Building an Application for PhoneGap

This guide is an attempt to introduce the reader into the wonderful world of PhoneGap. I will start off with a brief questions and answer to try to answer any preliminary questions you have.

FAQ

I completely understand everything. Where is the code and example application?

The code is saved in a Github account.

Username: national-instruments-ae

Email: national.instruments.ae@gmail.com

Password (both accounts): applicationsengineer

Feel free to head down to the Testing The Application section for a brief rundown on actually installing the application.

How did you learn about PhoneGap?

One of the best tutorials is on tutsplus.

http://mobile.tutsplus.com/tutorials/phonegap/phonegap-from-scratch/

Don't try to follow their suggestion about coding in Eclispe. For simple web applications just use a text editor. If you are in love with Eclispe for web development then by all means go for it. Also, their guide does not utilize PhoneGap Build. Please see the section about PhoneGap Build.

What is PhoneGap and how is it different from other solutions?

PhoneGap is a cool application that allows you write a single application that can deploy to almost any mobile device. It does this by running the application like a web browser. This allows the programmer to use all of their existing favorite web technologies in the development of the application. The major positive is that phonegap can be written once for all devices. The downside is that the application is a non-native application and will run significantly slower than most native applications.

This sounds interesting but I have never tried web programming before. Where do I get this amazing knowledge?

There are nearly infinite places to learn about web programming. A solid choice is to do codeacademy.com lessons until you feel comfortable building a very simple site. After that it is all basically just looking at reference sites like www3Schools and searching Google for technical examples.

http://www.codecademy.com/tracks/web
http://www.codecademy.com/tracks/javascript
http://www.w3schools.com/

PhoneGap Setup

The initial setup for PhoneGap applications is very similar to the setup for any web development. Ensure you have a way of writing code, (be it a text editor or full suite development) and a way of testing code (using a virtual server like MAMP or WAMP). Everything else is pretty succinctly covered in tutorials like the one on TutsPlus.

http://mobile.tutsplus.com/tutorials/phonegap/phonegap-from-scratch/

I am but a novice web developer myself but I cannot emphasize enough how much using frameworks will help you in building a prototype application. Frameworks can make a great looking application very quickly. One I have found success with in the past is Twitter Bootstrap.

The main takeaway I would like to leave you with is don't follow their advice about the building strategies. Use the PhoneGap Build service as provided by Adobe. It will save you time in the long run even though it caused me some frustration.

PhoneGap Build

This is the lifesaving portion of the project. This is a free service that Adobe provides that allows the near instant deployment of a PhoneGap application to any supported device. This is done by uploading all of the code to a repository at Github and then syncing the Github repository to PhoneGap Build.

http://github.com
https://build.phonegap.com/

Both of these sites offer useful tutorials on how to use their services. I would especially recommend reading briefly about how Github works. The application made by Github is pretty good but sometimes is unable to resolve conflicts. Often one must use the command line to resolve an issue and it helps immensely to be at least somewhat comfortable with Github.

When using this service do not include any library files like Cordova.js that most tutorials suggest requiring. PhoneGap Build will remove those files if they are not named exactly how it expects. For example, I included Cordova.2.9.0.js as a source link in the HTML file. I also included this file in source control. Unfortunately, PhoneGap Build removed my Cordova.X.X.X.js and replaced it with Cordova.js. Without the help of StackOverflow I would have never discovered this quirk in their service.

Testing The Application

When you actually want to install the application to your device it is surprisingly simple. I will try to walk you through the steps to install on an Android device.

1. Enable the Installation of apps from Unknown Sources. This is either in Application Settings or Security on your devices settings.
2. Log into PhoneGap with the newly created AE Github account. (Username='national-instruments-ae' Password='applicationsengineer')
3. Find the repository labeled 'phonegap-NI' and select the option to pull Latest.
4. Scan the QR Code with the device you would like to test after the build progress says complete.
5. Accept the download and installation on the device.
6. Have fun with the app!

Updating the Application

In order to make changes and test them on the device, it is necessary to sync all code with the Github repository, then select 'Pull Latest' on PhoneGap Build and re-install the application to your device. This process certainly seems tedious however it is often faster than the

deployment time to an Android emulator using tradition app development.