



# PhoneGap Plugins End to End

Jesse MacFadyen & Holly Schinsky

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# 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!



# Who has used Cordova plugins?

Everyone, 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.
- ✧ 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 a web-view
- ✧ 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-csdlk-asset-browser
- ✧ phonegap-plugin-csdlk-client-auth
- ✧ phonegap-plugin-csdlk-image-editor
- ✧ phonegap-plugin-csdlk-send-to-desktop
- ✧ phonegap-plugin-csdlk-user-auth

*CreativeSDK plugins built for PhoneGap*



# Other registry sites

- When you're popular like us ...
  - <http://plugins.cordova.io> ≤ 1,980 plugins listed
  - <http://www.pluginreg.com/> ≤ 1,612 plugins listed
  - <http://plugins.telerik.com/cordova> ≤ 70 'Verified' plugins

# 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-jesse-myplugin"`
- `version="0.0.1">`
- `<name>My Plugin</name>`
- `</plugin>`

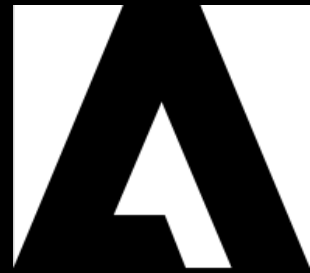
# Plugin.xml bonus points – a dependency

```
<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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