



Designing for Mice & Men

Bill Scott, Netflix

Netflix Across Devices (in-house products)



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?

Server-driven dynamic UI

Web-style release vs CE firmware updates

Support A/B Testing

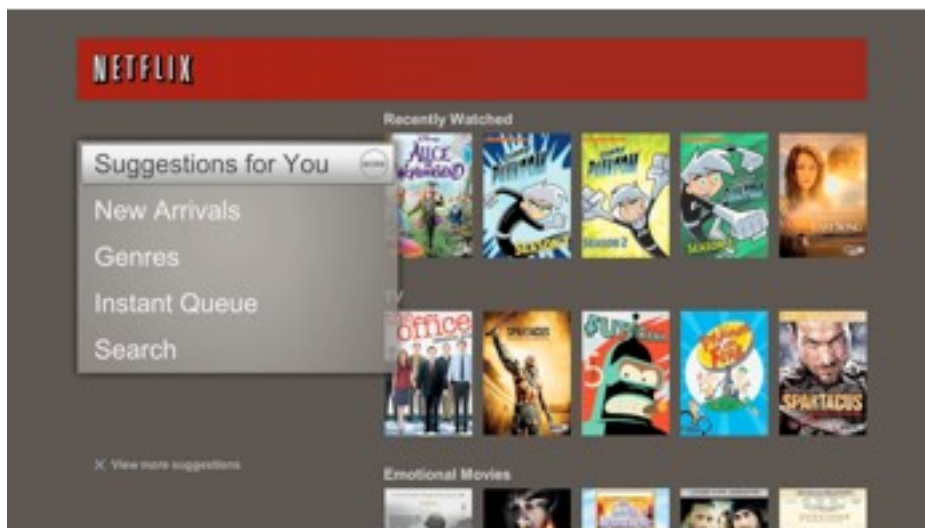
Learn Fast/Fail Quickly

Chaos Otherwise

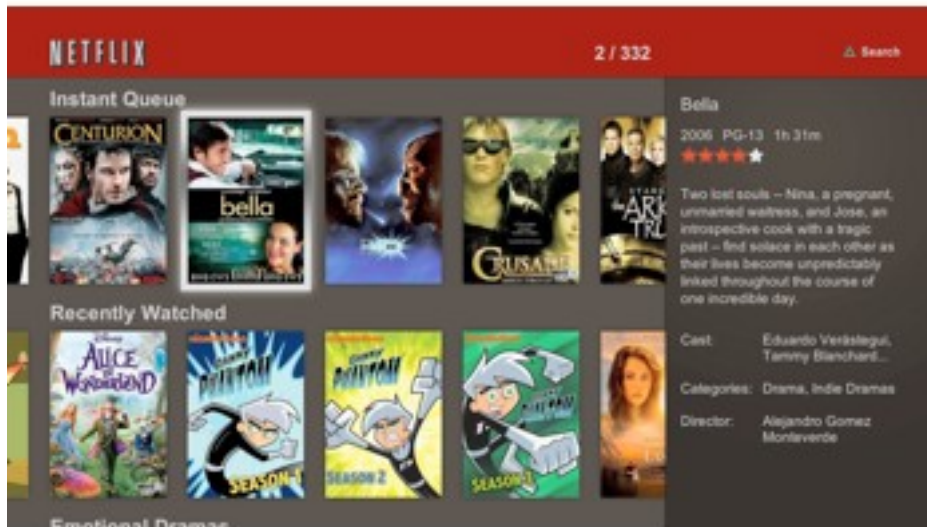
Chaos (400 SKUs)



Controlled Variances



Controlled Variances



Managing Across Platforms

We chose a portability layer (html5)

However, we vary the user experience across platforms
(web, tv, mobile, tablet)

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



Web

Input

Indirect. Pointer/keyboard

Navigation

Panes & windows

Posture

Stationary

Display

Hi-Res, large, near



TV

Input

Indirect. LRU/D/OSK

Navigation

Panes

Posture

Lean Back

Display

Hi-Res, far-away



Mobile

Input

Direct. Gesture/OSK

Navigation

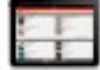
Panes

Posture

On-the-go

Display

Hi-Res, small, near



Tablet

Input

Direct. Gesture/OSK

Navigation

Panes

Posture

On-the-go, lean back shared

Display

Hi-Res, 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**

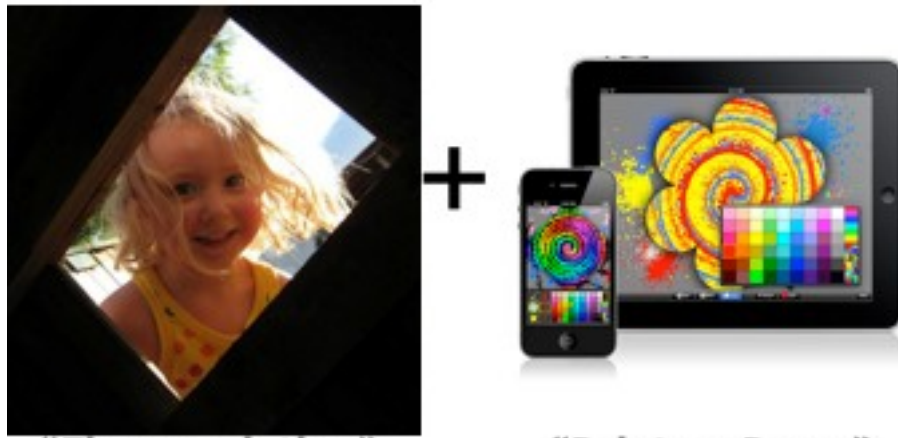
Three Principles

common design principles for
multiple platform design

#1 Get Physical



The Illusion of Physicality



"Finger painting"

"Paint on Paper"

"My finger is out of Purple!?"

Design for Physicality

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

The more true to life your application looks and behaves, the easier it is for people to understand how it works and the more they enjoy using it.

- Apple HIG

Use Metaphors to Embody Physicality

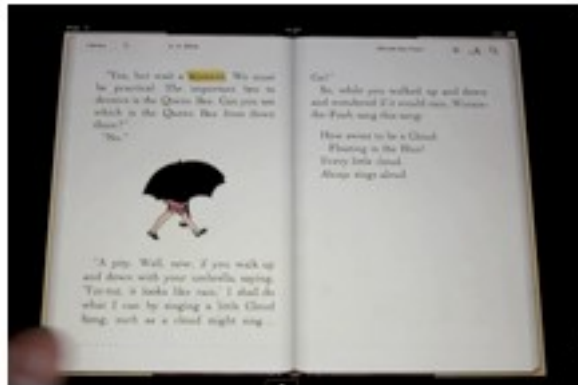
Physicality as Metaphor



Film Strip



Physicality as Metaphor

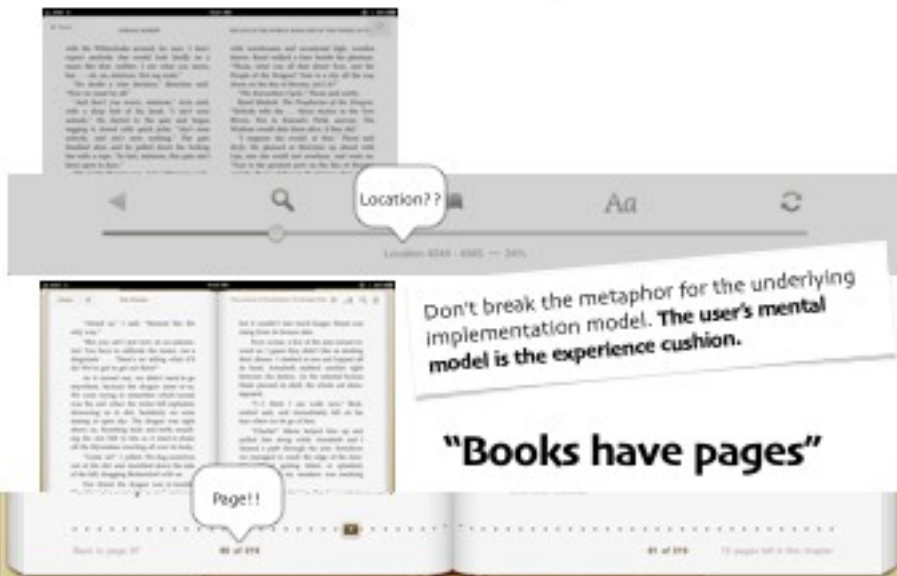


book

"Books have pages"

"Pages turn"

Anti-Pattern: Broken Metaphor



Break the Metaphor with Magic

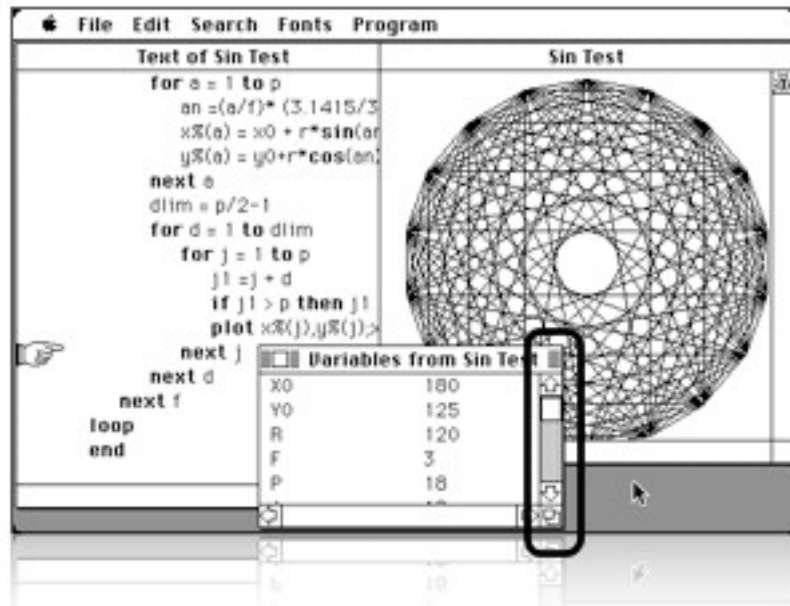


Strict physicality is hard work. Use magic to simplify the real world.

To Flick or not to Flick



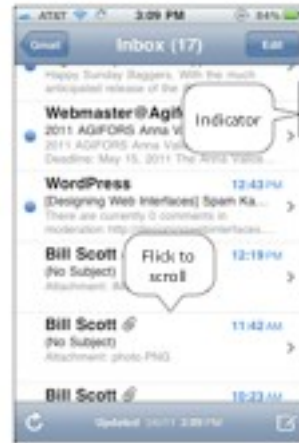
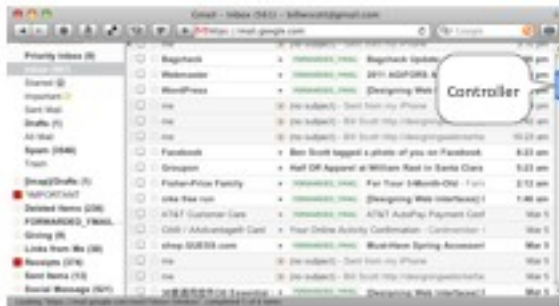
Use Directness to Simulate Physicality



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

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

* Joe Clark's recommendation - Tapworthy

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



Exploratorium Exhibit



Spot the differences



Now try again...

change blindness

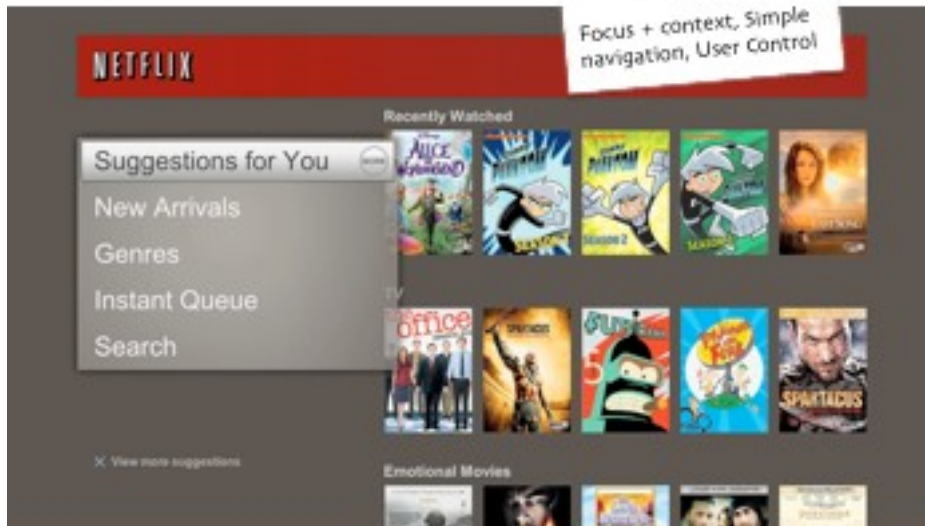


**Reduce Page
Switching
to Maintain Flow**

"Special" Experience

Principles followed:

Focus + context, Simple navigation, User Control



"Plus" Experience

Principles followed:

Content is the flow.
Information in Context.
Only 1 experience.



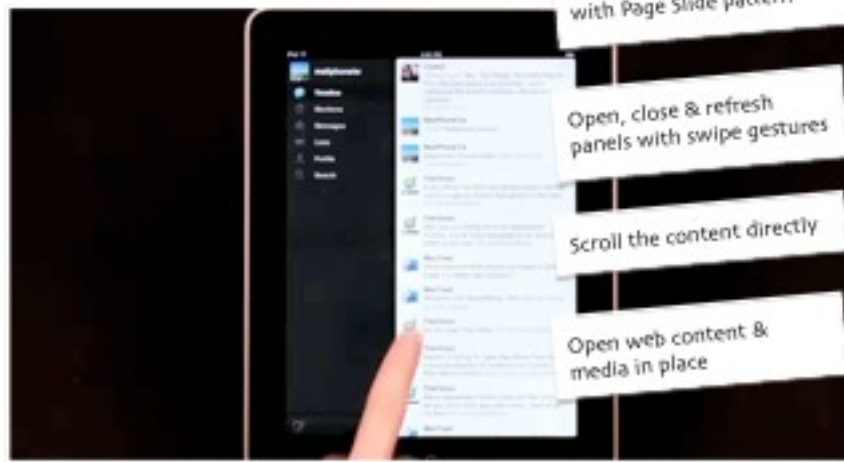
Which Won?

"plus" experience.

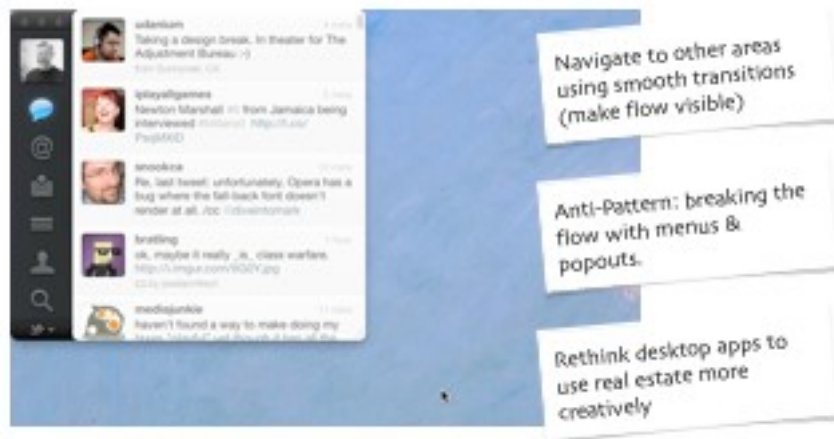
Maintains Flow



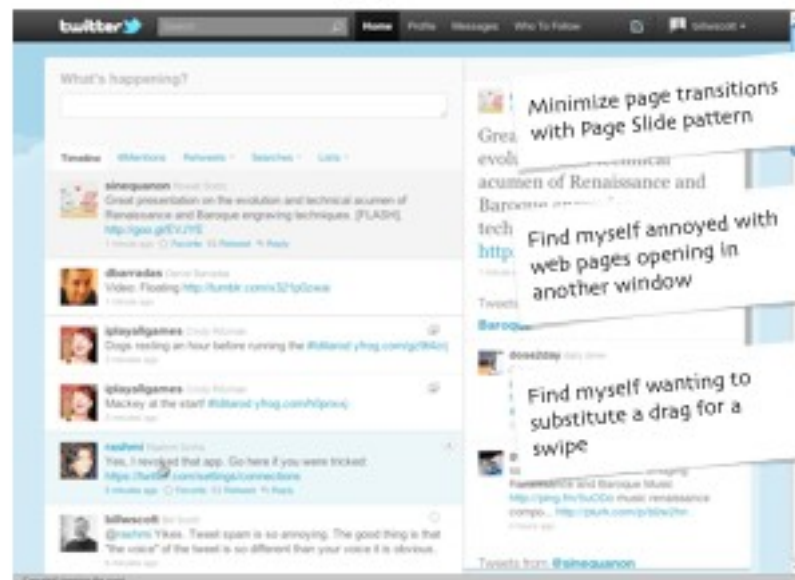
Twitter as iPad App



Twitter as Mac App



Twitter as Web App



Vs Hover & Cover



Where possible replace
annoying hover details with
dedicated detail panes



Keep Navigation Simple to Maintain Flow

Mobile Navigation



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



Gowalla: Tab + Flat
- Jeff Clark (Tapworthy)

Source: Tapworthy by Josh Clark

Pulse & Flipboard iPad Apps



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...

Be really, really
annoying

The screenshot shows the TurboTax Deluxe interface. At the top, there are tabs for 'Personal Info', 'Federal Taxes', 'Federal Review', 'State Taxes', and 'Print & File'. Below these, there are sub-tabs for 'Federal Tax Due', 'Wages & Income', 'Deductions & Credits', and 'Other Tax Situations'. The 'Federal Tax Due' sub-tab is active, showing a balance of \$10,533. Below this, the 'CA Tax Due' is shown as \$4,973. A form titled 'Enter Your Interest Paid to Some Lender' is displayed, with a field for 'Deductible interest paid in 2008' set to \$0.00. A note below the field says '(Box 1 on your 1098)'.

A close-up of the TurboTax interface showing the 'Federal Tax Due' as \$10,533 and the 'CA Tax Due' as \$4,973. The amounts are displayed in red text on a black background.



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

- Occam

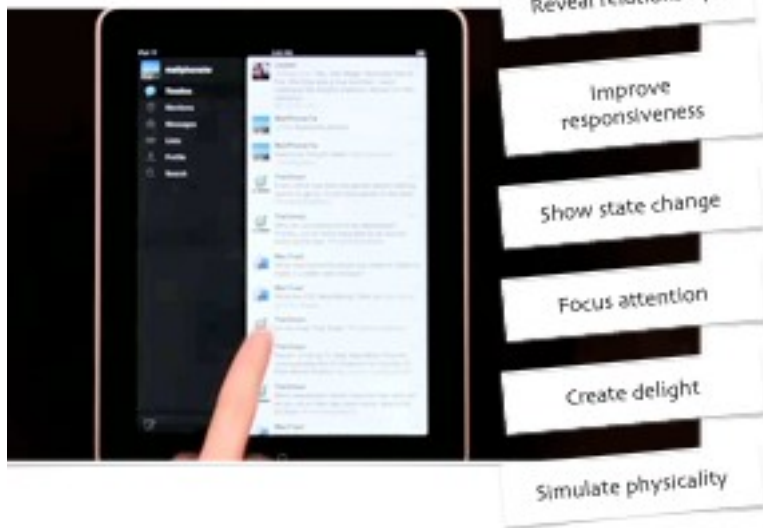
Make all visual distinctions as
subtle as possible, but still clear
and effective.

- Tufte "Smallest Effective Difference"

Web Apps Seem Prone to This

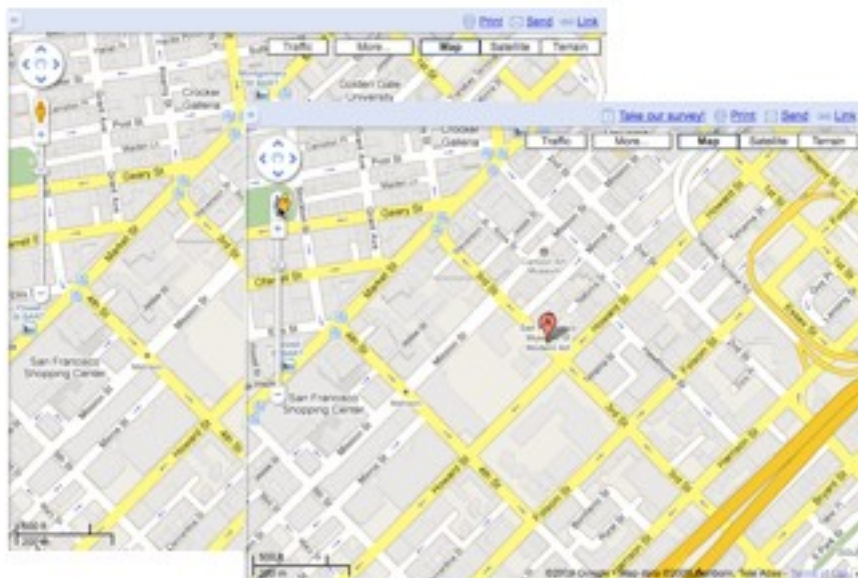


Animation Can...



Use Invitations to Create Responsiveness

Just in Time Invitations at Drag Moments



Invitations at Touch-Hold Moments

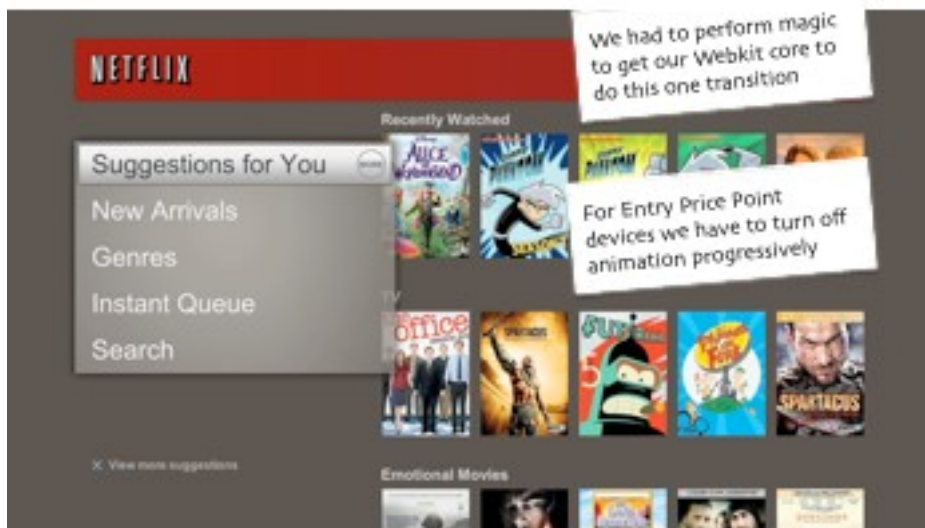


Invitations at Reward Moments



Be Snappy to Be Responsive

Performance is Not Always a Given



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...

NETFLIX

2 / 332

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Instant Queue

Recently Watched

Bella

2008 PG-13 1h 31m

★★★★★

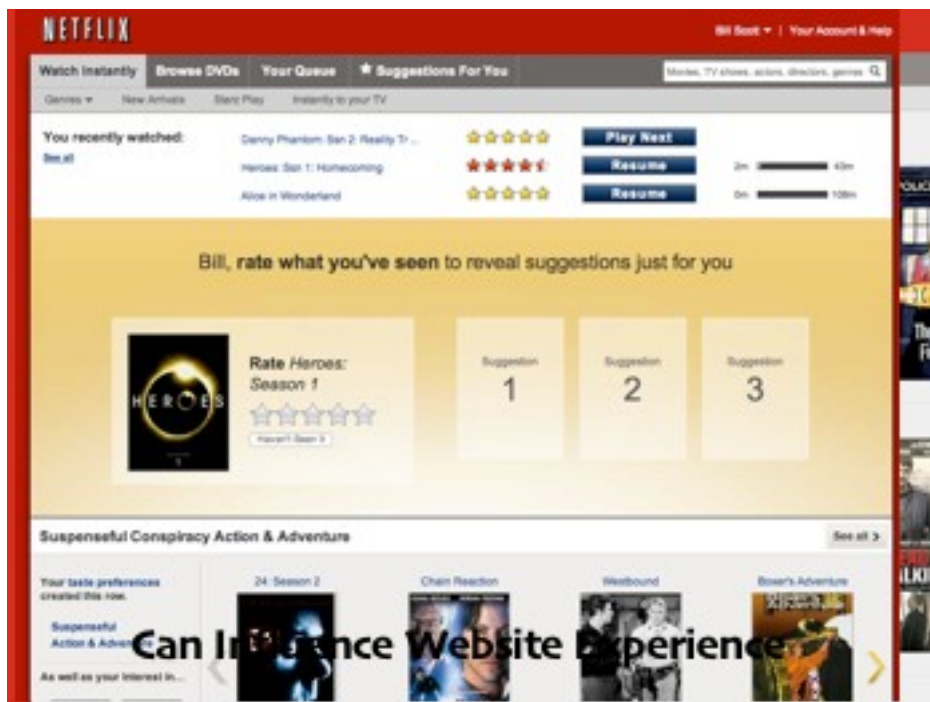
Two lost souls – Nina, a pregnant, unmarried waitress, and Jose, an introspective cook with a tragic past – find solace in each other as their lives become unpredictably linked throughout the course of one incredible day.

Cast: Eduardo Verástegui, Tammy Blanchard...

Categories: Drama, Indie Dramas

Director: Alejandro Gomez Monteverde

Emotional Dramas



Presentation

billwscott.com/share/presentations/2011/wamtp.html

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