**Project Identity:**

S-90 Go-Kart  
Week 6  
February 19, 2009 – February 26, 2009  
Eric Leknes

**Work Completed:**

The main focus of work this week was on getting the PCB design finished. The component placement was finalized early in the week, and the design ratsnest was checked for errors. The design for the PCB grouped like components together, around the 3 PIC’s in the center. Two voltage regulators provide the main 5V power, and the 6V connection needed for some of the peripheral components. The timer circuit is off to the left, and was put together manually, because Multisim did not export the circuit very well. The ports where the external wires will connect also had to be run manually and extras were added to make sure that expansion is possible if it is needed.

After checking the connections thoroughly for errors and missing connections the boards was routed with copper trace. The AutoRouter was used to save time, and using only two layers was easily able to make all connections. The traces were then cleaned up manually to eliminate unnecessary kinks and bends in the copper trace. This should increase the chances that the board will be manufactured exactly as it appears in Ultiboard, and will work as we need it to. At this point the board is ready to be ordered, and it is just a matter of selecting a company and sending in the files.
Future Work:

At this point the software is waiting for the final PCB to be ready. In terms of software the throttle PWM needs to be recalibrated for use with the new servo. The steering wheel and pedals need to be calibrated and designated as inputs. Additionally, all ports need to be matched and assigned to their locations on the PCB.

Time Line:

Feb 26th – Mar 5th: Order PCB and do as much software work as possible.

Hours Worked: 19