

# Designing for Mobile

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@ntschutta

Mobile - next big thing.

Why do we care?

Mobile first.

Mindsets, constraints,  
capabilities.

Look at some examples.

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 Wroblewski

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.

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

400 million iOS devices sold.

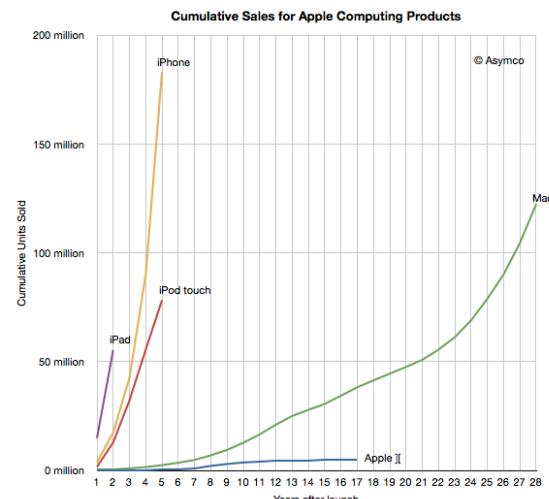
480 million Android  
activations.

To put that in  
perspective...

1 billion Windows PCs.

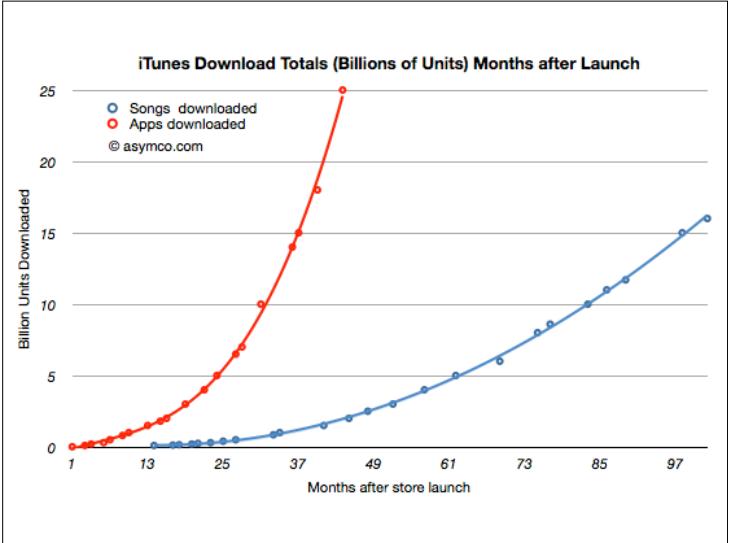
2.2 billion Internet users.

<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.smartononline.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](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...

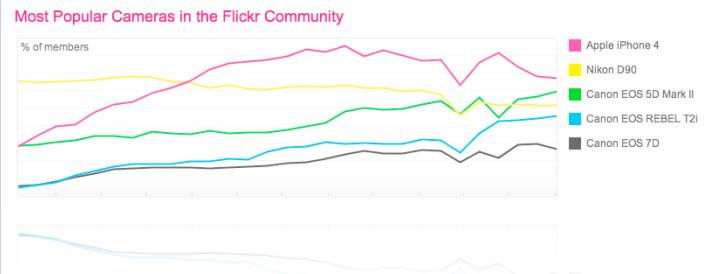
When will the tablet market be bigger than PCs?

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.



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



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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>



[Follow](#)

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.

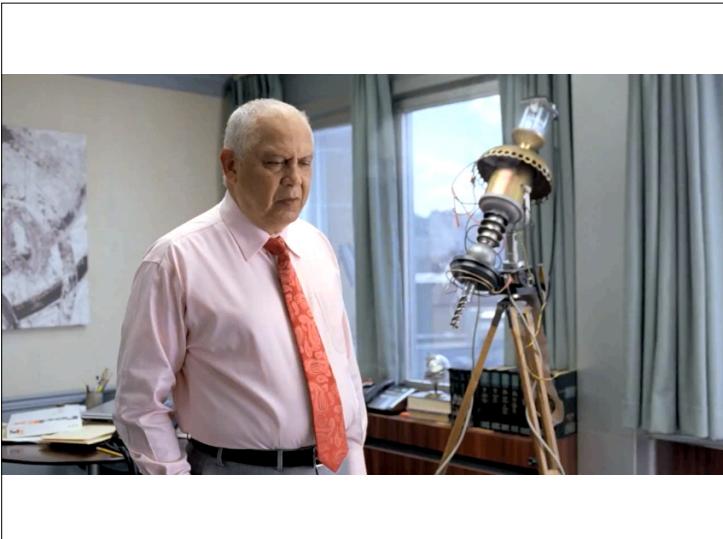
Waiting in line.

At work...

When do you use your  
mobile devices?

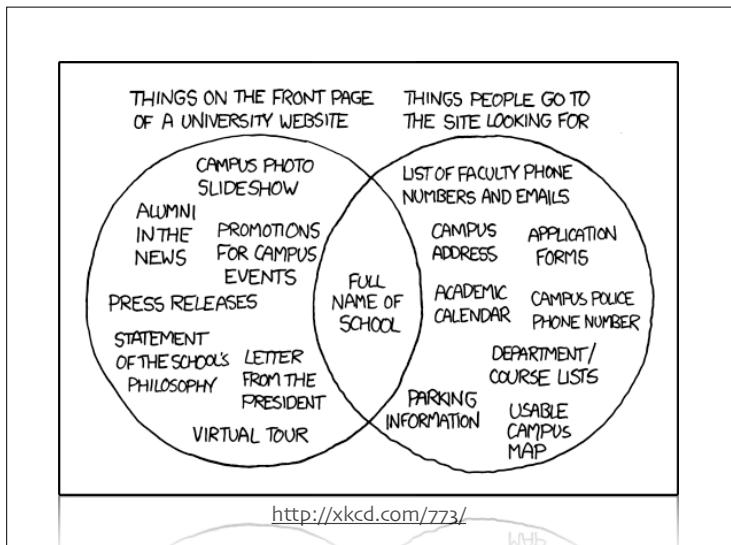
Turns out...all the time.

OK.



Shrink ray isn't  
going to cut it.

Need to rethink  
the experience.



Mobile first?

You bet!

Constraints.

Shall set you free...

Size.

Power.

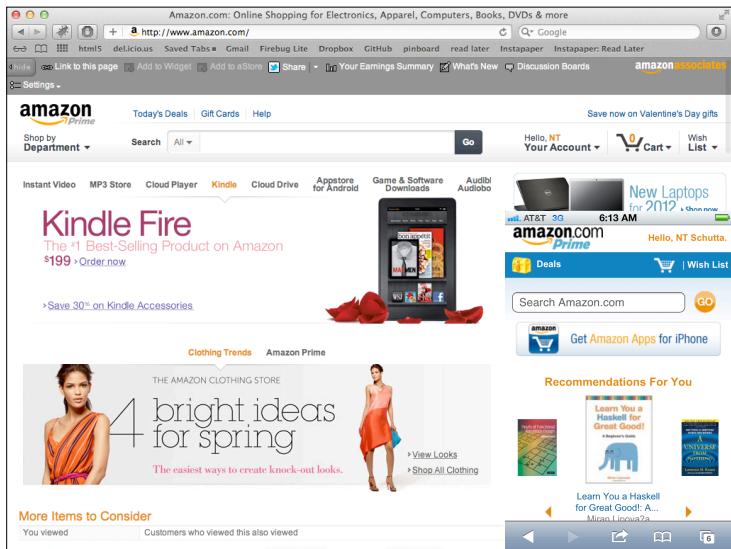
Connectivity.

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...

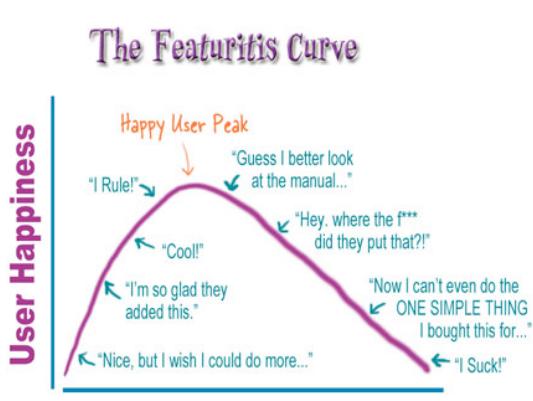
A screenshot of the Yahoo! homepage as it would appear on a desktop computer. The page features the classic purple Yahoo! logo at the top left. To the right is a search bar with a yellow "Search" button. The main content area includes a "TRENDING NOW" section with news items about Eddie Murphy, Lauren Gray, Jamie Lynn Spears, Pippa, Portia, and UFC 143. Below that is a "CLASSIC" section featuring a photo of Michael Jackson and a headline about Adrian Peterson changing his uniform number. At the bottom, there's a "POLL" section and a "Huge price for number switch" headline. The left sidebar contains a vertical list of links to various Yahoo! sites like Autos, Dating, Finance, Flickr, 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.

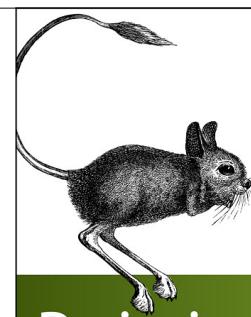
Like accessibility.

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/43803826242859008>



Designing for  
Mobile First

Luke Wroblewski

VIDEO

AUTHD

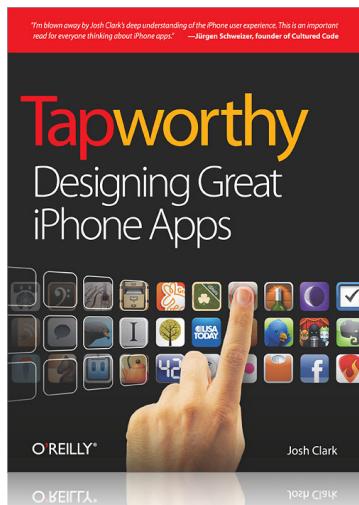
<http://shop.oreilly.com/product/0636920020776.do#>

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

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.

**LUKEW**  
IDEATION + DESIGN



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

Lookup/Find.

Explore/Play.

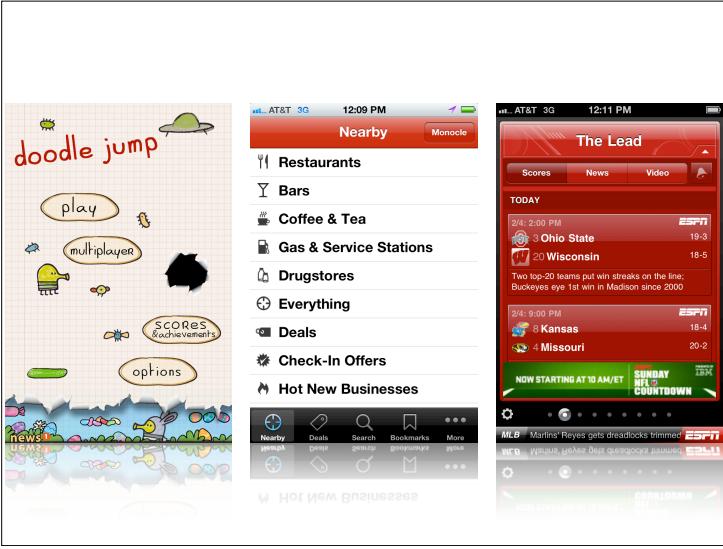
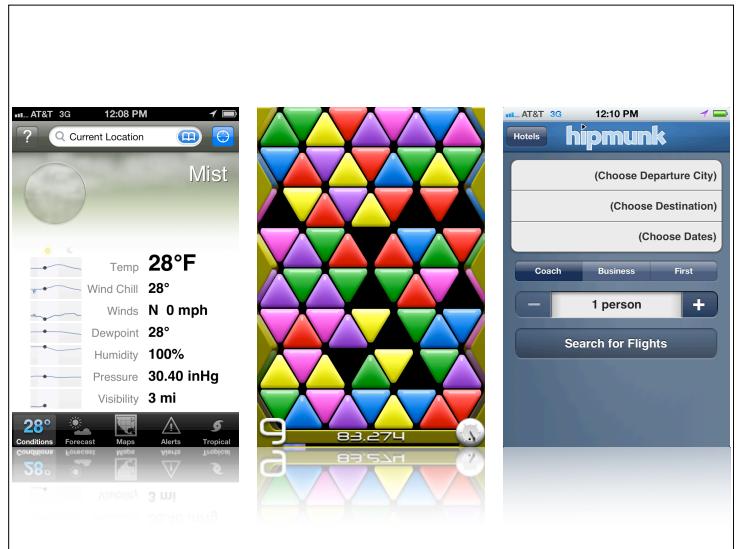
Check in/Status.

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.

A screenshot of the original Amazon search results page for "the girl with the dragon tattoo". The search bar at the top contains the query. Below it, a grid of products is displayed, including a Kindle book cover for "The Girl with the Dragon Tattoo" by Stieg Larsson, a DVD cover for "The Girl with the Dragon Tattoo", and a book cover for "The Girl Who Played with Fire". The page also features promotional banners for Valentine's Day gifts, Parker pens, and denim shopping.

A screenshot of the redesigned Amazon search results page for "the girl with the dragon tattoo". The layout is more organized, with a sidebar on the left listing categories like Department, Books, and Kindle. The main content area shows a list of search results, starting with the same three items as the original page: the Kindle book, the DVD, and the book from "Front Matter". The sidebar also includes links to "Listmania" and "Books".

The Girl with the Dragon Tattoo (Movie Tie-in Edition) (Vintage Crime/Black Lizard) (Mass Market Paperback)

**Stieg Larsson** (Author)

★★★★★ (3,163 customer reviews) | [Like \(101\)](#)

Price: **\$9.99** [Prime](#)  
Special Offers Available

**In Stock.**  
Ships from and sold by [Amazon.com](#). Gift-wrap available.

Want it delivered Wednesday, February 17 Order it in the next 23 hours and 4 minutes, and choose One-Day Shipping at checkout. [Details](#)

**50 new** from \$5.14 **31 used** from \$4.83 **1 collectible** from \$150.00

Formats	Amazon Price	New from	Used from
Kindle Edition	—	\$9.99	—
Handover, Deckle Edge	\$17.79 <a href="#">Prime</a>	\$16.00	\$11.11
Perfect Paperback, Print	\$9.57 <a href="#">Prime</a>	\$6.00	\$0.20
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# 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 homepage with a banner for the Kindle Fire. It features a search bar, a deal for a LG Compressor LuV400T Total Care Upright Vacuum, and a recommendation for TurboTax 2011. The sidebar includes sections for Clothing Trends and Best Sellers.

# Little different!

This screenshot shows the product page for 'Learn You a Haskell for Great Good!'. It includes the book cover, a 'Product Description' section, and a 'Product Details' section. The book is listed as having a list price of \$44.95 and a prime price of \$25.57.

This screenshot shows the same product page but with different pricing information. It lists a prime price of \$25.57 and a used price of \$22.57. The book is marked as 'In Stock'.

How'd they do?

Constraints.

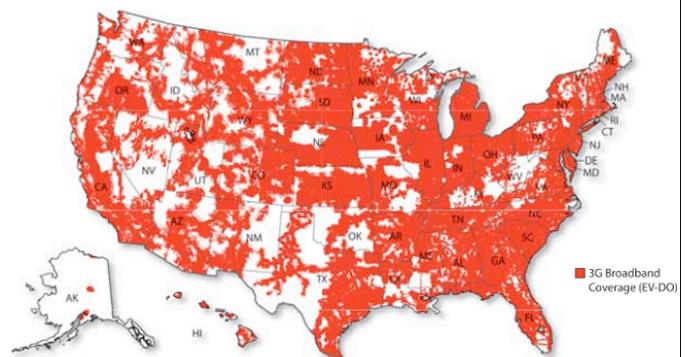
Pixels are precious.

What is required?

What can you eliminate?

Cut more.

3G, LTE...



We don't have perfect  
cell coverage!

5 to 2 to searching to 5.

It isn't a cat5 cable.

Or a wifi connection.

What do we do about that?

Sprites, minify, HTML5.

Canvas over images.

Do you need a huge library?

Lazy load.

Application cache.

Again, makes for a better desktop experience.

Bonus.

Milliseconds matter.

Amazon: 100ms delay  
reduces sales by 1%.

500ms extra on Google?

Drops traffic by 20%.

[http://www.slideshare.net/stubbornella/  
designing-fast-websites-presentation](http://www.slideshare.net/stubbornella/designing-fast-websites-presentation)

Users are distracted.

Not their focus.

(Is your desktop app the focus of attention?)

Even if it is, consider the environment.

Hopefully not while driving...

Usage tends to be choppy.

Sprints, not marathons.

One handed use.

Fingers != mouse pointer.

The one thumb test.

Which thumb?

Left or right hand?

About 1/3 of the screen is  
easy to get to.



# Activity zones.

<http://www.kickerstudio.com/blog/2011/01/activity-zones-for-touchscreen-tablets-and-phones/>

# Where are the toolbars?



# Where are they on most apps?

# Hint: not the bottom.

# People are often oscar mike.

Targets must be obvious.

Clark calls this the “blurry vision” of your app.

Gestures are often ignored.

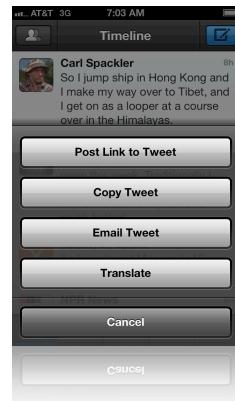
Not easily discoverable.

Many interface elements are hidden.



How do you email a tweet?

Press and hold of course!



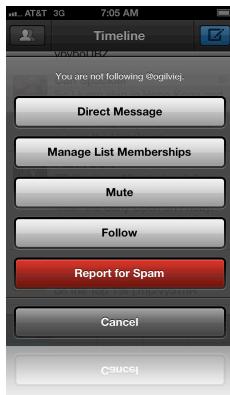
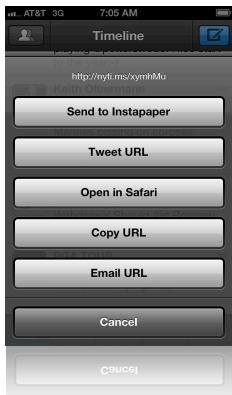
Would you have tried that?



Not all that's hidden...



Press and hold does  
different things...



Good? Bad?

Capabilities.

Mobile isn't just what  
you can't do...

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.

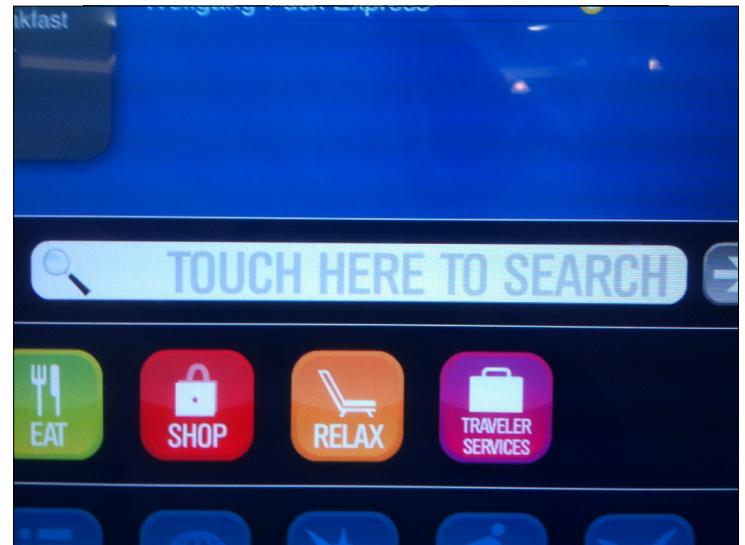
Android activations...

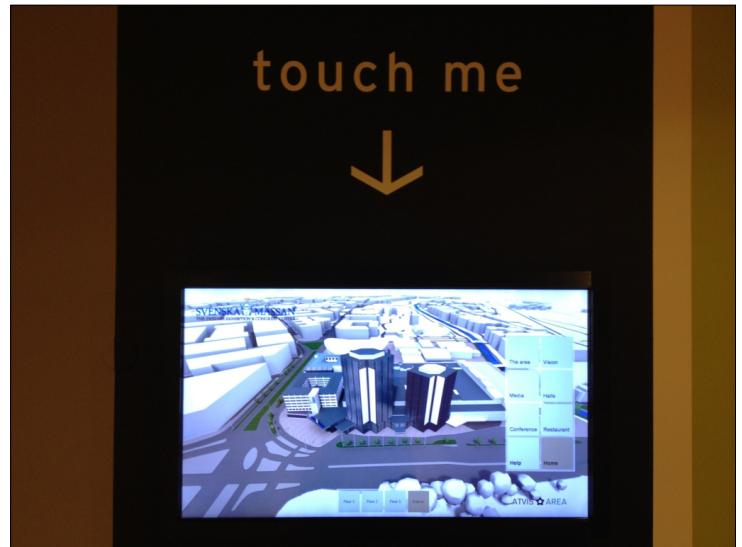
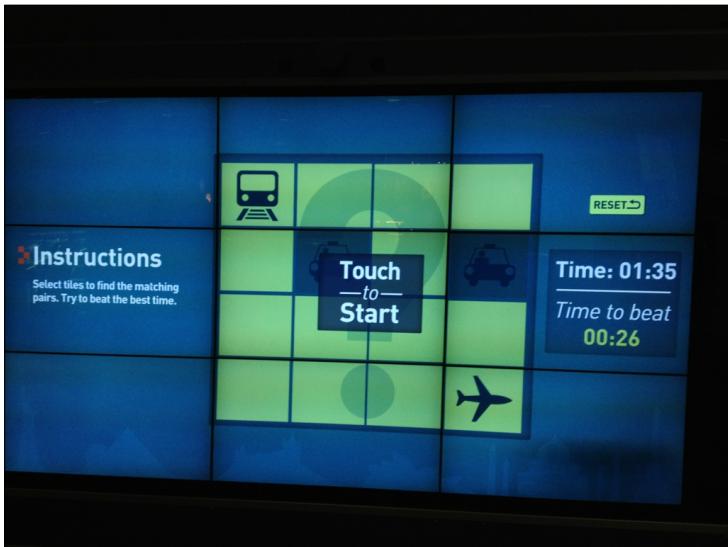
Windows Phone 7.

Nokia and RIM are shifting...

Think of our kids...

Isn't just mobile...





When will touch  
be assumed?

Audio.

Camera - video, pictures.

Connections - Bluetooth.

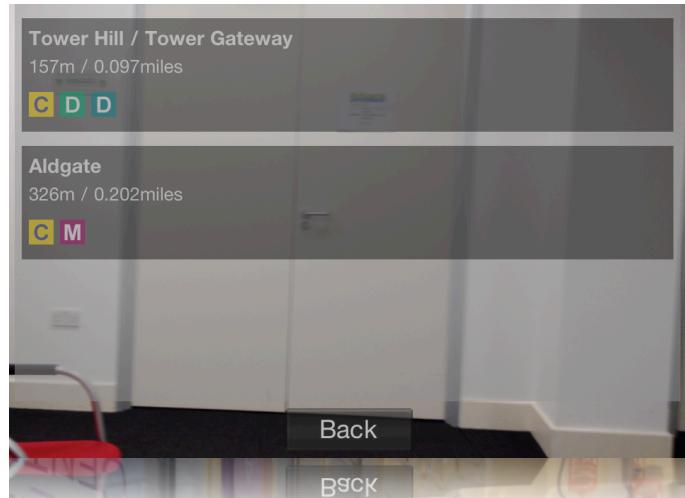
Proximity.

Email, contacts, apps.

Just because you  
\*can\* do something...

Augmented reality!

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



Try doing that with  
your laptop.

Some of these capabilities  
aren't exposed in browser.

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Inspirational, educational.

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- Funny
- Informative

to:

- All
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- Entertainment
- Design
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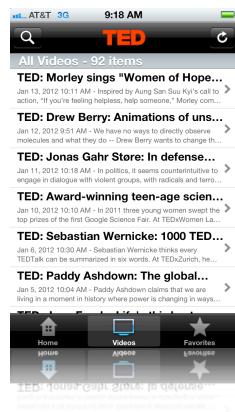
Search

What mindsets bring you to the TED app?

What changes would you make?

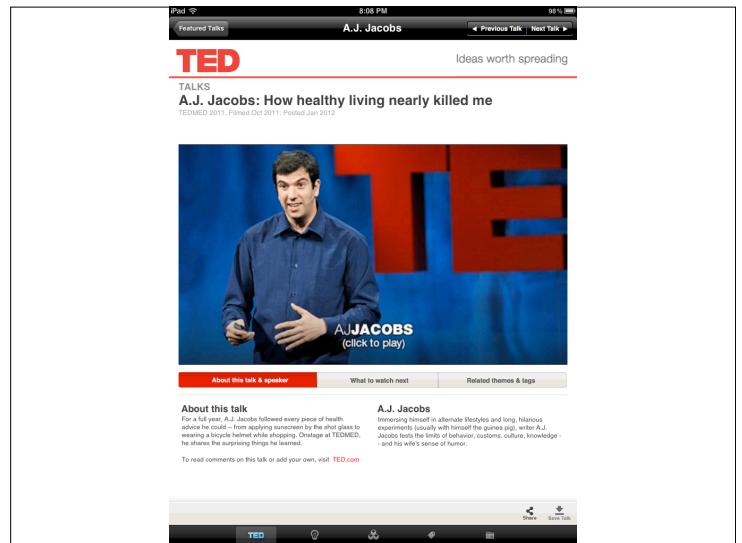
What capabilities would you leverage?

Let's see what they did!



That's simpler!

What about the iPad?



What do you think?

Design considerations.

Space is at a premium.

Resist the urge to  
use every pixel.

Fingers != mouse pointer.

They aren't precise.

And people are distracted.

Inadvertent presses.

Half of ad clicks - mistakes.

Think BIG targets.

44 x 44.

In theory, can go to 44 x 30.

And leave space...

Design for one handed use.

Discoverability.

Gestures aren't  
discoverable.

Think of them as shortcuts.

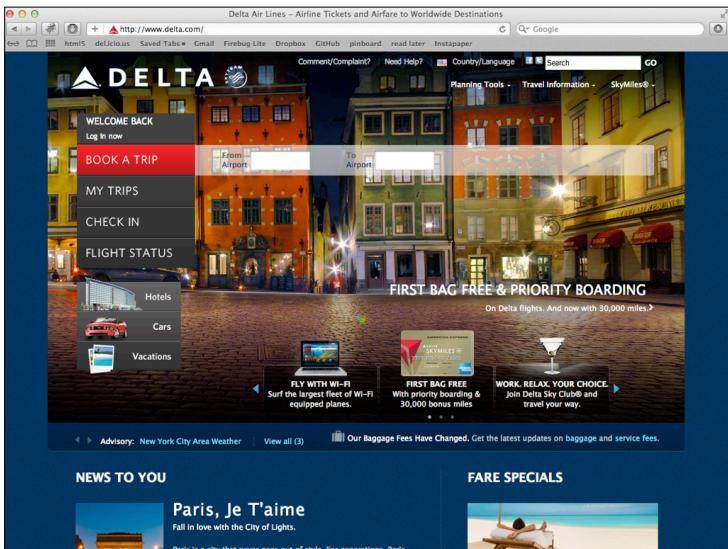
Capabilities!

Delta.

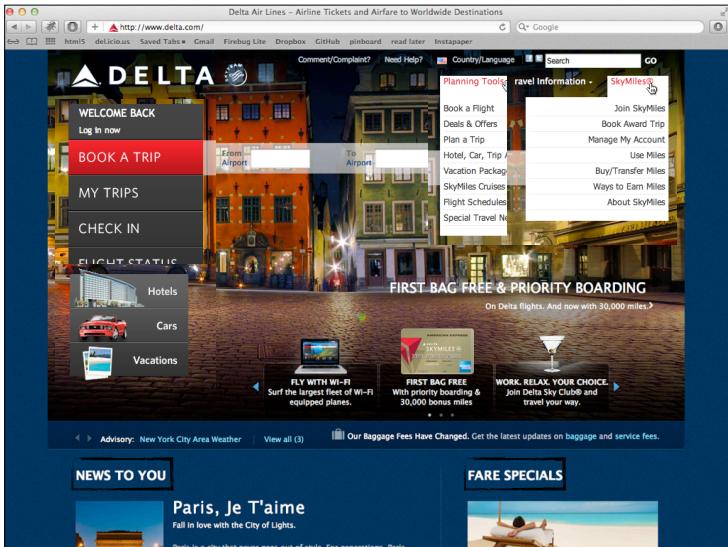
I travel a fair amount.

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?

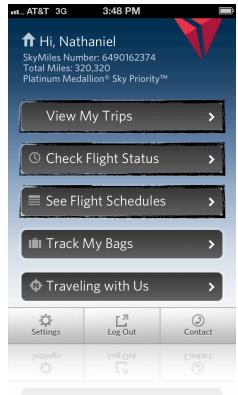
What are the top 3 tasks in  
a mobile context?

What capabilities could  
they leverage?

Let's see what Delta did.



What is the most important thing?



What do you think?

Mobile web? Native app?

It depends.

Seriously!

Apps - better usability?

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

Shift afoot...

Mobile web sites...easier?

Trade offs.

Certain features aren't  
surfaced in the browser.

Yet.

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?

Discoverability is a  
challenge in both arenas.

Market may \*expect\* you  
to have an app.

Nothing says you  
can't have both...

Brave new world!

Exciting times.

Options - and decisions.

Cannot ignore mobility.

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# Thanks!

Nathaniel T. Schutta  
@ntschutta