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## Past Goals (From winter break to the week of Jan 21st)

1. How to get the microcontroller to program and run
2. Seeking to do some quantitative range tests on the Xbee transceiver
3. Write the Xbee API for the microcontroller
4. Complete PCB component placement
5. Start PCB routing
6. Mount mechanical platform on steam valve
7. Run tests for overcurrent and stalling
8. Finish the main program that includes LCD, temperature sensor, and motor controller
9. Finish developing and start testing Ethernet transceiver's basic functionalities.
10. Develop Web interface
    1. investigate on talking with the microcontroller from the server side
    2. record steam valve controller data from the web interface
11. Assist in footprint verification and other urgent issues

## Issues

1. We had to contact Atmel for help figuring out how to program the microcontroller. Also, we need access to another copy of AVR32 because our copy doesn't seem to compile correctly.
2. We also decided to use the Xbee's API Frame mode which is a more robust method of sending the data, but is harder to program than the transparent mode. We need to come up with a better formed plan to quantitatively test the Xbee transceiver.
3. Layout plus software is not finding the appropriate footprint libraries. We are currently working with our advisers to resolve this issue
4. To test the Ethernet code we are currently waiting on the Ethernet development kit, which should be available late this week or next week

## Results and Progress

1. Successfully run and program the microcontroller
2. Finished writing the Xbee API for the microcontroller but still need to be tested
3. Completed some quantitative range testing with the Arduino microcontroller board
4. Completed Schematic Design and held schematic design review
5. Completed LCD programming and debugging
6. Completed appropriate footprint creation and assignment
7. Set up the appropriate software for PCB implementation
8. Integrated LCD into the main program and currently working on integrating the temperature sensor and motor controller code
9. Developed Ethernet transceiver's basic functionalities, waiting to start testing.
10. Started PHP Socket programming on the server side for the web interface

## Future Goals

1. Start Xbee transeiver testing on the Atmel 32-bit microcontroller
2. Define method to quantitatively test the range of the Xbee
3. Complete and verify footprints
4. Complete breadboard prototyping
5. Finish the main program that integrates LCD, temperature sensor, and motor controller
6. Finish testing Ethernet transceiver's basic functionalities.
7. Develop Web interface
   1. develop the code for communications between the microcontroller and the web interface
   2. develop the code to record steam valve controller data from the web interface