Mobile Application Presentation OpenStreet Sencha Leaflet Map **Application Logic** (JavaScript) Mobile Platform Neutral **Abstraction Layer** (PhoneGap) Mobile Native Adapter Layer (PhoneGap Native Plugin) **Location Transmitter** (Background Process)

This diagram demonstrates the mobile application subsystem.

The presentation layer is built using the Sencha Touch Framework and remains consistent throughout all devices, except for that it uses different CSS files depending on the detected platform.

The application logic layer is all done with HTML5 Javascript. We use PhoneGap as a mobile platform abstraction layer that will call methods in a PhoneGap plugin to call native APIs.

The mobile native adapter layer is the actual phonegap plugin. It contains either the iOS Plugin or Android Plugin depending on the mobile device on download from the Application Store (e.g., in the Play Android store the application will use the Android plugin). This will use the device's native APIs to get the rider's location and send it to the DCS server in the "background".

iOS Plugin

Android Plugin