Work Completed

This week I finished the brakes and began work on attaching the joystick. At the end of last week, I tested the brakes. Unfortunately, they did not work. This was because the cable joiner that I had made required that the cables curve. The wires were arranged end-to-end instead of in parallel, so when the joiner was attached to the actuator, the wires were bent. This means that a lot of stress was put on this part of the brake wires, and also that no matter how taut I pulled the wires, the actuator still pulled them tighter before reaching the point where the brakes were depressed. This means that the actuator had to move more than the planned ½”. Even if I moved the bracket so the actuator could move more than that, this wouldn’t alleviate the problem of the wires having to bend. Therefore, I decided to make a new joiner which would allow the wires to be parallel to each other. The new cable joiner is shown in Figure 1 below.

![Figure 1: New cable joiner which allows the wires to sit parallel to each other. Washers are placed over the top of the cylinder to keep them in place.](image)

This week I also began to plan the attachement of the joystick. I talked to Serg, who thought it would be unwise to weld the joystick to the go-kart because this would be a permanent attachment and couldn’t be adjusted if Mason found it uncomfortable. I decided instead to use two pipe fittings, similar to those I used for the attachment of the back of the seat. I will use two threaded rods with one end of each in the pipe fittings and the other end in the box containing the joystick. This set-up will allow for Mason’s parents to move the joystick if necessary to make him more comfortable.

For the joystick box, I will use the box that the joystick came with, and simply drill two holes in the bottom. Each of the threaded rods will go into these holes, and will be secured with a nut on the inside of the box. Figure 2 below shows the joystick and box set-up. One advantage of using the box that came with the joystick is that it already has the appropriate holes for the joystick wires.
Future Work

By the end of this week, I plan to finish attaching the joystick to the go-kart. I will then help my group members test all components for the next two weeks.

Project Review

The group plans to finish the hardware by this Friday and then spend the next two weeks testing the go-kart. Also, the McClements are planning a visit to UConn, so we will spend some time arranging this visit.

Hours Worked

Time spent on the project 3/26/2008 – 4/2/2008: 16 hours