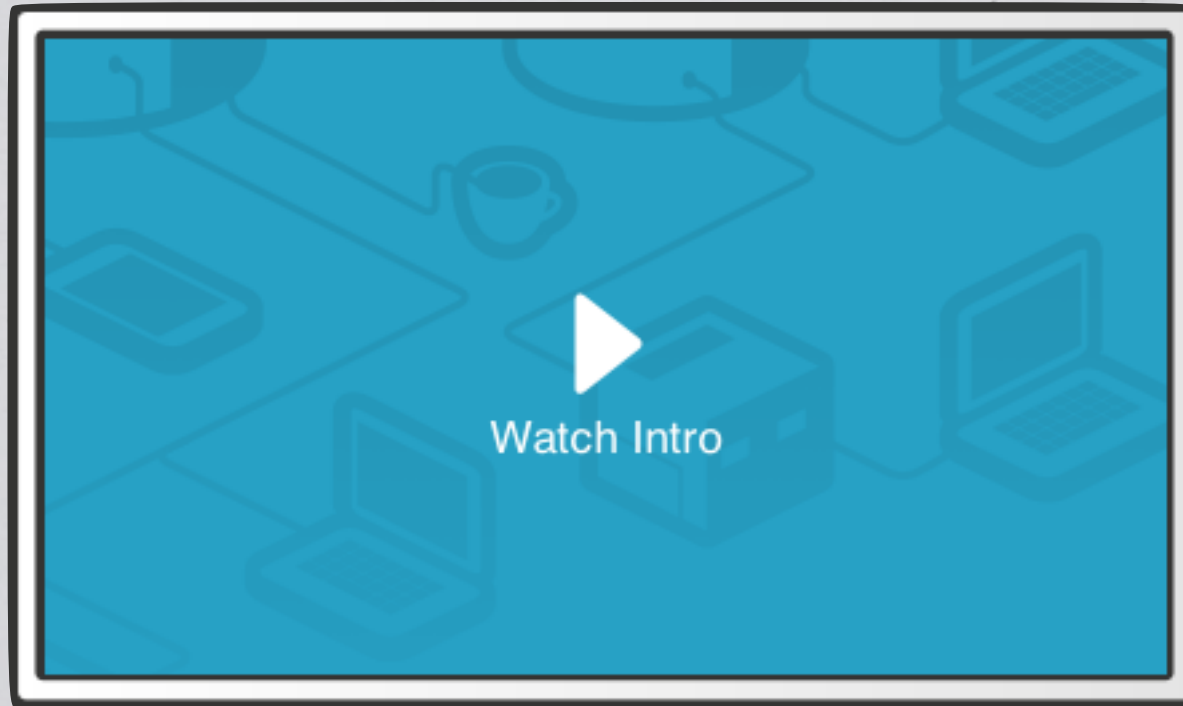

PHONEGAP

Creating apps with the web



Introduction Video



Plugins

- * PhoneGap has the ability to integrate with native-code plugins
- * Examples are Bluetooth, FTP Clients, and barcode scanners

HANDLING DATA

Handling Data

- * SQLite Database

```
var dbShell = window.openDatabase(database_name, database_version, database_displayname, database_size);
```

- * Web Services

- * VPN

WORKING WITH JAVASCRIPT

The Javascript

- * Javascript is a dynamic, weakly-typed language
- * It is intended to do client-side operations in a web application
- * Everything is an associative array

Persisting Data Across Pages

- * Used an object which mimicked a PHP Session
- * Stored in local database as a JSON String
- * Also allowed for crash handling

The Quirks

- * Asynchronous calls
- * Everything is global
- * Events

GUI ELEMENTS

The API

- * PhoneGap includes many APIs to interact directly with the phone
- * Accelerometer, Camera, Geolocation, Notifications, Storage...

Events

- * PhoneGap enables catching and handling of various events:
- * Device Ready, Pause/Resume, Volume Up/Down...
- * The documentation for the API is excellent and contains examples/tutorials: <http://docs.PhoneGap.com>

Plugins

- * Most PhoneGap Plugins are hosted by GitHub
- * Plugins are built in two parts:
 - * Javascript Front-end
 - * Native code for Back-end (Objective-C, Java, C#...)

Plugin Front-End

- * Register plugin in configuration file
- * Generate Javascript to handle how it will be called by the application front-end.
- * Javascript needs to be complimented with native implementation

Plugin Back-End

- * “Back-end” functionality of plugins are written in native code
- * Accesses CordovaInterface Object provided by PhoneGap
- * Cordova is what ties the front-end of the plugins to the back-end

```
@Override
public boolean execute(String action, JSONArray args, CallbackContext callbackContext) throws
JSONException {
    if ("beep".equals(action)) {
        this.beep(args.getLong(0));
        callbackContext.success();
        return true;
    }
    return false; // Returning false results in a "MethodNotFound" error.
}
```


Existing Plugins

- * Bluetooth
- * Augmented Reality
- * Barcode Scanner
- * FTP Client
- * NFC
- * ...
- * Get complete list at: <https://github.com/phonegap/phonegap-plugins>

Handling Dynamic Content

- * PhoneGap does more than just translate Javascript content for an application, it essentially uses the browser of the device
- * Dynamic content can be loaded as you would in a web app (the DOM will be changed and refreshed to show change)

ADVANTAGES & ADVICE

Advantages

- * Not having to build an app for each platform
- * Front end is all in HTML5 and CSS3
- * Debug and test in a browser
- * New feature: Build application in cloud (compile for iOS, Android, webOS... without having to maintain native SDKs)

Advice

* QUnit

* JS Unit Testing

Prettydate tests

Mozilla/5.0 (Macintosh; Intel Mac OS X 10_6_8) AppleWebKit/535.11 (KHTML, like Gecko) Chrome/17.0.963.56 Safari/535.11

1. prettydate basics (1, 5, 6)

1. undefined, expected: "just now"
2. undefined, expected: "1 minute ago"
3. undefined, expected: "1 hour ago"
4. undefined, expected: "Yesterday"
5. undefined, expected: "2x days ago" result: "2 days ago", diff: "2x
"2 days ago"
6. undefined, expected: undefined

Tests completed in 27 milliseconds.
5 tests of 6 passed, 1 failed.

Frameworks

- * Backbone.js, Ember.js, Angular.js, Knockout.js etc...
- * Allows for a simpler, cleaner JS project
- * Eases the management of Data access and handling

SUMMARY

Takeaways

- * PhoneGap is super easy to use
- * Hard to keep large JavaScript project clean and readable
- * Great for simple-cross platform apps
 - * When requiring plugins, you can lose some, but not all, advantages

Resources:

- * <http://phonegap.com/> : PhoneGap Info
- * <http://jquerymobile.com/> : JQuery mobile styling
- * <https://developer.mozilla.org/en-US/docs/JavaScript/Reference> : JavaScript reference
- * <http://sqlite.com/docs.html> : SQLite info
- * <http://qunitjs.com/> QUnit info
- * <http://backbonejs.org/> : Backbone Framework info
- * http://docs.phonegap.com/en/2.6.0/cordova_geolocation_geolocation.md.html#Geolocation : API tutorial
- * http://docs.phonegap.com/en/2.6.0/guide_getting-started_android_index.md.html#Getting%20Started%20with%20Android : Android Getting Started
- * http://docs.phonegap.com/en/2.6.0/guide_plugin-development_index.md.html : Phonegap Plugin Guide

QUESTIONS?
