

PhoneGap

The open source mobile framework
that supports 6 platforms

presented by Lukas Jeter

What is PhoneGap?

PhoneGap is a framework that is based on the open standards of HTML5 and allows developers to use common web technologies (HTML, CSS, and JavaScript) to build applications for multiple mobile platforms from a single code base.




History

- Project started at an iPhoneDevCamp in San Francisco, by co-creators Brock Whitten and Rob Ellis
- Won People's Choice Award at O'Reilly Media's 2009 Web 2.0 Conference
- Initially supported iPhone, Android and BlackBerry
- Currently developed by Nitobi Inc. under an MIT license

With PhoneGap you can

- Take advantage of HTML5 and CSS
- Use JavaScript to write your code
- Access Native Features of the supported platforms
- Deploy your app to Multiple Platforms
- Take advantage of the PhoneGap Build service
- Use Tools form the community
- Add PhoneGap Plugins to your project
- Get help from the growing community

Supported features

	 iPhone / iPhone 3G	 iPhone 3GS and newer		 OS 4.6-7	 OS 5.x	 OS 6.0+			
ACCELEROMETER	✓	✓	✓	✗	✓	✓	✓	✓	✓
CAMERA	✓	✓	✓	✗	✓	✓	✗	✗	✓
COMPASS	✗	✓	✓	✗	✗	✗	✗	✗	✗
CONTACTS	✓	✓	△	✗	✓	✓	✗	✓	✓
FILE	✗	✗	✓	✗	✓	✓	△	✗	✗
GEO LOCATION	✓	✓	✓	✓	✓	✓	✓	✓	✓
MEDIA (AUDIO RECORDING)	△	△	✓	✗	✗	✗	✗	△	✗
NOTIFICATION (SOUND)	✓	✓	✓	✓	✓	✓	✓	✓	✗
NOTIFICATION (VIBRATION)	✓	✓	✓	✓	✓	✓	✗	✓	✓
STORAGE	✓	✓	△	✗	△	✓	✓	✗	✗

PhoneGap Tools

Because PhoneGap is an open source, community-supported project, many extensions to the basic framework are available.

Examples:

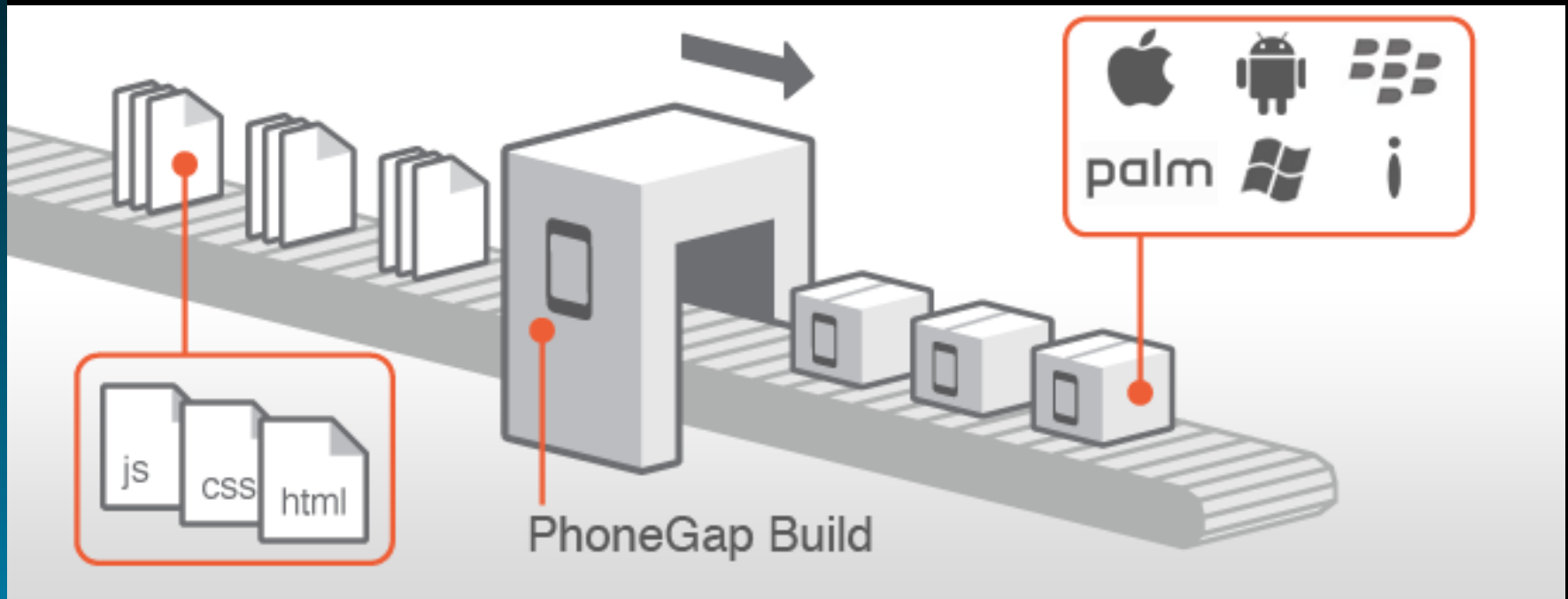
- Plugins
 - Barcode Scanner
 - File Uploader
- JavaScript libraries
 - JQuery Mobile
 - The Dojo Toolkit
- Tools
 - Sencha Touch

How it works

1. Install the native sdk of your target mobile platform
2. Download the PhoneGap zip file
3. Setup a new project in the target platform with PhoneGap parameters
4. Write HTML & JavaScript mobile application
5. Build & deploy using target platform's SDK

For platform-specific step-by-step instructions see: <http://www.phonegap.com/start>

“Write once. Compile in the cloud.
Run anywhere.”



The PhoneGap Build service

- Write app using HTML, CSS or JavaScript
- Upload it to the PhoneGap Build service
- Get back app-store ready apps for Apple iOS, Android, Palm, Symbian, BlackBerry
- Current development to also support Windows, MeeGo and Bada
- PhoneGap Build service is currently in beta testing and is free to register and use
- Will remain free for open source projects

<https://build.phonegap.com/>

API Reference

Accelerometer

Tap into the device's motion sensor.

Compass

Obtain the direction that the device is pointing.

Device

Gather device specific information.

Camera

Capture a photo using the device's camera.

Contacts

Work with the devices contact database.

Events

Hook into native events through JavaScript.

API Reference, continued

File

Hook into native file system through JavaScript.

Media

Record and play back audio files.

Notification

Visual, audible, and tactile device notifications.

Geolocation

Make your application location aware.

Network

Quickly check the network state.

Storage

Hook into the devices native storage options.

API Reference, class example

Accelerometer

Captures device motion in the x, y, and z direction.

Methods

- `accelerometer.getCurrentAcceleration`
- `accelerometer.watchAcceleration`
- `accelerometer.clearWatch`

Arguments

- `accelerometerSuccess`
- `accelerometerError`
- `accelerometerOptions`

Objects (Read-Only)

- `Acceleration`

API Reference, method example

`accelerometer.getCurrentAcceleration`

Get the current acceleration along the x, y, and z axis.

```
navigator.accelerometer.getCurrentAcceleration(  
    accelerometerSuccess, accelerometerError);
```

Description:

The accelerometer is a motion sensor that detects the change (delta) in movement relative to the current device orientation. The accelerometer can detect 3D movement along the x, y, and z axis.

The acceleration is returned using the [accelerometerSuccess](#) callback function.

Supported Platforms:

- Android
- BlackBerry WebWorks (OS 5.0 and higher)
- iPhone

API Reference, method example cont.

Quick Example:

```
function onSuccess(acceleration) {
    alert('Acceleration X: ' + acceleration.x + '\n' +
        'Acceleration Y: ' + acceleration.y + '\n' +
        'Acceleration Z: ' + acceleration.z + '\n' +
        'Timestamp: ' + acceleration.timestamp +
        '\n');
};

function onError() {
    alert('onError!');
};

navigator.accelerometer.getCurrentAcceleration(onSuccess,
onError);
```

iPhone Quirks:

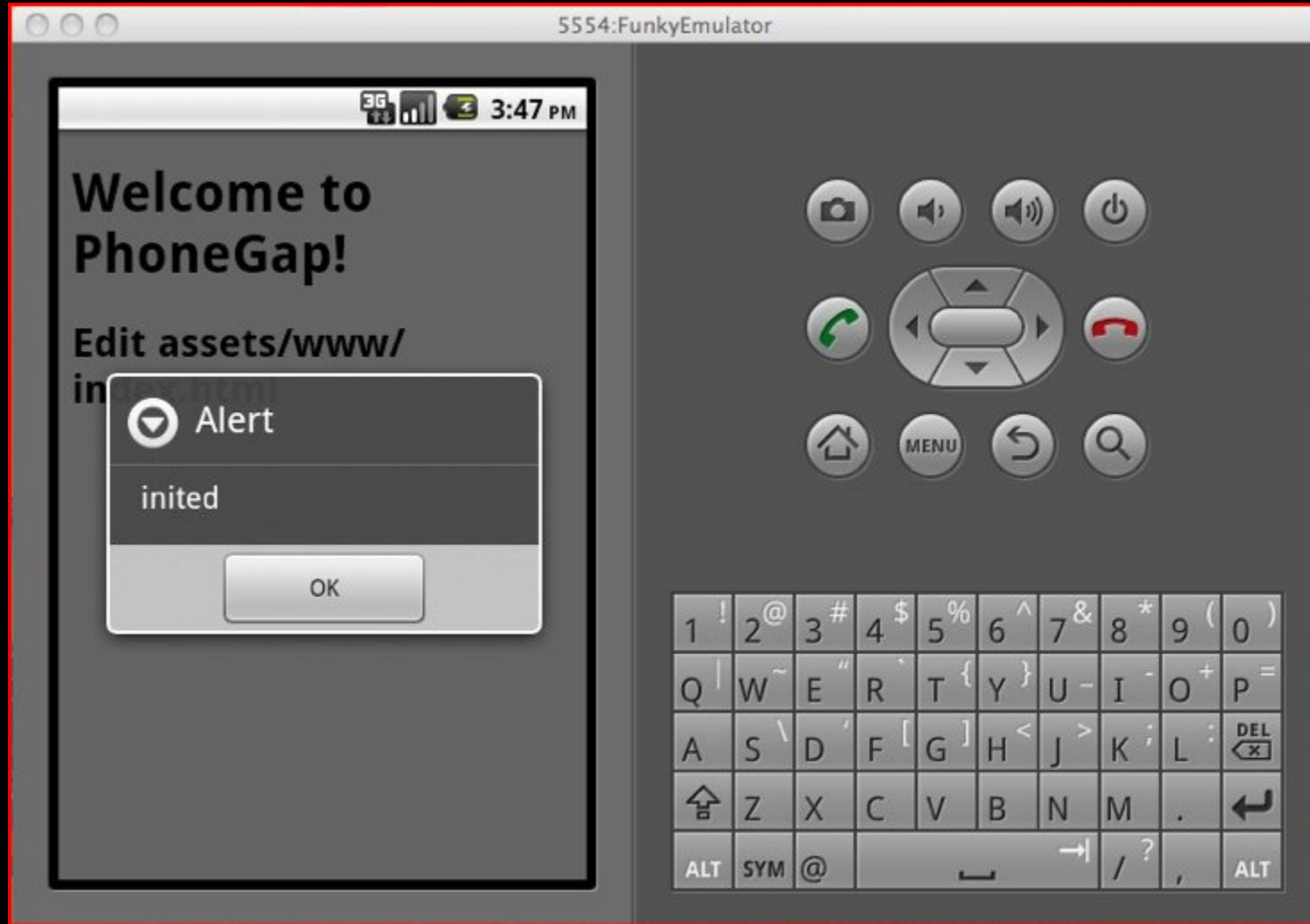
- iPhone doesn't have the concept of getting the current acceleration at any given point.
- You must watch the acceleration and capture the data at given time intervals.
- Thus, the `getCurrentAcceleration` function will give you the last value reported from a `phoneGap watchAccelerometer` call.

Hello PhoneGap: index.html

```
<!DOCTYPE HTML>
  <html>
    <head>
      <title>PhoneGap</title>
    </head>
    <body>
      <h1>Welcome to PhoneGap</h1>
      <h2>Edit assets/www/index.html</h2>

      <script type="text/javascript" charset="utf-8" src="phonegap.js"></script>
      <script type="text/javascript" charset="utf-8">
        document.addEventListener("deviceready", function() {
          alert('initialized');
        }, true);
      </script>
    </body>
  </html>
```

Sample app: screenshot



Who uses PhoneGap?

- **JustOneMore** *by R i b o t L i m i t e d*

Designed to help you discover inspiring video content Just One More provides a simple, addictive interface that brings the very best of Vimeo to the iPad/iPhone. Launched on the App Store in February and built using web-only technologies this free app shows that you really can make immersive, content-rich mobile apps using the latest in HTML5, CSS3 and JavaScript.

- **Orbium** *by B j ö r n N i l s s o n*

Fast moving action/puzzle game with high quality graphics and touch screen optimized controls. The aim is for it to work in any browser, both mobile and desktop. PhoneGap for app store presence.

- **harmonious.** *by T h e A n g r y R o b o t*

Z o m b i e F a c t o r y

Harmonious is a “smart” sketchpad that uses the lines you've already drawn to influence new lines. You can create some really artistic pieces and then upload them to the harmoniousapp.com gallery site. It uses the Harmony library from Mrdoob, jQTouch for interactions and the Glyphish icons, then wraps the whole thing up in PhoneGap.

Key Benefits

- Requires knowledge of common web technologies (HTML, CSS, JavaScript) rather than multiple distinct mobile platforms
- Open source – can be altered or extended by anyone
- Currently offers the widest major platform coverage among other similar frameworks

Limitations

- Applications are rendered using the platforms' web browser engine, not with the native UI objects
- Doesn't support *every* available platform... yet

Resources

- PhoneGap Docs: docs.phonegap.com
- PhoneGap Wiki: wiki.phonegap.com
- PhoneGap Google Group: [The PhoneGap Google Group](#)
- PhoneGap IRC:
 - Server: irc.freenode.net
 - Channel: #phonegap

Support Packages

- Typical support packages are available to enterprise customers
- Services include private forums, phone and email support, training, etc.
- Prices range from \$250/yr to \$50,000/yr

For more info & to download the
framework

www.phonegap.com

Thank You!