2.007 Design and Manufacturing I
Spring 2009

2.007 -- Introduction to Design and Manufacturing I

Milestone #6 – Demonstration of the Most Critical Module

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<u>Deliverable:</u> NO notebook to deliver! Just a demonstration of the module and some discussion with the instructors and you peer group.

Due Date: March 16-20 preferably during the assigned lab time, but potentially later in the week, especially when other sections don't meet, if you schedule a time.

DESCRIPTION:

This milestone centers on your most critical module (MCM). It is hoped that you'll perform a convincing demonstration of the finished module. However, it is possible to do well on this milestone with a module that fails yet is informative.

Unlike other weeks, notebooks will not be collected and graded. You may want to add a coupe pages about your module, but we won't assess that. Collection and redistribution is not convenient as spring break is coming up. I want you to have your notebook during the break. I think you may get some good ideas when your mind is less fully occupied than usual.

Instead the notebook, the deliverable is the demonstration of the module itself and the associated discussion. You'll prepare a presentation including the following elements:

1. **A demonstration of your most critical module.** Ideally, the module will work under the power supply available to you in the contest (batteries and/or compressed air). However, you may make some aspects of the module's operation manual rathert han automatic at this stage. The key is to demonstrate those aspects of the function that were deemed critical to your design.
2. **Explaining your most critical module.** Whatever the module actually does, you should seek to explain it to the instructors and your peer group. You might need some graphics for this. These can be on powerpoint slides, or they can be in your lab notebook which you can open up and show to us.
3. **Answering questions.** A big part of your grade this week centers on your abaility to answer questions. Some questions might be technical. For example, we might ask you to draw a torque speed curve and explain how the performance of your MCM is related to the curve. Some questions might be related to project management. For example, we might ask how you plan to get from your current state to a fully functional machine by the end of April.

OTHER ACTIVITY:

By the week of March 16-20, we should have the full menu of sensors available to you. It would be a good time to explore those. Perhaps you can pick one that might be useful in your machine and try using it. For example, I'd like to see a car that can sense when the door opens, leave the box, and reach the opposite corner of the field within 10 seconds.