Assistive Robotic Arm

Weekly Assessment #9
March 28, 2007 – April 4, 2007

Asma Ali, Megan Madariaga and Danielle McGeary
Grippers

- Tightened up gripper connections
- Replaced all nuts with lock nuts
  - Also bought washers for the grippers
Last Friday our group visited Dr. Fox.

He showed us an example of a rotating base.

We used some of his ideas to develop ideas for our base.
**Base**

- Machined the pillars out of PVC
- Altered a lazy susan for our bearing device
- Attached PVC connector on the top of the bearing device
- Machined the connector to fit the upper arm
- Machines spacers for shoulder joint
Base

- Put all pieces together
- Tested the motion of the base with our motor
  - This motor was donated to us by Dr. Fox
Motors

- Still need to buy the motor to control the arm
- The gripper motor and base motor are working
**Electrical**

- Will use a UDN2916 motor driver circuit which will be used to control two motors at once.
- Asma worked on an external bi-directional H-Bridge.
  - Had very hot MOSFETS.
  - Will counter this with either heat sinks or motor controller chips.
Future Work

- Purchase motor to move the arm
- Get pulley system working
- Adjust the size of the lower arm to client’s specifications
- Create the base box structure
- Work on testing of our device
- Finish keypad with switches
Hours Worked

- Asma: 11 Hours
- Megan: 15 Hours
- Danielle: 14 Hours
Any Questions?