User Guide

The website functions as follows:

1. Hover the mouse over an energy icon to see the name of the icon.
2. Click on the icon, and a pop up box will appear, displaying information about how that particular source of energy is doing in terms of the building. Only the first four icons have been given values measuring energy efficiency. As such, the other five boxes are simply filler boxes for visual example purposes.
   a. The first floor of the aquarium is drawn out in the pop up box
   b. The bar on the bottom left corner of the floor layout indicates: a red filling of a room as energy inefficient as possible, and a green filling of a room as energy efficient as can be, given the current moment based on predictions given by energy models supplanted to us
   c. Only four measurements are currently shown: zone mean air temperature, sensible heating rate, environment temperature, and environment barometric pressure.
   d. Zones are a set of rooms that share the same measurement of energy efficiency value. Zone mean air, for example, shows that the staff restroom, open office, and office111 are a part of the same zone and are using the same measurements of zone mean air. Additionally, the lobby also shows a measurement for zone mean air, but as part of a different zone, indicates a different value of energy efficiency.
3. Click outside the pop up box to close it.

User Documentation
(rough draft)

The data integration process functions as follows:

1. Read the incoming data from a file or socket. This program is done in Java, with a buffer reader. In the case of the file, it is read line by line and getting all the information and storing in directly in the database.

2. Before storing the data, we need to create a connection through a driver, creating an instance of it. Then the driven can establish the connection with a jdbc over mysql.

3. Data storage system works with a MySQL database management system, which we create two tables, one named references which stores all the variables with their corresponding information such as id, zone, name, unit, timestep, etc. Then we have another table called Data, which only stores the data. It has information about the id of the variable, the content of the reading, year, month, day, hour, start minute, end minute and day type.

Setting up a test network:

1. The batch file bvlc.bat configures environment variables to use BACnet/IP port 47809 for any subsequent BACnet tools and enables the BBMD Foreign Device Registration. Current testing is on analog input devices that maintain multiple sensor objects.

2. The BACnet server tools are used from the Command Prompt, or CMD.EXE. From the command prompt window, start the simulated BACnet device:
   c:\> bacserv 1234

3. From another command prompt window, use ipconfig to determine the network interface IP address that the bacserv is using:
   c:\> ipconfig

4. Use the default IP address to configure the BBMD and Foreign Device environment variables:
   c:\> bvlc.bat 192.168.0.42

5. The batch file bvlc.bat configures environment variables to use BACnet/IP port 47809 for any subsequent BACnet tools and enables the BBMD Foreign Device Registration. Current testing is on analog input devices that maintain multiple sensor objects.