

Atomic Object
Grand Rapids, Michigan, USA

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[@atomicobject](https://twitter.com/atomicobject)

Wednesday, November 24, 2010

I'm Carl Erickson, co-founder and President of Atomic Object

I thought it might be good to give you a little context about my company before I start talking...



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We're a 30 person software product development firm located in Grand Rapids

We're in our tenth year of operation...



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We all work from our building on Wealthy Street just outside downtown...



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we practice in web, mobile and embedded

and we build products for clients from the Fortune 500 to startups across many industries

today I'm talking about a complicated subject...

Crafting Your Mobile Strategy



Carl Erickson, PhD
Atomic Object

Wednesday, November 24, 2010

Mobile is a very complicated space right now

A recent Forrester study found only 1/3 of companies had a mobile strategy

And only 2% of the firms surveyed expected to generate revenue or new customers from their mobile applications

Things are changing very rapidly on the technology front, people and companies are still trying to figure out what it all means

That's the bad news. The good news is...

The Opportunity



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Mobile represents a fundamentally new computing platform

What differentiates mobile isn't just the size of the screen

It's ubiquity – we always have our devices close by, day and night

And intimacy – we wear them, we hold them in our hands, we sleep with them

Her mobile phone is more important to my teenage daughter than a car

We already know quite a bit about the mobile space...

The Opportunity

Ubiquity
+
Intimacy



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What We Know

- ~ Ubiquity + Functionality = Convenience
- ~ Social apps are huge
- ~ App market has a very long tail
- ~ Quality matters



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Ubiquity and functionality add up to convenience

- second highest used reading platform after Kindle was iPhone (before iPad)
- iPhone usage peaks on evenings and weekends (good browser)
- social apps are huge
 - FB and 50% of all iPhone app usage?

Yelp – (reviews, yellow pages) sees 27% of searches from iPhones, yet only iPhones account for only 4% of visitors overall

There are a lot of apps (300k Apple, 100k Android)

- visibility is a huge issue
- a lot of these apps are lousy
- a lot are free or very inexpensive

No surprise: people view apps as disposable

-one month after download, the vast majority of apps are only used by 5% of the people who downloaded them

A Harris Interactive study showed that quality of apps have an influence on people's view of brands

- bad apps hurt a company's brand
- users expect name-brand companies to have apps, and
- expect them to be easier to use than their website

Mobile is obviously a global market...

Smartphone Global Market

- ~ Growing very rapidly
- ~ Asia driving smartphone adoption
- ~ Still relatively small



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Smartphones are the hot item globally, with growth rates in excess of 30% over the last couple of years

Asia and parts of the developing world are driving a lot of this global growth

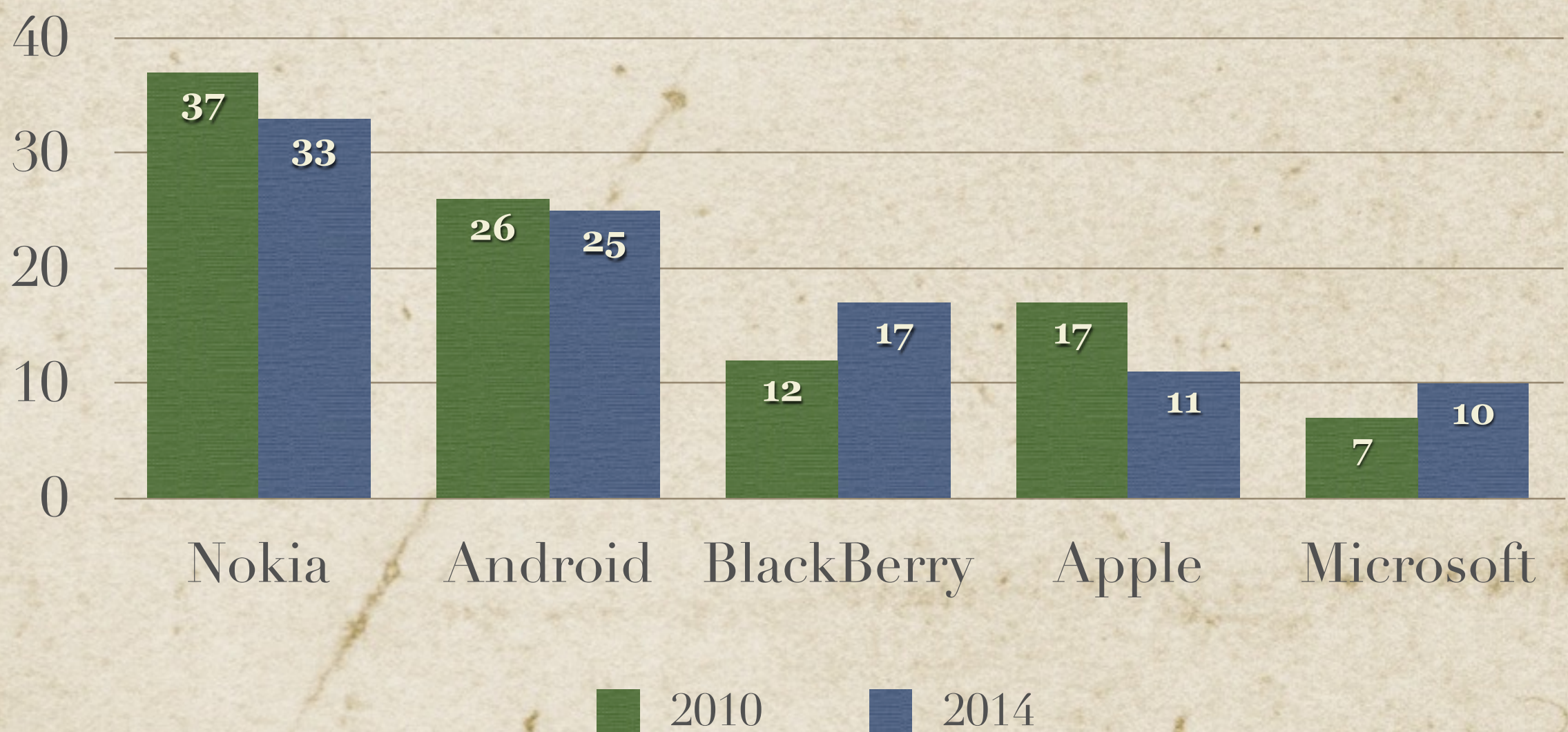
- less likely than US consumers to have Internet access
- more used to SMS and reading on phones

While smartphone market adoption is growing rapidly, it's still a relatively small 20% of sales globally

Here's how market share among smartphone companies breaks down...

Global Market Share

by Platform



IDC study, September 2010

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The global and US markets are very different

Globally, Nokia and their Symbian operating system are the leaders

Both Android and Apple are taking market share from Nokia

- will Nokia adopt Android?

- can their app store compete with Apple and Google?

IDC's view of Microsoft's market share reflect optimism on their new Phone 7 platform

BlackBerry is a relatively small player globally

But notice that BlackBerry is projected by IDC to grow in the next 4 years

My view is much more contrarian with respect to BlackBerry

- I see consumer successful platforms (Android, iOS) entering the enterprise

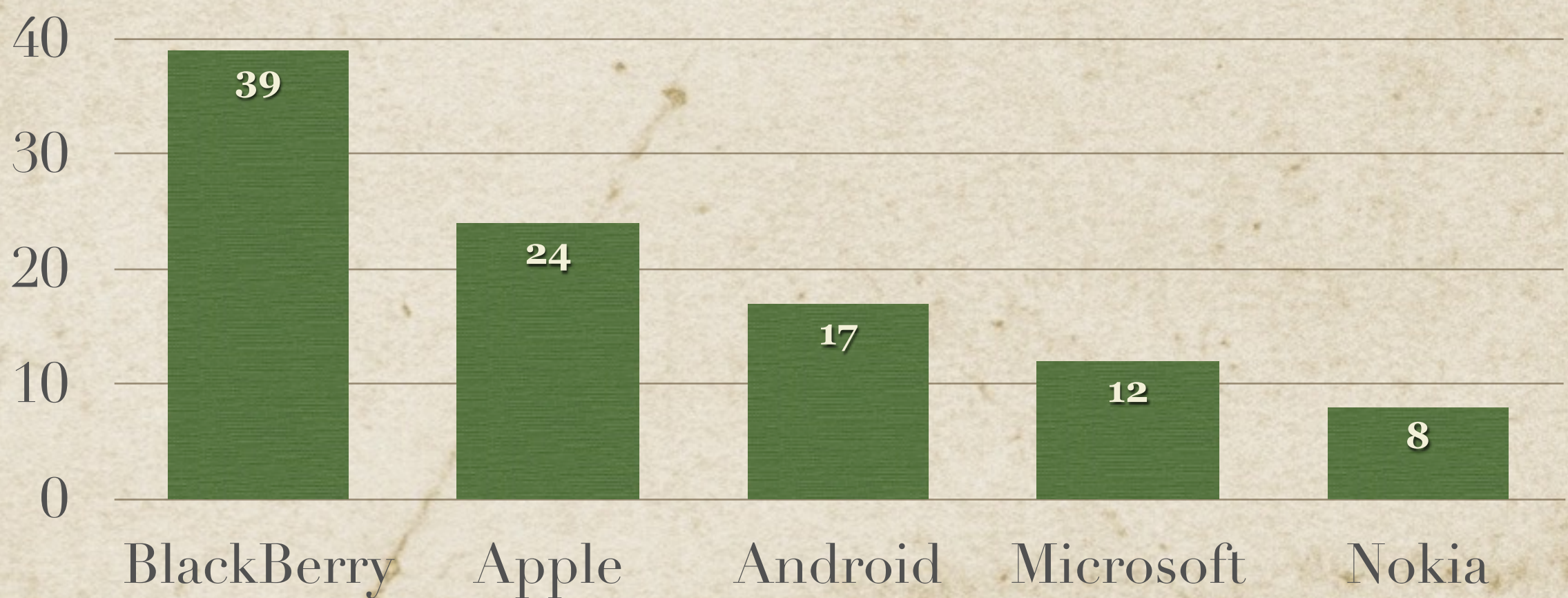
- I see consumer oriented devices changing expectations there

- I don't see RIM responding successfully to that challenge

The US market looks quite different...

US Market Share

by Platform



ComScore May-July market share

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Nokia is a very small player in the US in smartphones

BlackBerry is losing ground rapidly to Apple and Android

Microsoft's share reflects old technologies that are being replaced

We advise our customers to ignore BlackBerry for a very important reason...

Which Platforms Matter?

- ~ Units != Usage
- ~ Development time (cost) not equal
- ~ Today: iOS and Android
- ~ Next year, maybe: Microsoft
- ~ What about BlackBerry?



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Market share reflects the number of units being sold

But for applications, what matters more is how those units are used
Google sees 50x the number of searches from iPhone as any other mobile device

BlackBerry users are not app-oriented, unlike Android and iOS

BlackBerry does not have a compelling app store experience
and they have less than 10% as many apps as Android and iOS

Development tools and environment are very old and inefficient
–we estimate BB apps to cost twice as much and look 1/2 as good
–the approval process takes a long time and is unpredictable

Deciding on the platforms you need to cover is a big piece of the puzzle. The architecture of your applications is another...

Mobile Architecture

~ SMS

~ WAP

~ Basic browser HTML

~ Modern browser HTML + CSS + JS

~ Applications



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These are 5 generations of mobile app architecture

Calling SMS an “app” might be a bit of a stretch, but for a large portion of the world’s mobile phone users, it’s still a reality

WAP was much more successful in Europe than the US, and eventually merged into the web

The first web browser’s on mobile were frustrating. Anyone remember Blazer?

One of the early reason’s Apple succeeded with iPhone, well before the App Store existed, was that they gave us a modern browser that supported modern web app standards

The most recent choice in mobile is native applications.

The factors that drive the choice of native apps are...

Driving Applications

~ User experience

~ Performance

~ Off-line
operation

~ Findability

~ Device features

~ Monetization



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UX – Performance – Offline – Findability – Hardware – Revenue

If a native app makes the most sense, then you have a few alternatives that impact development cost, user experience, and platform coverage...

App Architecture

- ~ Native for each platform
- ~ Cross platform framework
- ~ Hybrid web apps



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There are three ways to architect mobile applications

native

cross-platform

hybrid web

...

Native Apps

- ~ Various languages
- ~ Various libraries and APIs
- ~ Porting and maintenance effort
- ~ Your mileage *will* vary



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The best user experience will be native apps

But remember how many platforms share the market? That directly multiplies development and maintenance cost

- each mobile platform has it's own languages, libraries, interfaces

Porting experience

- slightly to dramatically different apps

- saving some time on porting, but best estimate is still 1x

Maintaining multiple code bases going forward continues to cost

An alternative to native apps is to use a cross-platform app framework...

Cross-platform Frameworks

- ~ One code base
- ~ Compromises
- ~ Examples



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Cross-platform

- one code base, multiple platforms
- some tradeoffs in functionality and look&feel

Examples: MoSync, EdgeLib, Qt for Mobile

Another approach to solve the cross-platform expense problem is a hybrid web app...

Hybrid Web Apps

HTML5 + CSS3 + JS

✓ persistent local storage

✓ geo location

✓ device orientation

✓ offline mode

✓ audio/video

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HTML5 and CSS3 significantly extend the capabilities of traditional web technology.

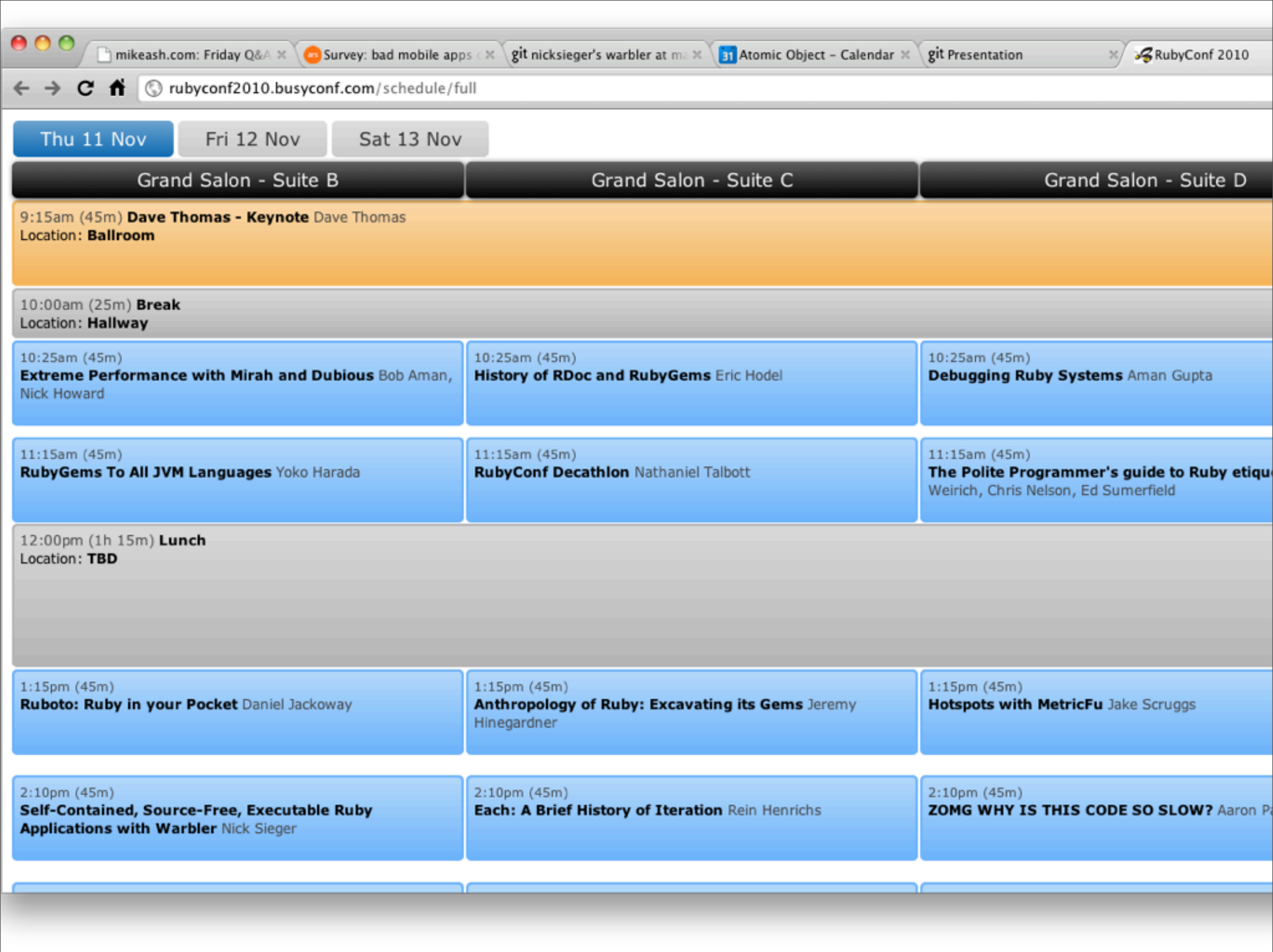
Both on mobile and desktop, apps built with HTML5 can be more like apps built with Flash or other rich internet application technology

These apps work on any mobile platform where the browser supports HTML5

You can even access hardware (camera, location sensor, GPS) from them

Some of the toolkits that support hybrid web apps are Rhodium, Titanium, and PhoneGap

I have a few screenshots of a simple app built this way...



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This is a desktop view of a simple app used for the program of a conference

Here's how it looks on an iPhone...



AT&T

8:57 AM

Days

Thursday

About

12:00pm

1:15pm

Grand Salon - Suite B

Ruboto: Ruby in your Pocket

Daniel Jackoway

Grand Salon - Suite C

Anthropology of Ruby: Excavating its Gems

Jeremy Hinegardner

Grand Salon - Suite D

Hotspots with MetricFu

Jake Scruggs

Grand Salon - Suite C

Anthropology of Ruby: Excavating its Gems

1:15pm - 2pm (45m)

Rubygems was created in 2003 and the repository of gems it spawned as a whole holds a history of ruby's usage and the people contributing to ruby.

This talk will present an investigation into the anthropology of Ruby through its gems. Who did what, when, and how often, along with the interrelations between projects, and the interesting visualization that can be produced from

Mobile's Place

- ~ Hype & Hip
- ~ Integration
- ~ Mobile only?



Questions?



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