PhoneGap

Outline

Being an open source framework that is designed to establish the hybrid application using HTML5, JavaScript and CSS, Phonegap now got itself a new name, "Cordova", since Apache Foundation took over the administration.
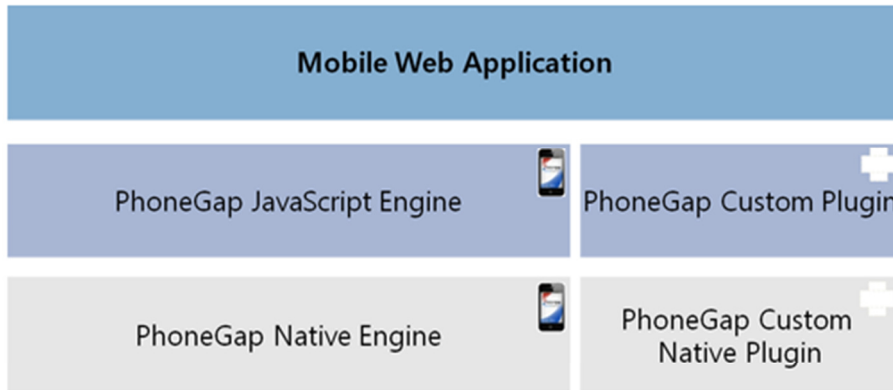
Description

Refer to the following for how PhoneGap is made of. Plugs-in are available for each element for functional expansion.

PhoneGap is made of a couple of components:

- PhoneGap JavaScript API to take control of the device's unique functions within JavaScript to be run in the browser (Web-view, etc.)
- Native Code by platform that is synchronized to link PhoneGap JavaScript.

PhoneGap adds PhoneGap Custom Plug-In and PhoneGap Custom Native Plug-In that comprise Plug-in implemented for plug-in functions, other than JavaScript intended for control of Device API and Native Code of SDK.

Refer to the following figure for how PhoneGap uses Device API where web standard technologies do not apply. Realized by JavaScript to take control of Device API, PhoneGap.js and WebView by platform are made of PhoneGap.jar and PhoneGap.framework, being a set of Native Codes interlocked with Mobile Web Application. Meanwhile, PhoneGap Plug-ins are made of JavaScript implementor and Native implementor. JavaScript Customized Plugs-in are implemented by calling Cordova.exec Function, whereas the class CDVPlugin is inherited for customized plugs-in.

Category	Description
Mobile Web Application	HTML, CSS, User Defined JavaScript
PhoneGap JavaScript Engine	Implemented by JavaScript for Device API Control cordova(PhoneGap).js
PhoneGap Native Engine	Native Code that inherits WebView by platform for interworking with Mobile Web Application cordova(PhoneGap).jar, cordova(PhoneGap).framework
PhoneGap Custom Plug-In	JavaScript Code for Plug-in added for functional expansion User Defined JavaScript Plug-In JavaScript Composition may vary by Native Code composition for plug-in for different platforms
PhoneGap Custom Native Plug-In	Platform Native Code for Plug-in added for functional expansion

Composition of Library

PhoneGap Project has the general device application SDK Project in it, supplemented by PhoneGap Framework and additional web resouces.

Meanwhile, PhoneGap Library comprises web resources and Native Codes and JavaScript Codes intended for linkage by device.

Android

- cordovalib.jar : Native Code to call functions unique to Android
- cordova.js : Contains Device APIs in it to call Native Code functions in cordovalib.jar in the form of plug-in

iOS

- CordovaLib.xcodeproj : Sub-project where Native Code intended for calling functions unique to iOS is required
- cordova.js : Contains Device APIs in it to call Native Code functions in cordova.framework in the form of plug-in

Device API that supports PhoneGap

Refer to the following Device API for how the functions unique to the device is supported via Device Hybrid Application:

PhoneGap Device API	Outline
Accelerometer	Accesses motion sensor (acceleration information, etc.)
Camera	Accesses device camera application
Capture	Accesses functions related to audio, image and video captures
Compass	Processes device pointing orientation
Connection	Accesses device cellular and Wifi information
Contacts	Accesses Contact DB in the device (create contact, search, etc.)
Device	Accesses device H/W and S/W information (title of device, version of platform, etc.)
Events	Implements the Method Deviceready once and for all when PhoneGap is loaded. (Entry Point . .)
File	Reads, writes and explores file system layer
Geolocation	Accesses device GPS sensor (location, etc.)
Media	Allows the device to store and write audio files
Notification	Provides visual and audial information and vibration notification. (Generates alert, confirm, beep and vibrate) .)
Storage	Accesses device storage

PhoneGap License

PhoneGap has been donated to Apache Software Foundation and now got itself a new name of "Apache Cordova". PhoneGap is thus awarded Apache License 2.0 and now open source.
Visit the following URL for PhoneGap license:

http://www.phonegap.com/about/license

Platform compatible with PhoneGap (compatibility)

Visit the following URL for platforms by device using PhoneGap. See the following for how device API is made of, using Device API Doc.

http://www.phonegap.com/about/feature

PhoneGap Reference

Using Cross-domain (Domain Whitelist Guide)

PhoneGap technically blocks network access by way of the security policy.　A developer intended to use PhoneGap should thus refer to the following to be granted an access to a domain or sub-domain:

Android

- Add domains for use of external resources by declaring external domains in Res/xml/config.xml:

```
<cordova>
<accessorigin="http://127.0.0.1*"/><!-- allow local pages -->
        <accessorigin="https://example.com"/>
        <accessorigin="https://example.com"subdomains="true"/>
        /* Sub-domain configurations */

        <accessorigin=".*"/>
        /*　Permitting accesses to all domains */
</cordova>
```

iOS

- Add domains for use of external resources by declaring external domains in Supporting Files/config.xml:

```
<accessorigin="https://example.com">
```

References

- http://www.phonegap.com/

http://www.egovframe.go.kr/wiki/doku.php?id=egovframework:hyb3.5:hrte:deviceapi

Outline

Implementation of Device API shall be available in both Android and iOS platform using PhoneGap Plug-in Architecture Pattern based upon JavaScript Engine and Native Engine in the web view area of a mobile application.

Refer to the following, relevant to Device API, for how Phonegap 4.0.0 is made of:

Device API Docs

Device API

- Accelerometer [Restrictions]

- [Camera](#) [[Restrictions](#)]
- [Capture](#) [[Restrictions](#)]
- [Compass](#) [[Restrictions](#)]
- [Connection](#) [[Restrictions](#)]
- [Contacts](#) [[Restrictions](#)]
- [Device](#) [[Restrictions](#)]
- [Events](#) [[Restrictions](#)]
- [File](#) [[Restrictions](#)]
- [Geolocation](#) [[Restrictions](#)]
- [Media](#) [[Restrictions](#)]
- [Notification](#) [[Restrictions](#)]
- [Storage](#) [[Restrictions](#)]

Device APIs for eGovFramework

- [Interface Android](#)
- [Interface iOS](#)

- [PKIMagicXSign](#)
- [PKIWizSign](#)
- [PKIXecureSmart](#)