CE/EE123A Winter 2012
Final report and presentation guidelines

Presentation

Everyone participates in the presentation preparation and talks as well. 25 minutes is the maximum length you can take, which will be strictly enforced. This will leave time for questions from our panel of experts and visitors and the class. Basically the presentation is a summary of your project, your project plan and your results so far.

This is a preliminary design review and so some of the points below may not have been done yet or are not applicable to your project. They are included in case you have – some aspects are further along than others.

Some things to cover in the presentation, in whatever style you think best:

• Introduction of the “project”. One project summary slide at beginning, preferably with an illustration, e.g. a “Big Picture Cartoon”. This is not the block diagram, but a higher level brief description with project objective.
• Why are you doing this project? Who needs it? How will it help anyone?
• Introduction of the team members and what their roles/duties are.
• What are the highlights of the project -- cool, new stuff you are doing.
• Overall description/summary of the project/design, what it is, what it does, what it might cost and why should anyone care? We suggest nice block diagrams and photos. What is your plan? This should include a functional block diagram if not presented earlier -- might not hurt to repeat the block diagram. This should include major technical challenges and how you plan to attack them. Schedule summary can be included here, but not too detailed.
• Break down of the major components of the project and a brief discussion about why you designed it the way you did. Again, we suggest nice block diagrams and photos.
• Description of where the “work” of the project was spent so far (not physical location, but in what areas, like project definition, research, PCB design, software development, hardware prototype research, etc).
• Tasks that remain to be done in the design expressed as a Gantt Chart.
• Demonstrations if applicable. One possibility is to have some video of lab experiments, existing solutions, etc.
• Summary of experience. What took a lot of time, what was the hard part? Advice for future teams on what works well and what doesn’t.
• Conclusions. This is a summary of the message that you want to leave with your audience -- usually three or four main points. Could include major challenges remaining.

Comments on presentation style and delivery:

• Face the audience, not the screen.
• Questions should be deferred until the end of the presentation. Please request this at the beginning of your talk.
• Dry runs of your presentation are essential - at least two.
• Make a strong effort to have an exciting presentation that will leave a very positive impression on your audience.
• Use little text; use lots of pictures and figures (though not all on one slide).
• Typically you should not have more than one slide per minute - so \( \leq 25 \) slides, probably significantly less.
• Have notes so you know what to say about each slide, refer to these while talking, not the screen.
• Use of ‘fly in’ text, movies and other PowerPoint features is great, but don’t overdue it as too much fancy stuff can distract from the message you are sending to your audience.
• Use a consistent “theme” for the entire presentation. If you want to use animation then use it consistently, but sparingly.
• If using a laser pointer only use it when explaining figures, not at text, people can read okay, and it gets annoying.

A very useful guide to science and engineering presentations with good examples is available on the EE123A website or directly at http://tos.org/pdfs/sci_speaking.pdf
Final Technical Report

This report will be a group effort and have the same content as the presentation with the addition of all the missing details about the engineering design, accomplished and planned. Primarily, it must contain a preliminary look at a technically detailed and complete engineering specification of the project and its components. Secondly it must contain essay content describing your team's experience.

Organize the report as follow:

• Cover page with all team members and titles and picture of what the product might look like.
• Table of contents.
• Summary of 123A experience and project creation. Clearly state the overall preliminary specifications supported with pictures/block diagrams.
• Discuss what has been done so far.
• Provide detailed break downs of logical major design components. Each section should contain schematics, block diagrams, pictures, or figures as applicable and in sum encompass the complete preliminary design. Include relevant trade studies, i.e. what alternatives did you investigate to accomplish a certain function and why did you choose the one you did?
• Discuss major challenges and other problems and how you solved them – naturally, some may still be issues that are unresolved.
• Schedule and division of labor for completion of project – preferably a Gantt chart (e.g. Microsoft Project or other similar planning tool). Identify what your team considers to be “critical paths”. Basically discuss how your team plans to get completed next quarter.
• The signed team charter document you came up with. Explain your rationale for them.

General Guidelines for the report:

• Please remember, this is supposed to be a description of the design your team developed to solve a problem. As such, it will serve as a complete technical specification supporting everything you do next quarter.
• Any figure/schematic/picture/block diagram included in the text MUST have a reference to it in the text; no “floating” allowed.
• Use a consistent format for the report. Write it in a single voice, so it doesn't look like a bunch of different people wrote different sections and then stapled it all together. This can only be done if everyone proof-reads the document and contributes to style, organization, accuracy and completeness. As educated professionals, your writing should be literate, clear and understandable.

• Describe the experience of the team, what was the challenging part, what took the most time.

• Use as many pages as required to clearly explain your team's design and the rational behind it with illustrations/block diagrams/pictures/graphs -- technical details such as specification sheets can be included, but should be only be included as appendices referred to in the report text. These items should only be the absolutely relevant portions, not the entire document. Specification sheets should ONLY be included in the report if necessary to explaining things: note: if your team includes them, they MUST be referenced in the text. Collecting them at the end to pad the report is meaningless.

• Finally, your team's technical report is due at noon the day after the presentation, March 20th. Please provide a printed copy and email a PDF version to both instructors.

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