

EE/CpE 423

Senior Design

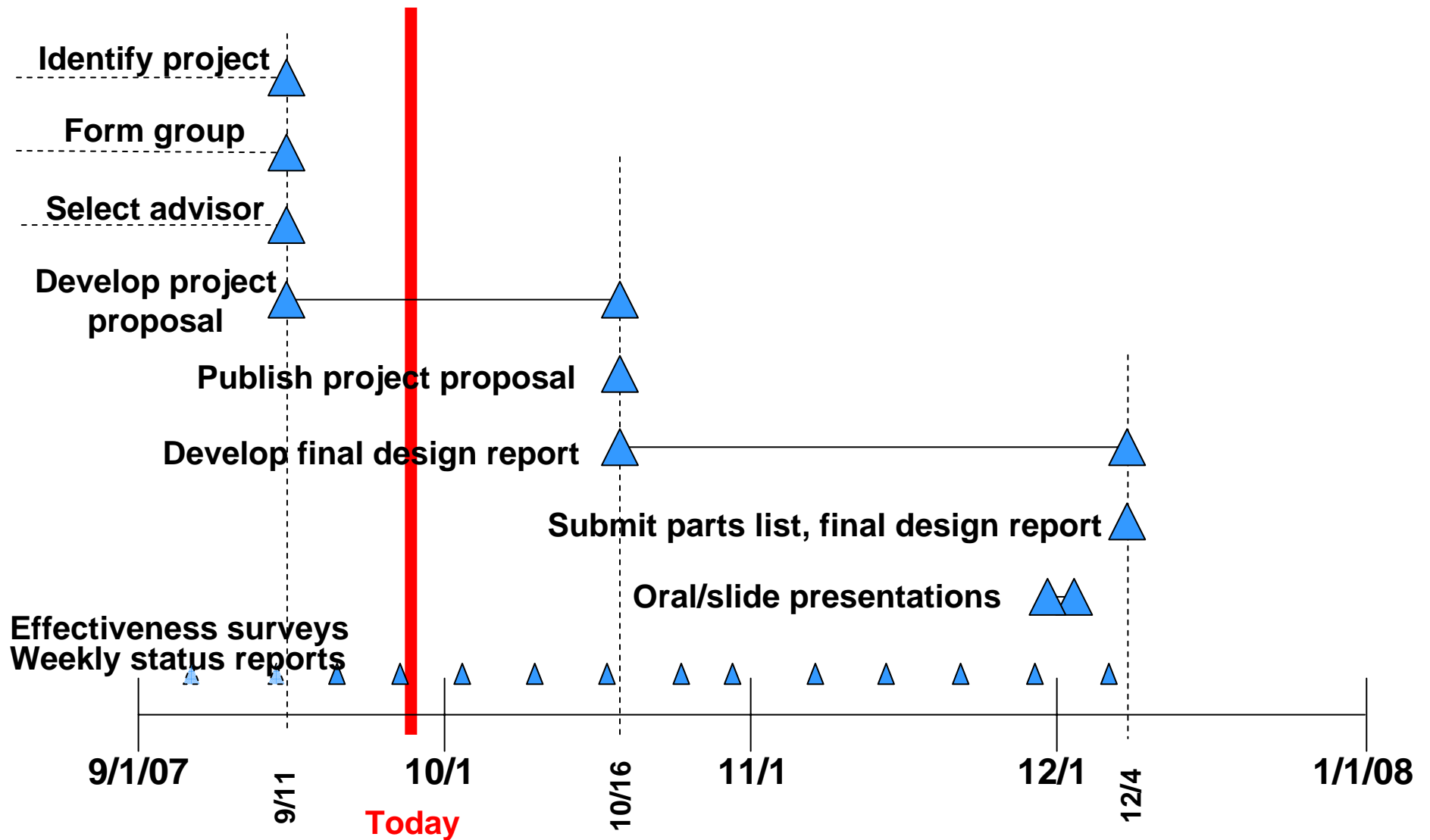
Fall 2007

Class 5 – 9/25/07

Agenda

- Time line
- Group status
- Group churn
- Intellectual property
- Other items to start thinking about

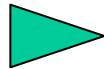
Senior Design Tasks – Fall '07



Project Status

As of noon September 25:

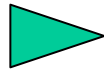
- 14 groups have formed (expect ~5 more)
- 49 students are in groups (21 more to form groups)



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The Senior Design Expo is 211 days away

Still More Project Ideas

- Customer relationship tracking software (sponsored by Merrill-Lynch)
- Digital Radiography Detector (sponsored by '04 graduate's family company)
- Wireless Heart Monitoring (Biomed)
- Video/Audio Monitor for Baby Crib (BizTech)
- Traffic Light Monitor and Control (BizTech)

Group Churn

- Random movement of students between Senior Design groups reduces the chances for success as groups need to reassign tasks to entering and leaving members. In the limit, the group spends all of its efforts on this fruitless activity.
- In case you and your group have mutually decided that the association is absolutely not workable:
 - I need
 - Email from you requesting a change in groups
 - Email from the soon-to-be-former group leader and faculty advisor(s) agreeing to the change
 - Email from the soon-to-be-new group leader and faculty advisor(s) agreeing to the change
- Your final Senior Design grade will be based on a time-weighted average of the grades for the groups you were in
- If you must move, it is easier to do this sooner, rather than later.

Now that you have the greatest project idea ...

- How do you protect it?

Patents, Copyrights, Trade Secrets, Intellectual Property, and Technical Business Ethics

- 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.
- Trade secret
 - Unpublished ideas, documents, processes, procedures, recipes, ..., used by a company in their business

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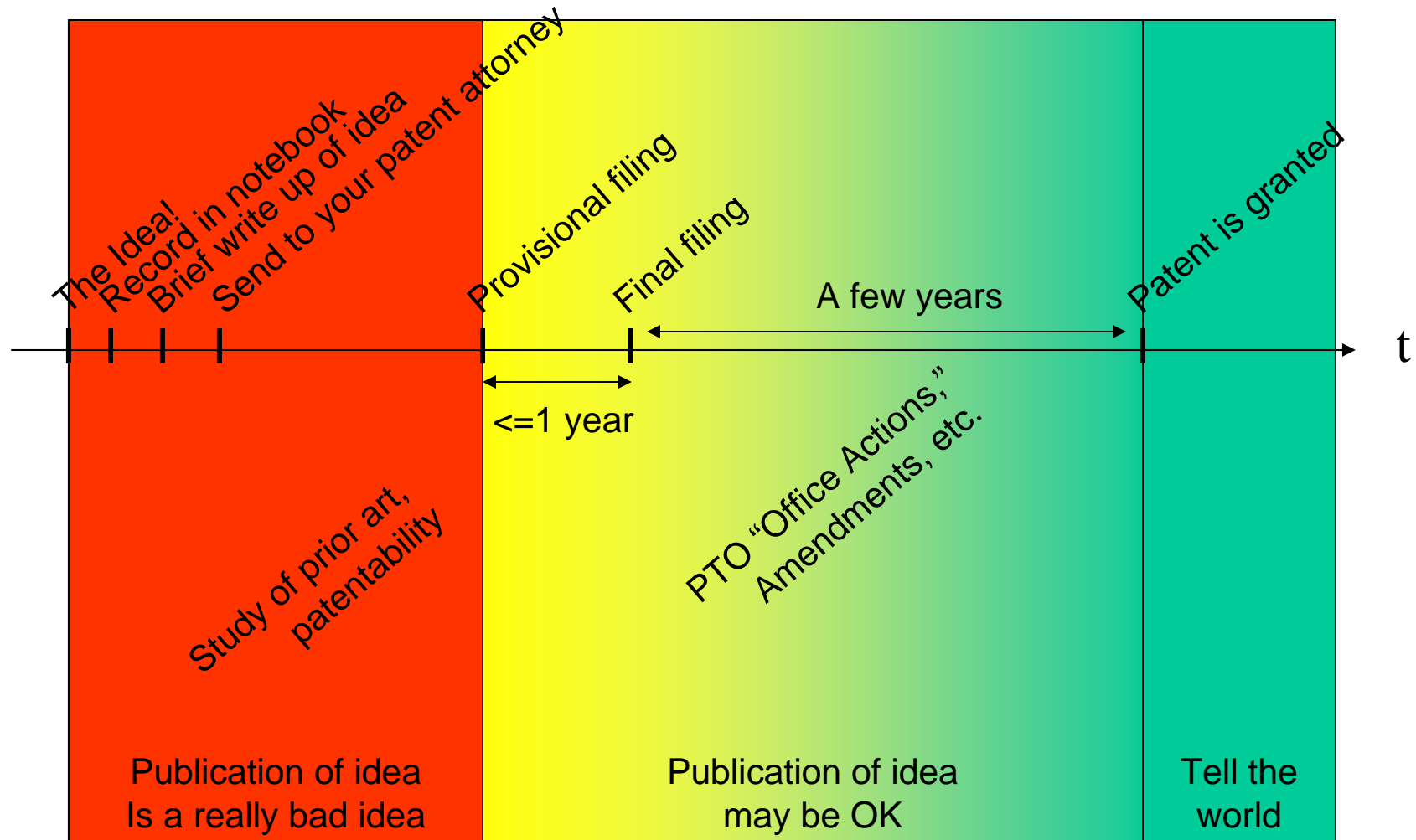
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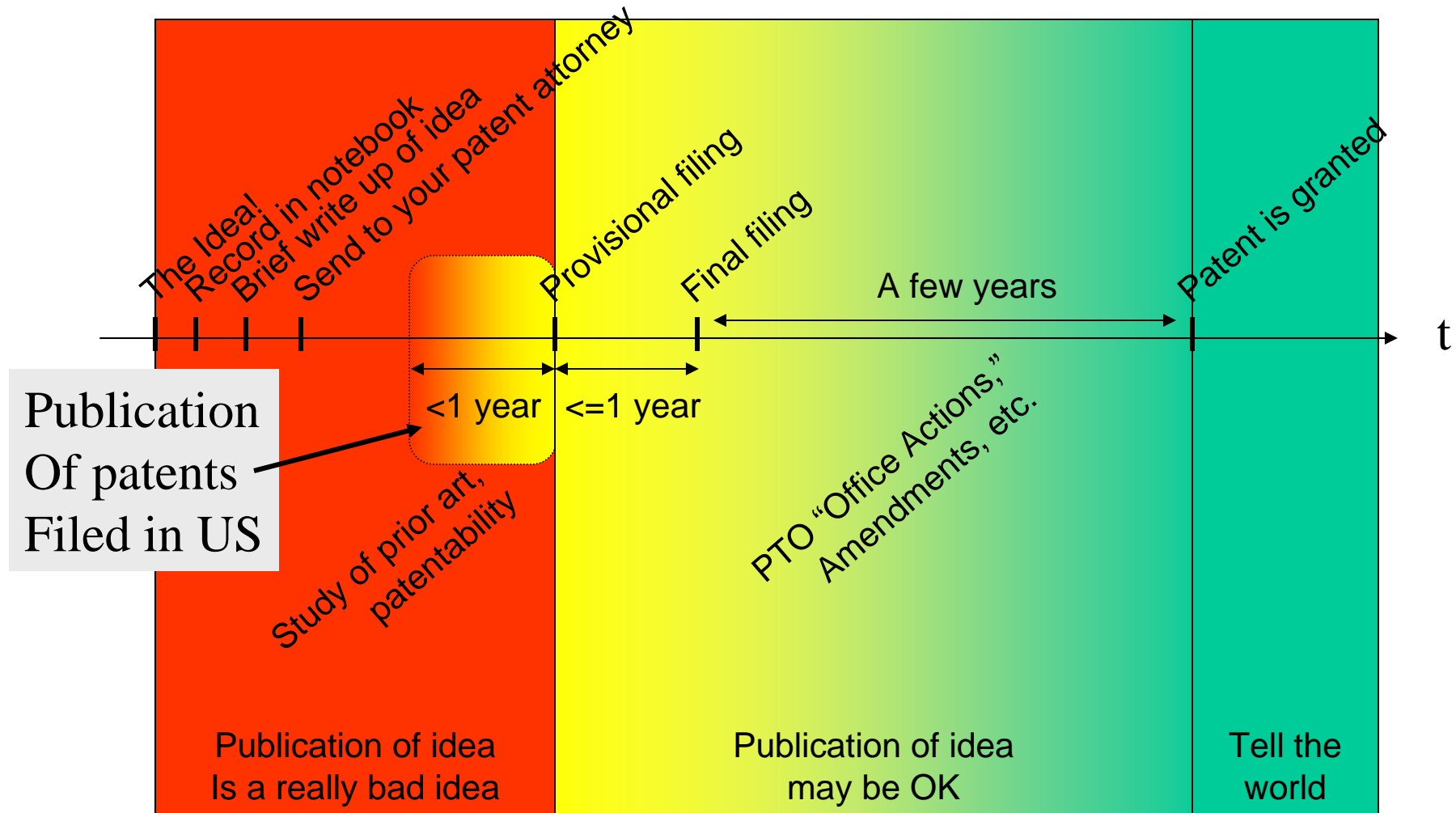
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Patent Process



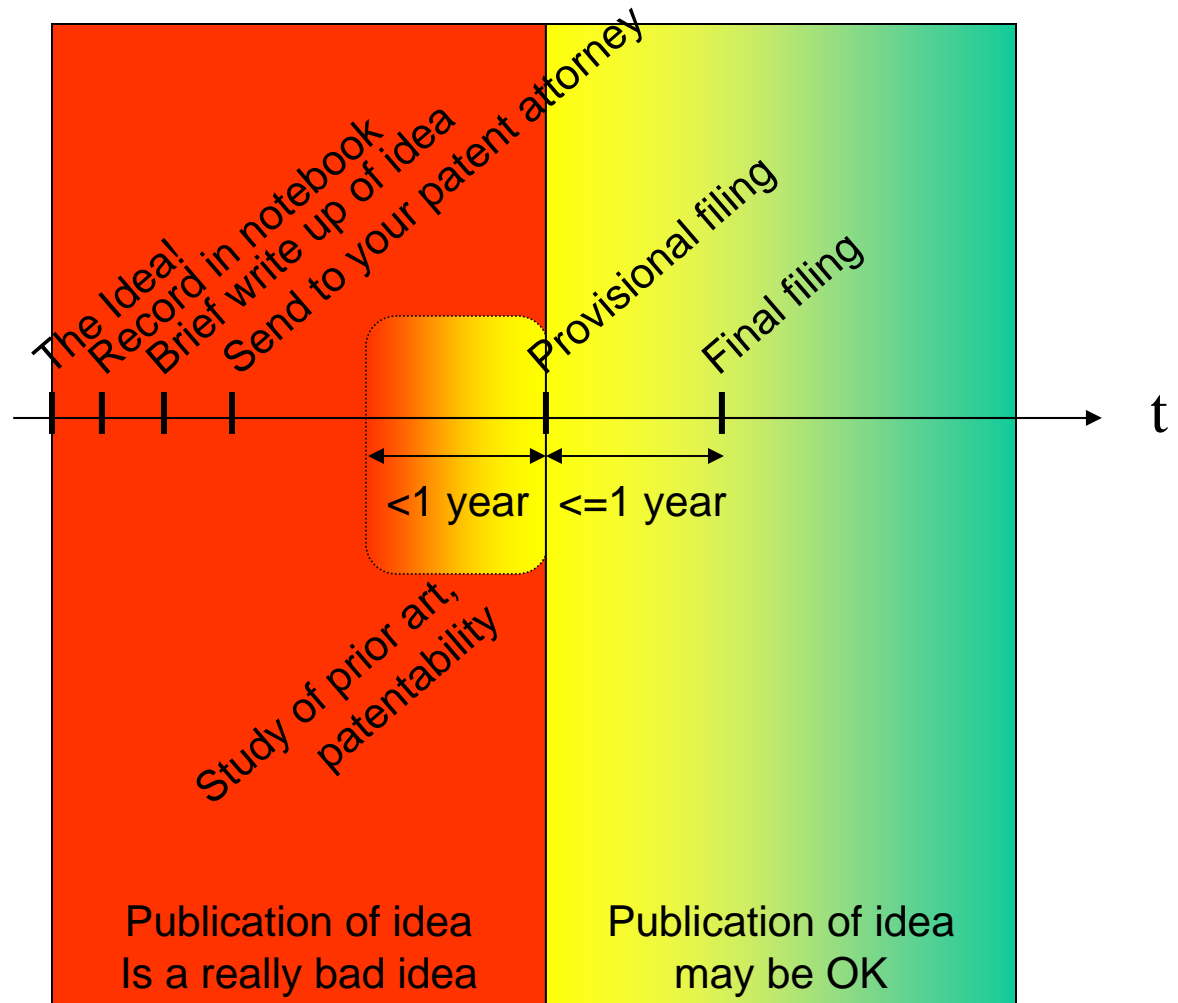
Patent Process



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

Other things you should start thinking about

- Project web site
 - Get it up and working soon so you can refine it later when it will be graded.
 - Must include all group deliverables (but NOT group effectiveness reports)
 - Research and other information links
 - All content must be on panda.ece.stevens-tech.edu
 - Each group will have a login on panda in the form “grp39”
 - If you are developing or hosting at another site, the **other** site must mirror panda content (i.e., do not link panda site to your off-site content - we can't archive off-site content)
- Final presentation
 - As you develop your project concept, think how you will present the idea
 - Presentations will be scheduled at the end of November/beginning of December
 - More details on presentation will be provided later – assume ~15-20 minutes; all group members must be present.