Non-Functional

1. The system shall be accessible though Internet browsers: Firefox, Google Chrome, Safari, and Internet Explorer.
2. The system shall be continuously available.

Wizard Training

1. The system shall at the main home screen have a wizard training guide button.
2. When the wizard training guide button is pressed the system shall display a slide that will instruct the users on how to select a sensor though images and icons.
3. The system shall have a next button in the ‘select a sensor’ slide allowing the user to move to the next slide.
4. The system shall have a previous button in the ‘select a sensor’ slide allowing the user to move to the previous slide.
5. In the ‘select a sensor’ slide the system shall have the previous button disabled.
6. The system shall have an exit button in the ‘select a sensor’ slide allowing the user to exit the wizard training guide.
7. When the next button is pressed from the ‘select a sensor’ slide the system shall display a slide that will instruct the users on how to specify a scope though images and icons.
8. The system shall have a next button in the ‘specify a scope’ slide allowing the user to move to the next slide.
9. The system shall have a previous button in the ‘specify a scope’ slide allowing the user to move the pervious slide.
10. The system shall have an exit button in the ‘specify a scope’ slide allowing the user to exit the wizard training guide.
11. When the previous button is pressed in the ‘specify a scope’ slide the system shall display the slide for how to select a sensor.
12. When the next button is pressed the system shall display a slide on how to specify a scope slide the system shall display a slide that will instruct the users on how to specify a pattern though images and icons.
13. The system shall have a next button in the ‘specify a pattern’ slide allowing the user to move to the next slide.
14. The system shall have a previous button in the ‘specify a pattern’ slide allowing the user to move to the previous slide.
15. The system shall have an exit button in the ‘specify a pattern’ slide allowing the user to exit the wizard training guide.
16. In the ‘specify a pattern’ slide the system shall disable the next button.
17. When the previous button is pressed the system shall display the slide for how to specify a scope.

Map Requirements

1. The system shall display a world map.
2. The system shall allow users the capability to zoom in, zoom out and drag map.
3. The system shall have five views; world, regions, country, section.
4. The system shall zoom in to a country when user clicks on a country on the world view.
5. The system shall zoom in to a region when user clicks on a region on the country view.
6. The system shall zoom in to a section when user clicks on section on the region view.
7. The system shall display icons representing active sensors on the selected section.

Preferences

1. System shall have a text field for an "Email
2. System shall have a text field for a "Phone"
3. System shall have a text field for a "Password"
4. System shall have a drop down menu for an alert notification: email, text
5. System shall have a text field for an "Affiliation"
6. System shall have a save button
7. System shall have a cancel button
8. The system shall allow a user to update an email address
9. The system shall allow a user to update a phone number
10. The system shall allow a user to update a password
11. The system shall allow a user to update an alert notification
12. The system shall allow a user to update his/her affiliation
13. The system shall verify if the email entered is valid
14. The system shall verify if phone entry has 10 digits
15. When all fields are filled, a user can save changes.

Login

1. The system shall have a textbox that will allow users to enter their username.
2. The system shall have a textbox that will allow users to enter their password.
3. The system shall mask the user’s password input into the password textbox as a series of black dots.
4. The system shall have a submit box.
5. The system shall have a label for the username textbox.
6. The system shall have a label for the password textbox.
7. The system shall have a cancel button.
8. The system shall have a forgot username button.
9. The system shall have a forgot password button.
10. The system shall have a create user button.
11. When the user clicks on the submit button the system shall attempt to verify the user inputted username and password.
12. When the user clicks on the cancel button the system shall close the login screen overlay and return to the user’s last navigated page.
13. If the user inputted username and password is verified the system shall log the user into the system and displays the tracking page.
14. If the user inputted username and password is incorrect the system shall display a login error message.
15. When the user clicks on the forgot username button the system shall prompt the user to enter their email address to have their username sent to their email.
16. When the user clicks on the forgot password button the system shall prompt the user to enter their email address to have their password sent to their email.
17. When the user clicks on the create user button the system will prompt the user to enter their email address, username, password, affiliated institution, and name.

Main Page

1. The system shall have the system name at the top center of the screen
2. The system shall have a menu bar on the upper end but below the banner of the screen.
3. The system shall have a “Login” button in the menu bar align to the right end of the screen.
4. The system shall have a “Welcome” text in the center of the screen explaining what the system is supposed to do and who it is designed for.
5. The system shall have a “Wizard” button on the bottom left hand side of the screen.
6. The system shall have a “Proceed to Sensor Map” button on the bottom center of the screen.
7. When the “Login” button is clicked the system shall display a screen over the welcome page which will contain the login page.
8. When the “Wizard” button is clicked the system shall redirect to another page where the wizard guidance will be displayed.
9. When the “Proceed to Sensor Map” button is pressed the system shall redirect to sensor search map for the guest user.

Sensor Selection

1. The system shall have a “Back to Map” button located at the upper right hand side of the screen.
2. The system shall have a table in the center of the screen which will have three columns: “Sensor”, “Location”, and “Type”.
3. The system shall have a table that will have a scroll bar on the right hand side of the table.
4. The system shall have a table with the “Sensor” column that will display the serial number of the associated sensor.
5. The system shall have a table with the “Location” column that will display the longitude and latitude gps coordinates of associated sensor.
6. The system shall have a table with the “Type” column that will display what the associated sensor measures.
7. The system shall have columns on the table that are clickable.
8. The system shall have rows on the table that are clickable.
9. The system shall have a combo box on the right of the table that will contain the selectable options “Filter”, “Sensor”, “Location”, “Type”, the default selection will be “Filter”.
10. The system shall have a text box beneath the combo box where the user can type in text.
11. When the “Back to Map” button is press the system shall redirect to the map of sensor locations.
12. When the heading of one of the columns is click the system shall sort the table based on the items of the clicked column.
13. When a row of data on the table is clicked the system shall redirect to the “develop data properties” page passing the clicked sensor serial number.
14. When an item other than “filter” is selected from the combo box and text is inputted into the text box the system shall search the selected column for the typed text, displaying all sensors that meet the condition and region of interest.

Develop Data Properties

General Screen

1. The system shall have the name of the system at the top center of the screen.
2. The system shall have a menu bar on the top upper end but below of the screen.
3. The system shall have a “Home” button in the menu bar located on the left end.
4. The system shall have a “Sensors” button in the menu bar located to the right of the “Home” button.
5. The system shall have a “File Format” button in the menu bar located to the right of the “Sensors” button.
6. The system shall have a “Preference” button in the menu bar located to the right of the “File Format” button.
7. The system shall have a “Logout” button in the menu bar located on the right end.
8. The system shall have a list of the data properties previously created located on the left side of the screen below the menu bar.

Property Graph

1. The system shall have a list of all the data properties previously created. A data property is composed of a scope and a pattern. The user shall be able to click on these properties.
2. The system shall have a graph that displays any record of a data property. A data property is composed of a scope and a pattern. It shall be located in the center of the screen below the menu bar. The graph can be a line graph, a bar graph or a pie chart.
3. The system shall have a list of the anomalies located on the right side of the screen below the menu bar.

Setting A Scope

1. The system shall have a radio button that corresponds to the “Global Scope”. It shall be located below the graph.
2. The system shall have a radio button that corresponds to the “Before R” scope. It shall be located below the graph.
3. The system shall have a radio button that corresponds to the “After L” scope. It shall be located below the graph.
4. The system shall have a radio button that corresponds to the “Between L & R” scope. It shall be located below the graph.
5. The system shall have a radio button that corresponds to the “After L until R” scope. It shall be located below the graph.

Setting A Pattern

1. The system shall have a “scroll down” menu which contains all selectable patterns available to the user. This menu shall be located below the radio buttons.
2. The system shall have a “scroll down” menu which contains the type of data being measured. The type can be temperature, humidity, among others.
3. The system shall have a “scroll down” menu which contains the following mathematical relational symbols:

|  |  |
| --- | --- |
| Definition | Symbol |
| Less than | < |
| Greater than | > |
| Less than or equal | <= |
| Greater or equal | >= |
| Equal | = |

1. The “scroll down” menu shall be located below the “Patterns” “scroll down” menu and to the right of the “Type” scroll down” menu.

Stimulus

1. When the “Home” button is clicked, the system shall redirect to the original home page. The original home page is the first screen after the credentials have been approved.
2. When the “Sensors” button is clicked, the system shall redirect to a new page with the list of the sensors.
3. When the “File Format” button is clicked, the system shall redirect to a new page where the user can select a format to download anomalies found by the system. (THIS IS AN ASSUMPTION, SINCE WE HAVENT GOTTEN THE MEMO’S FEEDBACK FROM THE CLIENT)
4. When the “Preferences” button is clicked, the system shall redirect to the “Preferences” page.
5. When the radio button “Global Scope” is chosen, it is shaded black and no other radio button is selected. The graph will change according to the new scope value. By default, the system will display the values of the last data property created.
6. When the radio button “Before R” is chosen, it is shaded black and no other radio button is selected. The graph will change according to the new scope value. By default, the system will display the values of the last data property created.
7. When the radio button “After L” is chosen, it is shaded black and no other radio button is selected. The graph will change according to the new scope value. By default, the system will display the values of the last data property created.
8. When the radio button “Between L & R” is chosen, it is shaded black and no other radio button is selected. The graph will change according to the new scope value. By default, the system will display the values of the last data property created.
9. When the radio button “After L until R” is chosen, it is shaded black and no other radio button is selected. The graph will change according to the new scope value. By default, the system will display the values of the last data property created.
10. When a value is selected from the “Patterns” “scroll down” menu, the graph will change according to the new pattern value. By default, the system will display the values of the last data property created.
11. When a value is selected from the relational mathematical symbols “scroll down” menu, the graph will change according to the new relational symbol value. By default, the system will display the values of the last data property created.
12. When a data property from the list of data properties is clicked, a pop-up window will appear, showing the description of that data property. It shall have the date it was created, scope and pattern values, and the name of it’s creator.
13. When an anomaly is clicked, a pop-up window will appear, showing the description that anomaly.

Mis.

1. The system shall have a menu bar with the following items: Home, Sensor, Tracking, Preferences, Help, Login/Logout.
2. The system shall have all the menu bar items be clickable.