

Project Assignment

18-759 Wireless Networking, Spring 2010

Course projects are open ended as one would expect in a graduate course. The goal of the course project is to provide depth in a particular area of wireless networking in a hands-on fashion. This handout gives an overview of the assignment.

Platform

This project must be done in teams of 2-3 students. Please contact the instructors before the project proposal deadline if you want to propose a project with a different team size. An example list of projects will be distributed in a separate handout. Your team can pick an topic from this list, or, even better, you can propose your own project.

Here are some things to consider when defining your project:

- The project needs to result in a concrete outcome that will offer an interesting result or insight. Ultimately, the primary goal is that you learn something.
- You must have the necessary background to complete the project. For example, do not propose a project at the physical layer if your only background in this area is just the few lectures in this course. Similarly, do not propose a project that involves kernel or driver hacking if you have limited programming experience.
- The project needs to be feasible. For example, the amount of effort must be reasonable given the time available and you must have access to the infrastructure needed to execute the project.

Deliverables

The specific deliverables for the project include a proposal, a design, two check points and a final poster. All documents should be in PDF format and should be submitted using the Blackboard digital drop box. All project elements will be graded, except for the design document, which will be used to give informal feedback.

Project Proposal - The project proposal will typically be no more than half a page and should include the following information:

- Names of team members
- Project topic and title
- A very brief description of your current plans with respect to what you will do and what platform you will use

Project Design - Project proposals will typically be about two pages in length, including appropriate figures. The project design should include the following information:

- Names of team members
- Project topic and title
- Description of activities that will be performed as part of the project.

- Expected results
- Equipment and resources needed
- Project plan: rough list of milestones, responsibilities of team members, qualifications

Project checkpoints - There will be two project checkpoints. Checkpoints are short status reports that cover the following:

- Team information
- Progress so far: what was completed
- Any results so far
- Problems encountered
- Changes in the project plan

The format for the checkpoints will be announced later

Poster presentation - Each team must prepare a poster that summarizes the result of their project. There will be a poster session in the last week of the semester.

Platform

One of the challenges you face is to identify the platform you will use for your project. Here are some possibilities:

- The wireless network emulator has 15 nodes that can be used remotely. More information can be found on the emulator web page: www.cs.cmu.edu/~emulator
- For some projects you may be able to use your own laptops.
- A number of wireless testbeds are available on the web. These include: Emulab (www.emulab.net), Purdue (<https://engineering.purdue.edu/MESH>), Orbit (<http://www.orbit-lab.org/>), etc.

A more detailed list will be discussed at a recitation session at the end of January.

Milestones

	Milestone	Comment
Mon, Feb 1	Project proposal	Blackboard digital dropbox
Friday, Feb 19	Project design	Blackboard digital dropbox
Friday, Mar 19	Check point 1	
Friday, April 9	Check point 2	
Last week of classes	Poster session	Class room