2.017 Design of Electromechanical Robotic Systems, Fall 2009

Final Presentation Slides: What We Expect

Draft (not graded) is Due: 12/1/09 (TUESDAY)
Final Slides are Due: 12/10/09 10:00 am (THURSDAY)
Final Presentations are Given: 12/10/09 11:00 (THURSDAY)

We expect a set of slides from each team, with probably 25 – 30 used in the main presentation. Because this is your major and final deliverable for the class, you may include additional slides in the same file to tell the whole story.

Each team will have thirty minutes to speak and ten minutes of Q&A. We will likely invite guests, so try to make your presentation accessible to the "intelligent layperson." Keep it very linear and easy to follow.

Grading of the final presentation and slides is for the group 5%, and individually 10%.

The slides and presentation should:

- Include the project title, team name, team members, and date.

- State the final objective of your project and a practical application, and describe the high-level functional requirements that you identified for your vehicle system.

- Throughout, include design calculations, circuit diagrams, data plots, drawings, photos, software flow charts, system block diagrams, etc. where appropriate. Avoid boring text.

- Detail the design process and major results:
    o Modeling of the vehicle and its environment, as well as their coupling
    o Physical experiments, testing, and prototyping that you performed
    o Dynamic behavior including stability, maneuvering
    o Sensing
    o Actuation
    o Power
    o Structures (including hydrodynamics)
    o General software components
    o Control algorithms; description, integration, rationale, and tuning

- Present high-quality data demonstrating <u>the level of success</u> in accomplishing the final objective. Use clear, annotated plots, figures and images/videos supported by captions and descriptions.

- Demonstrate that the vehicle response in an <u>uncertain environment</u> (wind, waves) was observed, modeled, and quantitatively taken into account in the design.

- Make a short self-assessment. What could you, or should you, have done differently? If you did not fully achieve the objective, why? If you did achieve your objective, what steps would you take to improve the reliability of your system?

2.017J Design of Electromechanical Robotic Systems
Fall 2009