

QCon London

@Nokia - Mobile Maps HTML5 Team
Andrea Giammarchi @WebReflection

the “what”

the whole story, in 8 words

the whole story, in 8 words



“one does not simply create an HTML5 Application”

Nokia Mobile HTML5 Team



if they made it, we'll try at least

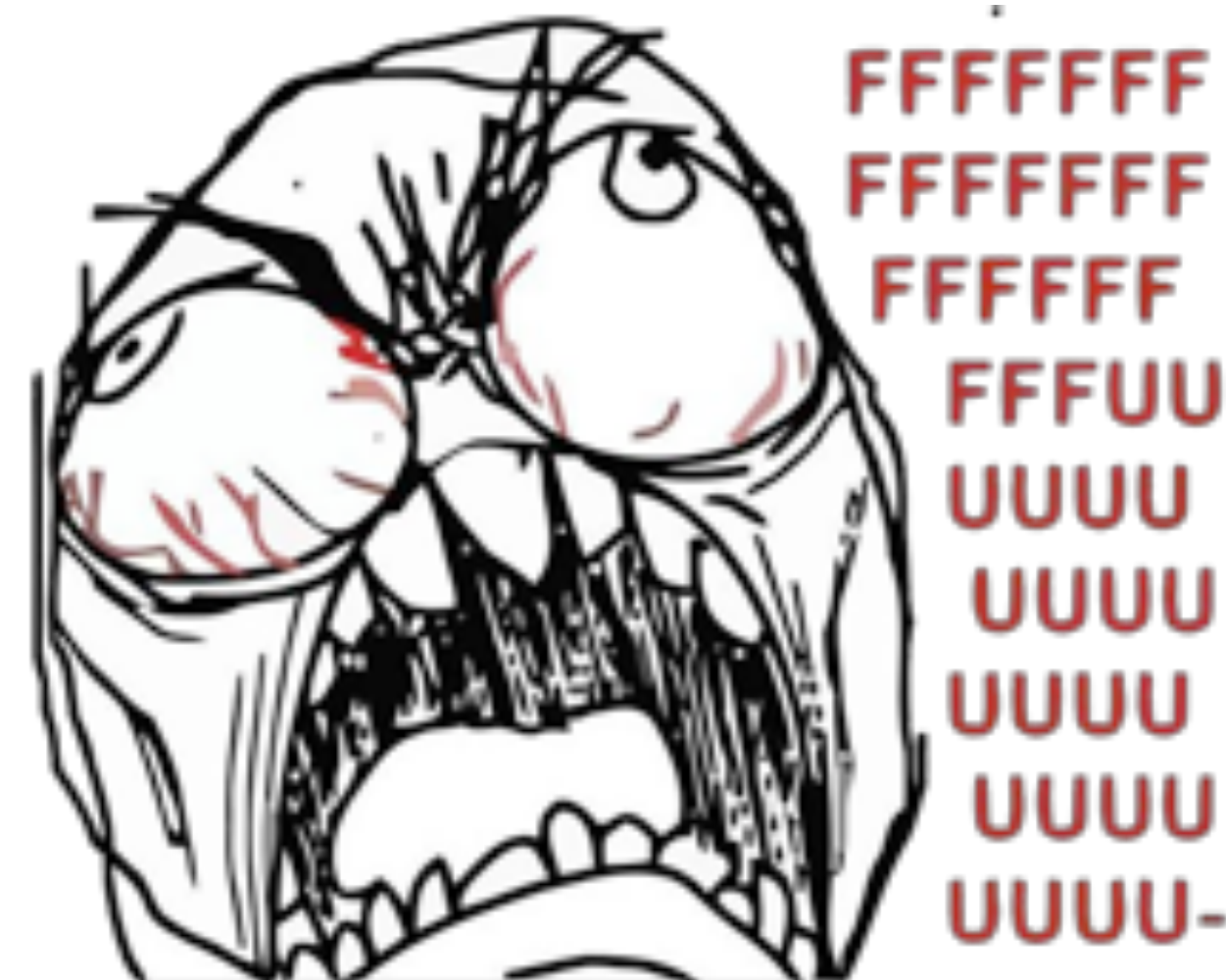
Challenges ... the “F” factor first!

Challenges ... the “F” factor first!

- **Fun**, as Nokia L&C services Mobile Web showcase, discovering the beauty of modern technologies

Challenges ... the “F” factor first!

- **Fun**, as Nokia L&C services Mobile Web showcase, discovering the beauty of modern technologies
- ... also ...



WebKit for Mobile



WebKit for Mobile

- the most fragmented browser out there
- the confirmation that *write once run everywhere* is still utopia
- still the most advanced mobile browser (as core)
- good average performances even in older devices

Performance



Performance

- the browser abstraction has a cost for low power CPUs
- real time render not possible (Typed Array almost nowhere)
- HW Acceleration quite there (while WebGL is not)
-

Performance

- the browser abstraction has a cost for low power CPUs
- real time render not possible (Typed Array almost nowhere)
- HW Acceleration quite there (while WebGL is not)
- ... we are still snappy, so you have margin to add more on top!

Cross Platform

- declarative UI like approach with transitions included
-
-
-

Cross Platform

- CSS3 transitions are hard to fix (i.e. broken `webkitTransitionEnd`)



Cross Platform

- declarative UI like approach with transitions included
- unified look and feel across different OS
-
-

Cross Platform

- declarative UI like approach with transitions included
- many edge cases fixed directly in core
-
-

Cross Platform

- declarative UI like approach with transitions included
- unified look and feel across different OS
- quick “tap” and viewport management
-

Cross Platform

- declarative UI like approach with transitions included
- unified look and feel across different OS
- no 300ms default delay, no resize trap
-

Cross Platform

- declarative UI like approach with transitions included
- unified look and feel across different OS
- quick “tap” and viewport management
- tablet and phone layouts

Cross Platform

- declarative UI like approach with transitions included
- unified look and feel across different OS
- quick “tap” and viewport management
- one app, different layouts if needed, same logic

Cross Platform - Where

- about 35 combinations of devices with different OS
- iOS 4.2+, Android 2.2+ up to 3.2 plus Kindle Fire
- BB Playbook
- Experimental: ICS, Blackberry, N9, webOS tablet, Qt WebKit 2
- Work in progress: Windows 8 and IE10

Cross Platform - Where Not

- Symbian and WP7 we have a great native experience
- Opera Mobile - investigating
- FireFox Mobile - investigating
- Internet Explorer 9 Mobile
 - good performances but poor CSS3 support plus no Touch

Cross Platform - Where Not

- Symbian and WP7 we have a great native experience
- Opera Mobile - investigating
- FireFox Mobile - investigating
- Internet Explorer 9 Mobile
 - good performances but poor CSS3 support plus no Touch



Phonegap



Phonegap

- augmented features as you go
- native platform integration
- enriched API and WebSQL with less limits
- plugins where necessary (i.e. SQLite or SMS for iOS)

Phonegap

- remember to remove this slide and **show some code, dude ...!**

Memory Limits

- on average, 50Mb of WebSQL limit to store offline content
- plus manifest, other 50Mb we do not want to fill up at all
- plus the localStorage, on average 5Mb before it fails

Our Solutions

- asynchronous queries for asynchronous base64 image/png tiles
- most important files on top of the manifest
- history, searches, and favorites as small chunks of data

Other Limits + Solutions

- audio API not consistent cross platform
-

Other Limits + Solutions

- audio API not consistent cross platform
- iOS user action hidden but still explicit through disclaimer

Other Limits + Solutions

- CSS3 transitions not consistent cross platform
-

Other Limits + Solutions

- CSS3 transitions not consistent cross platform
- ad hoc transitions handling with timers across all platforms

Other Limits + Solutions

- GeoLocation API not perfectly stable, i.e. watchPosition breaks
-

Other Limits + Solutions

- GeoLocation API not perfectly stable, i.e. watchPosition breaks
- centralized event driven geolocation object for smart operations

Other Limits + Solutions

- Cross-Origin Resource Sharing not consistent across platforms
-

Other Limits + Solutions

- Cross-Origin Resource Sharing not consistent across platforms
- RESTful Server Side Services through JSONP callbacks

why API

- to use Nokia Maps where you want, when you want
- to let developers focus on the product rather than cross platform problems we face on daily basis
- to make the creation of Webview based applications that easy and with Nokia maps included
-

why API

- to use Nokia Maps where you want, when you want
- to let developers focus on the product rather than cross platform problems we face on daily basis
- to make the creation of Webview based applications that easy and with Nokia maps included
- ... and now some example!

Thank You

@Nokia - Mobile Maps HTML5 Team
Andrea Giammarchi @WebReflection
<http://m.maps.nokia.com>

Please don't hesitate to contact
bernd.mrohs@nokia.com
to have early access to the closed beta

... and btw, we are hiring!

developer.jobs.berlin@nokia.com

entertainment.careers@nokia.com

Berlin - Bristol

Images Credits

- http://celebritywonder.ugo.com/wallpaper/Lord_of_the_Rings%3A_The_Fellowship_of_the_Ring_Wallpaper_15_1024.html
- <http://nothorn.deviantart.com/art/Arwen-s-Ride-160613650>
- <http://ragefac.es>
- <http://koti.24.fi/farian/lotr/linkit.htm>
- <http://lotr.wikia.com/wiki/Gandalf>
- <http://www.thedialecticalplaya.com/?p=23322>
- <https://twitter.com/WebReflection/status/171745051678998530>
- <http://www.youtube.com/watch?v=FzHown8JRXU>
- <http://www.whileiwasdrunk.org/tags/stairs>