

# Re-Introduction to Apache Cordova/PhoneGap

# Who is this guy?

IBM'er

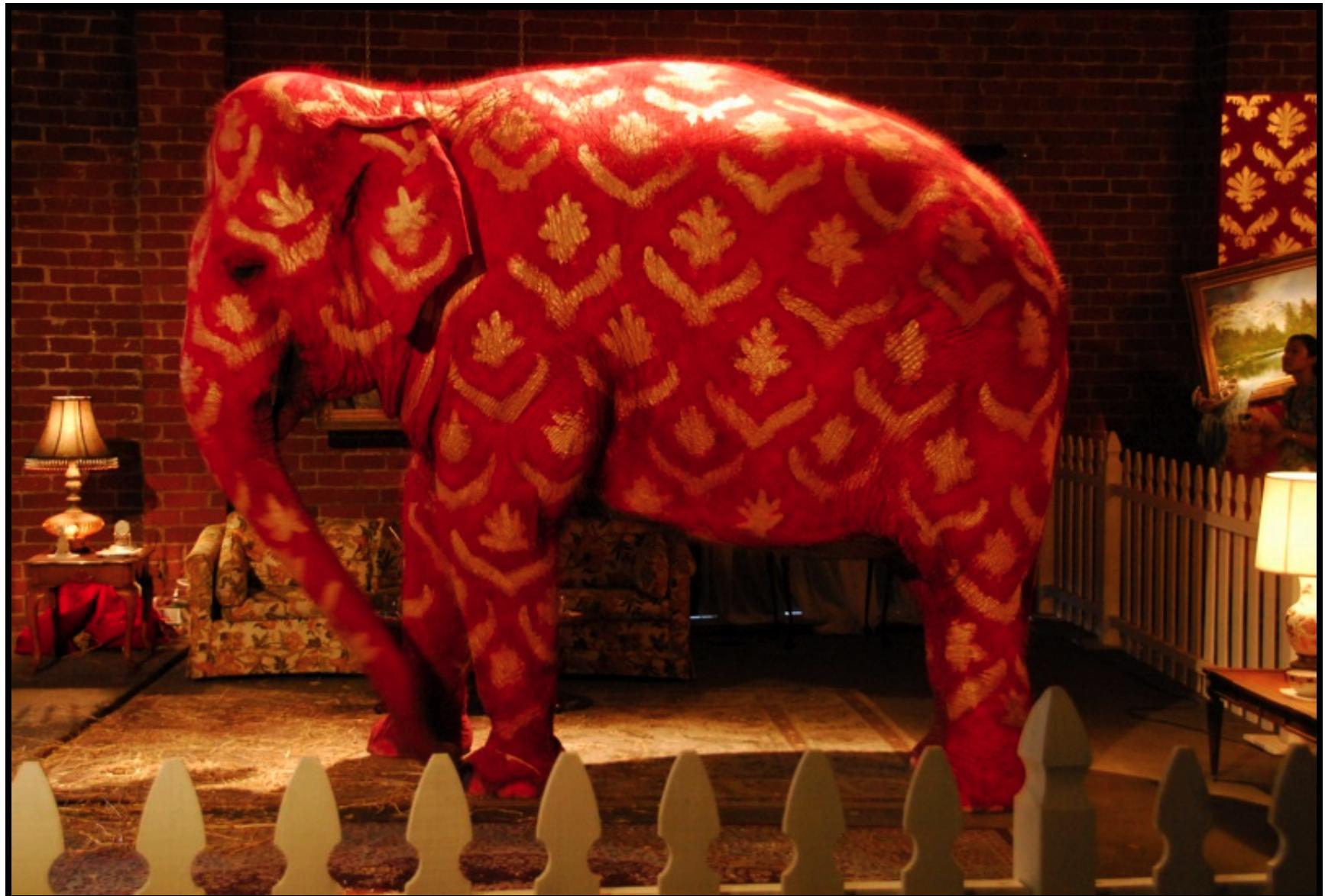
@macdonst

macdonst on Github

[simonmacdonald.com](http://simonmacdonald.com)

**PhoneGap/Apache Cordova** core contributor

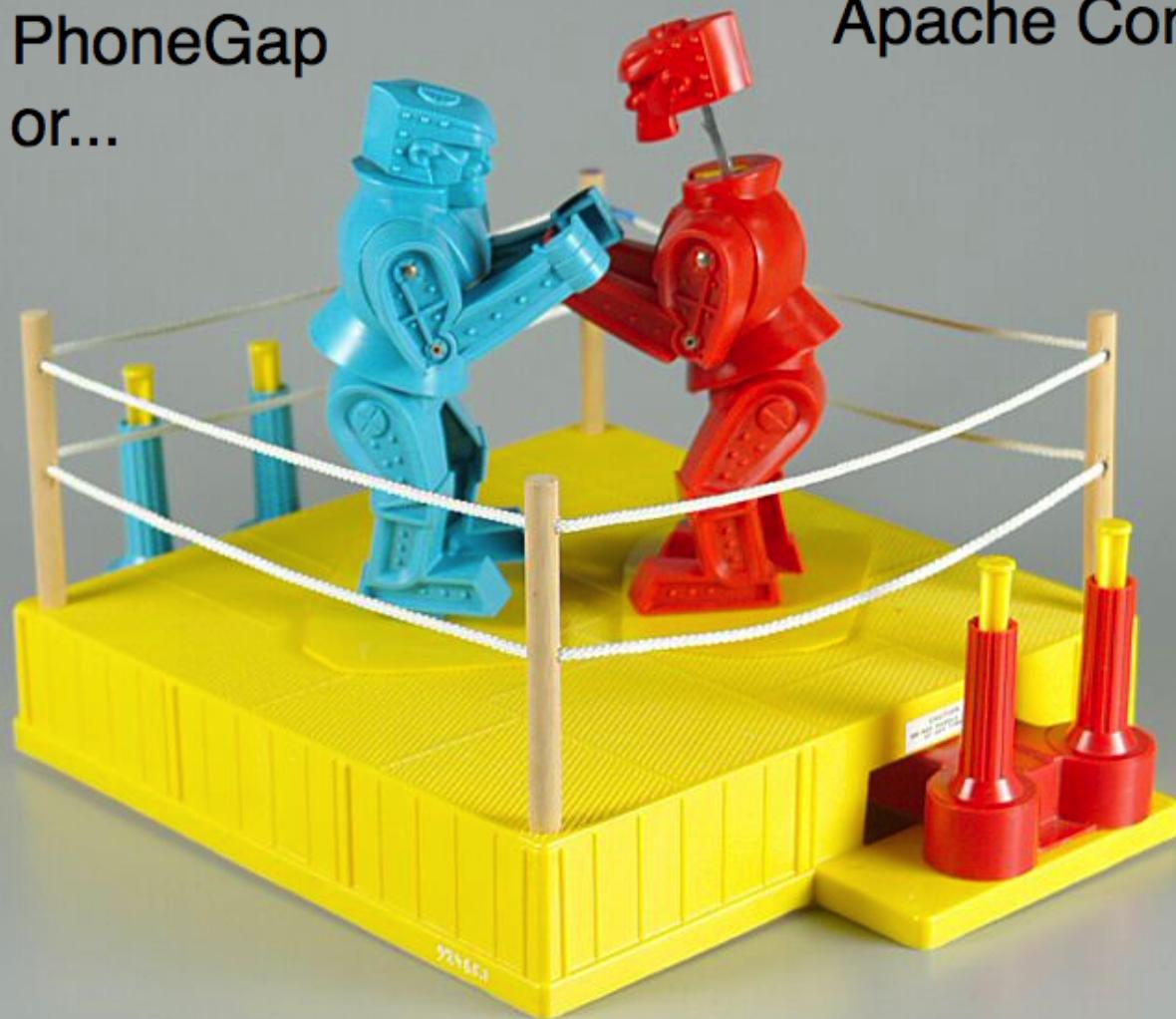
# Let's address the elephant in the room



Is it?

PhoneGap  
or...

Apache Cordova



# It's both

“ “You can think of Apache Cordova as the engine that powers PhoneGap, similar to how WebKit is the engine that powers Chrome or Safari....Over time, the PhoneGap distribution may contain additional tools that tie into other Adobe services, which would not be appropriate for an Apache project....PhoneGap will always remain free, open source software and will always be a free distribution of Apache Cordova.” ”

Brian Leroux, Adobe

Today there are two common types of apps on mobile devices:

1. Native
2. Web

# Native Mobile Apps

## Pros

Feature Rich  
Charge Money  
Offline mode

## Cons

Platform Specific  
Low level of skill reuse

# Web Apps

## Pros

Runs everywhere  
High level of skill reuse

## Cons

Lacks functionality  
No offline support  
Browser only

# Hybrid Mobile Apps

## Pros

- Feature Rich
- Charge Money
- Offline mode
- High level of skill reuse

## Cons

- Runs almost everywhere

# PHONEGAP



It's a framework for building mobile applications using web technologies



1. HTML For Layout
2. JavaScript to access device functionality
3. CSS for rich look and feel
4. Standards Based

The ultimate purpose of  
PhoneGap is to cease to  
exist.

# Supports



Mozilla contributors are on board including Piotr Zalewa  
the creator of jsFiddle

# PhoneGap Features

Accelerometer

Compass

Device

Geolocation

Media

Storage

Camera

Connection

Events

Globalization

Notification

Capture

Contacts

File

InAppBrowser

Splashscreen

# PhoneGap is not a UI Framework so use a JavaScript Toolkit



etc...  
or roll your own



# HOCKEY COMMUNITY

MAKING HOCKEY MORE ACCESSIBLE

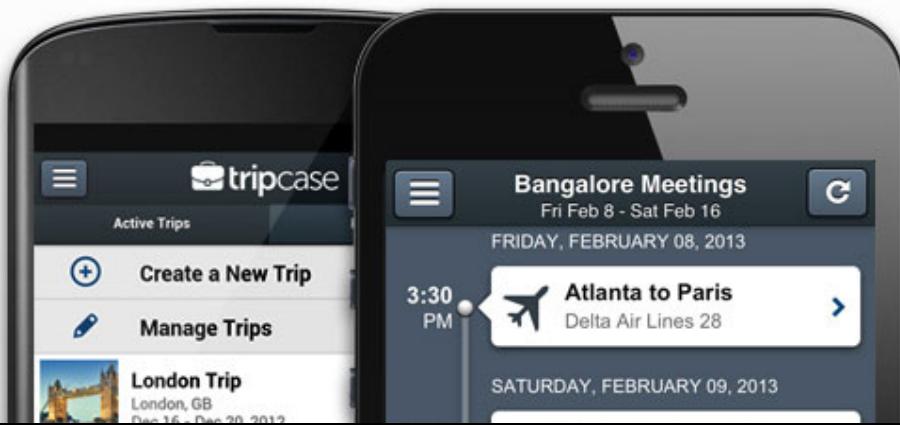








tripcase

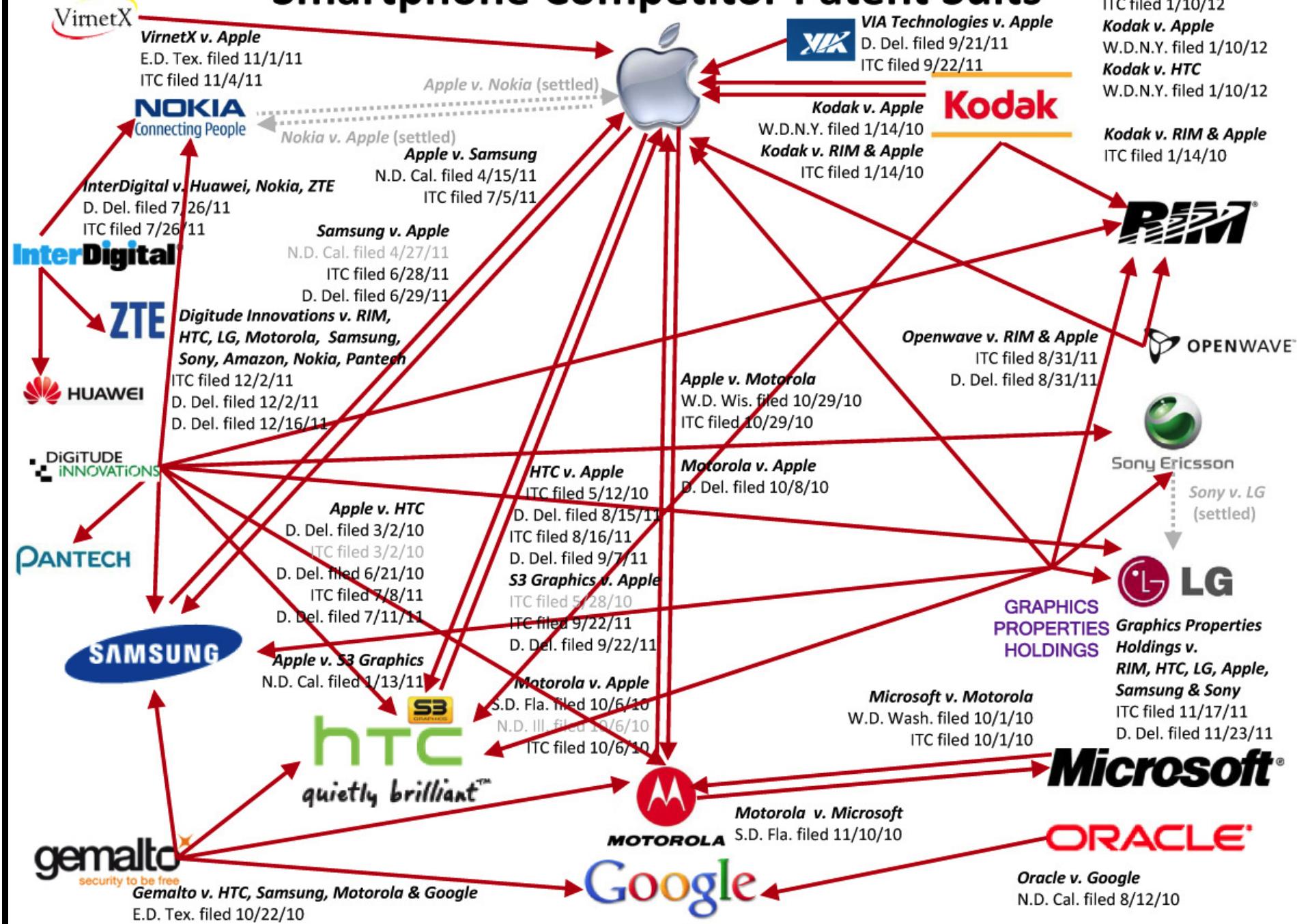


# PhoneGap Licensing

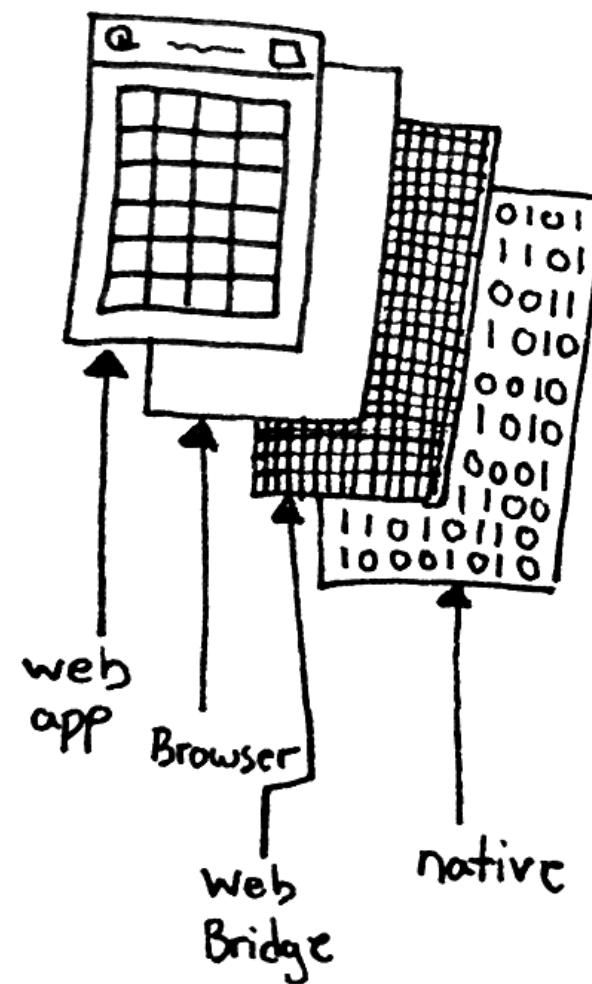
1. MIT Outbound
2. Apache 2 Inbound with CLA
3. This is important as it protects users. You will not get sued for using PhoneGap



# Smartphone Competitor Patent Suits



# PhoneGap Architecture

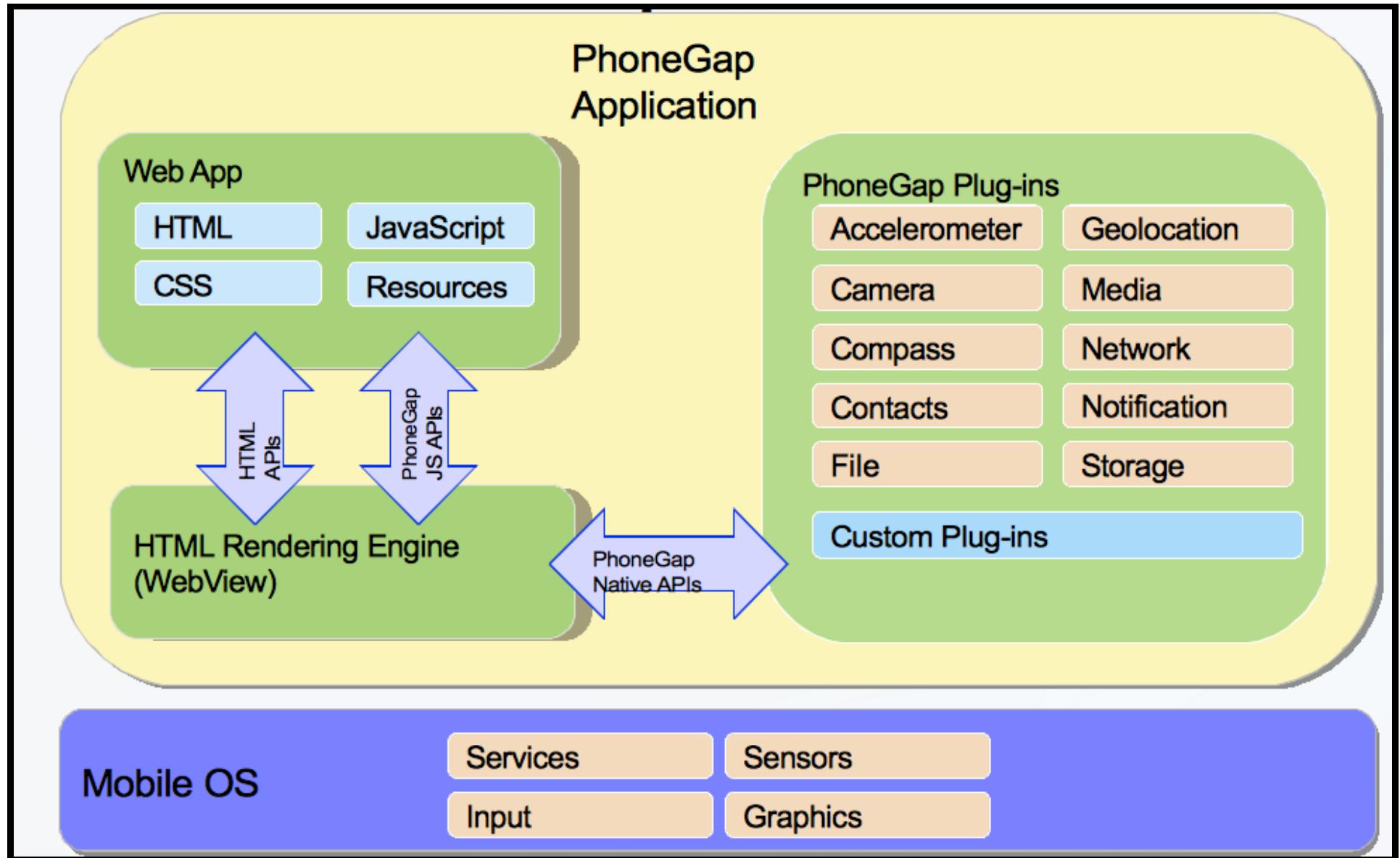


# Consists of 4 layers

1. **Web app:** Pure HTML, JS and CSS
2. **Browser:** Fullscreen or Chromeless web browser
3. **Bridge:** communication with native layer
4. **Native:** API implementation in the OS native language

# Application Architecture

- HTML/JS/CSS + graphic assets are on the device, packaged as part of the build process.
- There is no transcompiling of code. You write HTML/JS and PhoneGap runs HTML/JS.
- JavaScript can store retrieved data in a SQLite database, from localStorage (key/value pair) or the file system for offline access.
- Often a server component involved.
- JavaScript communicates with the server via XHR to retrieve data.
- Yes, you can load your app remotely with caveats.



# Let's build an app



# Create the app

```
./create ~/Documents/CordovaXY/HelloWorld  
org.apache.cordova.HelloWorld HelloWorld
```

A screenshot of a Mac OS X terminal window titled "bin — bash — 107x11". The window contains the command: "beckys-imac:bin becky\$ ./create ~/Documents/Cordova22/HelloWorld org.apache.cordova.HelloWorld HelloWorld". Three red arrows point from the text "project location", "package name", and "project name" to the corresponding parts of the command line.

project location

package name

project name

# Start with basic HTML

```
<html>
  <head>
    <title>Example</title>
  </head>
  <body>
  </body>
</html>
```

# Include the codova.js file

```
<html>
  <head>
    <title>Example</title>
    <script type="text/javascript" src="cordova.js"></script>
  </head>
  <body>
  </body>
</html>
```

# Create an onLoad handler

```
<html>
  <head>
    <title>Example</title>
    <script type="text/javascript" src="cordova.js"></script>
    <script>
      function onLoad( ) {
      }
    </script>
  </head>
  <body onload="onLoad( )">
  </body>
</html>
```

# Register for the deviceready event

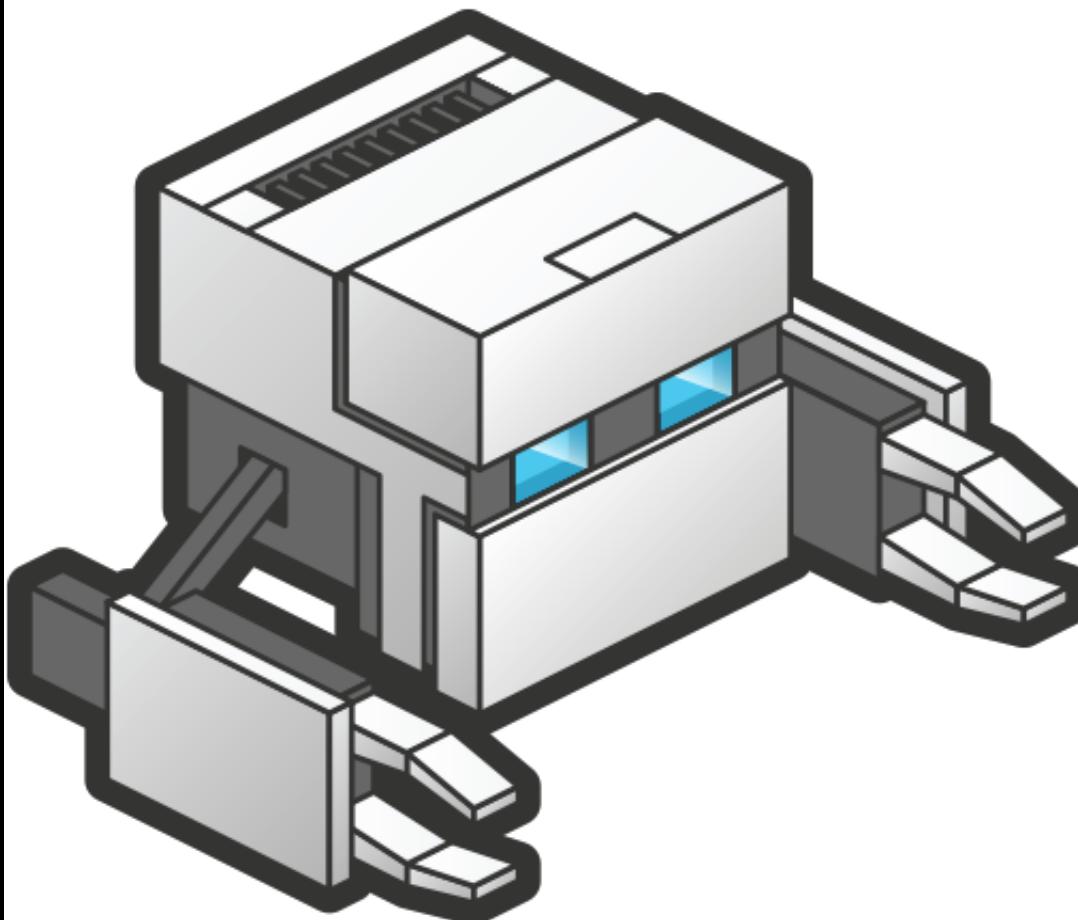
```
<html>
  <head>
    <title>Example</title>
    <script type="text/javascript" src="cordova.js"></script>
    <script>
      function onLoad() {
        document.addEventListener("deviceready",
          onDeviceReady, false);
      }
    </script>
  </head>
  <body onload="onLoad()">
  </body>
</html>
```

# When deviceready is fired, PhoneGap is ready

```
<html>
  <head>
    <title>Example</title>
    <script type="text/javascript" src="cordova.js"></script>
  >
  <script>
    function onLoad() {
      document.addEventListener("deviceready",
        onDeviceReady, false);
    }
    function onDeviceReady() {
      console.log("PhoneGap is ready");
      navigator.notification.vibrate();
    }
  </script>
</head>
<body onload="onLoad()">
</body>
```

# Building an App

- Compile, install and test for each platform
- If you don't want to install the tool chain for each OS then check out:  
<http://build.phonegap.com/>



# Live Demo!



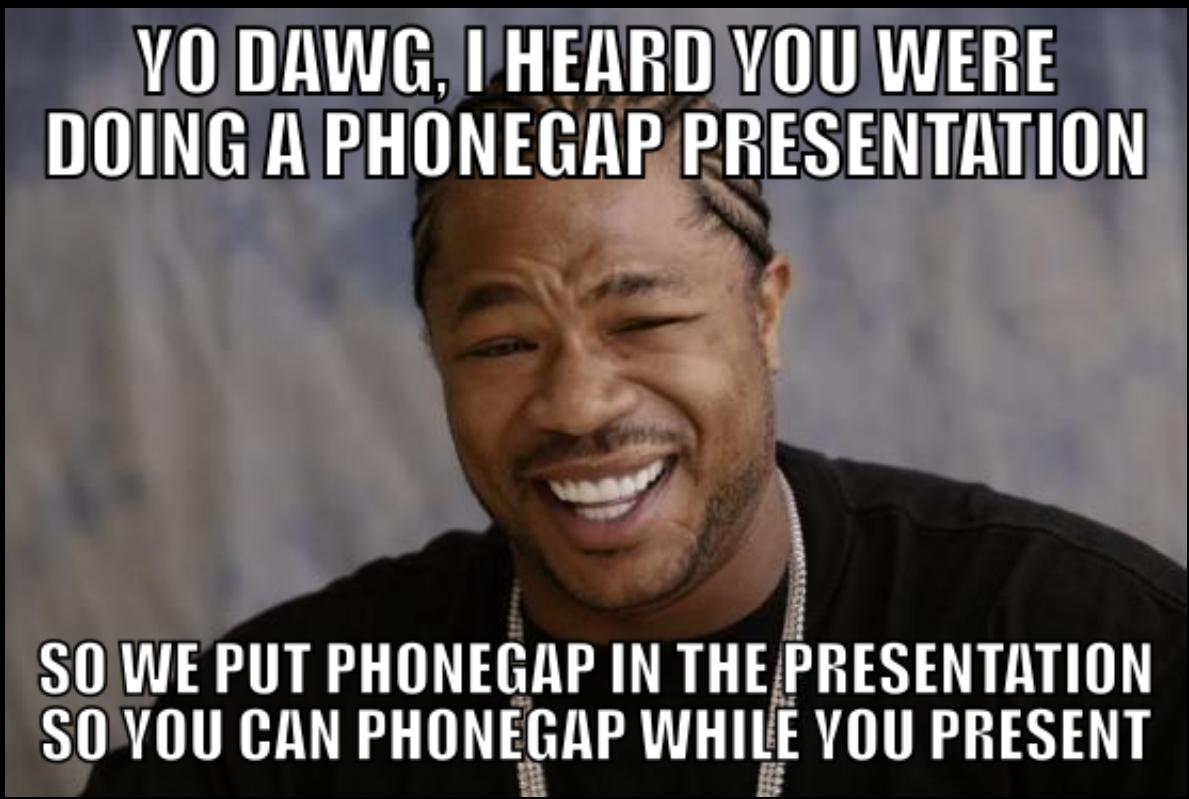
# Take a Picture

```
navigator.camera.getPicture(onSuccess, onFail, { quality: 50,
    sourceType: Camera.PictureSourceType.CAMERA,
    destinationType: Camera.DestinationType.FILE_URI });

function onSuccess(imageURI) {
    var image = document.getElementById('myImage');
    image.src = imageURI;
}

function onFail(message) {
    alert('Failed because: ' + message);
}
```





**YO DAWG, I HEARD YOU WERE  
DOING A PHONEGAP PRESENTATION**

**SO WE PUT PHONEGAP IN THE PRESENTATION  
SO YOU CAN PHONEGAP WHILE YOU PRESENT**

# Debugging

- Console.log is your friend!
- Try weinre!  
Pronounced “Wine Er Ee”,  
not “We Ner”!
- Stands for Web Inspector  
Remote
- [weinre Docs](#)
- <http://debug.phonegap.com/>

weinre: http://localhost:8081/demo/weinre-demo-min.html#pmuellr

http://localhost:8081/client/#pmuellr

weinre Elements Resources Network Timeline Console

http://opensource.org/licenses/alphabetical for full text.

```
* Copyright (c) 2010, 2011 IBM Corporation
-->
<html>
  <head>...</head>
  <body onload="onLoad()">
    <input id="button-start-stuff" type="button" value="start stuff">
    <h1>this is a green h1</h1>
    <h1 class="blue">this is a blue h1</h1>
    <h1 style="color:red">this is a red h1</h1>
    <p>...</p>
    <hr>
    <p>test exceptions in callbacks:</p>
    <div style="margin-left:1em">...</div>
    <hr>
    <p>...</p>
    <div id="output"></div>
  </body>
</html>
```

Computed Style   Show inherited

Styles

```
element.style { }
```

Matched CSS Rules

```
.blue {
  color: blue;
}

h1 {
  color: green;
  margin: 0.5em;
  margin-left: 1em;
  margin-left: 1em;
  padding: 0.4em;
  padding-left: 0.8em;
  padding-left: 0.8em;
}
```

Metrics   Properties   Event Listeners

html > body > h1.blue

```
> document.body.style.backgroundColor
  ""
> document.body.style.backgroundColor = "pink"
  "pink"
>
```

All | Errors Warnings Logs

Carrier 9:49 AM weinre demo localhost:8081/demo/... Google

start stuff

this is a green h1

this is a blue h1

this is a red h1

Some text, *some italic text*, and **some bold text**.

# Emulation

- Try Ripple
- Contributed by BlackBerry  
(formerly RIM)
- Installed as a  
Chrome Extension
- <http://emulate.phonegap.com/>

softpedia test

Devices Platforms Information

Platform: WebWorks  
Device: BlackBerry Torch 9860/9850  
OS: BlackBerry OS 7  
Manufacturer: Research In Motion  
Screen: 480x800  
Density: 253 PPI  
Browser(s): Webkit  
User Agent: Mozilla/5.0 (BlackBerry; U; BlackBerry 9860; en) AppleWebKit/534.1+ (KHTML, like Gecko) Version/7.0.0.0 Mobile Safari/534.1

Accelerometer Messaging

From: mac.softpedia.com  
Send SMS

Push Port: www.softpedia.com  
Push

beta Ringleader

BlackBerry

Settings Device & Network Settings Geo Location Events

Select the event that you want to fire:  
system.event.onCoverageChange  
Fire Event

Config

This section is a graphical representation of your configuration file. It is color coded to indicate success / failure. Expand each node to see the details.

The colors represent the following:

- Validation passed
- Validation failed
- Node is missing, but not required

Expected to find a configuration file for your widget, but none is present. Please create a configuration file with the following name in the root directory of your widget: undefined

Phone

Type: INITIATED  
Call Id: Clear Logs Fire Event

# What's Next?

The Future

NEXT EXIT



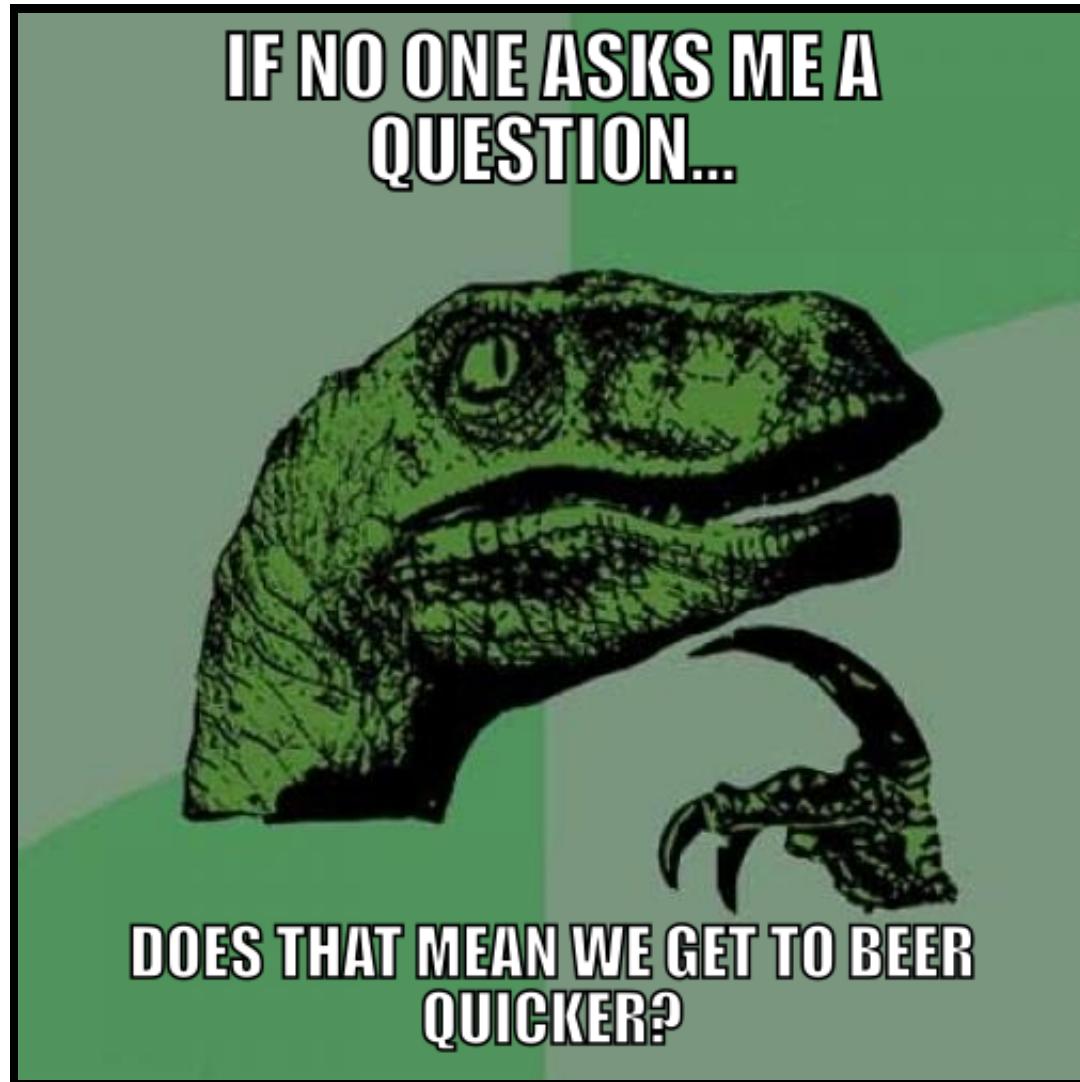
# PhoneGap 3.0

1. Targeted for Summer of 2013.
2. Everything will be a plugin. Only the exec bridge will be installed by default.
3. Improved command line tooling.
4. plugman for installing functionality (think npm or gems).
5. Core API audit to align with most recent W3C API's.

# Summary

1. Pick the right approach for your product be it web, native or hybrid
2. Leverage your web expertise
3. Be aware of the legal ramifications of mobile development
4. Provide an off line mode
5. Learn JavaScript!

# Questions?



**IF NO ONE ASKS ME A  
QUESTION...**

**DOES THAT MEAN WE GET TO BEER  
QUICKER?**

# Thanks!



# Resources

- PhoneGap
- Apache Cordova
- Download
- PhoneGap Google Group
- Getting Started
- API docs
- Wiki
- Code