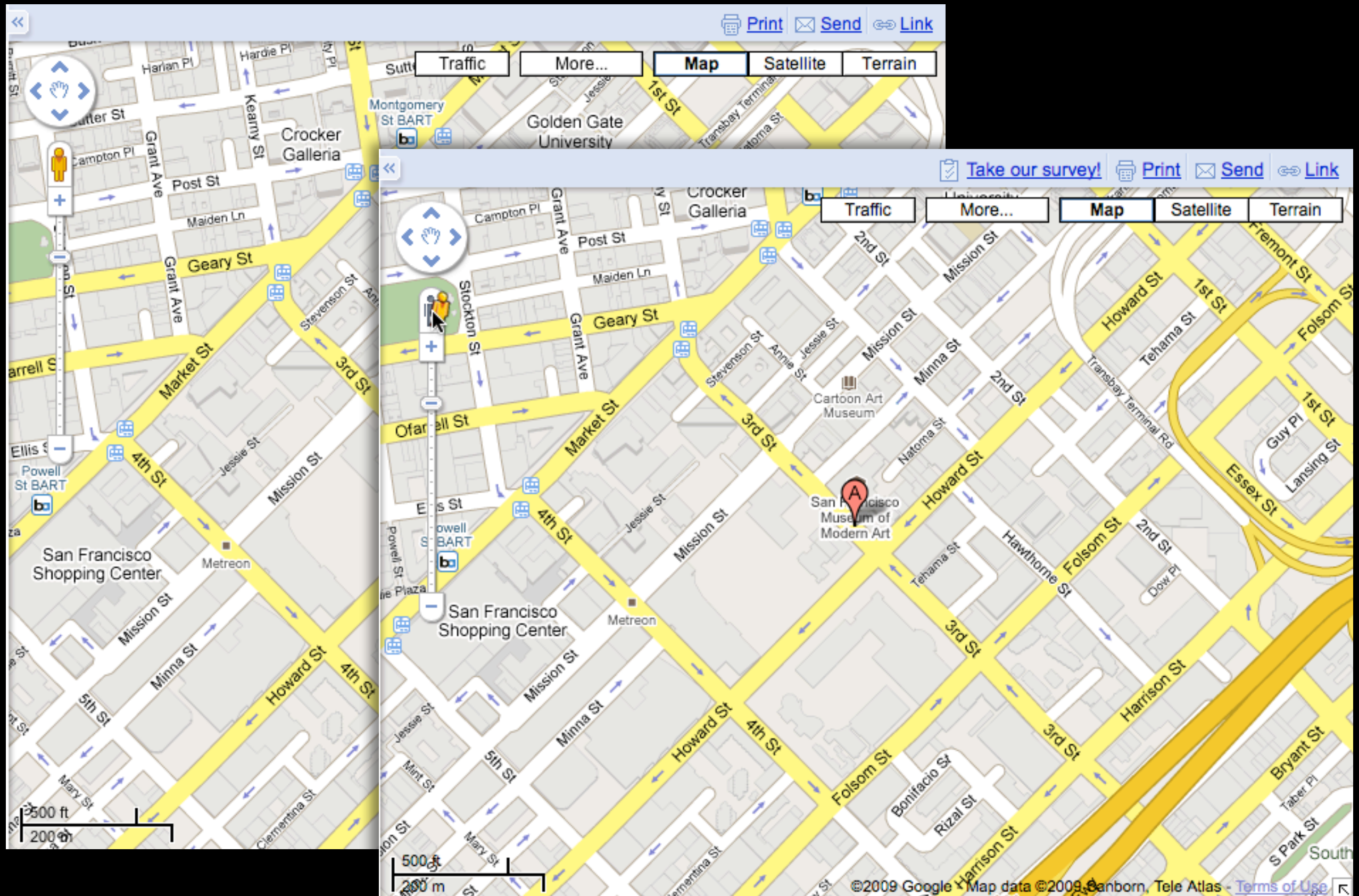
Simulate physicality

Use Invitations
to Create
Responsiveness

Just in Time Invitations at Drag Moments



Just in Time Invitations at Drag Moments



Invitations at Reward Moments

Invitations at Reward Moments

Close 

Rate Your Recent Return

OCEAN'S THIRTEEN



★ ★ ★ ★ ☆

No Opinion

RATE TO REVEAL...
...2 MOVIES YOU'LL LOVE

1

Add

★ ★ ★ ★ ☆

Not Interested

2

Add

★ ★ ★ ★ ☆

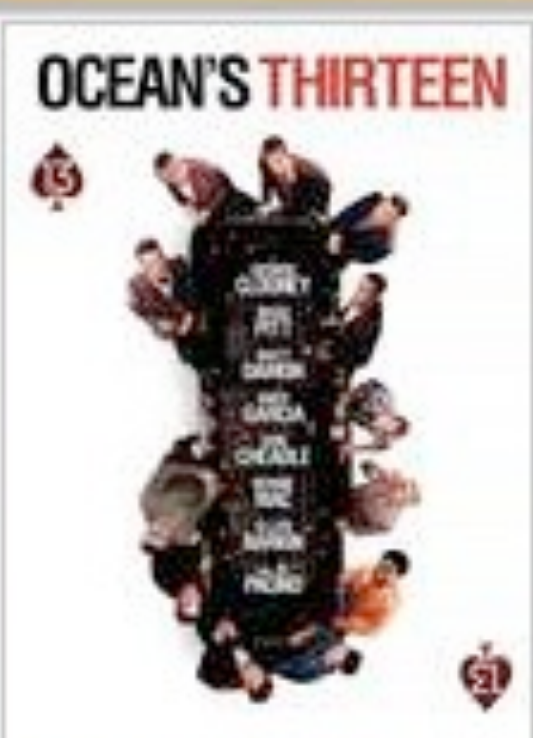
Not Interested

(click the stars)

Invitations at Reward Moments

Close 

Rate Your Recent Return



OCEAN'S THIRTEEN

RATE TO REVEAL...
...2 MOVIES YOU'LL LOVE

1 2

Add Add

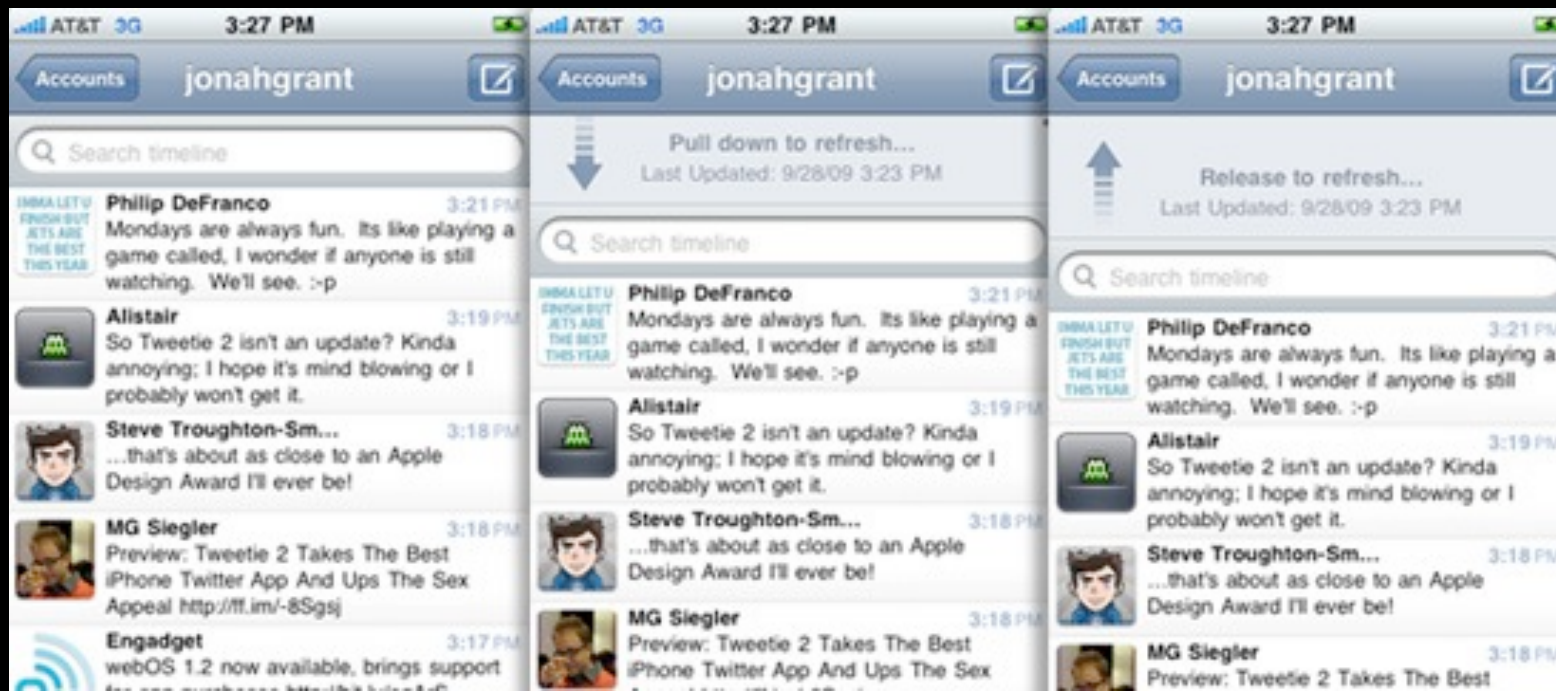
☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆ ☆

Not Interested Not Interested

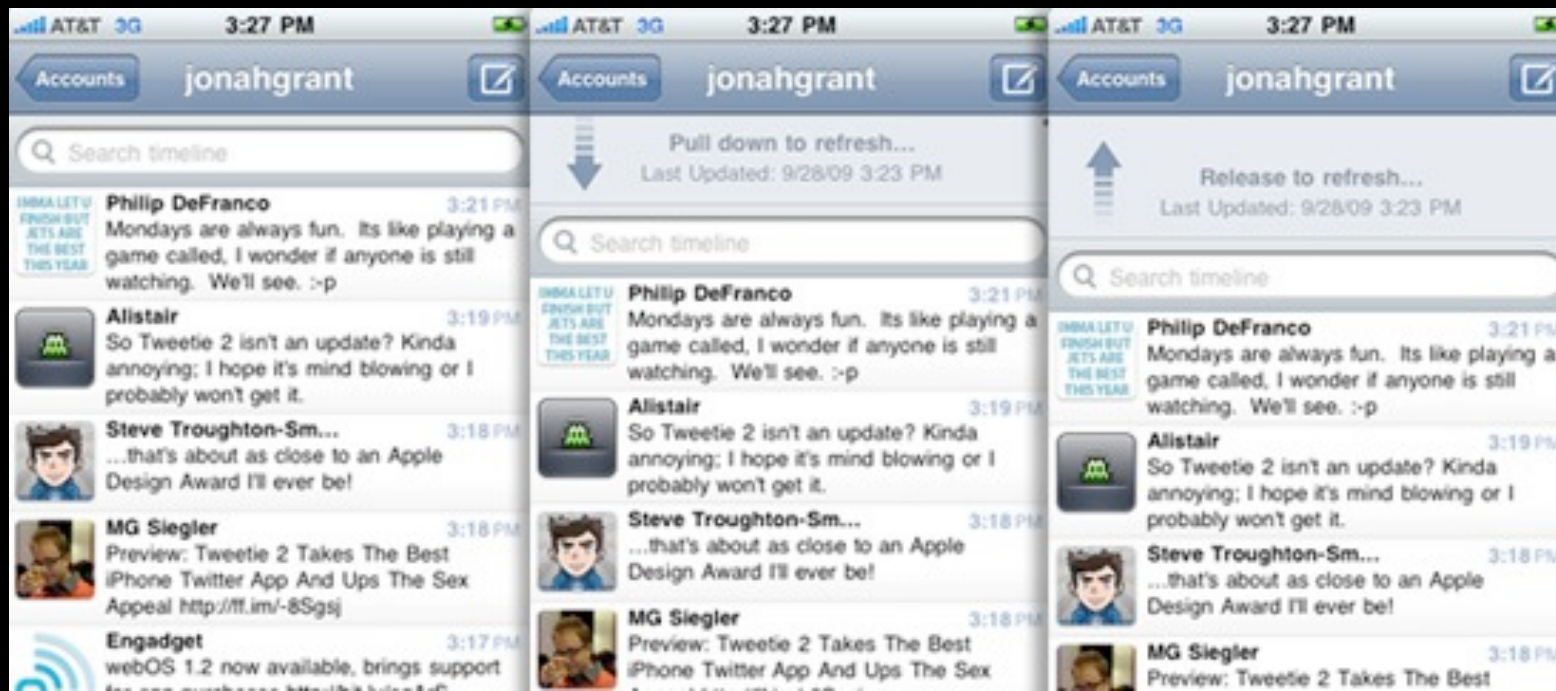
(click the stars)

Major source of
obtaining ratings

Mobile Invitations at Touch-Hold Moments



Mobile Invitations at Touch-Hold Moments



Content as an Invitation

Content as an Invitation

NETFLIX

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Bella

2006 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

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Emotional Dramas

Be Snappy

to

Be Responsive

Performance is Not Always a Given

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Emotional Movies



Performance is Not Always a Given

NETFLIX

We had to perform magic to get our Webkit core to do this one transition - "accelerated compositing"

Suggestions for You

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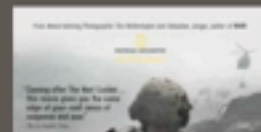


TV



✕ View more suggestions

Emotional Movies



Performance is Not Always a Given

NETFLIX

Suggestions for You

MORE

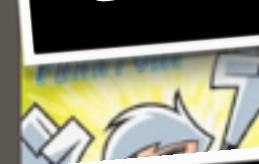
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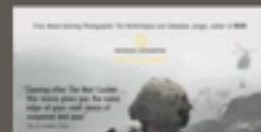


We had to perform magic to get our Webkit core to do this one transition - "accelerated compositing"

For Entry Price Point devices we have to turn off animation progressively

✕ View more suggestions

Emotional Movies



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](#)



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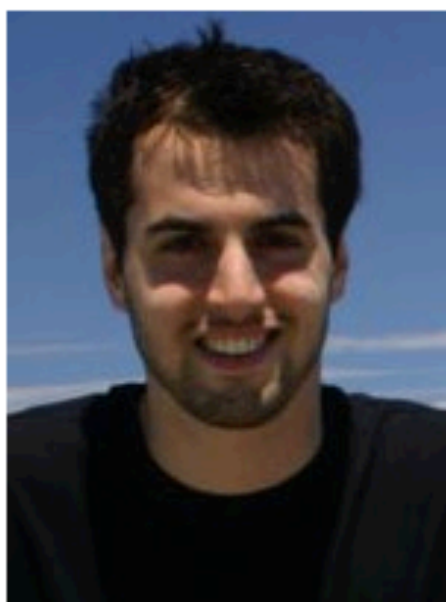


Hacker News



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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

Responsiveness Across platforms

	Input	Animation
Web	Pointer Indirect	Make Indirect Input Feel More Direct
Tablet/ Mobile	Fingers Direct	Make Direct Input Feel Real
TV	Remote Indirect	Make Indirect Input Feel More Direct Reinforce the Cinematic

Responsiveness Across platforms

	Input	Animation	Invitations
Web	Pointer Indirect	Make Indirect Input Feel More Direct	On hover
Tablet/ Mobile	Fingers Direct	Make Direct Input Feel Real	At touch/hold endpoints
TV	Remote Indirect	Make Indirect Input Feel More Direct Reinforce the Cinematic	Static hints (usually once an item is selected)

Responsiveness Across platforms

	Input	Animation	Invitations	Performance
Web	Pointer Indirect	Make Indirect Input Feel More Direct	On hover	Less of a consideration
Tablet/ Mobile	Fingers Direct	Make Direct Input Feel Real	At touch/hold endpoints	Can be a consideration
TV	Remote Indirect	Make Indirect Input Feel More Direct Reinforce the Cinematic	Static hints (usually once an item is selected)	Definitely an issue on some low-end devices

TV Experiences...

TV Experiences...

NETFLIX

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Bella

2006 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

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Emotional Dramas

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Movies, TV shows, actors, directors, genres 🔍

Genres ▾

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Danny Phantom: Ssn 2: Reality Tr ...



Play Next

Heroes: Ssn 1: Homecoming



Resume

2m 43m

Alice in Wonderland



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

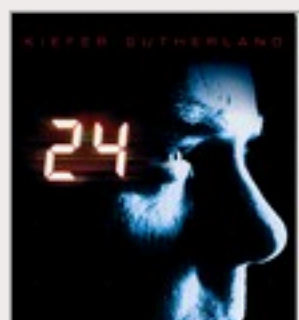
3

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



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★ Suggestions For You

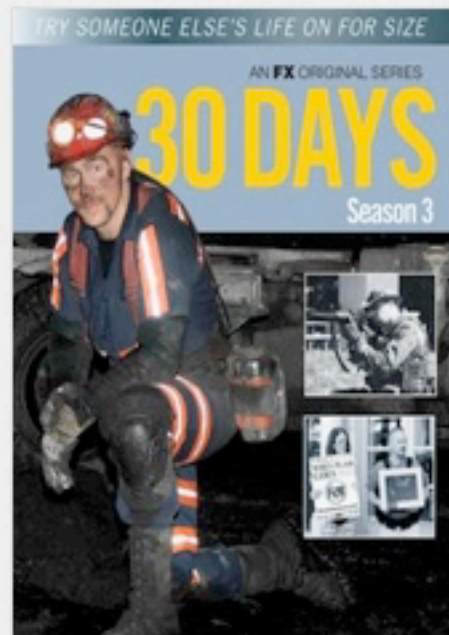
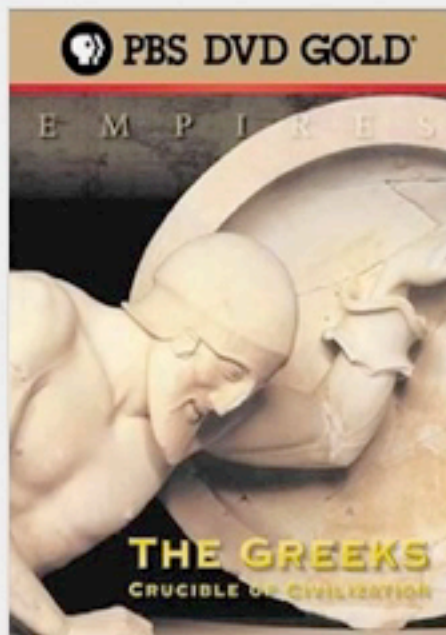
Genres ▼

New Arrivals

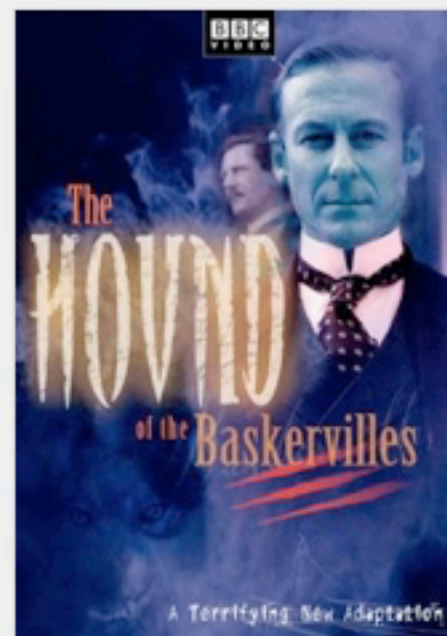
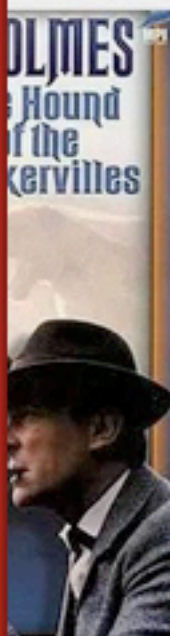
Starz Play

Instantly to your TV

TOP 10 FOR BILL

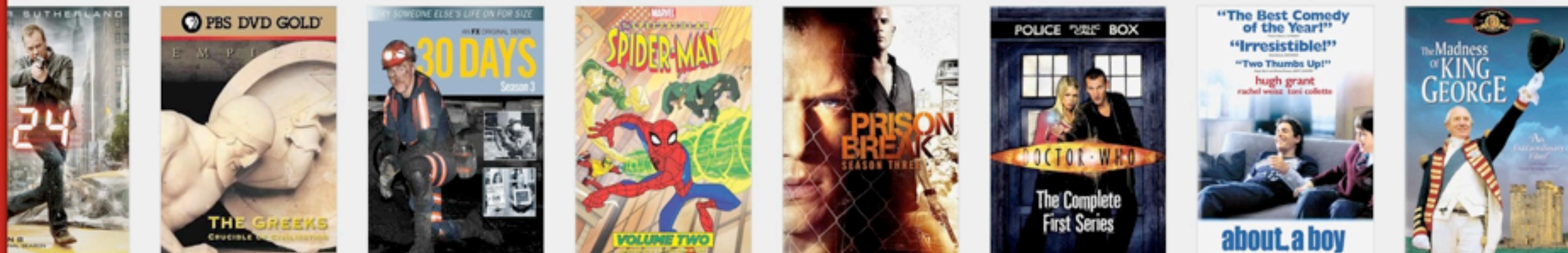


BRITISH CRIME THRILLERS

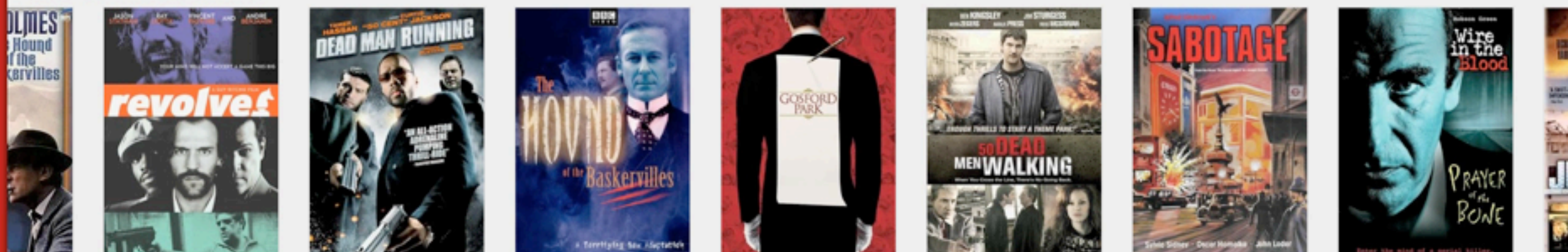


CRITICALLY-ACCLAIMED DARK ACTION & ADVENTURE

TOP 10 FOR BILL



BRITISH CRIME THRILLERS



CRITICALLY-ACCLAIMED DARK ACTION & ADVENTURE



Can Influence Website Experience



Presentation

billwscott.com/share/presentations/2011/dfmm

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