2.007 Design and Manufacturing I
Spring 2009

Milestone 7

Demonstration of MCM

Schedule for: week of 16-20 March.

Deliverables: 1. 1 page documentation of work (in your lab notebook.
2. Your MCM on vehicle ready for lab demo.

Week's Activities

With your MCM completed (presumably!) last week, the central activity for this week is to fabricate the vehicle on which your MCM will operate. In lab you will be asked to demonstrate your strategy; i.e. operate your vehicle in accordance with what you plan to do in the one minute allowed.

1. Fabricate vehicle

Based on your MCM, make any necessary changes to your vehicle design and fabricate it. You will need to ensure that your vehicle can properly support and withstand any stresses resulting from the MCM. Also think about how where the combined center of gravity of the vehicle and MCM will move as the MCM is operated, and what effect the movement of the CG will have on vehicle maneuverability. Be sure your vehicle/MCM combination can get out of the starting box and maneuver as planned in your strategy.

(In the case where your MCM is something that remains in the starting box, decide what would be an appropriate use of your lab time, make a plan, and move forward on the design/fabrication of that.)

2. Integrate MCM and vehicle

Make any fixes/improvements/changes to your MCM based on its demonstration last week; then mount it to the vehicle. Test the integrated MCM vehicle to be sure that you are ready to demonstrate it in your lab. Note: if parts of your integrated vehicle aren't built yet, for example a boot grabber, you can demonstrate thatpart of your strategy by just driving up to the boot and simulating grabbing it.

(3. Complete MCM CAD Model)

If you haven't completed this task already (due last week) complete your CAD model of your MCM so you will have a good record in your notebook.

Milestone 7 Specific Deliverables

A. in Notebook

1. One page or so, summarizing any major problems or issues you had while working, including schedule problems, and what you have done/will do to address them.

B. in Lab

1. Demonstration of MCM/vehicle