Project Identity:
Orthodontic Wire Mechanical System Tester
Group 7
Week 5:  2/21/06 – 2/28/06
Max Feldman

Work Completed:

A lot of work was completed this week on the software design. The previous version of motorcontrol.vi has incorporated the use of time delays. When this vi was run with the other vis, the entire program would delay, causing a gap in our data acquisition. This problem was fixed by completely restructuring the design of motorcontrol.vi so that we can avoid use of the time delay function. The majority of time spent this week was on the creation and debugging of this program. Currently, there are still a few minor bugs (that are still being worked out) in the program, but the program works and is fully functional. As you can see in the real-time graphs below, with the new software, one has the ability to move all three motors at the same time while simultaneously inputting data from the sensor and performing calculations.
The top graph represents the real time position of the three motors. The second and third graphs represent the measured force and torque values (respectively). Notice the ability of the vi to perform all of these functions simultaneously due to the new motor control vi created.

Future Work:

In the coming week I plan on testing all of the software with the motors running. This was not accomplished this week because the processor fan on our computer died, therefore leaving us without a fully functional workstation.

Also, this week I plan on finalizing the programs ability to export data specific to the user’s specifications.

Project Review:

The software end of the vi is coming along well, however without the ability to test it with all of the components it is tough to be certain it is fully
functional. We are falling behind on where I think we should be in terms of the mechanical design and assembly. We still are awaiting the arrival of our parts.

**Hours Worked:** 28