

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...

In 2011, Apple sold
more iOS devices...

Than all Macs sold
in *28* years.

400 million iOS devices sold.

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

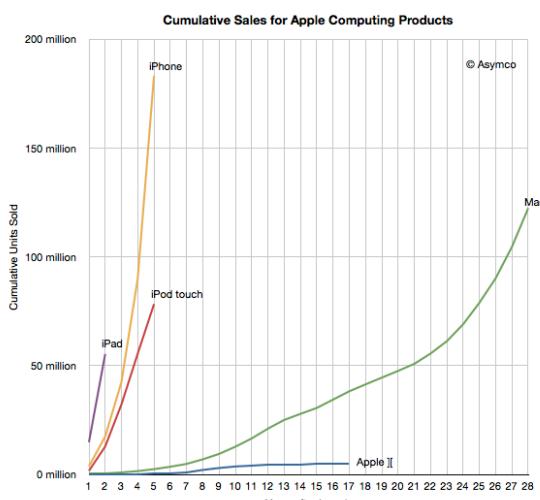
480 million Android
activations.

To put that in
perspective...

1 billion Windows PCs.

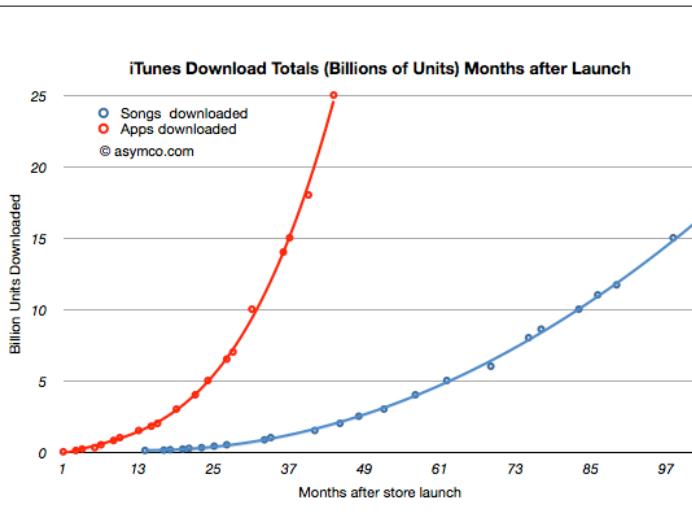
2.2 billion Internet users.

<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/](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/](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?

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

Faster than nearly every
other innovation...

When will the tablet
market be bigger than PCs?

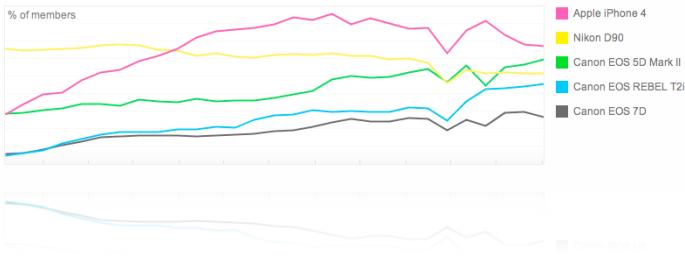
Fall of 2013...

<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!

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

Get's people's attention.

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?

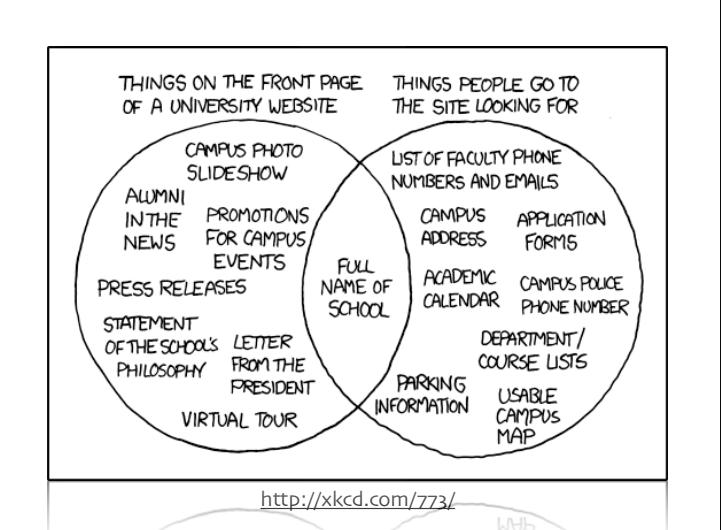
Turns out...all the time.

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.

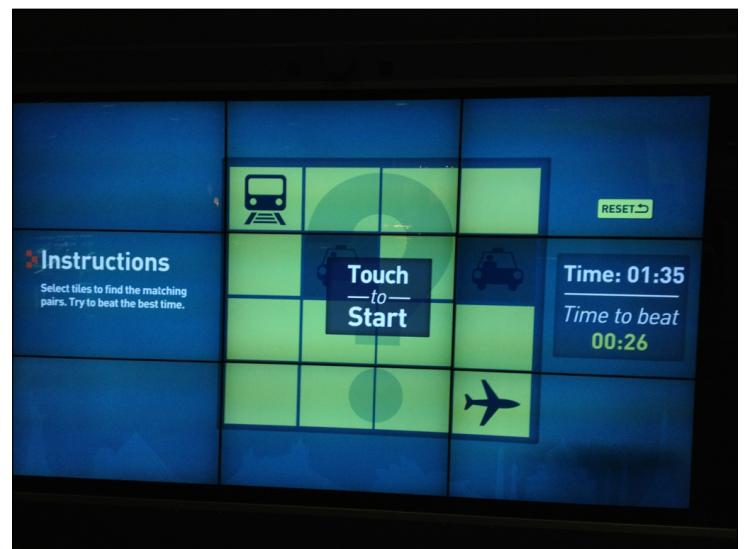
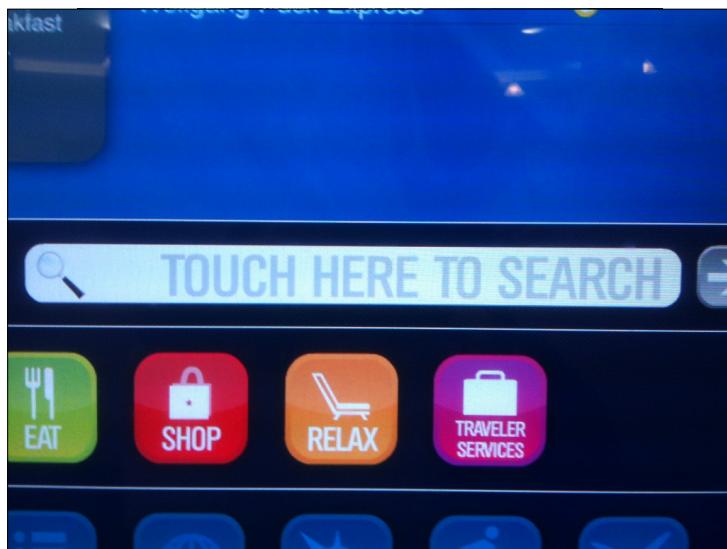
Android activations...

Windows Phone 7.

Nokia and RIM are shifting...

Think of our kids...

Isn't just mobile...



When will touch
be assumed?

Audio.

Camera - video, pictures.

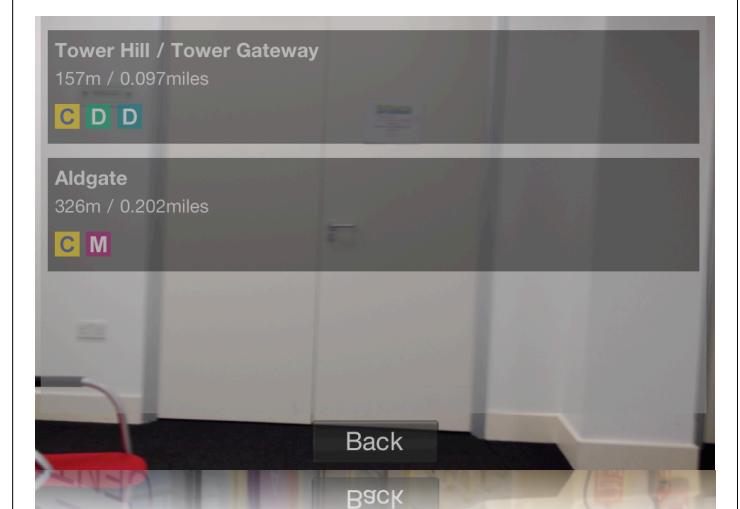
Connections - Bluetooth.

Proximity.

Email, contacts, apps.

Just because you
can do something...

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.

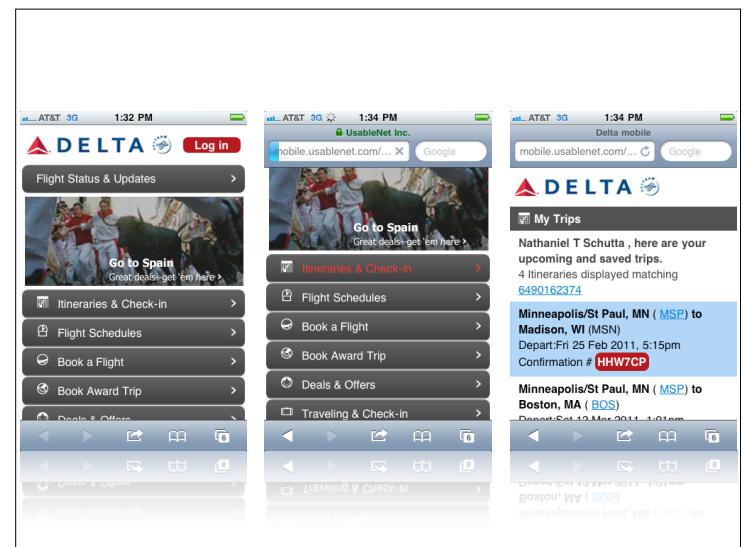
Do you *need* a
native app?

Is HTML5 enough?

Something like 3 billion
HTML capable phones.

Yes, 3 billion.

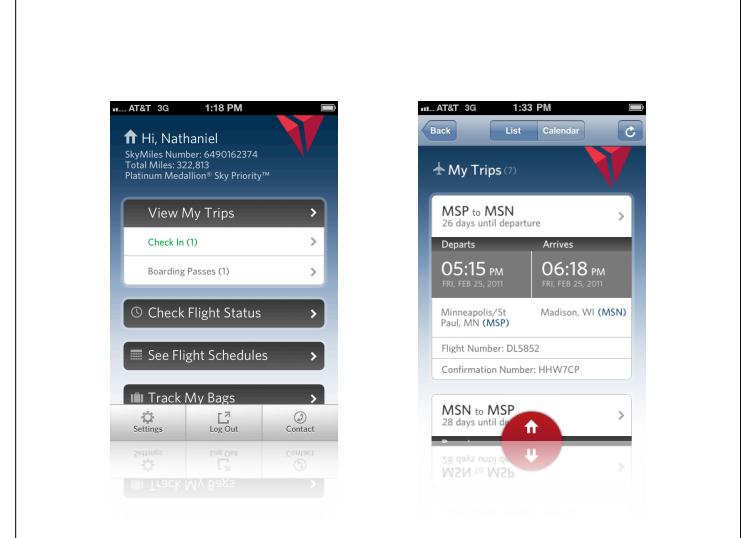
Delta.

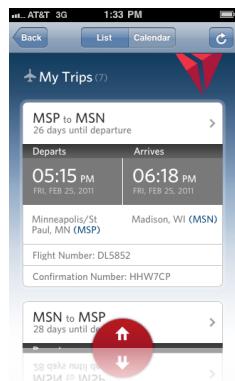
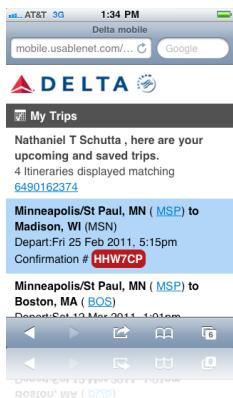


That works.

It's serviceable.

Here's a native look.





Which do you prefer?

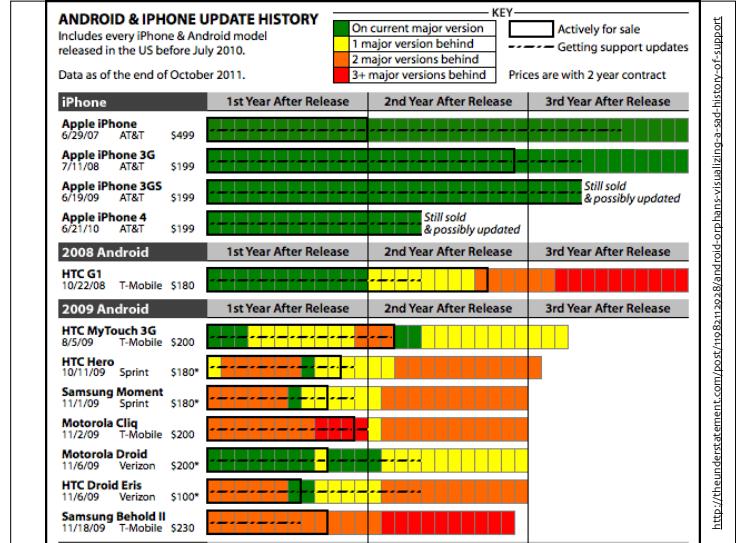
Could we make the mobile site better?

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.

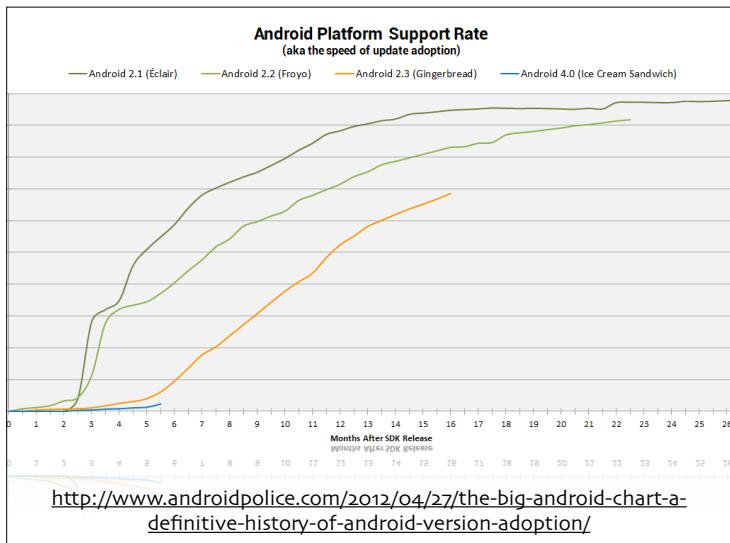
<http://developer.android.com/resources/dashboard/platform-versions.html>

On Chitika, JellyBean 1.5%
after 2 months.

iOS 6? 15%.

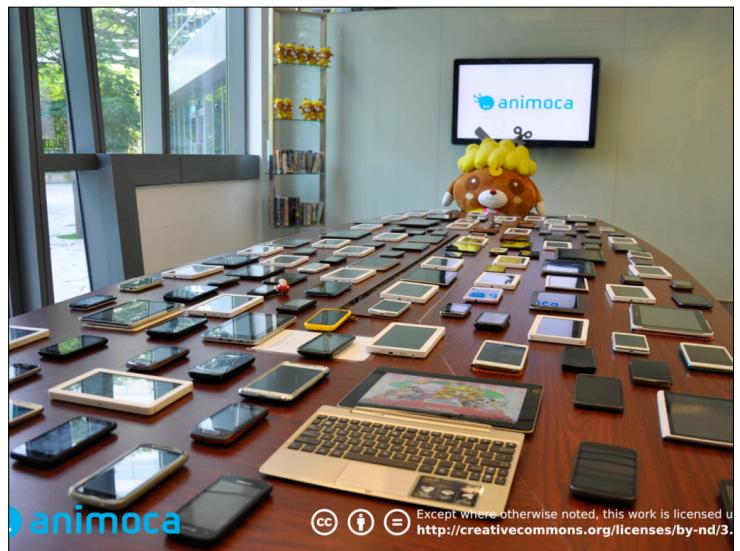
After 24 hours.

<http://allthingsd.com/20120920/usage-of-apples-ios-6-hits-staggering-levels-on-first-day-of-availability/>



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/>

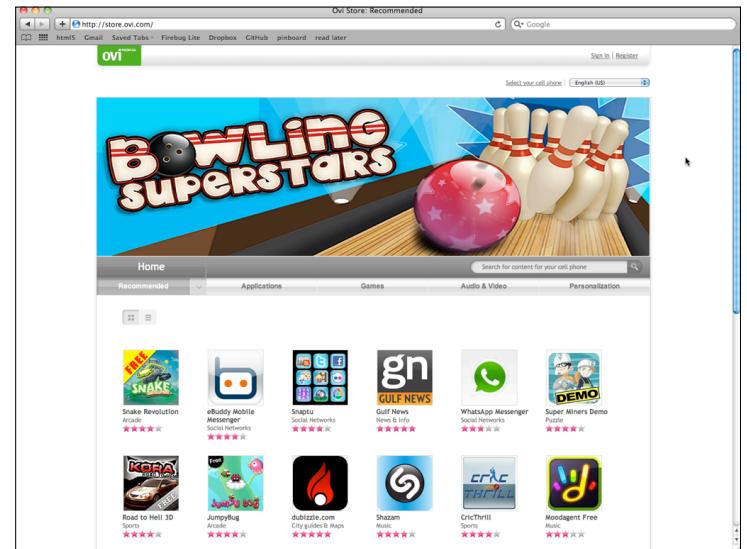
Which carriers?

Which app markets?

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

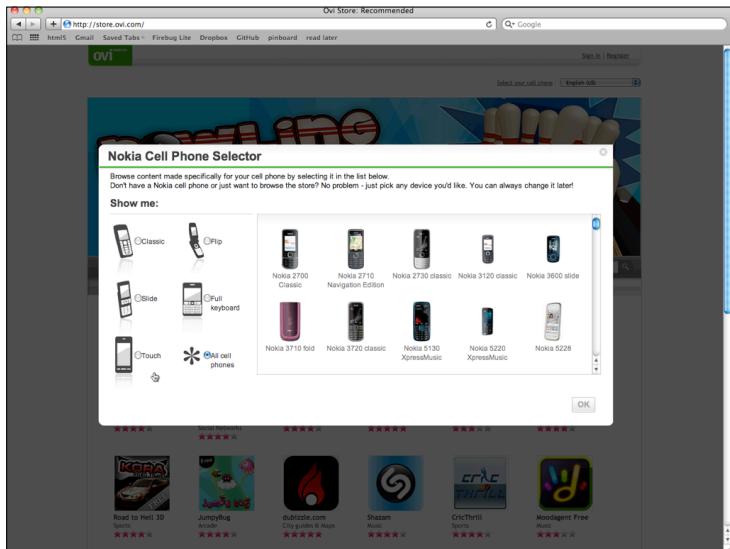
[http://blog.shiftyjelly.com/2011/08/02/
amazon-app-store-rotten-to-the-core/](http://blog.shiftyjelly.com/2011/08/02/amazon-app-store-rotten-to-the-core/)

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?

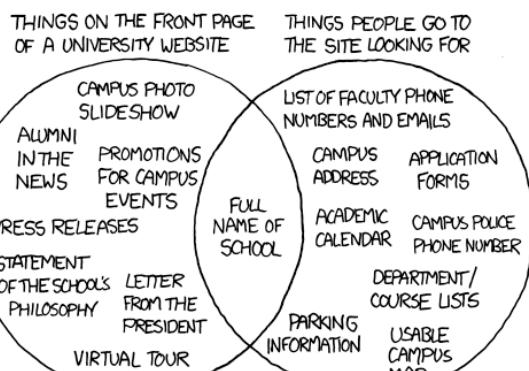
Internal only? Anyone
and everyone?

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.

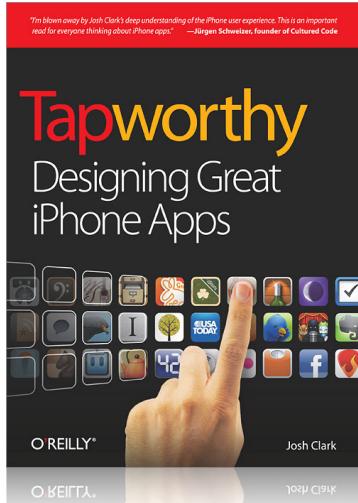
Targets must be obvious.

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.

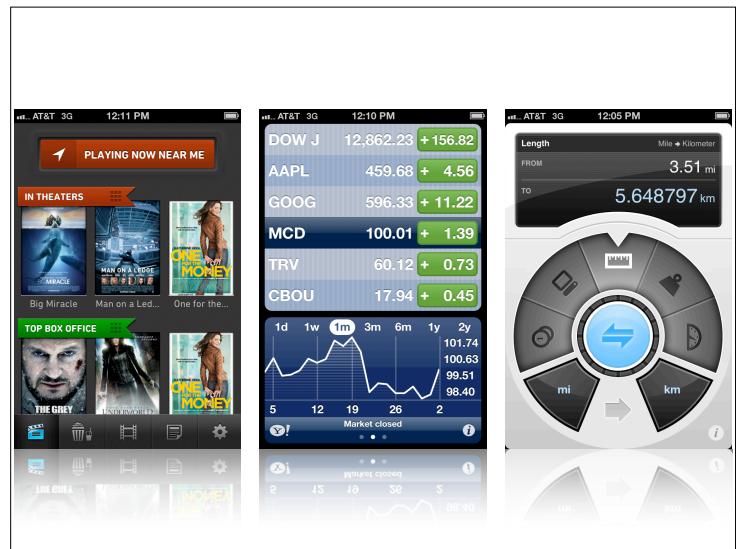
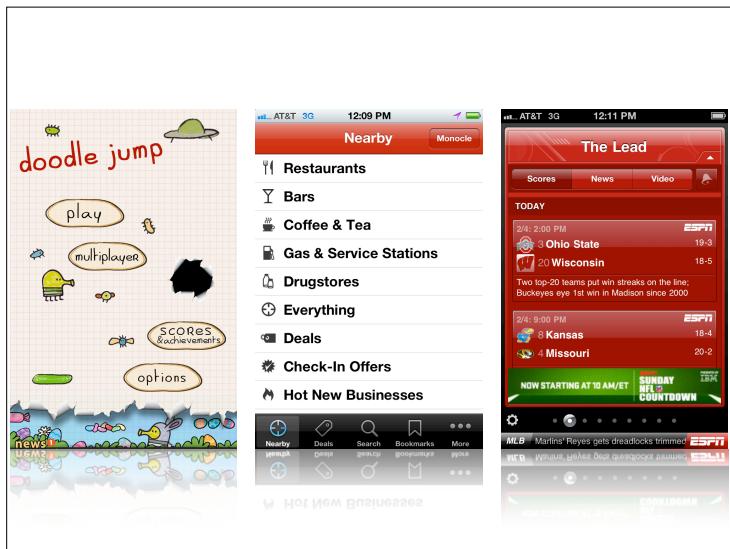
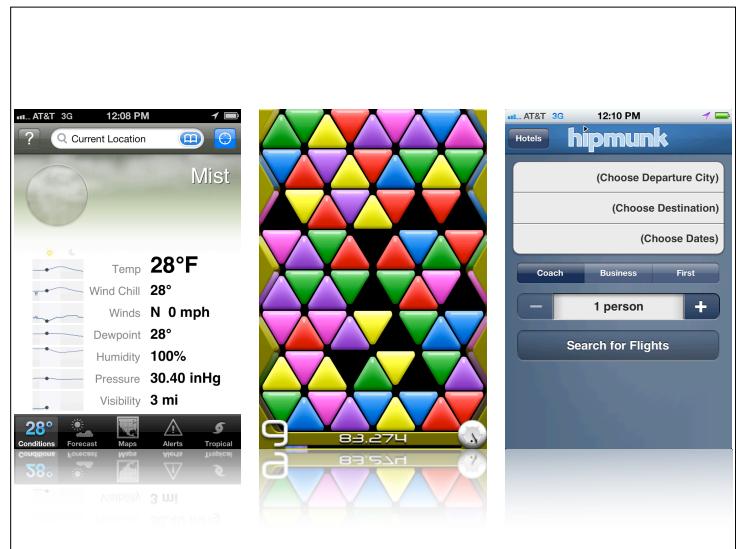
Check in/Status.

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. The main search results list items such as "the girl with the dragon tattoo" in Books, DVDs, and other categories like Music and Home & Kitchen.

This screenshot shows the search results for "the girl with the dragon tattoo" on Amazon. The results are organized into three columns. Column 1 shows items like "The Girl with the Dragon Tattoo (Movie Tie-in Edition) (Vintage Crime/Black Lizard)" by Stieg Larsson. Column 2 shows items like "The Girl with the Dragon Tattoo (Millennium Trilogy) by Stieg Larsson and Reg Keeland (Kindle Edition - Sep 16, 2008) - Kindle eBook". Column 3 shows items like "The Girl with the Dragon Tattoo (Movie Tie-in Edition) (Vintage Crime/Black Lizard)" by Stieg Larsson. The interface includes a sidebar with department links and a "See All 20 Departments" button.

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, a brief description, and purchase options. It highlights that the book is eligible for Prime and offers one-click ordering. The page also features a "Share your own customer images" section and a "Sell Back Your Copy" option.

This screenshot shows the same product page for "The Girl with the Dragon Tattoo (Movie Tie-in Edition)" as the previous one. It includes the book cover, price (\$9.99), and purchase options. A large callout box on the right side of the page says "Works great in the browser!".

Not so much for mobile.

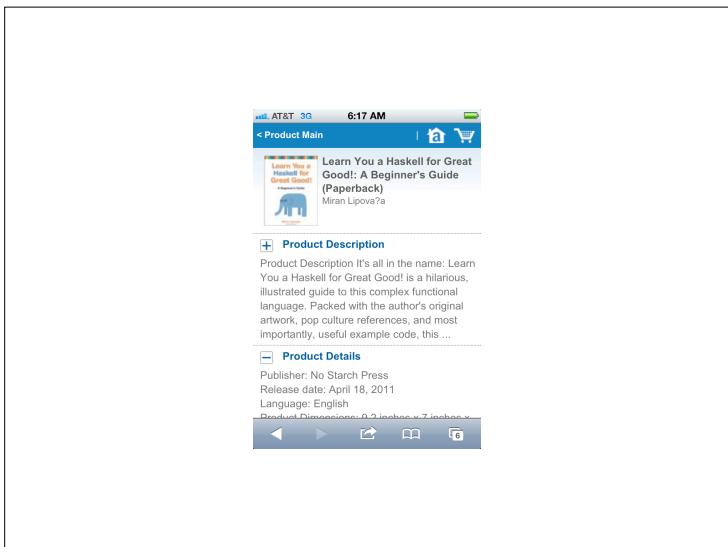
What would you change?

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.". Below the header, there's a prominent "Kindle Fire" deal with a price of \$199. To the right, there's a "Gold Box Deal of the Day" for an LG Kompressor LuV400T Total Care Upright Vacuum at a deal price of \$249.99. Further down, there are sections for "Recommendations For You" featuring books like "Learn You a Haskell for Great Good!" and "A Universe of Discourse". On the left, there's a "Clothing Trends" section with a woman in an orange dress and a "Movies & TV : Blu-ray" section with a thumbnail for "The Twilight Saga: Breaking Dawn, Part 1 (Blu-ray)". The footer includes a "More Items to Consider" section and a "Customers who viewed this also viewed" section.

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

Click to LOOK INSIDE!

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

A Beginner's Guide

Miran Lipovaca

Le Be Miran

22 reviews

In Stock

List

Share your own customer images

Search inside this book

Formats

Kindle Edition	Amazon Price	New from	Used from
\$23.01	\$23.01	—	—

35 new from \$23.57 12 used from \$22.57

Wish List

Add to Cart

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

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

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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

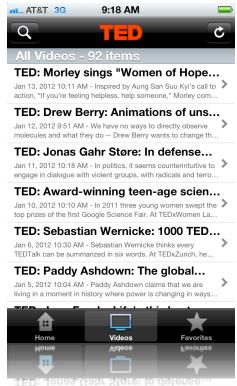
[View all tags >](#)

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 thumbnail of A.J. Jacobs speaking on stage. His name, 'A.J. JACOBS (click to play)', is overlaid on the video. Below the video 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', 'Contact', 'Privacy', 'Terms of Use', and 'Help'.

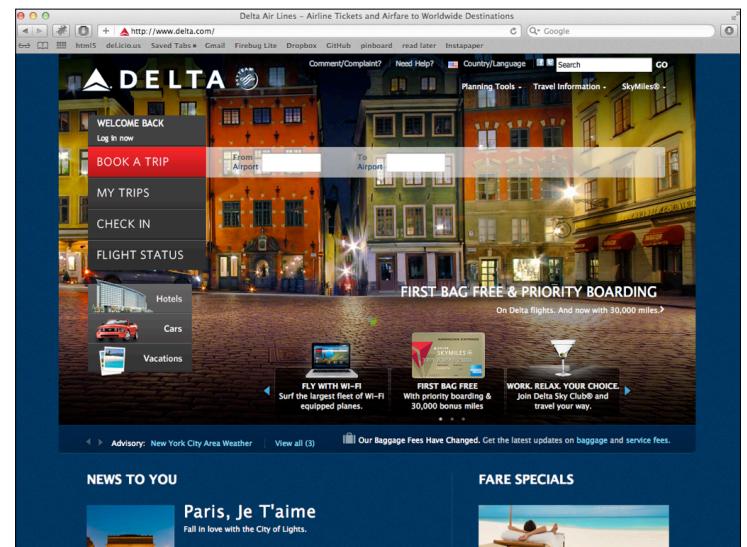
What do you think?

Delta.

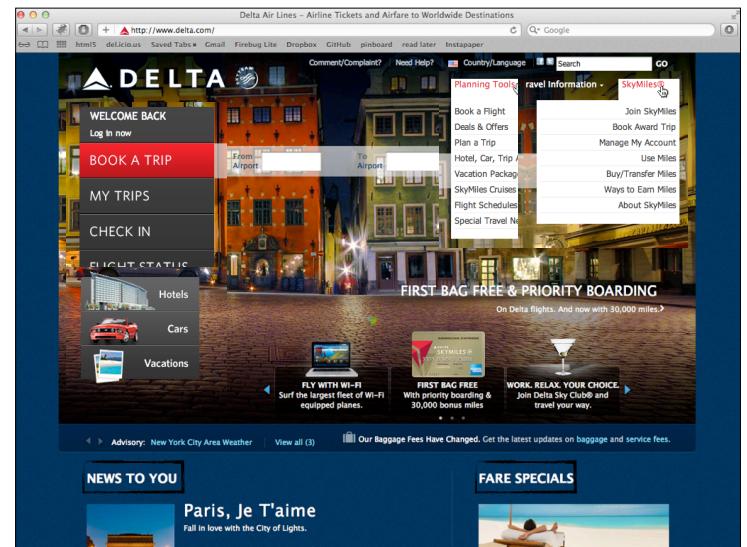
I travel a fair amount.

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?

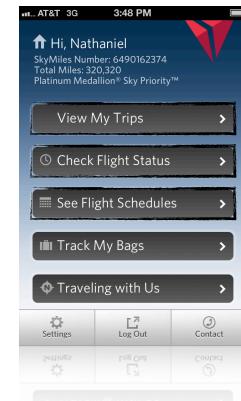
What are the top 3 tasks in a mobile context?

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

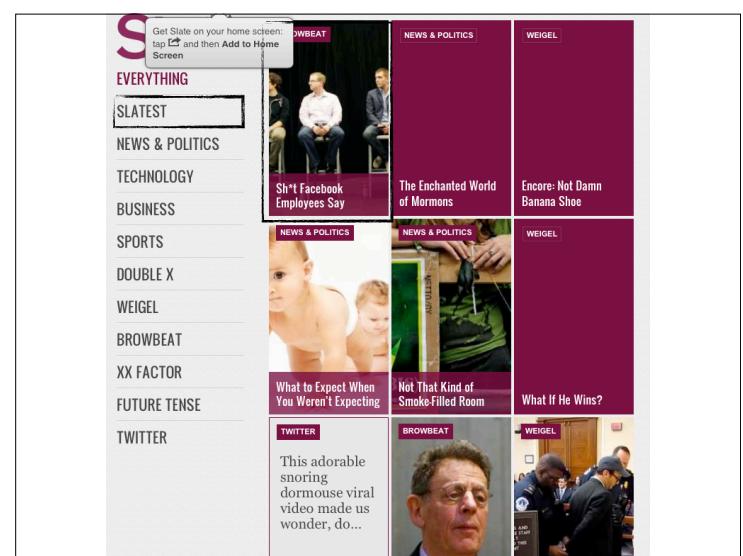
periods the animals stretch, move around, and sometimes urinate or defecate. The main purpose of hibernation is to conserve energy while food is scarce (typically during the winter months). Accordingly, animals eat and drink less during periods of hibernation, and thus expel less waste. Some hibernators, 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 screenshot shows the product page for 'Inside Apple' on the Kindle Store. At the top, there's a banner for the new Kindle Store on iPad. Below it, the book cover is displayed with a 'Click to LOOK INSIDE!' button. The product details include the author Adam Lashinsky, a price of \$12.99, and a summary: 'How America's Most Admired—and Secretive—Company Really Works'. A 'Buy now with 1-Click' button is prominent. To the right, there's a 'Try it free' section with a sample page. Below the main content, there's a 'Customers Who Bought This Item Also Bought' section with links to other books like 'Letters to Steve' and 'Talking to Siri'.

This screenshot shows the same product page for 'Inside Apple' on the full Amazon website. It features a similar layout with the book cover, price, and summary. A 'Showing 1 title' message is visible. The 'Buy now with 1-Click' button is present, along with a 'Buy' and 'Try a Sample' button. A 'Description' section at the bottom provides details about the book's publication date and page count.

Here's my "home page."

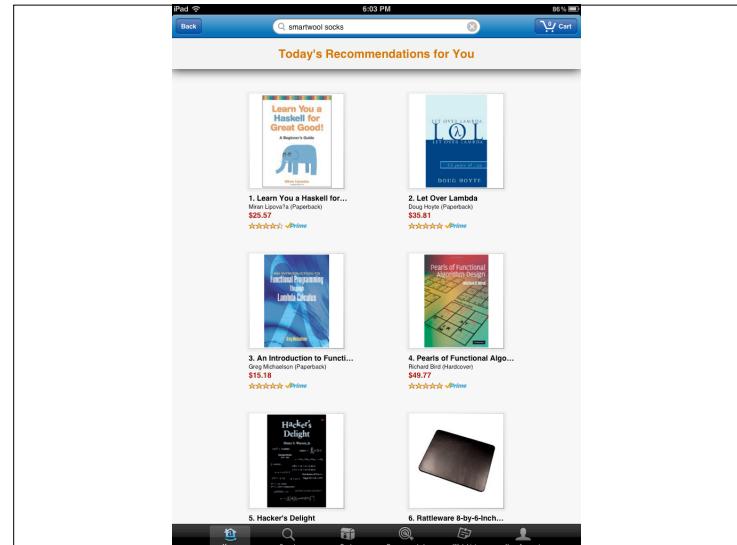
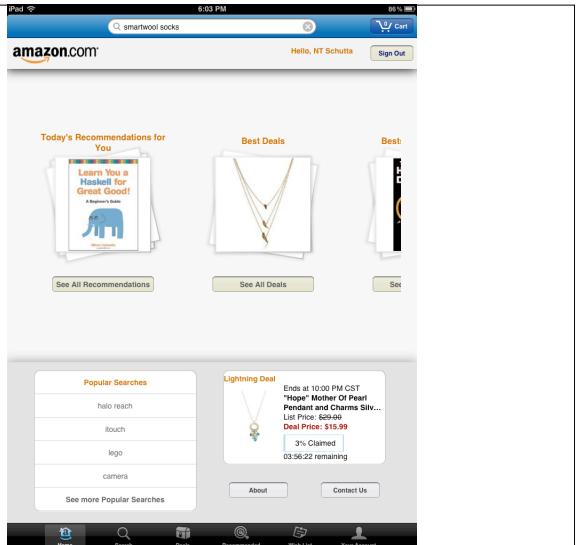
The screenshot shows the Kindle Store homepage. It features a 'Recommended for You' section with book covers for 'Learn You a Haskell for Great Good!', 'Land of Lisp', and 'The Reasoned Schemer'. Below this are sections for 'New York Times Bestsellers', 'Top 100 Paid', 'Top 100 Free', and 'The 7 Habits of Highly Effective People' by Stephen R. Covey. A 'Kindle e-Readers from \$79' section is also visible.

Versus the full site.

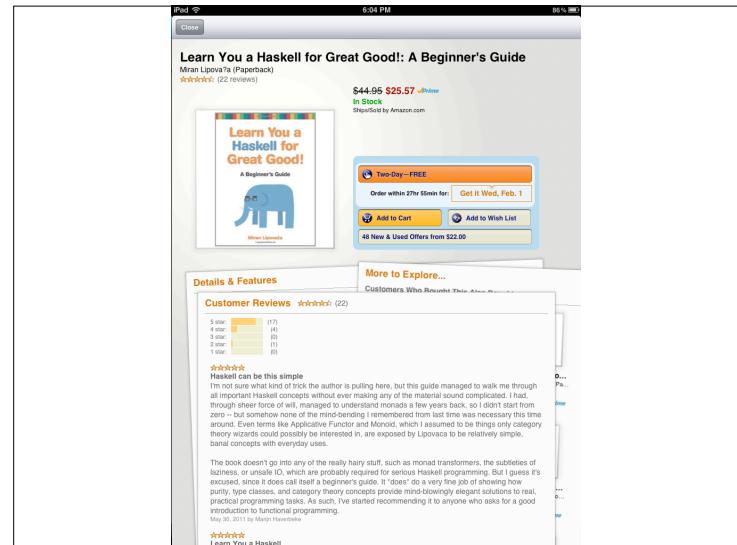
This screenshot shows the full Amazon website homepage. It includes a navigation bar with links like 'Shop All Departments', 'Search', and 'All Departments'. A prominent 'kindle fire' advertisement is at the top. Below it, there are sections for 'New For You' (including 'Inside Apple'), 'Kindle e-Readers from \$79', 'SHOP WITH POINTS', 'Treat Yourself', and 'New Collector's Edition'. The bottom of the page shows 'Best Sellers' and '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.

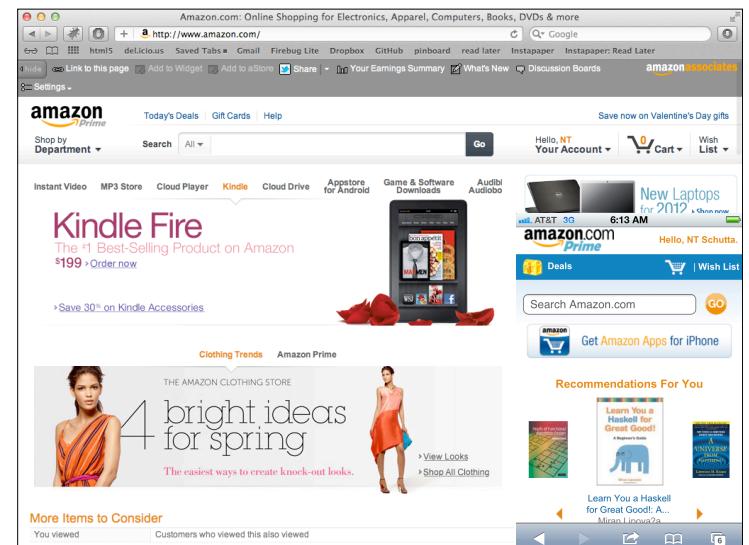
Connectivity.

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...

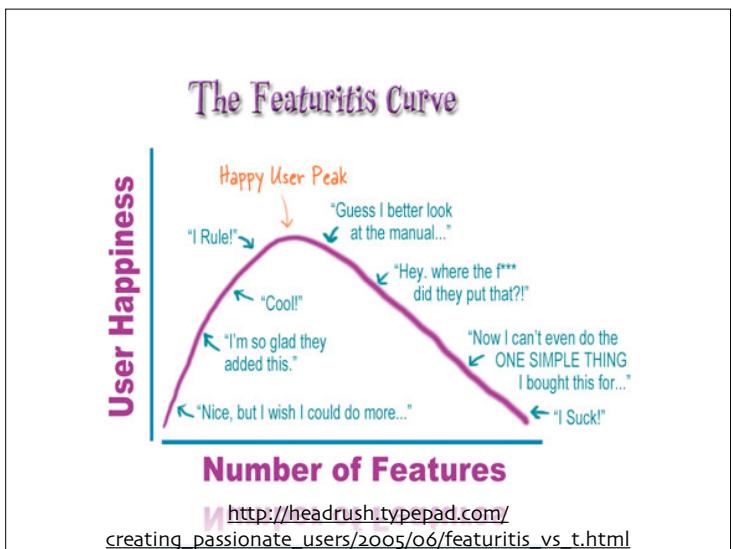
A screenshot of the Yahoo! homepage from February 4, 2012. The page features a search bar at the top with a yellow "Search" button. Below the search bar, there are sections for "TRENDING NOW" and "CLASSIC". The "TRENDING NOW" section includes headlines about Eddie Murphy, Jamie Lynn Spears, UFC 143, 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>



<http://shop.oreilly.com/product/0636920020776.d0#>

[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.

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?

Image Credits

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- <http://www.animoca.com/en/2012/05/all-the-myriad-androids/>

Thanks!

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