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Week 12 Report – April 4 through April 11, 2008  
Accessible Incontinence Control Device  
Team 8  

Work Completed  

The wireless was completed this past week and is functional. In addition, work was completed on the test set-up. Yamalia and I spent some time in machine shop creating a metal frame for the artificial bladder. The frame is T-Shaped, with the upright bar supporting the bladder and the upper crossbar supporting the artificial kidneys through which “urine” will be pumped into the bladder for presentation purposes. The stretch sensor configuration for this test set-up was modified from previous set-ups. The sensor is stretched between the two ureters on the top of the bladder which is the location it would be connected to in the human body.  

In addition to working on the test set-up, I helped Zack while he determined the final range of resistance values for each volume percentage. We had been having some problems with the fluid in the urine collection bag settling after a short amount of time and affecting the accuracy of our volume percentages.  

I also selected and ordered some tubing connectors for the artificial sphincter. Both straight connectors and Y-connectors were ordered so that the manual pump could be included to bypass the micropump in the event of device failure. Once the connectors arrived I began assembling the tubing for the artificial sphincter, and Zack prepared a manual pump for the system by removing all of the air inside it.  

Much of the work this past week done by the group was troubleshooting and attempting to get our project ready for Friday’s deadline. I have also begun to work on the operator’s manual for the Accessible Incontinence Control Device.  

Future Work  

The major future work at this point that needs to be done by Friday is assembling the final configuration of the artificial sphincter and getting the user remote functional. The code has already been written for the user remote but the CUTOUCH broke this week. Zack contacted the company and tried to troubleshoot the device, but the representative at Comfile felt the part was faulty and agreed to send a replacement part. The menu’s and set up of the remote is already done, we just need to make sure the remote can correctly send and receive signals in conjunction with the wireless. A picture of the CUTOUCH is shown below in Figure 1.
Also, the PCB board for our implant needs to be ordered by Friday. Additional tasks that need to be completed include building the power circuit and mounting our circuitry to our PCB board. Also, the implantable portion of the device needs to be enclosed in a housing and the external wireless transceiver needs to be mounted to the user remote. The final report, user manual, and competition video all need to be completed as well.

Project Review

Having functioning wireless communication for the device is a huge milestone. As long as the code for the user remote works, or can be debugged to work, our project will be functional by Friday. Then all that is left will be cosmetic and presentational work.

Hours Worked

I worked 11 hours this past week not counting the hours I was in the lab during Open House.