

DESARROLLO MULTIPLATAFORMA DE APPS CON GWT Y PHONEGAP

Betabeers Córdoba
27/9/2012



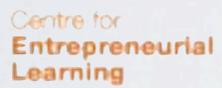
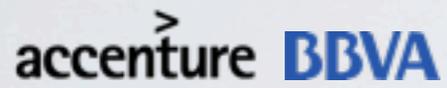
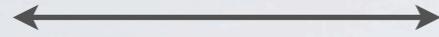
PhoneGap



GWT

MITIMELINE

1996 2001 2002 2005 2006 2007 2010 2012



EL MOMENTO QUE LO CAMBIÓ TODO

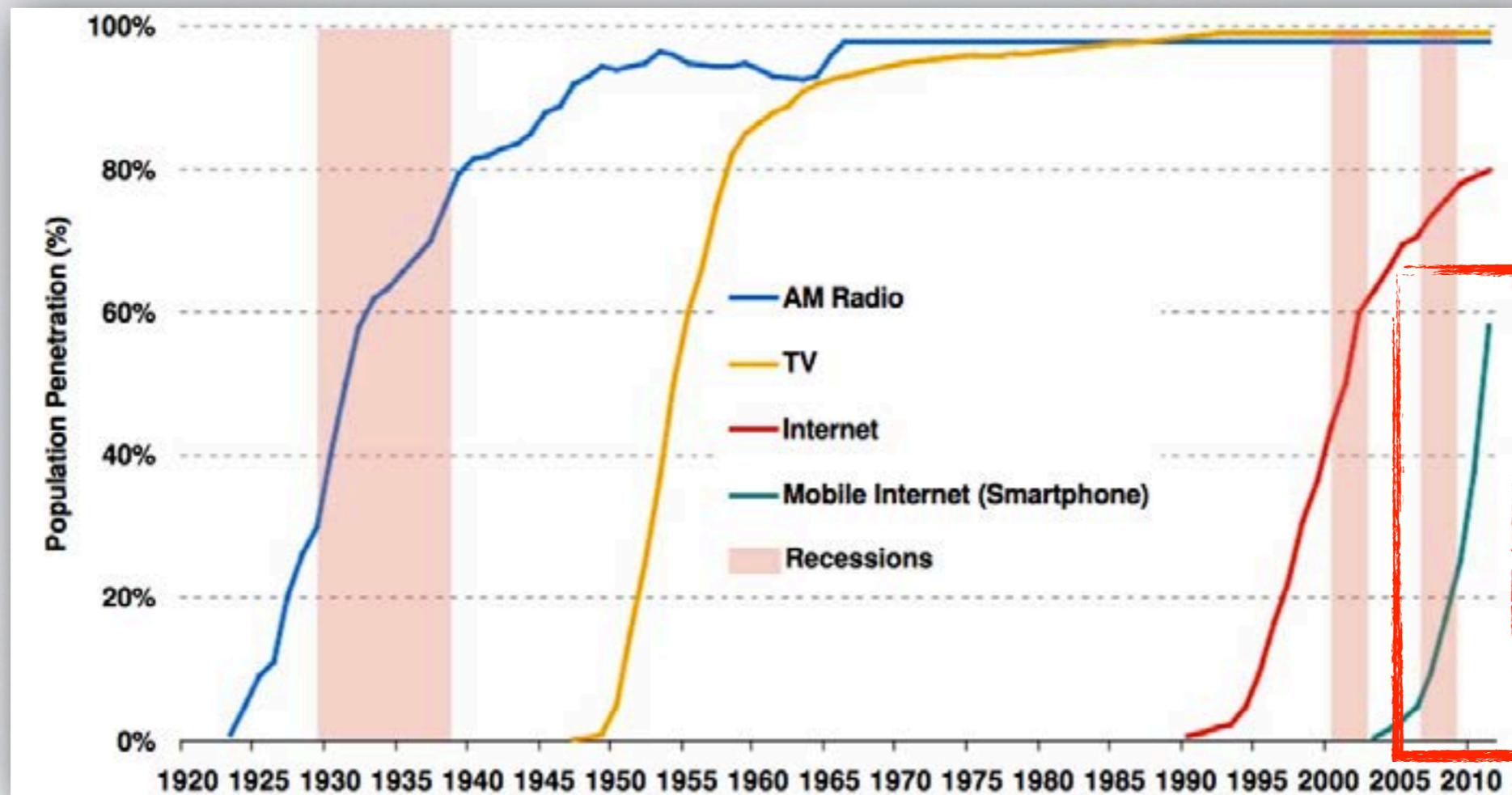


Julio 07



Noviembre 07

LA TECNOLOGÍA MÁS PENETRANTE DE LA HISTORIA



TODAVÍA NO SE CONOCEN LAS IMPLICACIONES



We do not currently directly generate any meaningful revenue from the use of Facebook mobile products, [...]. Accordingly, if users continue to increasingly access Facebook mobile products as a substitute for access through personal computers, [...] our revenue and financial results may be negatively affected.

The decrease in the average cost-per-click paid by our advertisers was driven by various factors.. [including] **the changes in platform mix due to traffic growth in mobile devices**, where the average cost-per-click is typically lower compared to desktop computers and tablets.



SÓLO MÓVIL

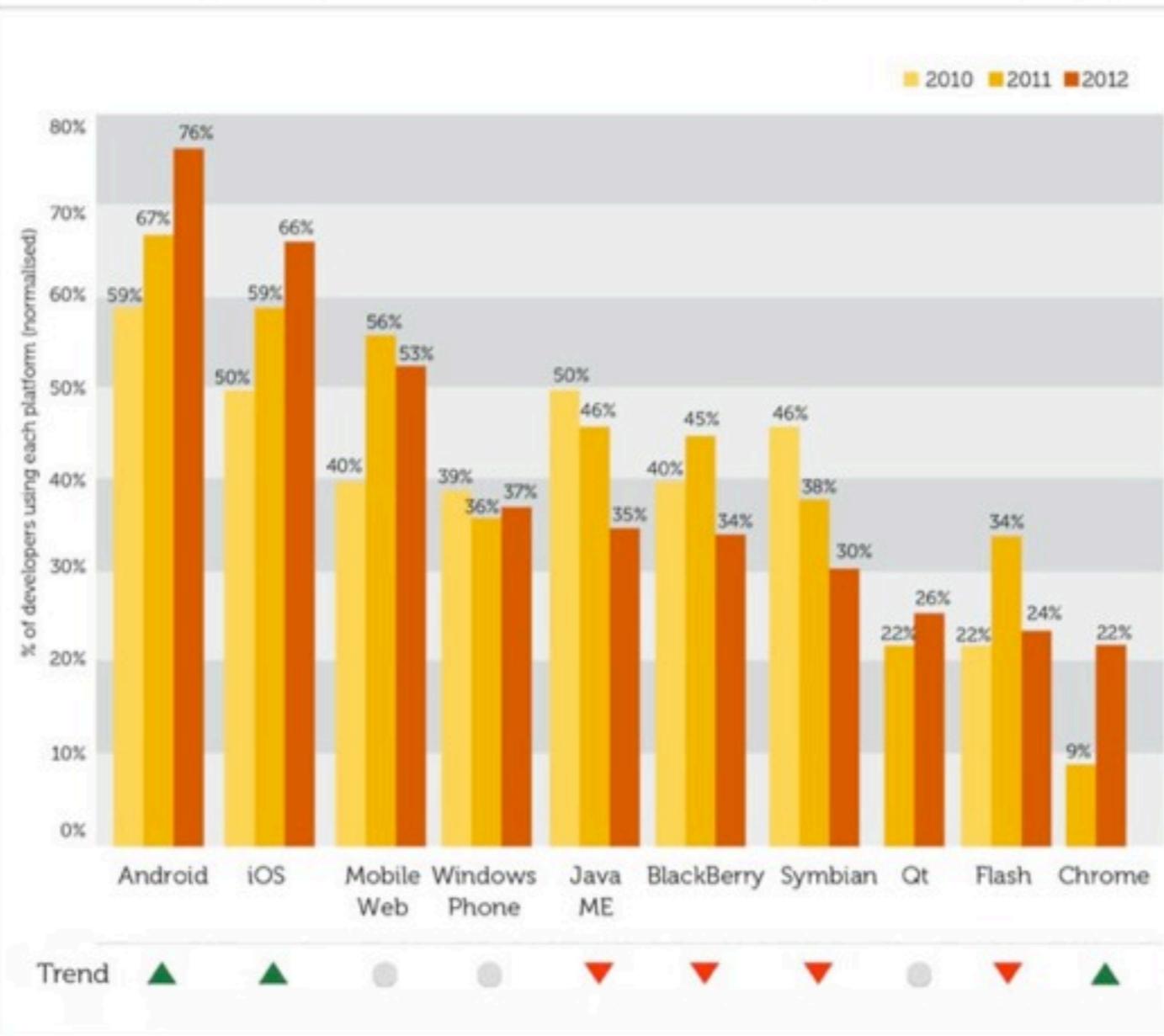


“Lo que menos me importa es la página web, lo más importante para mí es el entorno móvil”

PERO EL DESARROLLO PARA MÓVILES ES COMPLICADO

Developer Mindshare Index 2010-2012

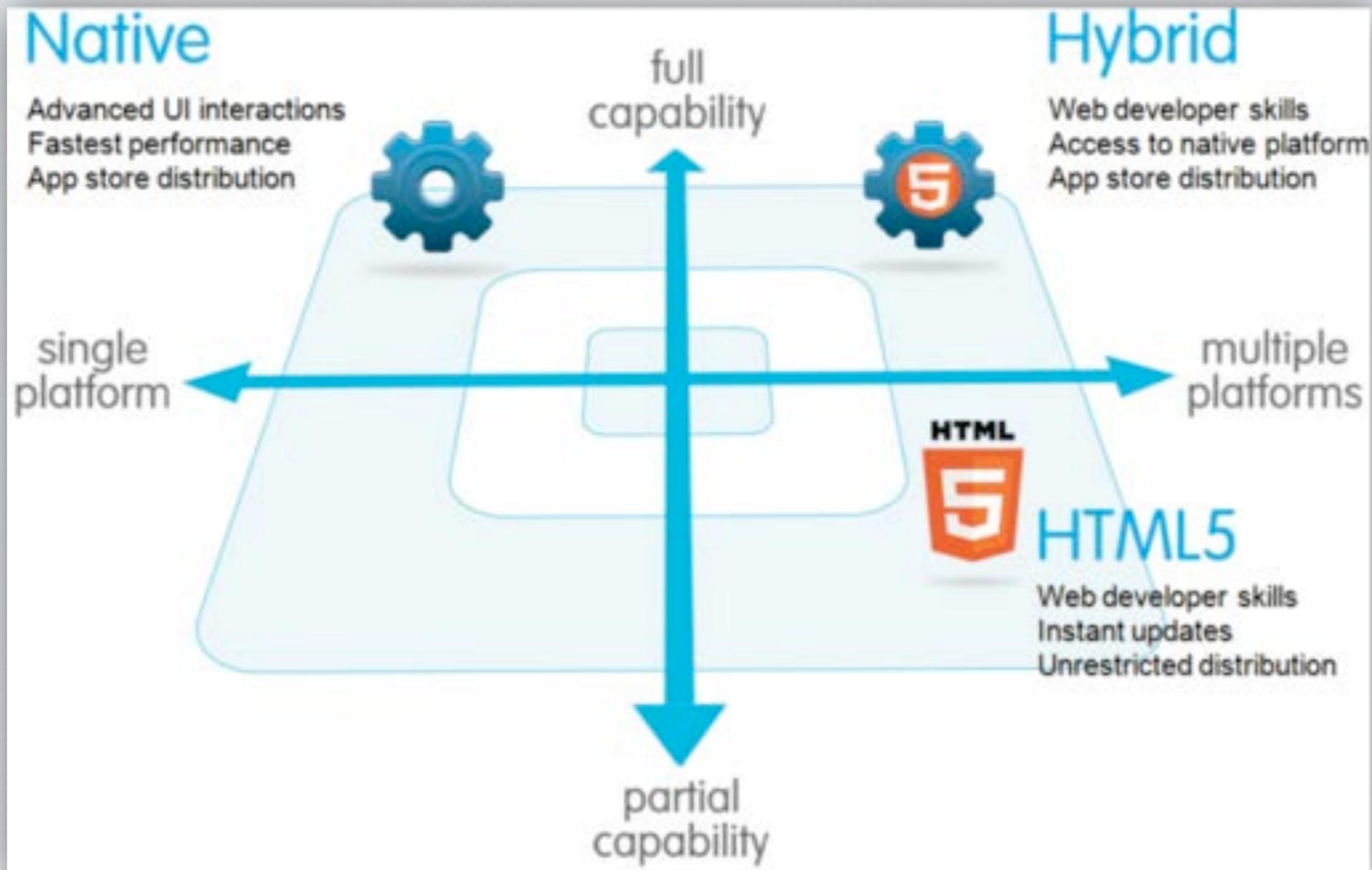
Top 10 platforms being used by developers, irrespective of their main platform (n=1,440 for 2012)



Source: Developer Economics 2012 | www.DeveloperEconomics.com | June 2012
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vision mobile BlueVia

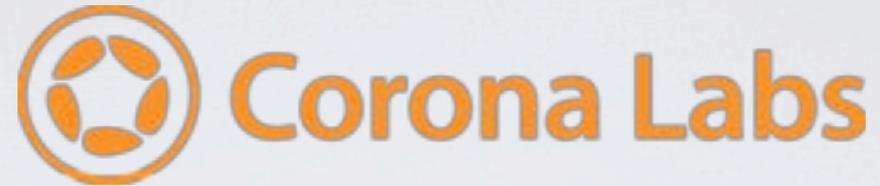
APPS NATIVAS VS. MOBILE WEB VS. HÍBRIDAS



FRAMEWORKS HÍBRIDOS



appcelerator



Xamarin
Mono Touch

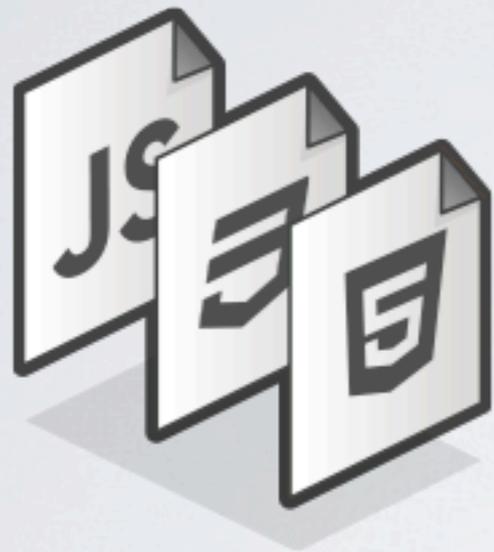


PhoneGap

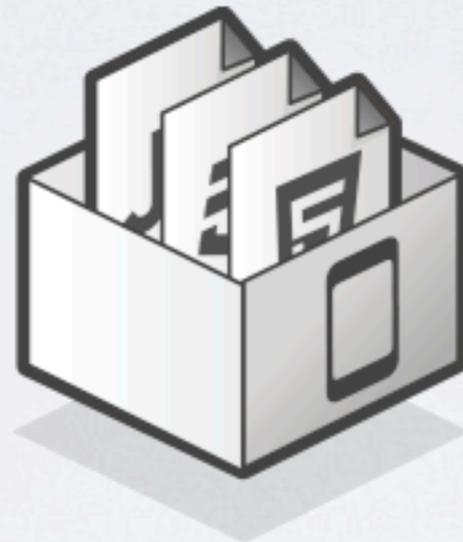
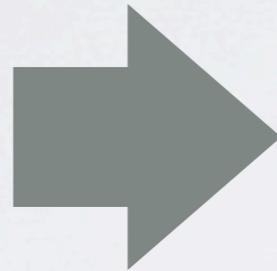
appMobi {!}



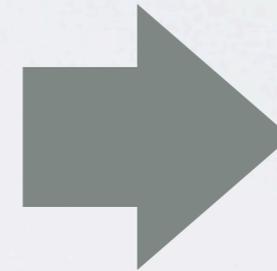
PHONEGAP



HTML5 + CSS3 + JS



Phonegap (Core APIs + Plugins)



Target platforms

CÓMO ES EN IOS?

The image shows the Xcode IDE interface for a Cordova project named 'PhonegapBetabeers' running on an iPhone 5.1 Simulator. The interface is divided into several sections:

- Left Panel (Project Navigator):** Shows the project structure. The 'www' folder contains 'cordova-1.7.0.js' and 'index.html'. The 'Classes' folder contains 'AppDelegate.h', 'AppDelegate.m', 'MainViewController.h', and 'MainViewController.m'. The 'Products' folder is also visible.
- Center Panel (Code Editor):** Displays the content of 'index.html'. The code includes a meta tag for viewport, a script tag for 'cordova-1.7.0.js', and JavaScript functions for 'onBodyLoad()' and 'onDeviceReady()'. The 'onDeviceReady()' function triggers an alert: `navigator.notification.alert("Cordova is working")`.
- Right Panel (Simulator):** Shows the iPhone simulator displaying the text 'Hey, it's Cordova!' and a link to the 'Getting Started Guide'. Below the text is a list of instructions, and an alert dialog box is shown with the message 'Alert: Cordova is working' and an 'OK' button.
- Bottom Panel (Console):** Shows the output log with the following entry: `2012-09-24 20:05:14.856 PhonegapBetabeers[16665:13403] Multi-tasking -> Device: YES, App: YES`.

CÓMO ES EN ANDROID?

The screenshot shows the Eclipse IDE with the following components:

- Package Explorer:** Shows the project structure for `com.serendipio.phonegaptest.MainActivity`. The `assets/www` directory is highlighted, containing `cordova-1.7.0.js` and `index.html`.
- index.html:** Contains the following HTML code:

```
<!DOCTYPE HTML>
<html>
<head>
<title>Cordova</title>
<script type="text/javascript" charset="utf-8" src="cordova-1.7.0.js"></script>
</head>
<body>
<h1>Hello World</h1>
</body>
</html>
```
- MainActivity.java:** Contains the following Java code:

```
package com.serendipio.phonegaptest;

import org.apache.cordova.DroidGap;

public class MainActivity extends DroidGap {

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        super.loadUrl("file:///android_asset/www/index.html");
    }
}
```
- LogCat:** Shows the following log messages:

Level	Time	PID	TID	Application	Tag	Text
D	09-26 18:40:26.371	273	273	com.serendipio.ph_	DroidGap	DroidGap
D	09-26 18:40:26.621	273	273	com.serendipio.ph_	PluginManager	init()
D	09-26 18:40:26.670	273	273	com.serendipio.ph_	SoftKeyboard_	Ignore t
D	09-26 18:40:26.760	273	273	com.serendipio.ph_	SoftKeyboard_	Ignore this event

The screenshot shows an Android emulator with the following details:

- Screen:** Displays the text "Hello World" in a large, bold font.
- System Bar:** Shows the time as 6:42 PM and various status icons.
- Navigation:** Includes a virtual navigation pad and several function buttons (home, back, search, etc.).
- Keyboard:** A full QWERTY virtual keyboard is visible at the bottom.

EJEMPLO

PHONEGAP PLUGINS

phonegap-plugins / iOS

name	age	message	History
AccountList	3 months ago	updates needed for cordova 1.5 and greater [RobbyBellevin]	
Analytics	8 months ago	[Analytics Android] added updated plugin for phonegap 2.0 [mrdavies]	
AppBadge	4 months ago	Added AppBadge PhoneGap plugin for iOS [Michele]	
AppInventorPlugin	5 months ago	The version of AppInventor compatible with PG added to Class folder. [alekshin]	
AppPreferences	2 months ago	Fix README syntax [mwashey]	
AudioRecord	6 months ago	Cordova 1.5.0 support of AudioRecord plugin. [stoying]	
AugmentedReality-Kitcube	7 days ago	Initial plugin [WolfgangZ]	
Badge	5 months ago	Added a README to help install and use the plugin. [JStuhr]	
BarcodeScanner	2 months ago	Update zxing from 1.7 to 2.0 [nutynut]	
CalendarPlugin	8 months ago	Added method to fetch calendar list, and optional calendar name for c... [floodher]	
ChildBrowser	4 days ago	Updated iOS ChildBrowser: 1. Fixed iOS 6 orientation issue, 2. ARCOn... [shazron]	
DatePicker	8 months ago	[DatePicker iOS] Added allowFutureDates option. [Anuramedhugul]	
DeviceDetails	12 days ago	add iOS device details plugin [forestzard]	
Diagnostic	5 months ago	. [FandyMcMiller]	
EmailComposer	2 months ago	Email Composer (iOS) CDV 2.0 compliance [FandyMcMiller]	
ExternalFileUI	8 months ago	updated readme [vicew]	
ExternalStorage	8 months ago	updated phone gap file references [vicew]	
ExtractZipFile	4 months ago	updating README with better instructions [shakiv]	
FileUploader	6 months ago	FileUploader CDV 1.5.0 only [FandyMcMiller]	
Globalization	2 months ago	Updated Globalization plugin for use with Cordova 2.0 and add [mow415]	
GoogleAnalytics	8 months ago	update iOS GoogleAnalyticsPlugin headers for 2.0.0 [robdiaccio]	
InAppPurchaseManager	5 months ago	InAppPurchaseManager (iOS) 1.5.0 support edits [FandyMcMiller]	
Keychain	8 months ago	Change CDVPlugin.h import to use correct filename [agrigory]	
LocalNotifications	2 months ago	Correct type on foreground notification parameter [rodjgim]	
LowLatencyAudio	8 months ago	updated ExternalStorage plugin for Cordova naming conventions, updated... [vicew]	
MapKit	7 days ago	Update iOS MapKit.js to have proper ref to cordovafile [benkaf1y]	
MessageBox	8 months ago	Add the email text field type to prompt MessageBox [jwalsh19]	
NativeContacts	4 months ago	Remove duplicate definition of 'setToolBarTitle' [jadem-c]	
NavigationBar	2 months ago	Fixed background image stretching with iOS < 5.0 [AndDog]	
NotificationEx	5 months ago	Updated NotificationEx for Cordova [shazron]	
OCRPlugin	3 months ago	added OCRPlugin for iOS [cesarmobile]	
PayPalPlugin	2 months ago	PayPal (iOS) CDV 2.0 compliance [FandyMcMiller]	
PickerView	6 months ago	Remove trailing NSLog() calls in 'iOSPickerView'. [ingrove]	
PowerManagement	5 months ago	Updating PowerManagement plugin for iOS and Cordova 1.8 [Vireo]	
PrintPlugin	8 months ago	PrintPlugin CDV 1.5.0 support [FandyMcMiller]	
ProgressHUD	3 months ago	Memory crash fixes for 'iOSProgressHUD'. [ingrove]	
PushNotification	9 days ago	add example response data to ios pushnotification.js docs [forestzard]	
SMSComposer	2 months ago	SMS Composer CDV 2.0 Compliance [FandyMcMiller]	
ScreenOrientation	24 days ago	update iOS/ScreenOrientation/README.md [scottw]	
ScreenShot	3 months ago	readme file for ios/screenshot [jwemands]	
SecureDeviceIdentifier	4 months ago	Added new 'iOSSecureDeviceIdentifier' plugin. [ingrove]	
ShowAlertPlugin	8 months ago	Merge pull request #102 from jason18/writer [shazron]	
StatusBarNotifier	12 days ago	add statusBarNotifier plugin for ios [forestzard]	
Tumblr	8 months ago	Documented usage of retina quality images [AndDog]	
TweetLight	3 months ago	Added support for setDeviceIdentifier [schwert13]	
Twitter	2 months ago	Twitter (iOS) CDV 2.0 Compliance [FandyMcMiller]	
UIPageIndicators	5 months ago	UIPageIndicators Plugin Folder [FandyMcMiller]	
Uniquifier	5 months ago	updated generalised to not call unneeded logs [andrewspinks]	
VolumeSlider	2 months ago	Update VolumeSlider for Cordova 2.0 [dmgwks]	
WebInspector	3 months ago	add iOS/WebInspector plugin [mow415]	
WebPageInfo	3 months ago	add example to use it [scottw]	
WebRTC	8 months ago	Add v1 of cord.io iOS plugin [schazron]	
WebView	4 months ago	iOS Cloud KeyValue Store plugin [alekshin]	
README.md	2 months ago	README.md update [FandyMcMiller]	

phonegap-plugins / Android

name	age	message	History
AccountList	3 months ago	updates needed for cordova 1.5 and greater [RobbyBellevin]	
Analytics	8 months ago	[Analytics Android] added updated plugin for phonegap 2.0 [mrdavies]	
AppBadge	4 months ago	Added Android AppBadge PhoneGap plugin. [Michele]	
AppPreferences	2 months ago	Use new way of defining phonegap plugins. [mwashey]	
AugmentedReality-Kitcube	7 days ago	Initial plugin [WolfgangZ]	
BackgroundService	4 days ago	modified: Android/BackgroundService/1.5.1/README.md [Fed-Folde]	
BarcodeScanner	15 days ago	Update Android/BarcodeScanner/README.md [mrdavies]	
Bluetooth	11 months ago	Added more authors [Daniel Tloor]	
BluetoothPlugin	3 months ago	[Android] Adding disconnect function to BluetoothPlugin [Vireo]	
CallLog	8 months ago	Add callLog plugin [news]	
ChildBrowser	20 days ago	Merge pull request #774 from chazzozal/patch-2 [mrdavies]	
ChildBrowserManager	11 months ago	Compatibility with phonegap 1.0+ [Sublime Charon]	
ContactView	8 months ago	This change allows the return of Email address information from the c... [NikolMytel]	
DatePicker	4 days ago	Update Android/DatePicker/README.md [ymurru]	
Diagnostic	5 months ago	. [FandyMcMiller]	
Downloader	3 months ago	Downloader would sometimes not return the directory name, depending o... [Nick Fetschek]	
ExtractZipFile	5 months ago	Changed README with proper instructions. [vishalrajg]	
FileUploader	2 years ago	fix param name with additional params [francoisbmetz]	
FTPClient	6 months ago	Updating FTPClient for 1.5.0 [mrdavies]	
Globalization	2 months ago	Update package name and add getPreferredLanguage API [mow415]	
HeaderWatcher	8 months ago	Add HeaderWatcher plugin. [scottw]	
Http	8 months ago	README file text corrections [janzvoda]	
IME	2 months ago	Update ChildBrowser, TTS, VideoPlayer, IME, AppPreferences to 2.0.0 [mrdavies]	
LocalNotification	6 months ago	The readme tries to tell people to update the application tag but bec... [mrdavies]	
LowLatencyAudio	8 months ago	updated to Cordova namespace [vicew]	
MacAddress	4 months ago	Added android manifest permission in doc [jbrind]	
OccAppService	8 months ago	OccAppService plugin for Android [Maxime Schwab]	
PayPalPlugin	8 months ago	Updated PayPal Plugin for Android to work with Cordova 2.0.0 [jomez-dev]	
PhoneListener	3 months ago	Updates aside, pretty sure I am still 'the author' [dmgwks]	
PowerManagement	5 months ago	Updating PowerManagement plugin for iOS and Cordova 1.8 [Vireo]	
RemoteSound	4 months ago	Update Android/RemoteSound/README.md [jbrind]	
Resources	4 months ago	Changed default package name to the current app package name to simpl... [janzvoda]	
SMS Inbox_sentry access	8 months ago	Fixed some typos. [jvan]	
SMSPlugin	6 months ago	Modified plugin and example for Cordova 1.8 [dhookewsky]	
Screenshot	10 days ago	Updating Screenshot plugin to 2.0.0 [mrdavies]	
Share	8 months ago	Updated to work with cordova 2.0.0 [jpearl]	
ShopGap	8 months ago	PhoneGap wrapper around ShopifyAJ to make authenticated API calls [csounders]	
SoftKeyboard	6 months ago	add isShowing function to Android SoftKeyboard plugin [waksarutevski]	
SpeechRecognizer	8 months ago	Updating SpeechRecognizer Plugin to work with 2.0.0 [mrdavies]	
StatusBarNotification	25 days ago	Merge branch 'master' of github.com:phonegap/phonegap-plugins [shaphet]	
TTS	2 months ago	Update ChildBrowser, TTS, VideoPlayer, IME, AppPreferences to 2.0.0 [mrdavies]	
Torch	11 months ago	Phonegap plugin for Android to enable Torch functionality [adavies]	
VideoPlayer	2 months ago	Update ChildBrowser, TTS, VideoPlayer, IME, AppPreferences to 2.0.0 [mrdavies]	
WACAppPaymentPlugin	6 months ago	Readme has been updated. [WACISUPPORT]	
WebIntent	8 months ago	Merge pull request #709 from Patrick94/patch-1 [mrdavies]	
WebkitCursors	2 months ago	Get wkhtml plugin working for phonegap 1.5.0 [George Hamilton]	
README	2 years ago	added dirs for other devices [Jesse MacFadyen]	

phonegap-plugins / BlackBerry

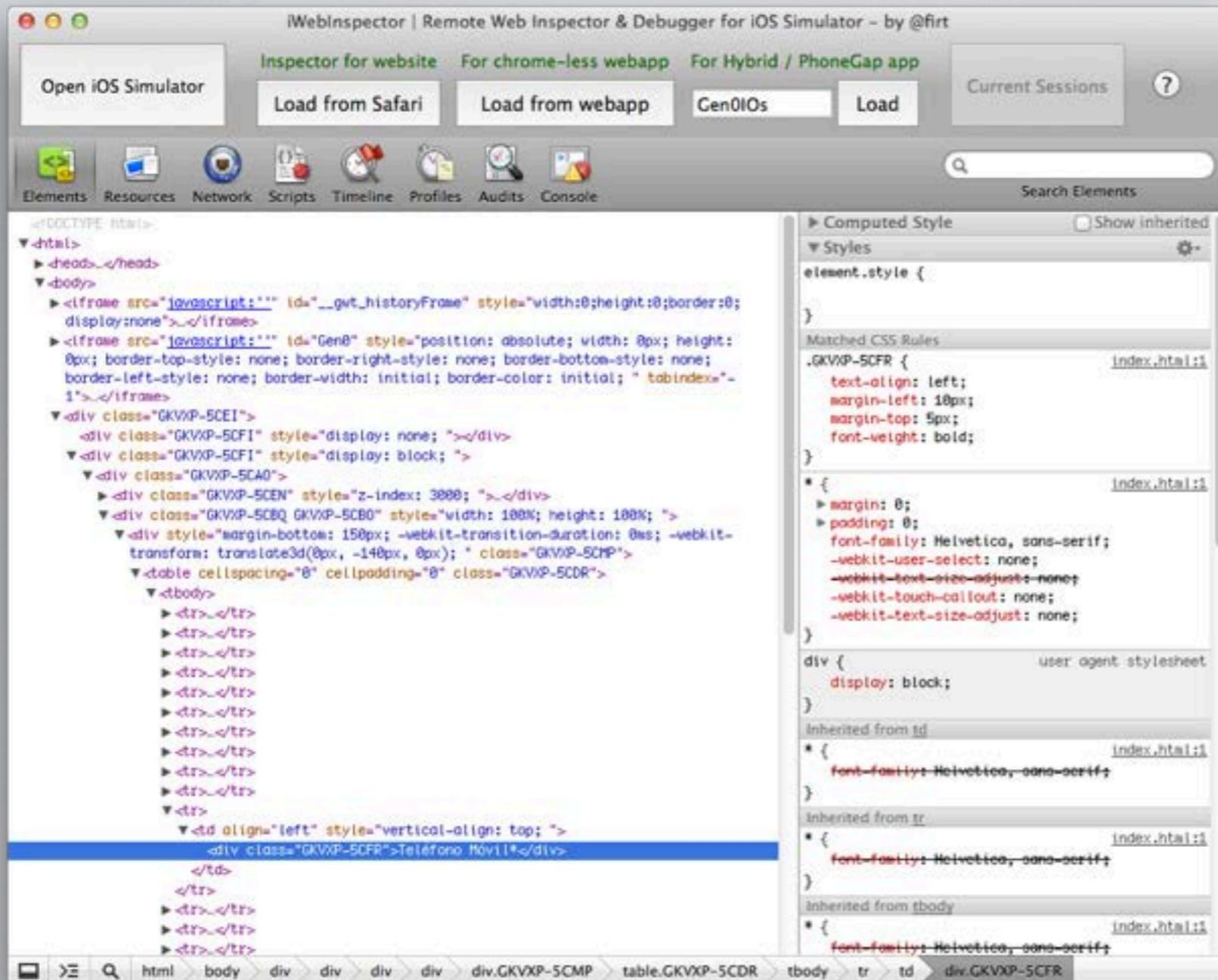
name	age	message	History
BarcodeScanner	8 months ago	Enable BB ChildBrowser and BarcodeScanner for Cordova 2.0 [dewd4bbu]	
ChildBrowser	8 months ago	Enable BB ChildBrowser and BarcodeScanner for Cordova 2.0 [dewd4bbu]	
Globalization	2 months ago	Update package name and add getPreferredLanguage API [mow415]	
README	6 months ago	Update BlackBerry plugins for Cordova 1.8. [dewd4bbu]	

phonegap-plugins / WindowsPhone

name	age	message	History
BarcodeScanner	2 months ago	Added focus button for camera [mrluiewicz]	
ChildBrowser	2 months ago	. [FandyMcMiller]	
Facebook	10 months ago	facebook plugin [agrebnoy]	
LiveTiles	2 months ago	clean up warnings for unused Exception vars [jurskecbbage]	
PGMagLauncher	2 months ago	Formatting code [jurskecbbage]	
PGSocialShare	2 months ago	update PGSocialShare for 2.x [jurskecbbage]	

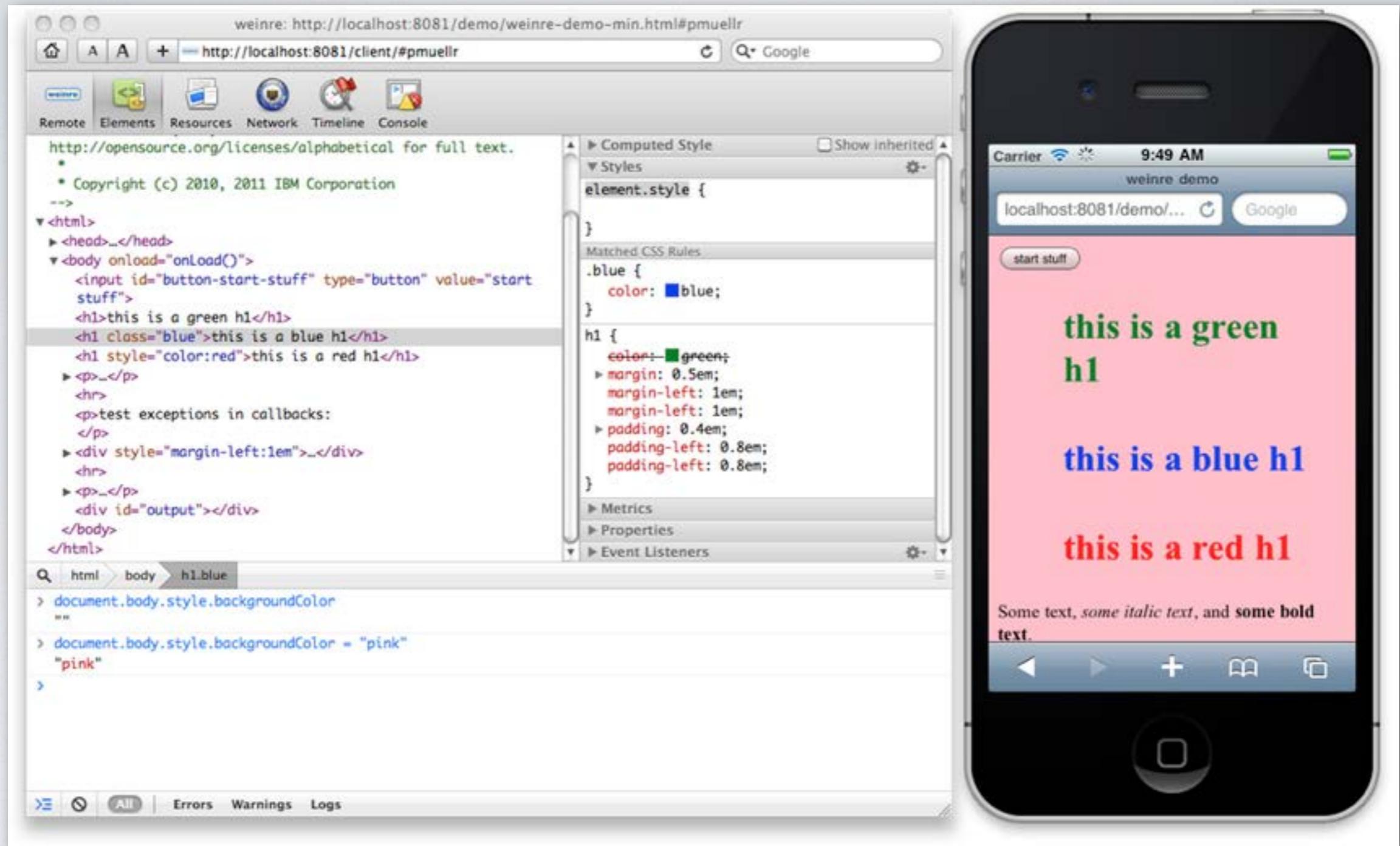
EJEMPLO

DEBUGGING?



iOS: iWebInspector

DEBUGGING?



Android, iOS: Weinre
debug.phonegap.com

QUÉ UTILIZAR PARA LA UI?

- HTML5 + CSS3 + JS
- AJAX 100%
- No olvidarse del servidor
- Ni de la “performance” y limitaciones en el móvil
- Simular el Look & Feel de la plataforma
- Open Source con amplia comunidad
- Otras características: facilitar la depuración, el testeo, incrementar la productividad, etc.

ALGUNAS ALTERNATIVAS

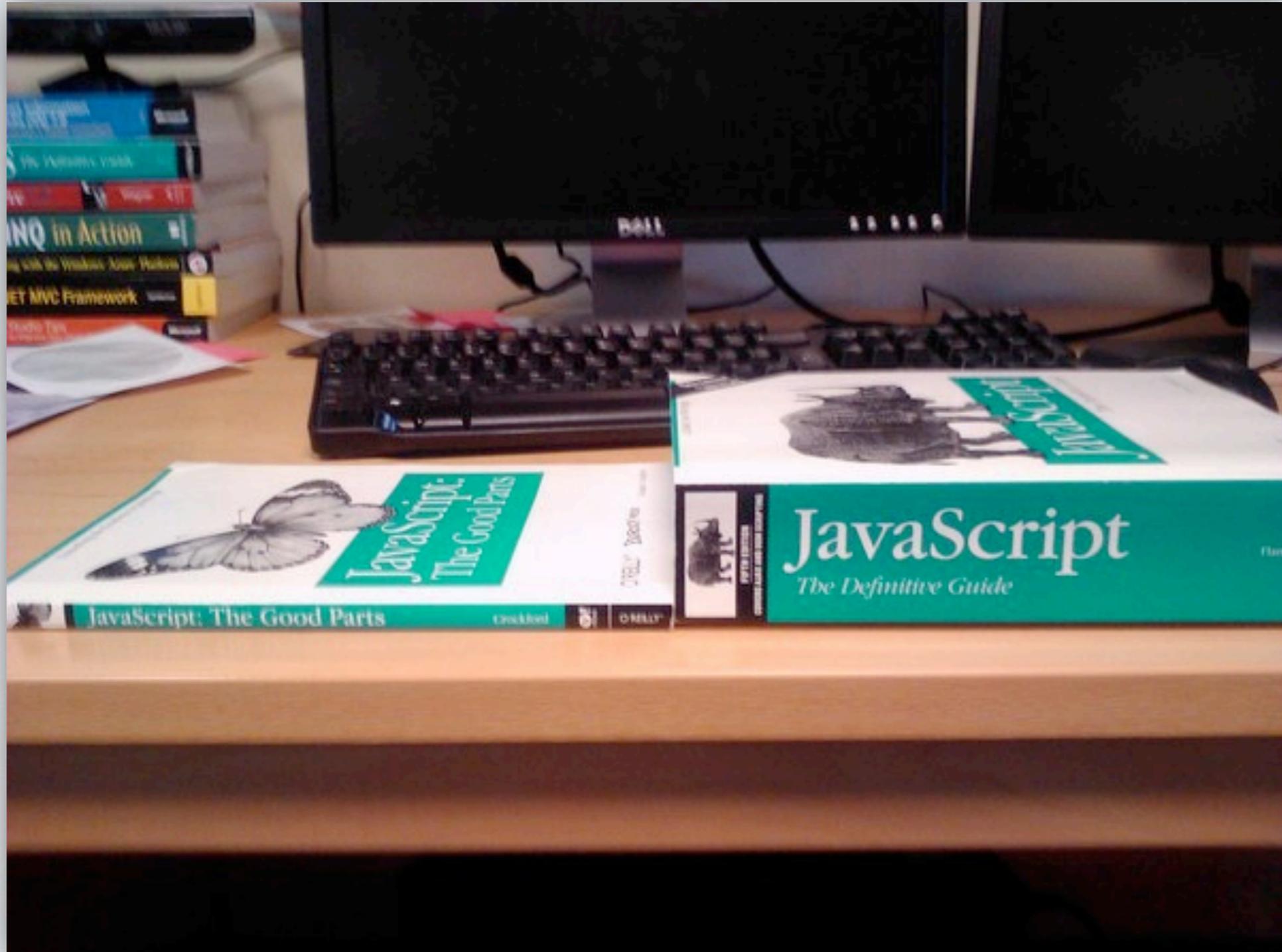


JQTOUCH

dōjō



EL PROBLEMA CON JAVASCRIPT...



WTFJS.COM

min less max

june 1, 2011

This beauty is courtesy of [TTYT](#) ...lets look at some code.

```
Math.max();  
// -Infinity  
  
Math.min();  
// Infinity
```

Ok, so, there is a good reason for this behaviour. It might even make sense if you happen to occasionally omit args from your min/max calls. ;)

You see, the min/max implementations need something to compare to and Infinity and -Infinity are the only safe values to use for that comparison. [@kriskowell goes into more better detail here](#) and was quickly followed by [@brendaneich](#) whom not only [wrote js in 10 days](#) but can rock out unicode Infinity symbols without looking them up ...I shit you not.

Of course, due to this behaviour js allows for this code humour:

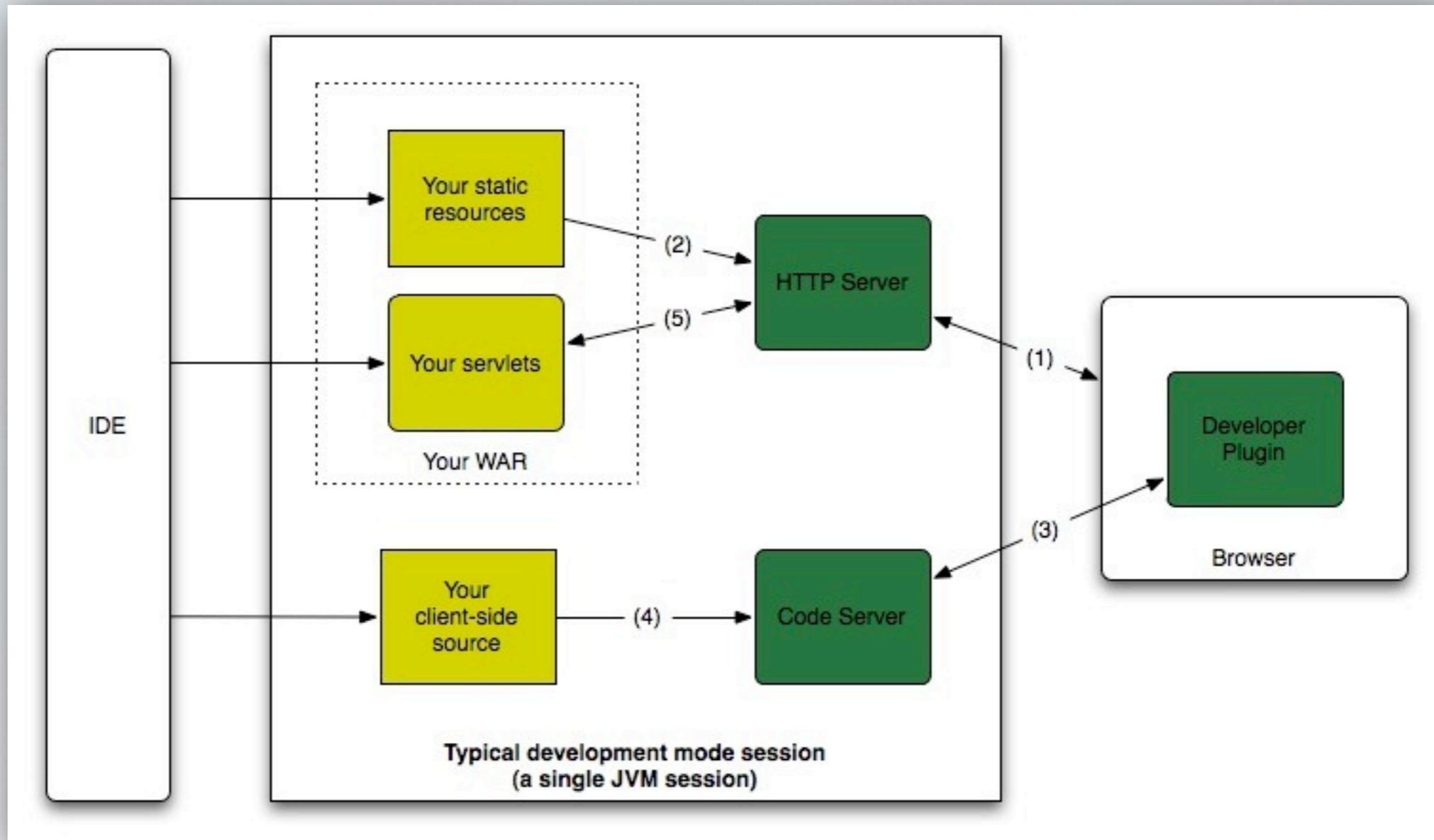
```
Math.min() < Math.max();  
// false
```

Oh JavaScript, I still love you.

GWT

- Introducido por Google en 2006
- Compila Java a Javascript
- Soporta todos los principales navegadores*
 - También los móviles (Webkit)
- Usado en producción por Google en numerosos proyectos
 - Google Adwords, Android Play, Google Groups...
- Recientemente Google ha liberado la dirección del proyecto*

GWT EN MODO DE DESARROLLO



EJEMPLO

WIDGETS

Button

Normal Button Disabled Button

PushButton

Normal Disabled

Push Button Disabled

RadioButton

Choice 1 Choice 2 (Disabled)

CheckBox

Normal Check Disabled Check

DatePicker

« Apr 2009 »

S	M	T	W	T	F	S
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	1	2
3	4	5	6	7	8	9

ToggleButton

Up Down Disabled

up down disabled

TextBox

text box.

PasswordTextBox

.....

TextArea

This is a big text area...

Hyperlink

[Info](#)

[Buttons](#)

[Menus](#)

[Images](#)

[Layouts](#)

CellBrowser

- Family ▶ A (5) ▶
- Friends ▶ B (2) ▶
- Coworkers ▶ C (3) ▶
- Businesses ▶ D (4) ▶
- Contacts ▶ E (2) ▶
- F (2) ▶

Selected:
Barbara Austin

Bertha Ruiz
543 Third Way

Barbara Austin
656 Main Ave

ListBox

List 0 foo0

List 0 bar0

List 1 baz0

List 2 toto0

List 3 tina0

List 4

CellList

Lucille Wagner
95 Centennial Way

Ann Clark
716 Main St

Peggy Robertson
203 Currier St

Alex Burns
81 Main Ave

Daniel Gordon

0 - 40 : 250

MenuBar

Style Fruit Term

Bold

Italicized

More » Code

Strikethrough

Underlined

Tree, CellTree

- foo@example.com
 - Inbox
 - Drafts
 - Templates

SuggestBox

bar

baz

foo bar

RichTextArea

B *I* U X₂ X² [List Icon] [Text Icon] [Text Icon] [Text Icon]

Background Foreground Font

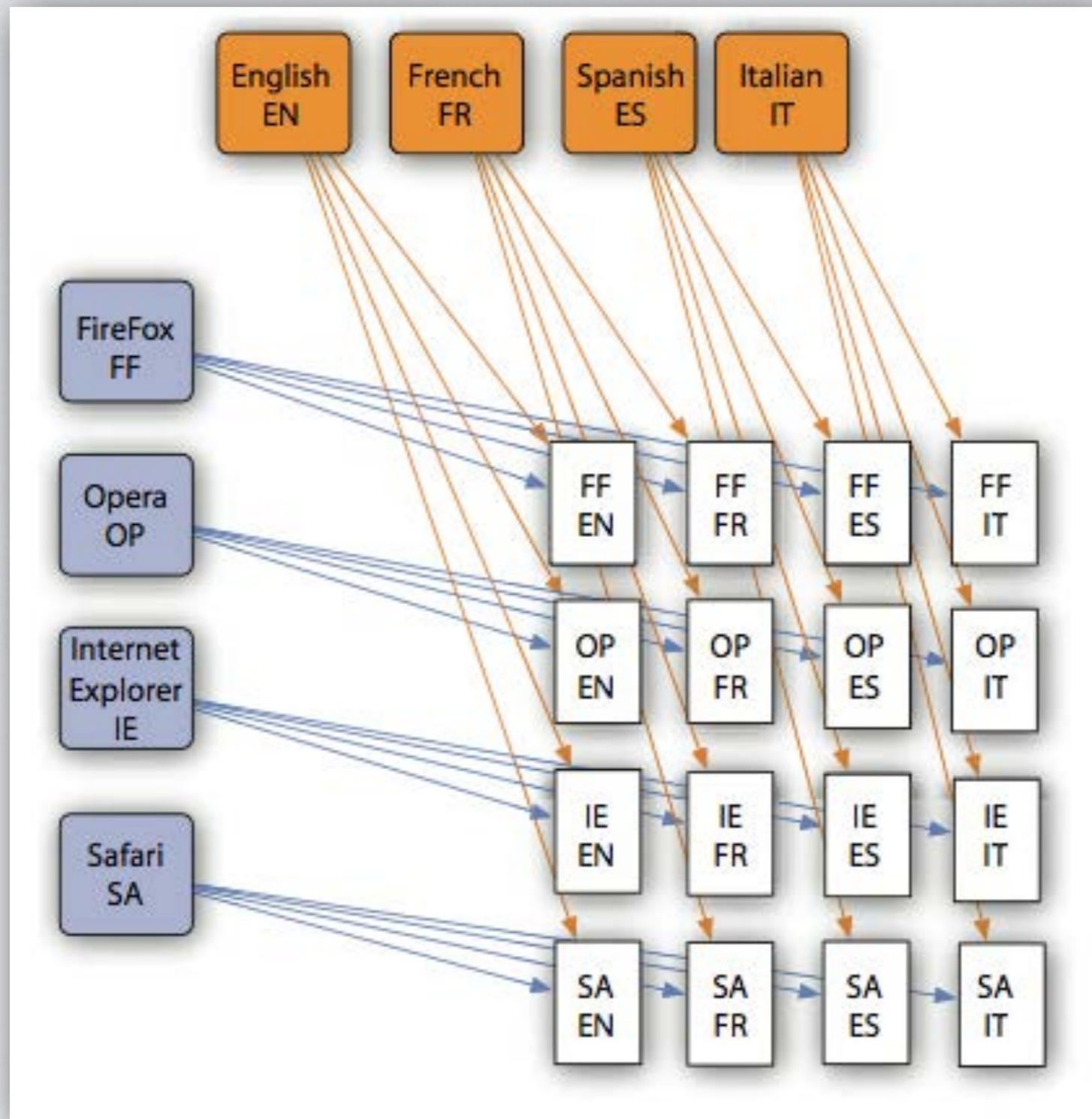
FlexTable, Grid, and CellTable

sender	email
markboland05	mark@example.com
Hollie Voss	hollie@example.com
boticario	boticario@example.com
Emerson Milton	emerson@example.com
Healy Colette	healy@example.com
Brigitte Cobb	brigitte@example.com
Elba Lockhart	elba@example.com

Y SI HAY DISEÑADORES? UIBINDER

```
ClaimDesktopScreenView.ui.xml
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!DOCTYPE ui:UiBinder SYSTEM "http://dl.google.com/gwt/DTD/xhtml.ent">
3 <ui:UiBinder xmlns:ui='urn:ui:com.google.gwt.uibinder'
4   xmlns:g='urn:import:com.google.gwt.user.client.ui'
5   xmlns:s='urn:import:com.serendipio.front.merchant.desktop.client.widget'>
6
7   <ui:with field='I18N' type='com.serendipio.front.merchant.client.I18NMerchantMessages' />
8
9   <g:HTMLPanel>
10     <div class="linesbg">
11       <div class="nav-mini">
12         <div class="wrapper">
13           <h1 id="header-mini" class="left"><g:Anchor ui:field="logoAnchor" href="javascript:;" ></g:Anchor></h1>
14           <g:Anchor ui:field="backAnchor" href="javascript:;" text="{I18N.back_homepage}" addStyleNames="green-btn right"></g:Anchor>
15         </div>
16       </div><!-- nav-mini -->
17
18       <div class="viewer-mini">
19         <div class="wrapper">
20           <h1 id="mainClaimSlogan"><g:Label text="{I18N.claim_business_header}"></g:Label></h1>
21           <h2 class="center darkgreentext" id="scndSloganClaim"><g:Label text="{I18N.claim_business_subheader}"></g:Label></h2>
22         </div><!--wrapper -->
23       </div><!--viewer-mini -->
24       <div class="wrapper">
25         <div class="onecol-transp center">
26           <form id="claim-form">
27             <h2 class="requested-plan-label"><g:Label ui:field="requestedPlanLabel" text=""></g:Label></h2>
28             <s:BusinessForm ui:field="businessForm"></s:BusinessForm>
29             <h2><g:Label text="{I18N.personal_details}"></g:Label></h2>
30             <table cellpadding="5" cellspacing="5" border="0">
31               <tr>
32                 <td colspan="2">
33                   <g:Label ui:field="nameLabel" text="{I18N.name_label}" styleName="label"></g:Label>
34                 </td>
35               </tr>
36               <tr>
```

“DEFERRED BINDING”



GWT.XML

ConsumerTouchNativeCompilationModule.gwt.xml

```
1 <module rename-to="touch">
2   <inherits name="com.serendipio.front.consumer.touch.ConsumerTouchModule" />
3   <inherits name="com.google.gwt.http.HTTP" />
4   <set-property name="user.agent" value="safari" />
5   <set-property name="mobile" value="true" />
6   <set-property name="target" value="native" />
7   <define-property name="platform" values="ios,android" />
8   <set-property name="gwt.logging.firebugHandler" value="DISABLED" />
9   <set-property name="gwt.logging.consoleHandler" value="ENABLED" />
10  <set-property name="gwt.logging.simpleRemoteHandler" value="DISABLED" />
11  <set-property name="gwt.logging.popupHandler" value="DISABLED" />
12
13  <replace-with class="com.serendipio.front.consumer.touch.client.view.widget.phonegap.childbrowser.ChildBrowserPhoneGapAndroidImpl">
14    <when-type-is class="com.serendipio.front.consumer.touch.client.view.widget.phonegap.childbrowser.ChildBrowser" />
15    <when-property-is name="platform" value="android" />
16  </replace-with>
17
18  <replace-with class="com.serendipio.front.consumer.touch.client.view.widget.phonegap.childbrowser.ChildBrowserPhoneGapIOsImpl">
19    <when-type-is class="com.serendipio.front.consumer.touch.client.view.widget.phonegap.childbrowser.ChildBrowser" />
20    <when-property-is name="platform" value="ios" />
21  </replace-with>
22
23  <replace-with class="com.serendipio.front.consumer.touch.client.ConsumerTouchNativeInitializer">
24    <when-type-is class="com.serendipio.pillar.gwt.mvp.AppInitializer" />
25  </replace-with>
26
27  <replace-with class="com.serendipio.front.consumer.client.presenter.facebook.FacebookConnectNativeChildbrowserWrapper">
28    <when-type-is class="com.serendipio.front.consumer.client.presenter.facebook.FacebookConnectWrapper" />
29  </replace-with>
30
31  <replace-with class="com.serendipio.pillar.gwt.client.ui.ScreenTransitionManagerDefault">
32    <when-type-is class="com.serendipio.pillar.gwt.client.ui.ScreenTransitionManager" />
33  </replace-with>
34
35 </module>
```

ConsumerTouchNativeCompilationModule.gwt.xml

INTERNACIONALIZACIÓN (I18N)

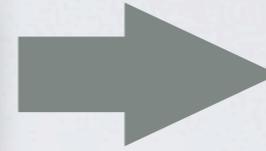
- Construido sobre “Deferred binding”
 - Se genera una permutación adicional por idioma
 - Muy potente: plurales, mensajes por defecto, RTL...
- Incrementa el tamaño de la compilación



CSS COMPILADO

Constantes:

```
@def reachBlue #017FAA;  
@def highlight #c0dfea;  
@def neutral #e4edf5;  
@def hudback #eaeaea;  
@def reachFont Verdana, Helvetica, Arial, San-Serif;
```



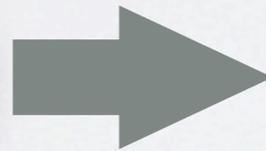
```
body {  
  font-family: reachFont;  
  font-size: 12px;  
  margin: 0px;  
  padding: 0px;  
  min-height: 99.999%;  
}
```

Condiciones (perfecto para emular L&F según la plataforma):

```
@if user.agent ie6 {  
  .translucent {  
    filter: Alpha(opacity=80);  
  }  
} @else { // also @elif supported here  
  .translucent {  
    opacity: 0.8;  
  }  
}
```

Recursos:

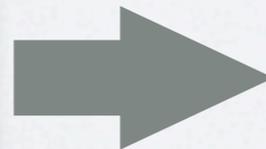
```
@Source("ace.ttf")  
DataResource aceCrikeyFont();
```



```
@url aceCrikeyUrl aceCrikeyFont;  
@font-face {  
  font-family: "Ace Crikey";  
  src: aceCrikeyUrl;  
}
```

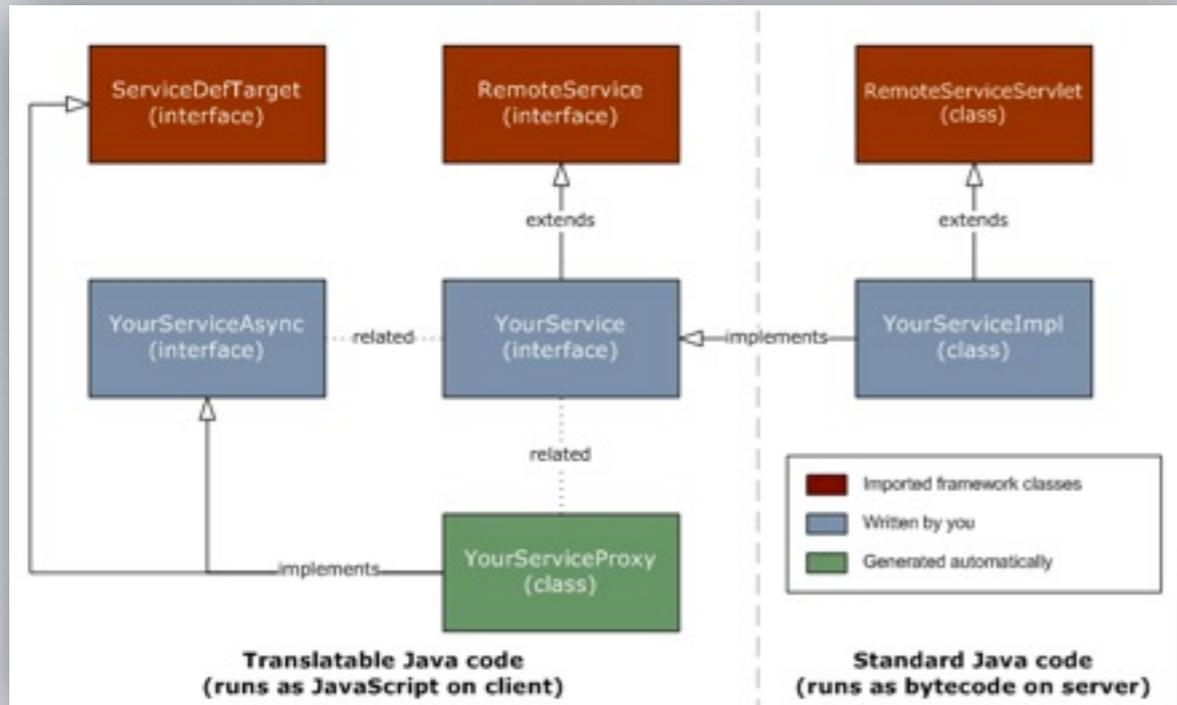
Sprites:

```
@sprite .historyButton {  
  gwt-image: "historyIcon";  
  cursor: pointer;  
  border: none;  
  margin-right: 5px;  
}
```



```
.GEWUSY4DJJ{height:16px;width:16px;overflow:hidden;background:url(%data:image/png)
```

SERVIDOR: GWT-RPC



```
public void menuCommandEmptyInbox() {
    // (1) Create the client proxy. Note that although you are creating the
    // service interface proper, you cast the result to the asynchronous
    // version of the interface. The cast is always safe because the
    // generated proxy implements the asynchronous interface automatically.
    //
    MyEmailServiceAsync emailService = (MyEmailServiceAsync) GWT.create(MyEmailService.class);

    // (2) Create an asynchronous callback to handle the result.
    //
    AsyncCallback callback = new AsyncCallback() {
        public void onSuccess(Void result) {
            // do some UI stuff to show success
        }

        public void onFailure(Throwable caught) {
            // do some UI stuff to show failure
        }
    };

    // (3) Make the call. Control flow will continue immediately and later
    // 'callback' will be invoked when the RPC completes.
    //
    emailService.emptyMyInbox(fUsername, fPassword, callback);
}
```

PROBLEMAS CON GWT-RPC

- GWT-RPC “marca” los objetos serializables con un hash MD5
- Si el servidor detecta una discrepancia al deserializar lanza una excepción
- Consecuencia: No soporta clientes con versiones antiguas



JSNI (JAVASCRIPT NATIVE INTERFACE)

```
public static native void alert(String msg) /*-{  
    $wnd.alert(msg);  
}-*/;
```

```
/**  
 * Validate the hashing algorithm  
 * @param string String to hash  
 * @return Hashed String  
 */  
public static native String encodeMd5(String string) /*-{  
function RotateLeft(lValue, iShiftBits) {  
return (lValue<<iShiftBits) | (lValue>>>(32-iShiftBits));  
}  
  
function AddUnsigned(lX,lY) {  
var lX4,lY4,lX8,lY8,lResult;  
lX8 = (lX & 0x80000000);  
lY8 = (lY & 0x80000000);  
lX4 = (lX & 0x40000000);  
lY4 = (lY & 0x40000000);  
lResult = (lX & 0x3FFFFFFF)+(lY & 0x3FFFFFFF);  
if (lX4 & lY4) {  
return (lResult ^ 0x80000000 ^ lX8 ^ lY8);  
}  
if (lX4 | lY4) {  
if (lResult & 0x40000000) {  
return (lResult ^ 0xC0000000 ^ lX8 ^ lY8);  
} else {
```

M-GWT



GWT-PHONEGAP



```
public native void findNative(JavaScriptObject fields, ContactFindCallback callback,
    var instance = this;

    var sC = function(contacts) {
        instance.@com.googlecode.gwtphonegap.client.contacts.js.ContactsJsImpl::call
    };

    var eC = function(error) {
        callback.@com.googlecode.gwtphonegap.client.contacts.ContactFindCallback::onF
    };

    var lfilter = contactFindOptions.@com.googlecode.gwtphonegap.client.contacts.Cont
    var lmultiple = contactFindOptions.@com.googlecode.gwtphonegap.client.contacts.Co
    var gwtDate = contactFindOptions.@com.googlecode.gwtphonegap.client.contacts.Cont
    var ldate = "";
    if (gwtDate != null) {
        ldate = this.@com.googlecode.gwtphonegap.client.contacts.js.ContactsJsImpl::
    }

    var options = {
        filter : lfilter,
        multiple : lmultiple,
        updatedSince : ldate
    };

    $wnd.navigator.contacts.find(fields, $entry(sC), $entry(eC), options);
} */;
```

LO QUE IMPORTA: LA COMPILACIÓN

- Al final, tenemos que compilar la versión de producción y GWT es perfecto:
 - Elimina código muerto y css no utilizado
 - Optimiza, ofusca y comprime el JS
 - Optimiza el css (image inlining)
 - Consolida los ficheros (JS/CSS/HTML)
 - Mecanismo de caché
 - Análisis del resultado de la compilación (SOYC)

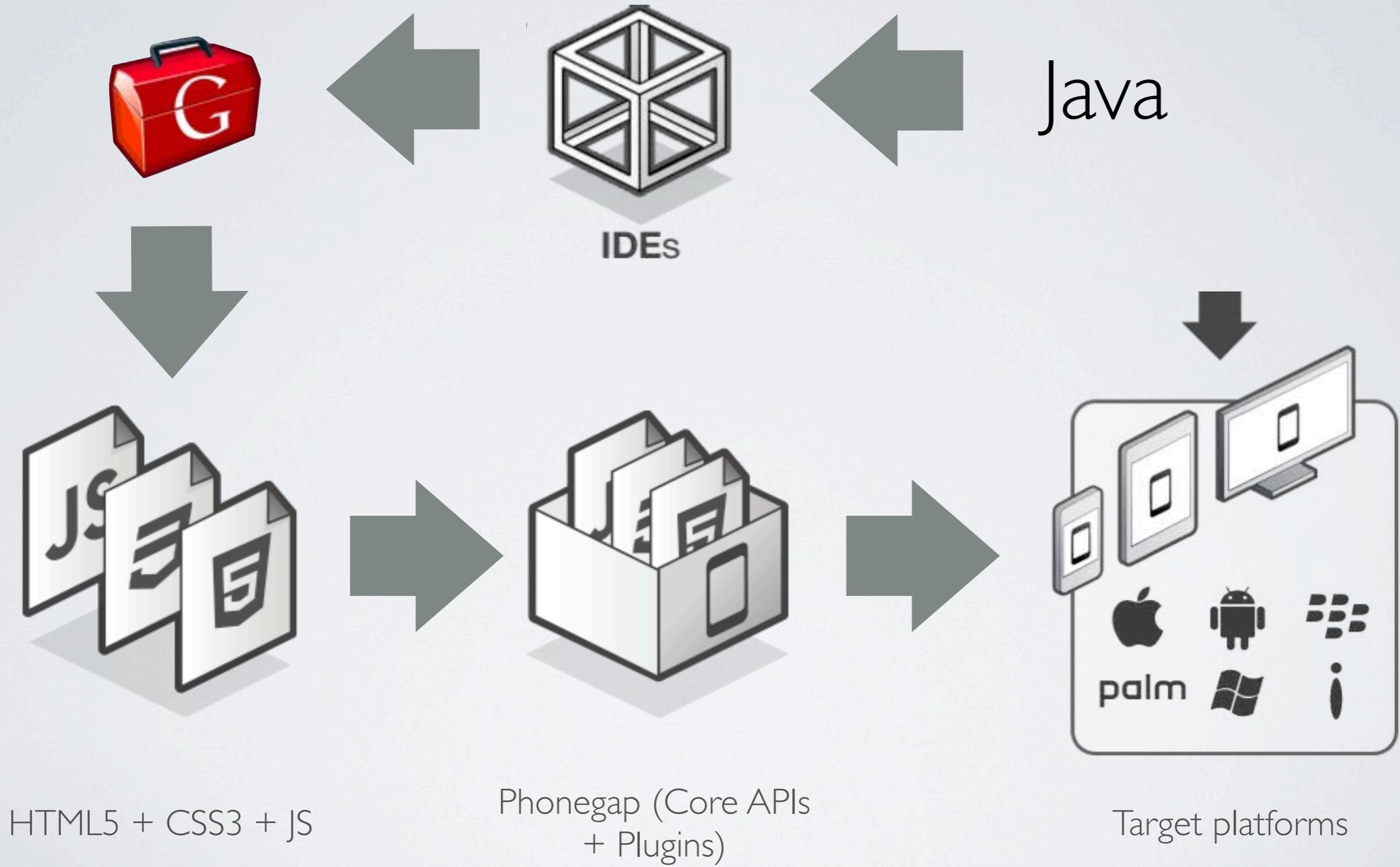
COSAS QUE ME HE DEJADO

- Google plugin for Eclipse
 - GWT Designer
- Integración GWT - Google app engine
- Speed tracer
- Mayor integración Javascript - JSON: Javascript Overlay Types
- Seguridad: Anti XSS
- Request factory
 - Librería de comunicaciones basada en JSON con versión Android
- Librerías específicas JUnit
- Code splitting
- MVP Framework
- GWT superavanzado
 - GWT super dev mode
 - Elemental - “to the metal” HTML5 bindings

PROBLEMAS CON GWT

- Curva de aprendizaje compleja
- No soporta todo el JRE
- Algunas características pueden ser contraproducentes en desarrollo móvil
 - Deferred binding + II8N
 - GWT-RPC
- Desde que salió, se duda del soporte que Google le presta
 - Roadmap oscuro
 - Peor desde que se anunció Dart
 - Quizás el problema es que Java ha dejado de ser “cool”
- Mantenimiento del modo de desarrollo
- Mantenimiento de las apis de Google, HTML5

GWT + PHONEGAP



HTML5 + CSS3 + JS

Phonegap (Core APIs + Plugins)

Target platforms

DUDAS / PREGUNTAS?

GRACIAS!

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