Erica Kramer  
Week 5 Report – February 15 through February 22, 2008  
Accessible Incontinence Control Device  
Team 8

**Work Completed**

The two wireless transceivers were connected to power and tested to see if they were ready to be used. For both transceivers the status lights indicated they were ready. The current draw for an ACODE transceiver was measured with a multimeter to be .002 Amps. The lithium ion batteries were also tested, and a single battery can operate the micropumps continuously for 13 minutes. We now need to test multiple batteries in series with a voltage divider circuit to see how long we can run a micropump for because we need to increase the lifetime.

I focused this week on how to connect the wireless transceivers to the CB220 as serial connections. By using the ACODE manual online, as well as the CUBLOC manual, I developed two potential configurations that could be used to connect the ACODE and the CB220.

The photographs shown below show the beginnings of the protoboard set up connecting the ACODE transceivers and the CB220.

![Image](image_url)

*Figure 1*
I also spent some time this week looking up options in the CUBLOC manual to improve the code I had written previously to control the implant. For example, I found two options for functions that will return a more accurate AD value for the stretch sensor than the Adin() function.

In addition I researched possible ways to make our test set-up look more realistic for the competition video. I found a child’s science kit that has a “working” bladder model. I plan on ordering this kit in the next week after consulting with my group members.
Future Work
The two major things the group needs to work on in the coming week is getting the wireless transceivers fully connected and transmitting data and to work with the test set-up to determine resistance values that correspond to volumes. The urine collection bag needs to be attached to a hard backing and the stretch sensor needs to also be attached. Then we will be able to fill in numeric values in the code I have written regarding the status indication portion of our design. It is my hope in the next week to finalize at least one of my three main microprocessor functions.

Project Review
The project is progressing well, and having a test set-up operational is going to be a huge bonus for our group. We will be able to progress at a quicker pace now. There was some lab time lost due to snow this past week, but Yamalia and I intend on coming into lab this coming weekend to make up some of that time.

Hours Worked
13 hours were worked this week on the project. Several hours of this time was spent researching information about the ACODE wireless and how it could function without using the Promiwin software to configure it. The rest was spent drawing diagrams showing how the ACODE would be connected and beginning to connect it on a protoboard.