Work Completed

This week I have focused on the installation of the linear position sensor that we were able to get from Novotechnik. Last week during the weekly meeting we received the LWG75, shown below, at the design lab.

![Figure 1: Novotechnik’s LWG75 linear position sensor.](image)

While this sensor would be able to provide the linear position of the rack over the required 2.5 inches of movement, I found that its body was far too large to fit in the small space at the front of the vehicle. I spent a considerable amount of time trying to plan out an appropriate mounting solution but I was unable to come up with a way to mount the device that I found acceptable.

Having determined that it would be very difficult to mount the LWG I got in touch with Matt Pietro from Novotechnik who had been very helpful in the past. Matt suggested a few other models that his company produced that he felt would be good for our application. He was very helpful and was happy to support our efforts. I set up a meeting with Matt on Tuesday of this week to take a look at the device options that were available. On Tuesday I drove up to Novotechnik’s location in Southborough, MA where Matt and I determined that the TEX75, shown below would be the best solution for use in the E-Racer.
This device is much smaller than the LWG, which will make it easier to mount on the steering rack of the vehicle. It is also sealed to prevent damage due to environmental conditions, such as a moderate amount of moisture and dust. Having acquired the new position sensor I will mount the device tomorrow morning in the UConn machine shop and will determine the voltage range when 5V is applied over the full range of the rack. Once this is mounted and the voltage range is determined Kevin will able to complete the program for the steering system on the vehicle.

**Future Work**

While I had planned to have the position sensor as well as the switches mounted by this week, I ran into problems with the position sensor, as discussed below. As a result I will need to mount the switches on the vehicle on Thursday. Additionally, I will need to mount the remote kill switch once Kevin is done with the control system circuitry. The team has set a goal of completing all hardware by Friday and I feel that this is a very reasonable goal. Once the hardware is completed we will spend the remaining two weeks working to test the vehicle’s systems and to troubleshoot any problems that are discovered. While there is only a small amount of time remaining I feel that we are on schedule to finish this project and be successful.

**Project Review**

The group continues to work well together and is motivated to produce a working product that is on time, under budget, and will fulfill the requests of the client.

**Hours Worked**

Time spent on the project 3/26/2008 – 4/2/2008: 15 hours