The current system that research scientists are using to gather environmental data from various sensors across different geographical locations has been a problem for the scientist because the interface is difficult to use and the different proprietary formats that the sensor manufactures use. Part of the problem with the interface is that it is “relevant to computer science, talks about queries and codes and rules that's not the language of science.” (Dr. Pennington pg. 13) Another problem is that there are different data formats for different sensors, so the scientist needs to be able to describe the file format so that the system can “take those proprietary formats and turn them into something more standard.” (Dr. Pennington pg. 19) This has been an ongoing problem for the scientists. And they are requesting for a new system that will enhance the previous system by fulfilling the following functionalities as per the requirement definition handout in Appendix C.

* Improve the user interface for the data property specification tool;
* Provide scientists with the ability to create, retrieve, update, or delete sensor data properties using a mobile device;
* Provide the ability to describe the file formats for different types of sensors to allow the system to read a file and check for anomalies using the appropriate properties; and
* Provide the ability to graph the processed data and show where data readings are not satisfying specified data properties.