



PhoneGap Plugins End to End

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FUTURE
TECH SUMMIT 2017

About Us

Holly

- ✧ PhoneGap developer since 2011
- ✧ Apache Cordova committer
- ✧ Community builder, evangelist



Jesse

- ✧ PhoneGap developer since 2008
- ✧ Apache Cordova committer
- ✧ 5+ years at Adobe, still doing the same thing!



Pre-reqs

Step by step instructions here:

<http://phonegap.com/workshop-plugins/>

Install node-js

- ✧ <https://nodejs.org>

Install cordova

- ✧ from terminal run => `npm install -g cordova`

Install the phonegap-plugin-template tool

- ✧ `npm install -g phonegap/phonegap-plugin-template`

Ask me for the wifi password!

Who has used Cordova plugins?

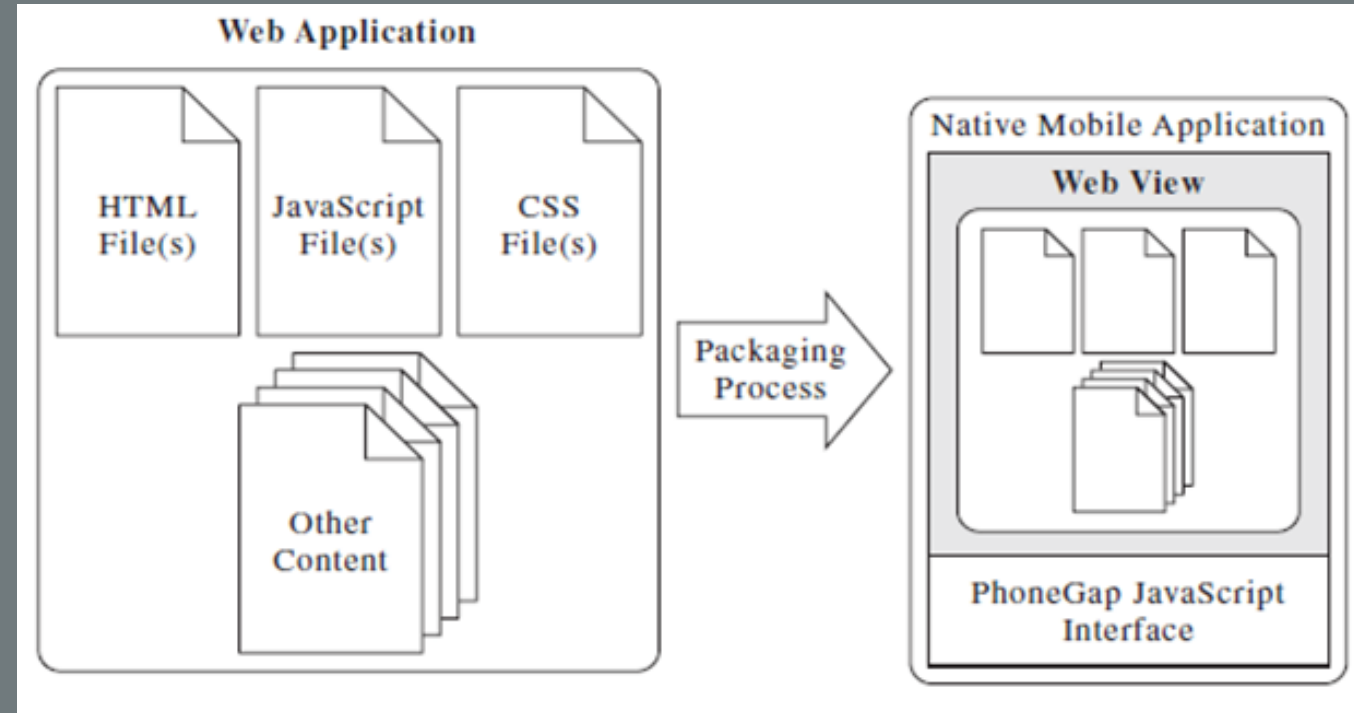
Everyone who has used Cordova or PhoneGap.
Whether you know it or not.

Who knows how they work?

A much smaller set.

How is Apache Cordova architected?

- ❖ Apps present a full screen web-view that hosts the application
- ❖ The view is rendered in html+css
- ❖ Application logic is implemented in JavaScript running in the web-view.
- ❖ Cordova framework provides an 'exec' interface which can call native code.
- ❖ Native code is called through 'exec' and results are returned via exec callbacks.
- ❖ Plugins are modular, so they can be mixed freely.



What is a plugin?

- ✧ A plugin exposes some native functionality to a Cordova app.
- ✧ Typically provides a (common) JavaScript interface to an application
 - ✧ **running in the webview**
- ✧ Includes native code for one or more devices.
 - ✧ **Native code can do anything a native app can do!**
- ✧ JS code calls native via the 'exec' api
- ✧ Native code sends status and results back to JS via 'exec' callbacks

3 ways we install plugins

Via npmjs.org registry

```
$ cordova plugin add cordova-plugin-device
```

Github.com

```
$ cordova plugin add https://github.com/apache/cordova-plugin-device
```

From a local path

```
$ cordova plugin add ~/MyPlugins/cordova-plugin-device
```

This is the recommended way for developing!

The 'core' plugins

- ✧ battery-status
- ✧ camera
- ✧ debug-console
- ✧ contacts
- ✧ device
- ✧ device-motion
- ✧ device-orientation
- ✧ dialogs
- ✧ file
- ✧ file-transfer
- ✧ geolocation
- ✧ globalization
- ✧ inappbrowser
- ✧ media
- ✧ media-capture
- ✧ network-information
- ✧ ~~splash-screen~~
- ✧ status-bar
- ✧ vibration
- ✧ whitelist
- ✧ screen-orientation*

This is a great resource for learning about plugins too!

Our plugins (PhoneGap)

- ✧ phonegap-plugin-barcodescanner
- ✧ phonegap-plugin-contentsync
- ✧ phonegap-plugin-push
- ✧ phonegap-plugin-multiview
- ✧ phonegap-plugin-csdk-asset-browser
- ✧ phonegap-plugin-csdk-client-auth
- ✧ phonegap-plugin-csdk-image-editor
- ✧ phonegap-plugin-csdk-send-to-desktop
- ✧ phonegap-plugin-csdk-user-auth

CreativeSDK plugins built for PhoneGap

Plugin Authoring

Plugin.xml defines your plugin

- ✧ A plugin id for registration and discovery, add/remove
- ✧ A version number, author, repo link (similar to package.json)
- ✧ A list of platforms and native headers, source files, resources, JavaScript files
- ✧ Configuration items, permission requirements
- ✧ js-module – the js entry point for your plugin
- ✧ Hooks

Let's look at an example ... <http://github.com/apache/cordova-plugin-device>

A minimum viable plugin.xml

```
<?xml version="1.0" encoding="UTF-8"?>  
<plugin xmlns="http://apache.org/cordova/ns/plugins/1.0"  
  xmlns:android="http://schemas.android.com/apk/res/android"  
  id="org-me-myplugin"  
  version="0.0.1">  
  <name>My Plugin</name>  
</plugin>
```

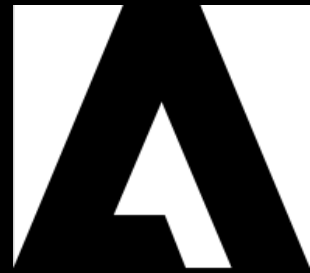
Plugin.xml bonus points – a dependency

```
<dependency id="cordova-plugin-device"/>  
<dependency id="cordova-plugin-console"/>
```

Dependency mashup IS a valid plugin!

See <https://github.com/purplecabbage/cordova-plugin-hardcore/>

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