

The Mobile App Smackdown

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Mobile - next big thing.

Why do we care?

Apps? Web sites?

Mindsets, capabilities.

Look at some examples.

Mobile first.

Mobile is a big deal.

Bit of growth there.



Android activations
outpacing baby births.

[http://www.telegraph.co.uk/technology/ces/9013487/
CES-2012-Android-activations-outpacing-baby-births.html](http://www.telegraph.co.uk/technology/ces/9013487/CES-2012-Android-activations-outpacing-baby-births.html)

 @lukew
Luke Wróblewski

There are more iPhones sold per day (402k) than people born in the World per day (300k). [twitter.com/#!/asymco/stat...](https://twitter.com/#!/asymco/status/161943568024469504)

 @asymco
Horace Dediu
24 Jan : 37 million iphones

[http://news.cnet.com/8301-17938_105-57365767-1/
apple-makes-more-iphones-than-humans-make-babies/](http://news.cnet.com/8301-17938_105-57365767-1/apple-makes-more-iphones-than-humans-make-babies/)

<https://twitter.com/#!/lukew/statuses/161943568024469504>

Might be a natural cap
there somewhere...

 Horace Dediu
ASYMCO



Android will reach a billion users in half the time it took Facebook.

 Reply  Retweet  Favorite

<https://twitter.com/asymco/statuses/254124178024833026>

iOS - a billion units in late 2014 or early 2015.

<http://www.asymco.com/2012/09/17/projecting-ios-devices-through-itunes-account-growth/>

In 2011, Apple sold
more iOS devices...

Than all Macs sold
in *28* years.

<http://www.asymco.com/2012/02/16/ios-devices-in-2011-vs-macs-sold-it-in-28-years/>

400 million iOS devices sold.

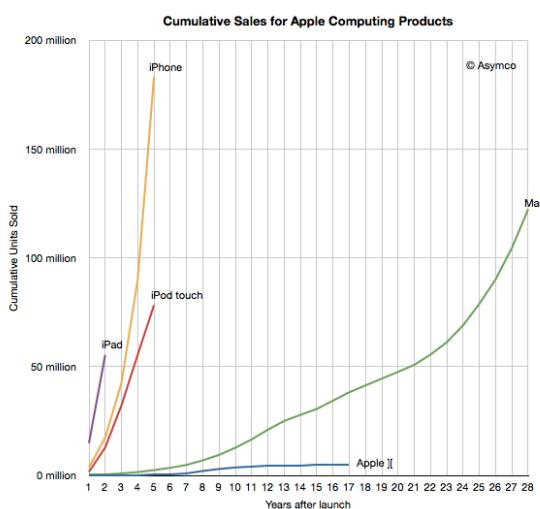
480 million Android activations.

To put that in perspective...

1 billion Windows PCs.

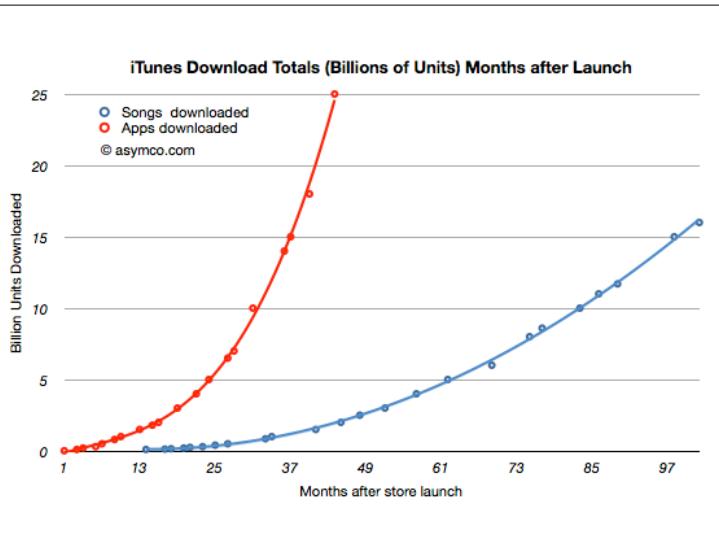
2.2 billion Internet users.

<http://www.lukew.com/ff/entry.asp?1626>



App developers receive \$12 for each iOS device sold.

<http://www.asymco.com/2012/02/19/app-developers-get-12-for-each-ios-device-sold/>



Facebook: half the user base is mobile.

<http://techcrunch.com/2012/02/01/facebook-s-1-845-million-users-every-month-more-than-half-daily-and-nearly-half-mobile/>

Amazon > \$1 billion via mobile devices.

<http://www.business-opportunities.biz/2010/07/23/1-billion-via-mobile-devices/>

Smartphone sales passed computer sales...

A year ago.

<http://www.smartonline.com/smarton-products/smarton-mobile-smartphones-pass-pc-sales-for-the-first-time-in-history/>

What happens when most of us carry smartphones?

When will that happen?

Nielsen says it already has...

http://blog.nielsen.com/nielsenwire/online_mobile/smartphones-account-for-half-of-all-mobile-phones-dominate-new-phone-purchases-in-the-us/

When will we
reach saturation?

Faster than nearly every
other innovation...

<http://www.asymco.com/2012/04/11/when-will-smartphones-reach-saturation-in-the-us/>

When will the tablet
market be bigger than PCs?

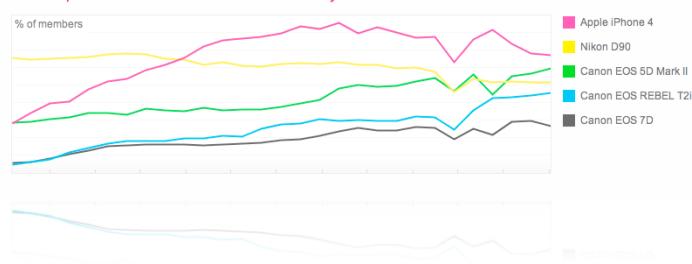
Fall of 2013...

<http://www.asymco.com/2012/03/02/when-will-the-tablet-market-be-larger-than-the-pc-market/>

Most popular camera on Flickr?

iPhone.

Most Popular Cameras in the Flickr Community



<http://www.flickr.com/cameras/>

Horace Dediu
@asymco



About 75 apps have been downloaded for every iOS device ever sold.

4:04 PM - 17 Feb 12 via Twitter for Mac · Embed this Tweet
[Reply](#) [Retweet](#) [Favorite](#)

<http://twitter.com/#!/asymco/status/170629806810083328>

Horace Dediu
@asymco



iTunes App download rate is approximately 49 million per day (average since October 2011).

3:51 PM - 17 Feb 12 via Twitter for Mac · Embed this Tweet
[Reply](#) [Retweet](#) [Favorite](#)

<http://twitter.com/#!/asymco/status/170626394831863809>

The average person looks at their phone 150 times...

A DAY!

Get's people's attention.

<https://twitter.com/#!/grigs/status/166882533781422082>

Want more stats?

<http://www.lukew.com/ff/entry.asp?1131>
<http://www.lukew.com/ff/entry.asp?1188>

The PC...isn't very personal.

Your phone is.

Always with you.

What would I know about
you if I had your phone?

Schedule, email,
texts, apps...

Location.

Interesting privacy
concerns there...

People use their mobile
devices constantly.

At home.

Waiting in line.

At work...

When do you use your mobile devices?

Turns out...all the time.

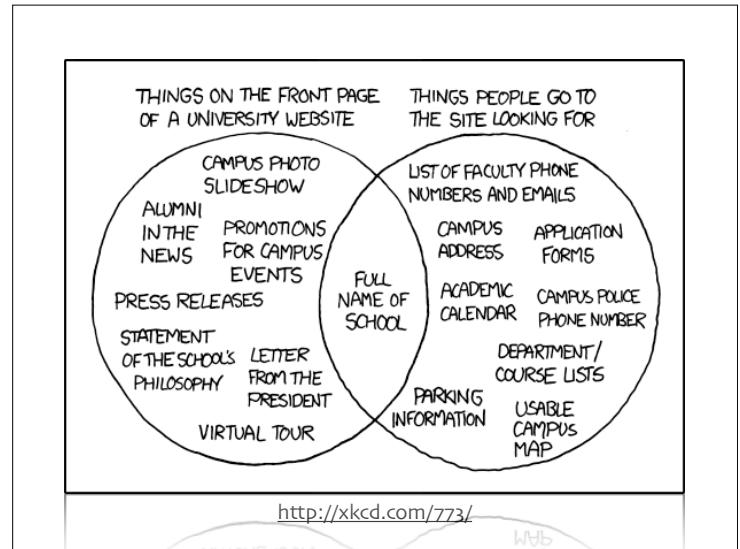
OK.





Shrink ray isn't
going to cut it.

Need to rethink
the experience.



Capabilities.

Mobile devices can do
things "PCs" can't.

“PC” sales are declining.

<http://www.asymco.com/2012/01/12/is-the-ipad-a-pc/>

<http://www.asymco.com/2012/01/26/the-year-of-the-ipad-for-the-second-year-in-a-row/>

Orientation.

Most apps change based
on orientation.

Gyrosopes, accelerometers.

Location.

Generally more accurate
than your PC.

Touch.

Multi touch gestures.

Becoming the dominate
interaction paradigm...

Apple, Q4.

>17 million iPhones,
>11 million iPads.

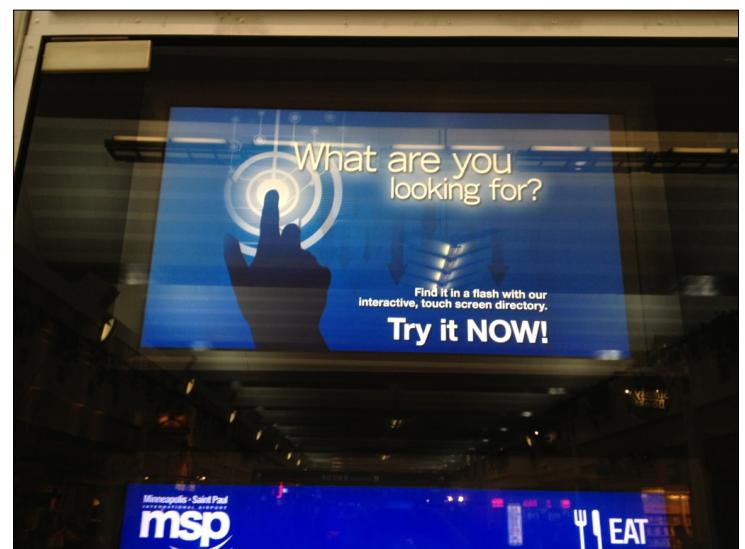
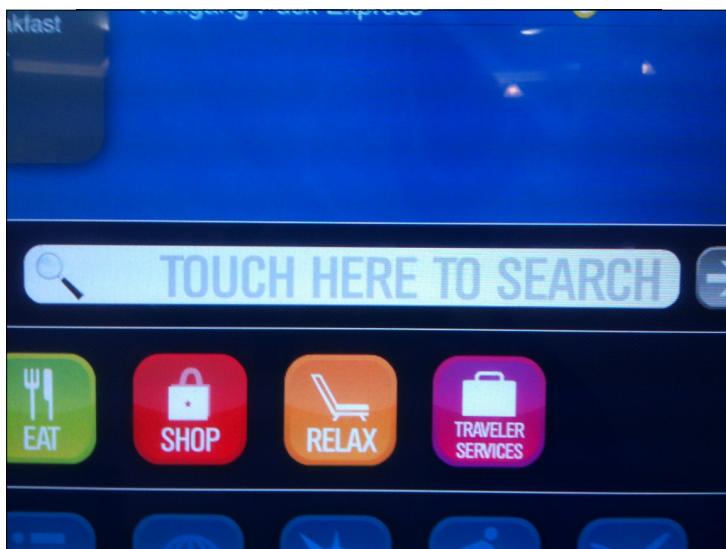
Android activations...

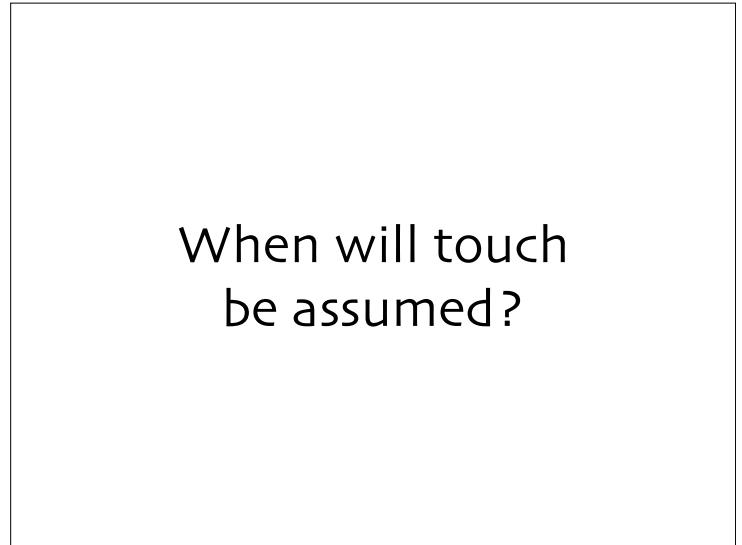
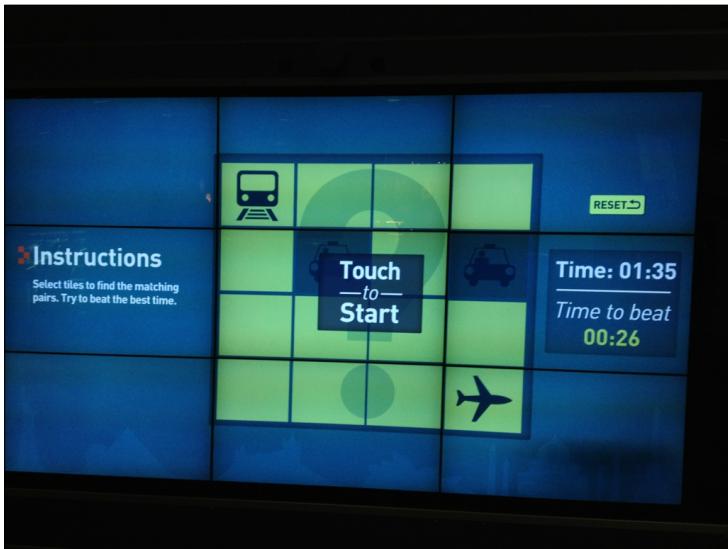
Windows Phone 7.

Nokia and RIM are shifting...

Think of our kids...

Isn't just mobile...





Audio.

Camera - video, pictures.

Connections - Bluetooth.

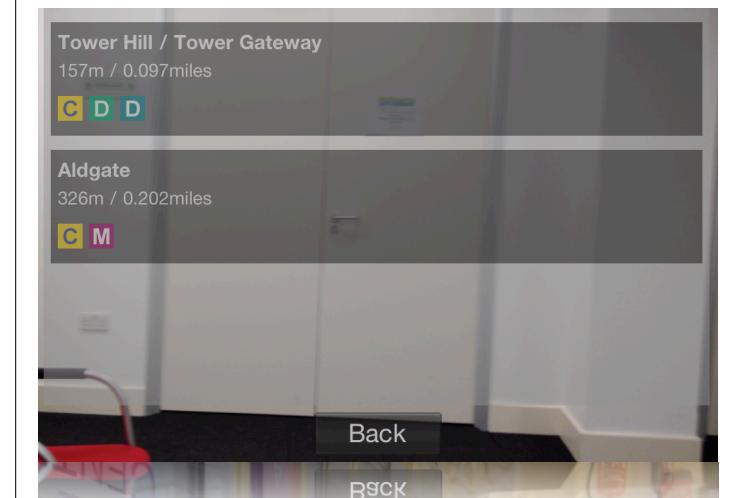
Proximity.

Email, contacts, apps.

Just because you
can do something...

<http://blog.path.com/post/17274932484/we-are-sorry>

Augmented reality!



Try doing that with
your laptop.

Some of these capabilities
aren't exposed in browser.

We need a mobile answer.

What do we do?

Just build a
native app right?

Well, maybe. Maybe not.

Do you *need* a native app?

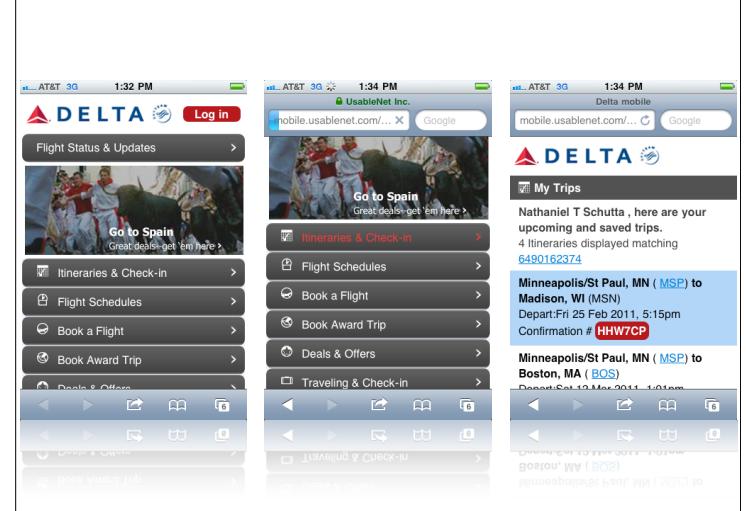
Is HTML5 enough?

Something like 3 billion HTML capable phones.

Yes, 3 billion.

http://www.quirksmode.org/blog/archives/2011/01/operator_billin.html

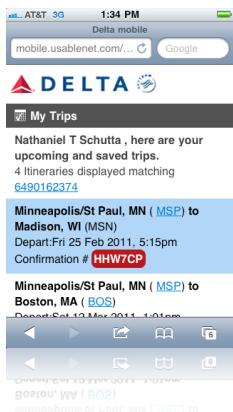
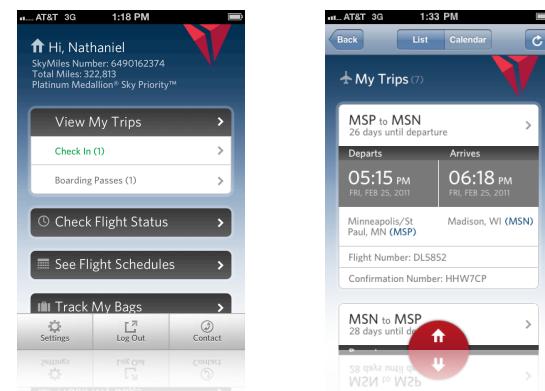
Delta.



That works.

It's serviceable.

Here's a native look.



Which do you prefer?

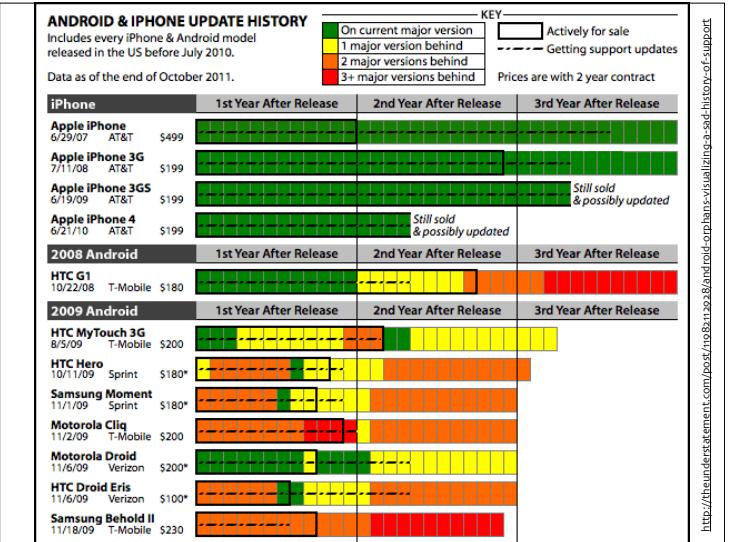
Could we make the mobile site better?

Building native apps isn't always easy.

Some key questions.

Which OSes?

Which OS "versions"?



Latest version of Android?
It's on 1.2% of devices.

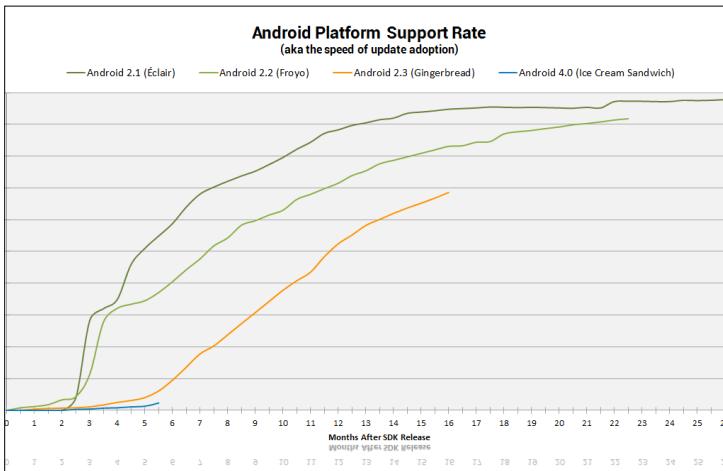
[http://developer.android.com/resources/
dashboard/platform-versions.html](http://developer.android.com/resources/dashboard/platform-versions.html)

On Chitika, JellyBean 1.5%
after 2 months.

iOS 6? 15%.

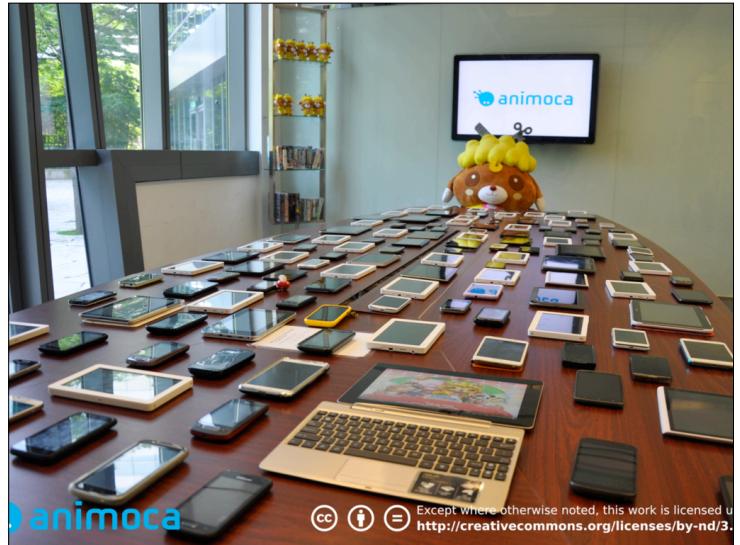
After 24 hours.

[http://allthingsd.com/20120920/usage-of-apples-ios-6-
hits-staggering-levels-on-first-day-of-availability/](http://allthingsd.com/20120920/usage-of-apples-ios-6-hits-staggering-levels-on-first-day-of-availability/)



Can we support
multiple OSes?

Which handsets?

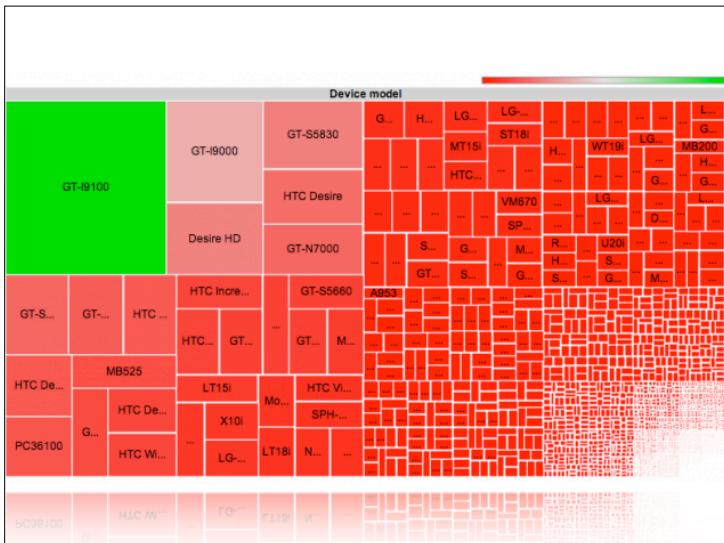


This Is What Developing For Android Looks Like.

<http://techcrunch.com/2012/05/11/this-is-what-developing-for-android-looks-like/>

One developer encounters
3,997 devices.

<http://arstechnica.com/gadgets/2012/05/android-fragmentation-one-developer-encounters-3997-devices/>



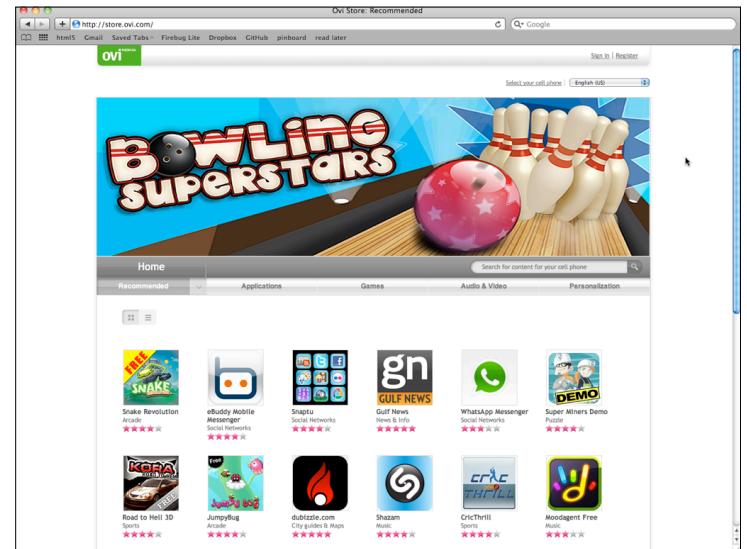
Which carriers?

Which app markets?

Can you afford to be on
Amazon's app market?

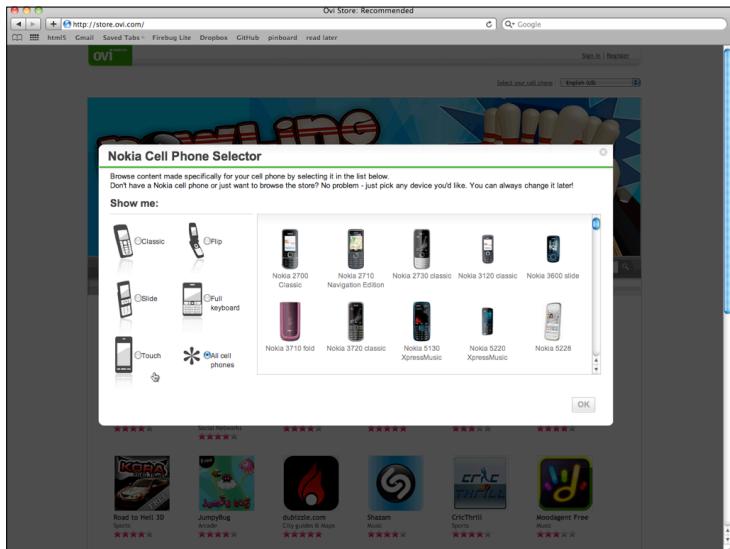
[http://blog.shiftyjelly.com/2011/08/02/
amazon-app-store-rotten-to-the-core/](http://blog.shiftyjelly.com/2011/08/02/amazon-app-store-rotten-to-the-core/)

Android fragmentation, Black
Berry, Palm...Windows?



Wow, that looks great!

But here's step 2...



Bummer.

Not so user friendly...

Some mobile apps -
exclusive to handsets.

Still want to build a
native app?

Reality - cost.

Time.

Skill sets.

They aren't complimentary.

What do you do?

Great! HTML5.

Mobile browsers excellent
HTML5 support.

More likely than
desktop peers.

Isn't this just like
MS vs. Apple?

NO!

This isn't a zero sum game.

It isn't even the same game.

In 2011, Apple sold
more iOS devices...

Than all Macs sold
in *28* years.

<http://www.asymco.com/2012/02/16/ios-devices-in-2011-vs-macs-sold-it-in-28-years/>

Handsets - expected to go
from 1.5 to 2 billion.

From \$5.3 billion...to \$14
billion in profits.

<http://www.asymco.com/2012/05/03/the-phone-market-in-2012-a-tale-of-two-disruptions/>

There's opportunity here...

Besides, there's a
relief valve.

The web...and HTML5,
gives us an out.

So we should just build a web app then...right?

It depends.

Seriously!

Apps - better usability?

<http://www.useit.com/alertbox/mobile-sites-apps.html>

Shift afoot...

Mobile web sites...easier?

Trade offs.

We've built web apps
for a while now.

But mobile devices are
seriously constrained.

Requires rethinking.

Browser may not support
what we need to do.

Certain features aren't
surfaced in the browser.

Yet.

Camera, audio, contacts,
multitouch, notifications...

Likely to change over time.

Can be harder to
monetize a web asset.

Apple and Amazon -
earned your trust.

What about random 3rd
party developer?

Who are you more likely
to give your CC number?

Key aspect of the app
store ecosystems...

Very easy for someone to
give you money.

Discoverability is a
challenge in both arenas.

But more so in
the wild web.

If you have an established
franchise, less of an issue.

Like, say, 37signals.

<http://37signals.com svn/posts/2761-launch-basecamp-mobile>

Market may *expect* you
to have an app.

Speaking of the market,
what is yours?

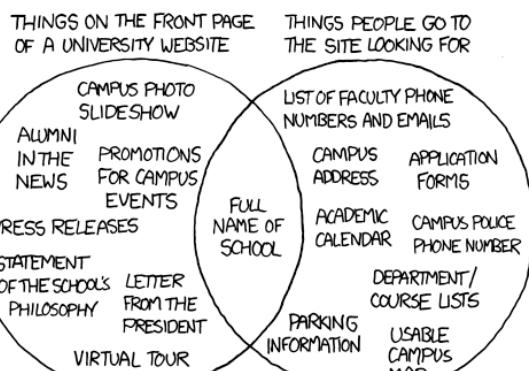
Internal only? Anyone
and everyone?

Regardless of the delivery...

What tasks does a mobile
user need to accomplish?

Boil it down to the essence
of your application.

Then cut some more.



You cannot afford to get
the intersection wrong.

Usage tends to be choppy.

Sprints, not marathons.

One handed use.

Fingers != mouse pointer.

The one thumb test.

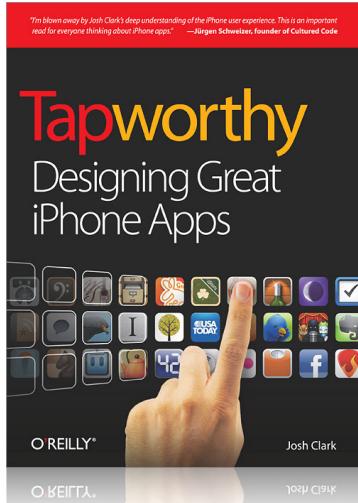
Targets must be obvious.

Nothing says you
can't have both...

Mobile mindsets.

Why do they “hire” your mobile experience?

What are they trying to do?



Microtasking.

Boredom.

Local.

Google has similar concepts.

Repetitive now.

Bored now.

Urgent now.



<http://www.lukew.com/>

Lookup/Find.

Explore/Play.

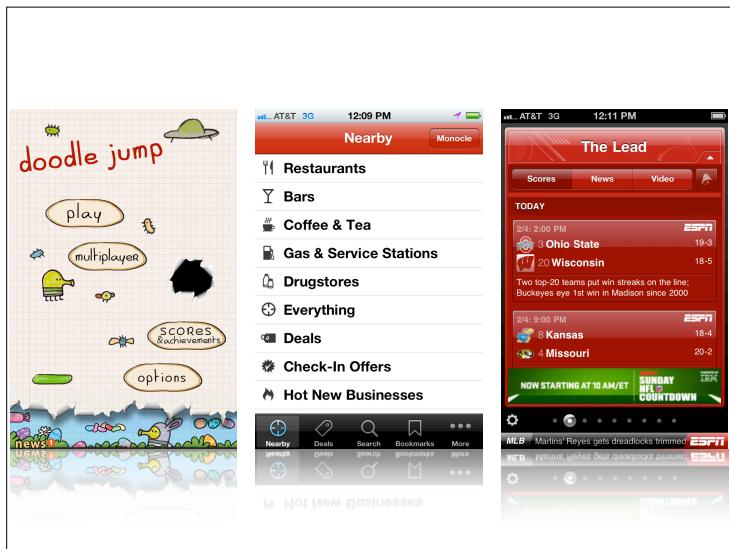
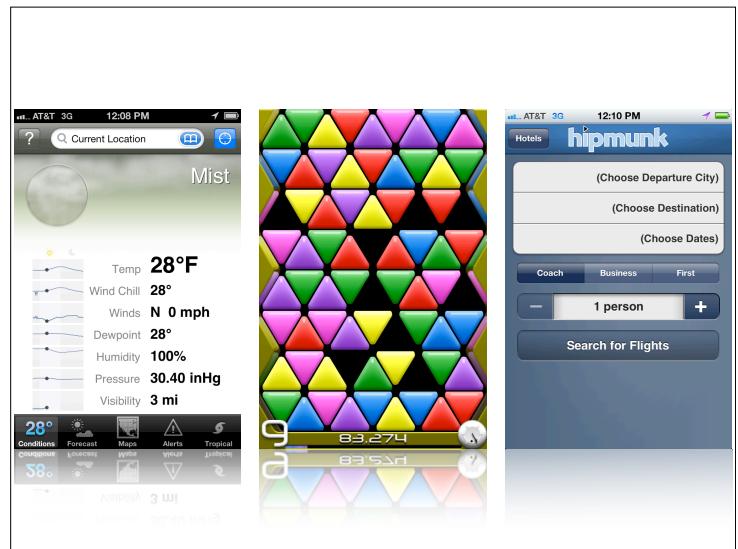
Check in/Status.

Edit/Create.

*WHY does someone
launch your app?*

WHAT is the context?

Let's look at some apps...



Who, Why, Where.

Amazon.

We've all used Amazon.

Pretty good website.

The screenshot shows the Amazon homepage with a search bar at the top containing the query "the girl with the dragon tattoo". Below the search bar, there are several search results. One result is for "Valentine's Day Gifts", which includes a banner for Valentine's Day and a section for "Treat Yourself". Another result is for "Experience Parker 5TH Technology", featuring a pen. Further down, there are sections for "Best Sellers" (Movies & TV - Black) and "1. Drive (+UltraViolet Digital Copy)". The sidebar on the left lists various shopping categories like Unlimited Instant Videos, MP3s & Cloud Player, Kindle, Audible Audiobooks, Books, and more.

This screenshot shows the search results for "the girl with the dragon tattoo" on Amazon. The top result is for "The Girl with the Dragon Tattoo (Movie Tie-in Edition) (Vintage Crime/Black Lizard)" by Stieg Larsson. It shows the book cover, price (\$9.99), and a brief description. Below the main result, there are other items related to the book, such as "The Girl with the Dragon Tattoo (Millennium Trilogy) by Stieg Larsson and Reg Keeland (Kindle Edition - Sep 16, 2008) - Kindle eBook". The sidebar on the left is identical to the one in the first screenshot.

This screenshot shows the product page for "The Girl with the Dragon Tattoo (Movie Tie-in Edition)" by Stieg Larsson. The page includes the book cover, author information, customer reviews, and purchase options. It highlights that the book is eligible for Prime and offers 1-Click ordering. The page also features a "Share your own customer images" section and a "Sell Back Your Copy" option. At the bottom, there are "More Buying Choices" and a "Have one to sell?" link.

This screenshot shows the same product page for "The Girl with the Dragon Tattoo (Movie Tie-in Edition)" as the previous one. The layout is identical, showing the book details, purchase options, and customer reviews. The page emphasizes the book's availability on Kindle devices and the option to sell it back to Amazon.

Works great in the browser!

Not so much for mobile.

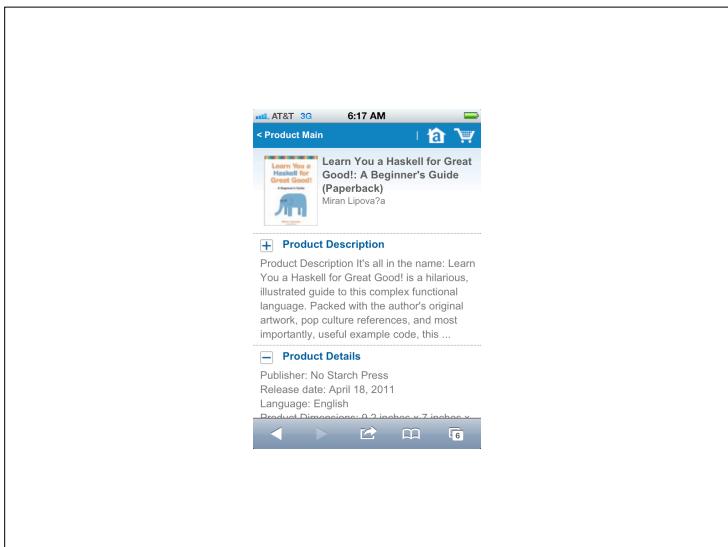
What would you change?

Which mindsets?

Let's see what Amazon did.

The screenshot shows the Amazon.com homepage with a clean, modern design. At the top, there's a search bar and a navigation bar with links for "Today's Deals", "Gift Cards", "Shop by Department", and "Hello, NT Schutta.". The main content area features several promotional banners: "Kindle Fire - The #1 Best-Selling Product on Amazon", "Clothing Trends", "Recommendations For You" (including books like "Learn You a Haskell for Great Good!" and "A Universe of Discourse"), "Gold Box Deal of the Day" (an LG Kompressor LuV400T Total Care Upright Vacuum), "Today's Deals" (TurboTax 2011), and "Best Sellers" (Movies & TV: Blu-ray). The bottom of the page includes sections for "More Items to Consider" and "Customers who viewed this also viewed".

Little different!



Amazon.com: Learn You a Haskell for Great Good!: A Beginner's Guide (9781593272838): Miran Lipovaca: Books

Shop by Department

Books Advanced Search Browse Subjects New Releases

Prime Member: NT Schutta

NT Schutta: This member makes Prime even better! ★★★★ (22)

Learn You a Haskell for Great Good!: A Beginner's Guide (Paperback)

Miran Lipovaca

5 stars (22)

in other books are available for Amazon Prime

Quantity: 1 Add to Cart or Sign in to turn on 1-Click ordering.

Buy Used Used - Good See details \$22.57 Eligible for free shipping with Amazon Prime. Fulfilled by Amazon Add to Cart or Sign in to turn on 1-Click ordering.

How'd they do?

TED.

Amazing talks.

Inspirational, educational.

TED: Ideas worth spreading

Riveting talks by remarkable people, free to the world

Try our new platform

Resize by:

- Newest releases
- Date filmed
- Most viewed
- Most emailed this week
- Most comments this week
- Most jaw-dropping
- ... persuasive
- ... courageous
- ... ingenious
- ... fascinating
- ... inspiring
- ... beautiful
- ... funny
- ... informative

to:

- All
- Technology
- Entertainment
- Design
- Business
- Science
- Global issues

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TED Ideas worth spreading

Riveting talks by remarkable people, free to the world

Try our new platform for sharing ideas: [TED Conversations](#) »

Resize by:

- Newest releases
- Date filmed
- Most viewed
- Most emailed this week
- Most comments this week
- Most jaw-dropping
- ... persuasive
- ... courageous
- ... ingenious
- ... fascinating
- ... inspiring
- ... beautiful
- ... funny
- ... informative

Show talks related to:

- All
- Technology
- Entertainment
- Design
- Business
- Science
- Global issues

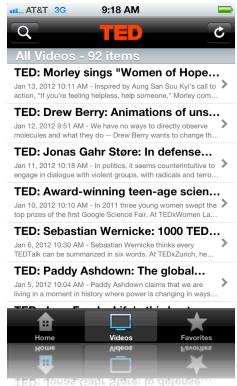
[View all tags >](#)

What mindsets bring you to the TED app?

What changes would you make?

What capabilities would you leverage?

Let's see what they did!



That's simpler!

What about the iPad?

A screenshot of a TED talk page. At the top, there's a navigation bar with 'Featured Talks', the speaker's name 'A.J. Jacobs', and links for 'Previous Talk' and 'Next Talk'. Below the navigation is the TED logo and the tagline 'Ideas worth spreading'. The main content area features a video player showing a man speaking on stage. The video player has a play button in the center. To the right of the video, the speaker's name 'A.J. Jacobs' is displayed with a 'click to play' button. Below the video player are sections for 'About this talk & speaker', 'What to watch next', and 'Related themes & tags'. At the bottom of the page is a footer with links for 'About TED', 'Contact', 'Help', 'Log in', and social media icons for YouTube, Facebook, and Twitter.

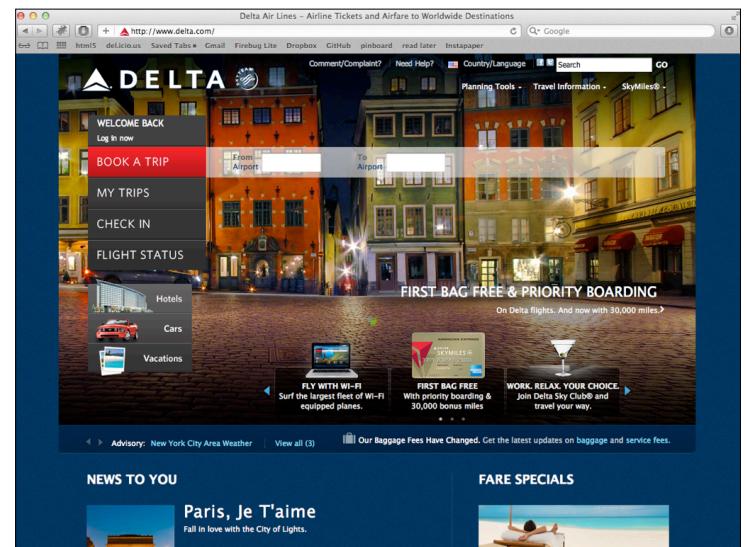
What do you think?

Delta.

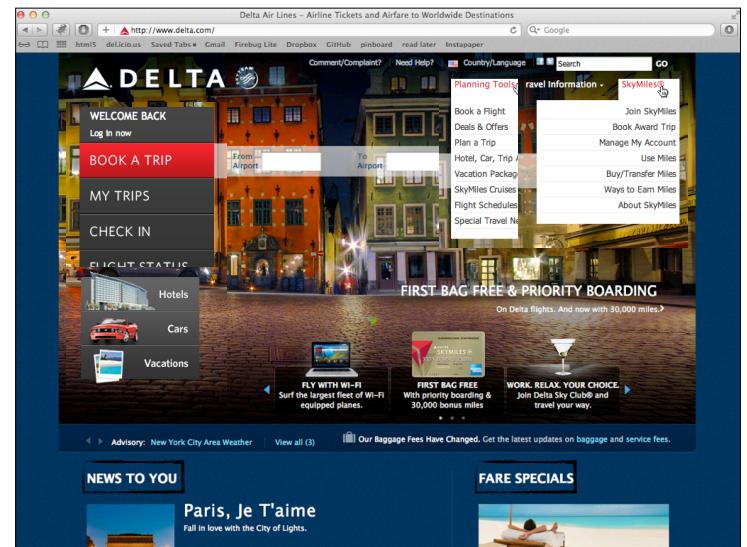
I travel a fair amount.

I'm a Delta guy.

Use the website often.



Lot going on there!



What is important here?

What are the top tasks?

What about mobile?

What would you change?

Which mindsets?

Where would it be used?

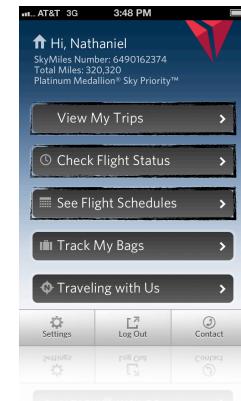
What are the top 3 tasks in a mobile context?

What capabilities could they leverage?

Let's see what Delta did.



What is the most important thing?



What do you think?

Hybrid web apps.

Some companies are building “hybrid” apps.

They run in the browser...

But they are more “app” like.

For example:

Here's the desktop site on the iPad.

That's quite a difference.

Desktop view isn't sticky though.

Do hibernating animals wake up to go to the bathroom?

By Slate on Wednesday, February 1, 2012 at 12:02 AM

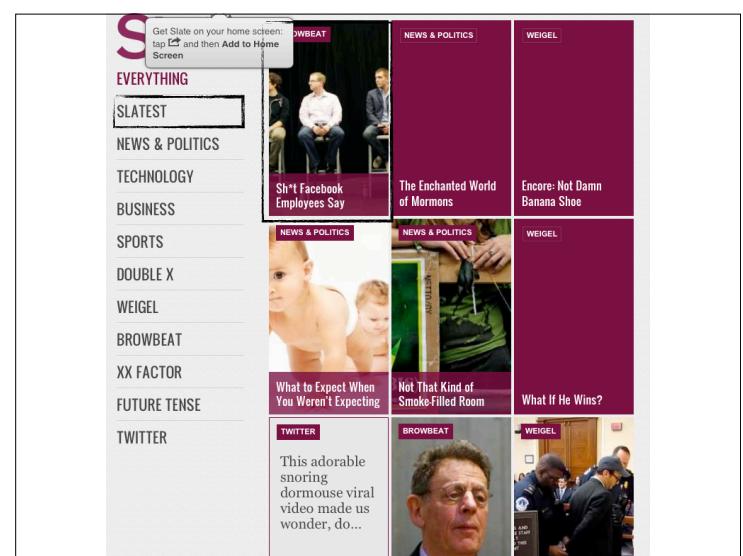
periods the animals stretch, move around, and sometimes urinate or defecate. The main purpose of hibernation is to conserve energy while food is scarce (typically during the winter months). Accordingly, animals eat and drink less during periods of hibernation, and thus expel less waste. Some hibernators, including most rodents, may peek at stored food, while others, like the Midwest's [thirteen-lined ground squirrel](#), store all their energy internally in the form of fat. Even those hibernators that don't eat or drink anything at all sometimes defecate and urinate during hibernation (metabolizing stores of fat does produce waste), but these animals expel only a tiny amount during hibernation.

Hibernating bears, on the other hand, [can go the whole winter without going to the bathroom](#). While bears are not the most serious of hibernators—they don't sleep as deeply or lower their body temperature as many degrees as most other hibernating mammals—few animals can hold it in like bears. Many bears pass more than half of every year in hibernation, neither eating nor drinking any water. Hibernating mothers can even suckle their young without leaving their den for a drink. They obtain their water by metabolizing fat reserves, which does produce waste. However, instead of urinating and defecating, [hibernating bears recycle that waste](#). Urea waste, which can be poisonous at

And it crashed Safari.

But it is beta.

But look at the targets!



Here's another example.

From Amazon.

The All-New Kindle Family: from \$79

Kindle Store

Buy A Kindle | Free Shipping | Kindle eBooks | Kindle Newsstand | Popular Accessories | Discussions | Manage Your Kindle | Kindle Support

Start reading Inside Apple on your Kindle **In under a minute.** Don't have a Kindle? [Get your Kindle here.](#)

[Shop the New Kindle Store for the best experience on your iPad!](#)

[Click to LOOK INSIDE!](#)

Inside Apple: How America's Most Admired—and Secretive—Company Really Works (Kindle Edition)

Adam Lashinsky (Author)

4.5 out of 5 stars (2,000 customer reviews) | [\\$12.99](#)

Print List Price: \$26.99
You Save: \$14.00 (52%)
Sold by: Hachette Book Group
This price was set by the publisher

Length: 240 pages | [Don't have a Kindle? Get your Kindle here.](#)

Formats: Kindle Edition | Kindle Price: \$12.99 | New from \$14.45 | Used from \$12.99

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Description

January 25, 2012 – 240 pages

INSIDE APPLE reveals the secret systems, tactics and leadership strategies that allowed Steve Jobs and his company to churn out after hit and inspire a cult-like following for its products.

If Apple is Silicon Valley's answer to Willy Wonka's Chocolate Factory, then author Adam Lashinsky provides readers with a golden ticket to step inside. In this primer on leadership and innovation, the author will introduce readers to concepts like the "DRI" (Apple's practice of assigning a Directly Responsible Individual to every task) and the Top 100 (an annual ritual in which 100 up-and-coming executives are tapped a la Skull & Bones for a secret retreat with company founder Steve Jobs).

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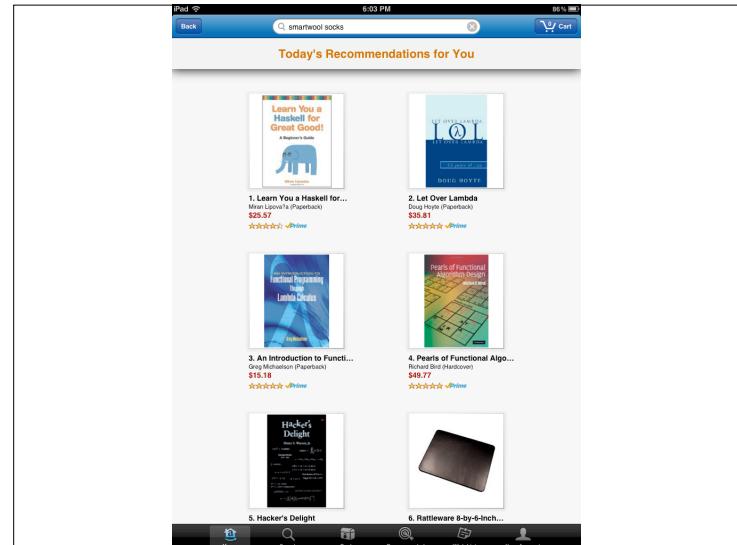
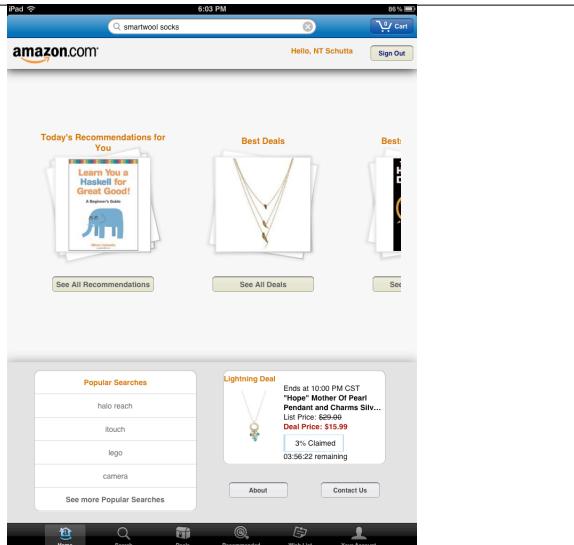
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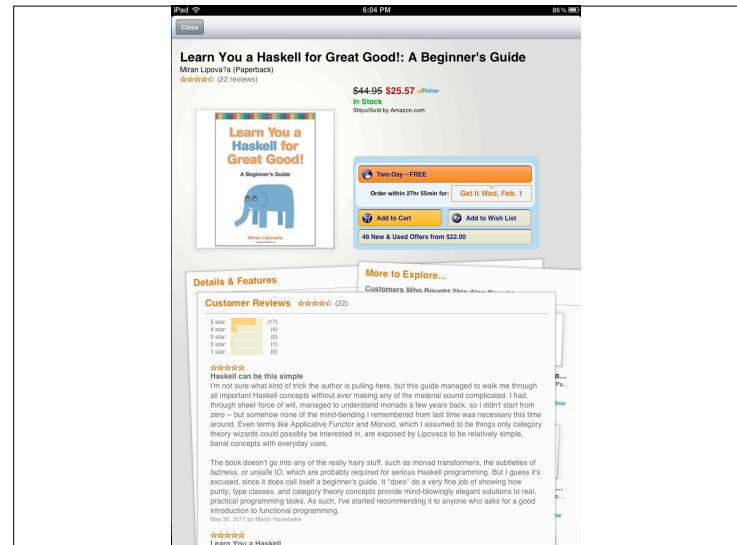
Movies & TV: Blu-ray

Isn't it the same
recommendation engine?

Heck, they even
have an iPad app!



Isn't it the same
recommendation engine?



What do you think?

Which one would
you reach for?

Shell apps.

Web view, web content.

But packaged for the
respective platform.

PhoneGap, Appcelerator
Titanium, Sencha Touch...

Best of both worlds?

Worst of both?

Pros:

Write once, run anywhere.

Release fixes and updates
at will - no app reviews.

Familiar web stack.

Cons:

How did Swing work out?

Your app now depends on
the framework's schedule.

Performance can be an issue.

The uncanny valley.

Shell Apps and Silver
Bullets.

At first things were easy...

But eventually the complexity overwhelms.

Simple Made Easy.

There are no silver bullets!

<http://www.infoq.com/presentations/Simple-Made-Easy>

Mobile first?

You bet!

Constraints.

Shall set you free...

Size.

Power.

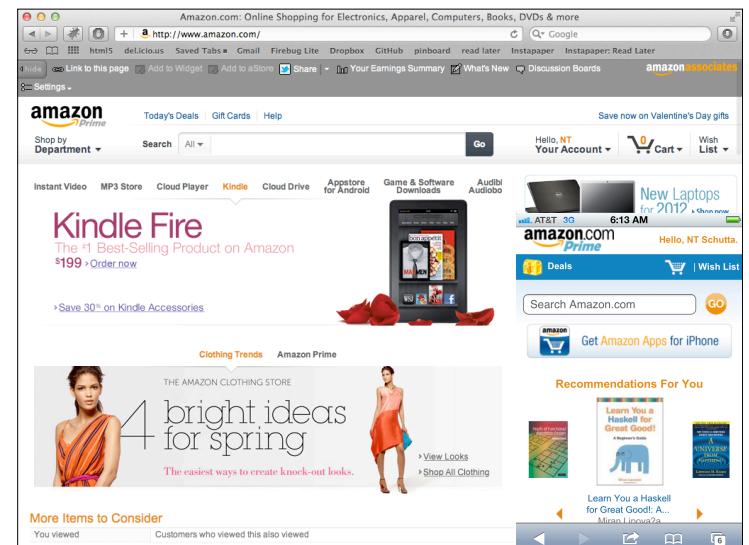
Connectivity.

Usage patterns.

“One eye, one thumb.”

Forces you to focus.

What's important?



1024 x 768

320 x 480

Essentials.

Can't have it all.

How do you know?

Starts with the users.

Ethnography.

Study people in
their environment.

What are they doing?

What do they want to do?

Where are they?

Makes it easier to build
the desktop version.

<http://csswizardry.com/2011/11/sam-penrose-design-process-and-write-up/>

Can the mobile experience
surpass the “normal” app?

Focus on what you need.



Apps are like goldfish...

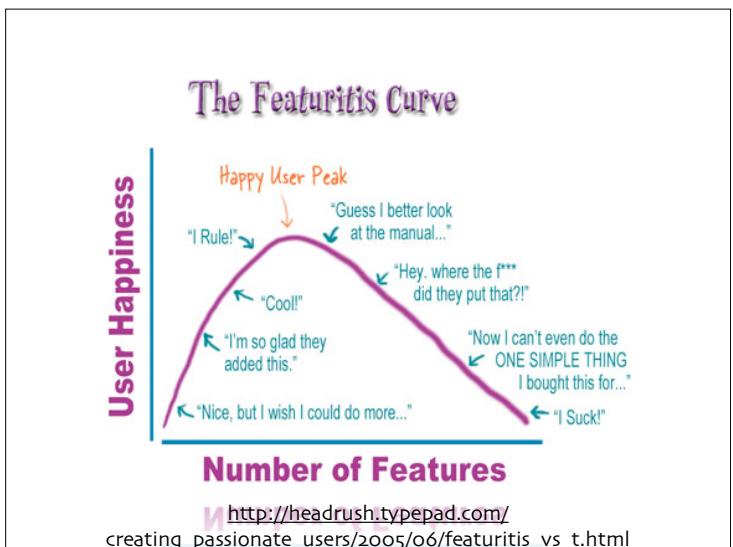
A screenshot of the Yahoo! homepage from February 4, 2012. The page features a search bar at the top with a yellow "Search" button. Below the search bar, there are sections for "TRENDING NOW" and "CLASSIC". The "TRENDING NOW" section includes headlines about Eddie Murphy, Jamie Lynn Spears, UFC 143, and Ben Gazzara. The "CLASSIC" section includes a "Popular This Week" section featuring a photo of Adrian Peterson and a headline about his uniform number switch. The left sidebar lists various Yahoo! sites such as Autos, Dating, Finance, Games, Horoscopes, Jobs, Mail, Messenger, Movies, News, Omg!, Real Estate, Screen, Shine, Shopping, Sports, Travel, and TV.

"We have a few pixels over here we could use..."

Can't do that with mobile.

What are the top 3 tasks?

The 20%.



Too many features...
encumbers users.

What is the single most
important task?

Helps your desktop users too.

Like accessibility.

Better for everyone.

Thought of the day: we'll know the mobile web is "ready" when links to the desktop version are understood to be unnecessary.

—Jason Grigsby

<https://twitter.com/#!/grigs/status/438038262428590008>



AUTHD

[http://www.lukew.com/
presos/preso.asp?26](http://www.lukew.com/presos/preso.asp?26)

Great, so native or HTML5?

Pros...and cons.

“Web” vs. “Native”.

<http://www.tbray.org/ongoing/When/201x/2011/06/14/Native-vs-Web>

Many native apps could be written in HTML5.

Should they be the interesting question.

Depends on what you want to do...

<http://www.tbray.org/ongoing/When/201x/2012/05/02/Web-Futurez>

Publishers - don't like apps?

<http://www.technologyreview.com/news/427785/why-publishers-dont-like-apps/>

Maybe they're doing it wrong...

<http://www.marco.org/2012/10/11/the-magazine>

Uncanny valley...

http://en.wikipedia.org/wiki/Uncanny_valley



Applies to interfaces too...

<http://billhiggins.us/blog/2007/05/17/the-uncanny-valley-of-user-interface-design/>

CrossPlatformMobile.

<http://martinfowler.com/bliki/CrossPlatformMobile.html>

Pretenders: Why mobile Web apps should stop trying to act like native apps.

<http://civil.ly/2011/06/19/pretenders-why-mobile-web-apps-should-stop-trying-to-act-like-native-apps/>

Why Mobile Web Apps Should Stop Trying to Act Like Native Apps.

<http://daringfireball.net/linked/2011/06/20/pretenders>

Brave new world!

Exciting times.

Options - and decisions.

Cannot ignore mobility.

What do you need out of a mobile experience?

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Thanks!

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@ntschutta