Agenda

• Timeline
• Project formation status
• Remaining potential projects
• Publishing your idea vs. protecting it
• Funding/sponsorship
• Technogenesis course requirements
Senior Design Tasks – Fall ‘14

Identify project
Form group
Select advisor
Develop project proposal
Publish project proposal
Develop final design report
Submit parts list, final design report
Oral/slide presentations
Effectiveness surveys
Weekly status reports

8/26/14 10/1 11/1 12/1 12/2 1/1/15

Today
Project Status

As of September 9, 2:30 pm:

• 7 groups have formed (expect ~8-13 more)

• 27 students are in groups (~38 more to form groups or formally transfer to X section)
Potential projects for 2014-2015

• My favorites (I will advise)
  – Quadcopter—beyond stable hovering (year 3)
  – Multi-legged robot (Spiderbot)
  – iPad/iPhone app to communicate with mobility and speech-impaired patient
  – System to log student ID card swipe for course attendance (E101)

• Interdisciplinary senior design section (EE/CpE-423X, meeting jointly with BME423X, CE423X, and ME423X), with associated special section of TG-403—all require permission of advisor to join and are subject to modification
  – Medical domain – ‘423X (with BME Prof. Hazelwood)
  – Vibration Energy Harvesting
  – Structural Health Monitoring
  – Solar powered boat
  – HVAC system design
  – Pool monitoring system
  – Laser alignment tool for electricians
  – System to perform high resolution airborne imaging
  – System to prevent high resolution airborne imaging
  – Water and sustainability in El Salvador
  – ADA wheelchair platform design for inclined railway
Other issues to start thinking about

• Protecting your intellectual property

  While

• Publicizing your work

• Getting funding, sponsorship and other support
Simple steps to protect IP
Simple steps to protect IP

1. Record your ideas

A bound notebook with numbered pages provides a permanent legal record.

2. Have a non-inventor witness

Besides, it is a good practice to get into the habit of recording your project progress.
Publicizing your work

• Every group will develop a web site on an ECE department server (starting ~mid October)

• Web site will include overview of project, weekly reports, midterm and final reports, final presentation

• If you have any patentable ideas, leave them off web site and talk in generalities.

• Every group will present their project to the class at the end of the Fall semester. Your classmates are not under Nondisclosure and are not co-inventors, so the presentation can be considered publication of your idea – don’t disclose any details that may be patentable or realize you just started a 1 year countdown.
Getting support for your project

- ECE department will provide limited ($400) reimbursement for project-related expenses

- In the past ITT (now called Excelis) has funded ~2 ECE Senior Design groups each year (they choose among ECE projects they find relevant to their work (defense contracting – US Citizenship required to visit their plant)).

- Look to former Summer/co-op/internship employers for funding; also companies that might be interested in the ideas you are developing
Getting support for your project

• Sponsorship is not required, but reduces your budget pressures

• Most companies expect to get something in return for money they spend – be careful about giving away your IP unless you are getting something of value in return (David Peacock or I can give you guidance about what tradeoffs make sense to you)
Special item - Technogenesis

• TG421 is a co-requisite for ‘423/’424

• We have been phasing-in TG403/404 as a replacement, which will probably be complete in Fall 2015

• Everyone in ‘423X/’424X is taking TG403/404 instead of TG421, and some other departments are having their students take TG403/404 for their 423A/424A co-requisite

• We are trialing TG403/404 for students in EE/CpE-423A but:
  – Everyone in the group must either take TG421 or TG403/404
  – TG404 is a Spring course
  – If you have commitments for the Spring that prevent you from taking TG404, your entire group must take TG421 this semester. If you do not, your group should be switched to TG403/404
  – Professors from SSE will be teaching TG403/404 for ECE students (Tony Barrese ‘70 and Mike Pennotti – all three of us are Bell Labs refugees so I know how they think)
  – Get together with your group and decide if you are able to switch to TG403/404 then let me know.