**PDR Documentation Guidance**

During the Preliminary Design Review (PDR), you will brief your project concept to the class. ***The deliverable item is a briefing, in MS PowerPoint format*** that will describe your project, outline the approach, and demonstrate its feasibility by addressing the following items:

1. Project description
   1. High level description of project
   2. Brief description of how your project fits into a larger system, if applicable
   3. Capabilities
   4. Limitations
2. Functional description
   1. Functional block diagrams, and or
   2. State machines, and or
   3. Architectural diagrams
3. Interface descriptions
   1. Internal (within your project)
   2. External (to elements you don’t control, such as public internet or partner project)
4. Material and resource requirements
   1. Everything you need to complete the project
      1. Development tools
         1. Any special build, or installation, instructions
      2. Test equipment
      3. Knowledge base
      4. consumables
   2. Where its coming from?
   3. When is it available?
   4. Items expected of you by other students (team projects)
5. Development Plan and Schedule
   1. Approach
   2. Order of development
   3. Milestones & schedule
   4. For team projects
      1. Clear delineation of responsibilities & dependencies
      2. Clear description of interfaces
      3. Integration and test plan
   5. Risk
      1. Identify known risk areas
      2. Present mitigation plan
      3. Does schedule reflect risk areas?
6. References
   1. Reuse of existing material encouraged, as in real life.
   2. Cite all existing work that will be used in your project
7. Assembly instructions (final project document only)
   1. Instructions to set up development environment
   2. Describe basic steps to assemble from scratch (i.e. bare metal rebuild)
8. Performance and measurement data (final project document only)
   1. Provide screen shots, test data, measurement data as necessary to show functionality of each subsection, and of the entire system.

After the PDR, this document will evolve into your CDR document and then later to the document which satisfies the documentation requirements for this course. It is a living document which will evolve and grow as your project progresses. Both CDR and final document should address, at least, the items outlined above. The evolutionary cycle is outlined below.

* The PDR presentation (MS PowePoint Brief) is a high level description of your project.
* The PDR charts will become the CDR design document (MS Word format), which is a more detailed version that includes any changes you might have made since the PDR. ***The CDR doc should contain narrative for each section.*** You will submit this document, but will not present it to the class.
* After CDR submittal, the remainder of the course will be dedicated to development. The development activity will be documented for inclusion in the project document. The CDR document will be updated to reflect changes and expanded to include assembly and performance data.
* The final project document should provide enough detail that any of your peers could modify/improve/incorporate your design without interacting with you.