**Nevada Climate Change Portal Mobile Application**

**Computer Science & Engineering**

**The University of Nevada, Reno**

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**1. Abstract**

The purpose of this project is to create a mobile application for the Nevada Climate Change Portal. The application will attempt to combine the diverse number of data sources presented in the Portal in a single package which is easily accessible from mobile platforms. The application will specifically be focused on tablet use and will primarily target the IOS and Android platforms, both of which have a significant mobile/tablet presence.

As a secondary objective, the application will attempt to provide a convenient interface for contributing data to the various data sources present in the Portal. This would take advantage of the potential to use mobile devices in the field to enter data directly from data collection sources.

**2. Description**

As stated above, the primary purpose of this project is to create a mobile version of the Nevada Climate Change Portal website. This will in particular focus on data sources within the portal. The project will attempt to provide access to all of the data presented in the normal website on mobile platforms. It will particularly focus on the Android and iOS platforms.

The primary goals of the application are as follows:

* Provide mobile access to all data resources contained in the Portal (where possible).
* Provide a mobile and tablet-friendly version of the Demeter Framework for displaying data. This will likely involve coupling the data sources used by Demeter with a new, mobile-friendly frontend.
* Provide mobile access (at least in summary form) to other informational areas of the portal.
* Provide access to Portal media resources .

Data in the portal is presented in a variety of formats, from dynamic page content to Silverlight to simple archive files. Unifying these data sources will be one of the primary challenges of the project (particularly as Silverlight is not available on the majority of mobile platforms).

To ease development across mobile platforms (as application development differs significantly between platforms), the Apache Cordova (formerly PhoneGap) framework will likely be used. This will allow one version of the project to be developed using HTML5/JavaScript which can be easily compiled and deployed across Android, iOS, Windows Phone and others.

The audience of the project will be the same as the audience of the main Portal: researchers and contributors to the system as well as other users needing the research data or looking for information related to Nevada Climate Change. It is hoped that creating a mobile version of the Climate Portal will also expand the potential audience for it by making it more convenient to access,

The current external advisor of the project is Michael McMahon, Jr. Mr. McMahon was instrumental in the development of the original Climate Portal and is therefore the best person to consult regarding the makeup of the site and how data is processed and presented.

**3. Potential/Significance**

The significance of this project is that it will allow users of the Climate Portal to both access and contribute to the Nevada Climate Portal from mobile platforms. This is valuable in that it will allow this data to be accessed conveniently outside of the main site, something which could improve the visibility of the site as well as provide access for individuals out in the field or without convenient desktop access.

**4. Budget/Justification**

The budget for this project should be low but may require tablets for testing certain platforms. iOS in particular can be difficult to simulate for testing purposes and generally requires an actual iPad/Mac to accurately test on.

5. Related Resources