EE/CpE 423
Senior Design
Fall 2005
Class 3 – 9/13/05
Agenda

• Status and deliverables

• Patents, copyright, trade secrets, IP and technical business ethics
Senior Design Tasks – Fall ‘05

- 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

Timeline:
- 9/1/04
- 10/1
- 10/18
- 11/1
- 12/1
- 12/6
- 1/1/05

Today
A comment on class scheduling…

• EE/CpE-423 are scheduled for 3 – 5:50 on Tuesday (A and B-section) and Thursday (A-section).

• E421 is scheduled for Thursday from 9-9:50 and 10-10:50

• TG-401 is scheduled for Thursday, 3-4:15 and 4:30-5:45

• Having heard no overwhelming cry to change the time, we will generally meet from 4-5 on Tuesday, EXCEPT during Senior Design presentations.

• SD presentations will be scheduled from 3-5:50 on Tuesday and 3-5:50 on Thursday. At this point, it appears that the dates will be 11/29 and 12/1. 12/6 may be used if the number of groups gets too large.

• Groups with members taking TG401 will have first choice for Tuesday presentations.

• When you pick your time for SD presentations, keep in mind that E421 will be scheduling presentations during ‘423 class time. We have no leeway in our schedule, so make sure you don’t schedule your E-421 anytime near your ‘423 presentation. E421 presentations have traditionally run overtime, sliding into the ‘423 presentations.
Today’s Deliverable:

http://www.ece.stevens-tech.edu/sd/material/Project_advisor_form.doc

1. Forming a group to commit to an idea is the first priority.
2. Finding an advisor (ECE, PEP, CS) to work with you is your next priority.
3. A working project title is fine.
4. A paragraph to a page description is sufficient at this stage.
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• Weekly reports due Monday by Noon
  – Use ONLY the template provided to ensure consistent format:
  – Template is on Senior Design web site (below)
  – Team leader is responsible for submission of weekly report (electronically)
  – **Group grade will be influenced by timeliness, completeness of reports**
  – To be sure your group gets proper credit for report submissions, email them to jberenba@stevens.edu and bmcnair@stevens.edu
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  – **DO NOT SEND EFFECTIVENESS REPORTS TO ADVISOR!!!**

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Now that you’ve formed a group...

• Each group will have a WebCT private discussion group, if you want to use it to coordinate group activity:
## Senior Design Students Not Yet Known To Be In A Project Team

<table>
<thead>
<tr>
<th>Ali Afzal</th>
<th>Hoda Aghajani-Memar</th>
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<td>Ravi Amin</td>
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These groups should be thinking very seriously about adding members
If You’re Still Looking for a Project Idea…

• Communications networking and process planning for NJ blood bank (Prof. Curtis, Technology Management)

• NY Office of Emergency Management communications planning (Prof. Skown, Business Technology)

• Software to consolidate user interface to on-line collaboration (Prof. Reilly, Technology Management)

• Virtual sign-up sheets (Lynn Insley, Career Services)

• More ideas at:
  http://www.ece.stevens-tech.edu/~bmcnair/senior_design-05-06/problems.html
Now that you have the greatest project idea …

• How do you protect it?

- Caveat: I am not a lawyer, but I know some good lawyer jokes…

- Patent
  - Describes a process, method, apparatus to perform a function that is:
    - Useful – it must do something
    - Novel – no one may have described it before
    - Non-obvious to “a person of ordinary skill in the art” – “I could have thought of that!”
  - 20 year protection from filing of idea with US PTO
  - Prevents others from using your ideas
  - Specification and Claims

- Copyright
  - Protects the expression of original work by the author, rather than the work itself
  - Normally used with literary, dramatic, musical, artistic, and some other intellectual works
  - Gives copyright owner exclusive right to distribute, perform, display, etc., work

- Trademark
  - A word, symbol, or device used in trade (business) to indicate source of product or service, to distinguish it from others.

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Publication of idea is a really bad idea
Tell the world

The idea!
Record in notebook
Brief write up of idea
Send to your patent attorney
Preliminary filing
Final filing
<=1 year
PTO “Office Actions,” Amendments, etc.
A few years
Patent is granted

Patent Process

EE/CpE423: Senior Design Fall 2005
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Publication of patents Filed in US

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Patent Process

• Implications for Senior Design

• What constitutes “publication?”
  • web site
  • class presentation
  • unrestricted discussion with anyone other than co-inventors, attorney
Protecting IP

• Employee Confidentiality Agreements:
  – “We will sue you if you talk”

• Non-Compete Agreements
  – “What you learned here stays here” – pre-nuptials for the workers

• IP Assignment Agreements:
  – “We own your every waking thought. Maybe your dreams, too”

• Non-Disclosure Agreements (NDA): 
  – “Forget what we told you when you leave the building”
Technical Business Ethics

- Extrapolating from open literature
- Competitive assessment
- Probing for information at trade shows, conferences
- Reverse-engineering
- Software disassembly
- Dumpster-diving
- Hacking into competitor’s systems