

EE/CpE 423

Senior Design

Fall 2006

Class 2 – 9/5/06

Agenda

- Problem definitions
- Announcement, issues
- Directions and more logistics.

Problem Definition

- I want to:
 - build a widget
 - explore gizmos
 - program a thingamabob
 - design a doohickey

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- Widgets are too expensive for everyday users
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- Focus on user/customer needs:
Functions, Size, Performance, Power, Cost

Project Status

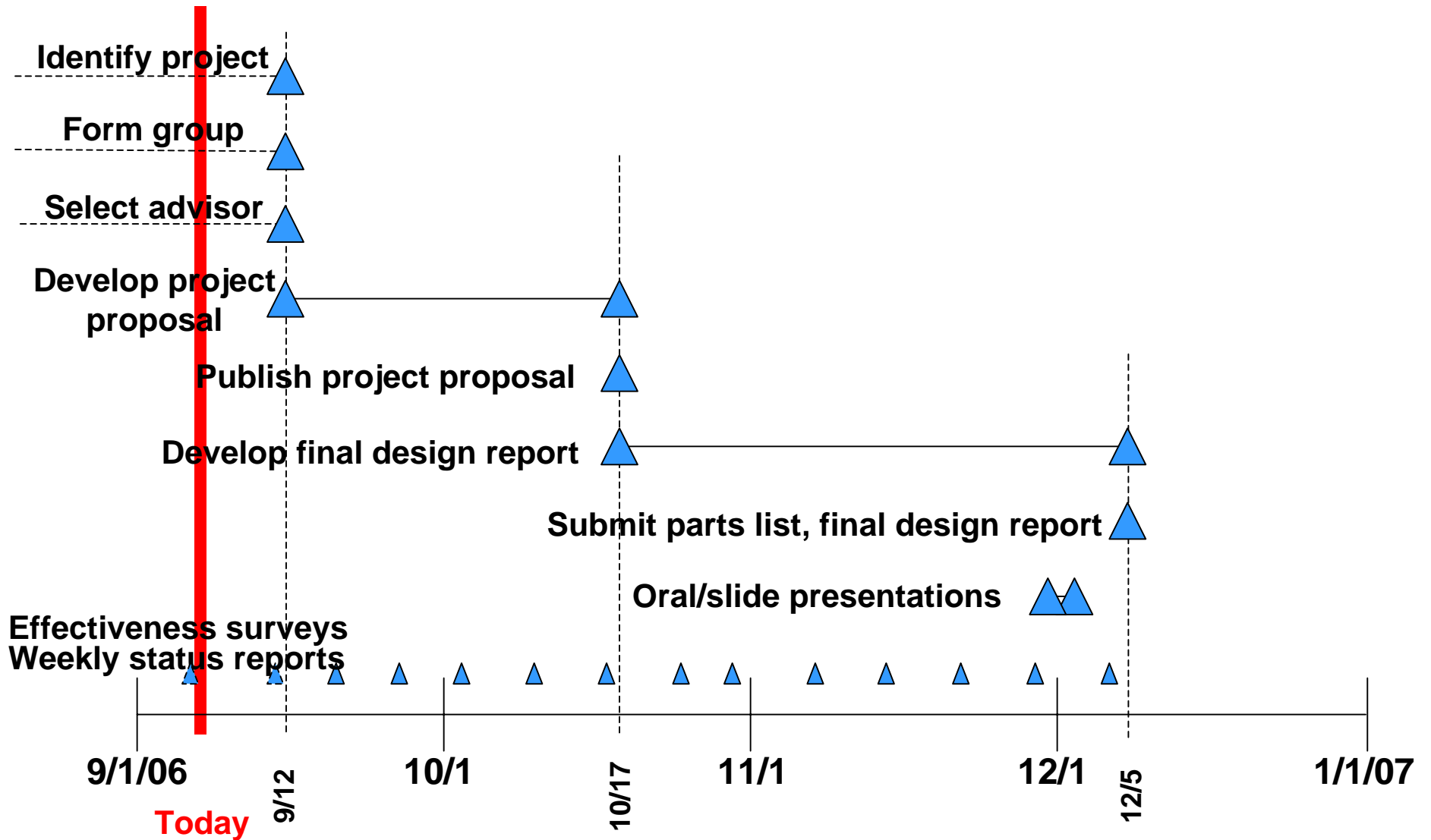
Group #	Project	Team members	Advisor
1			
2			
3			

http://www.ece.stevens-tech.edu/~bmcnair/senior_design-06-07/groups.html

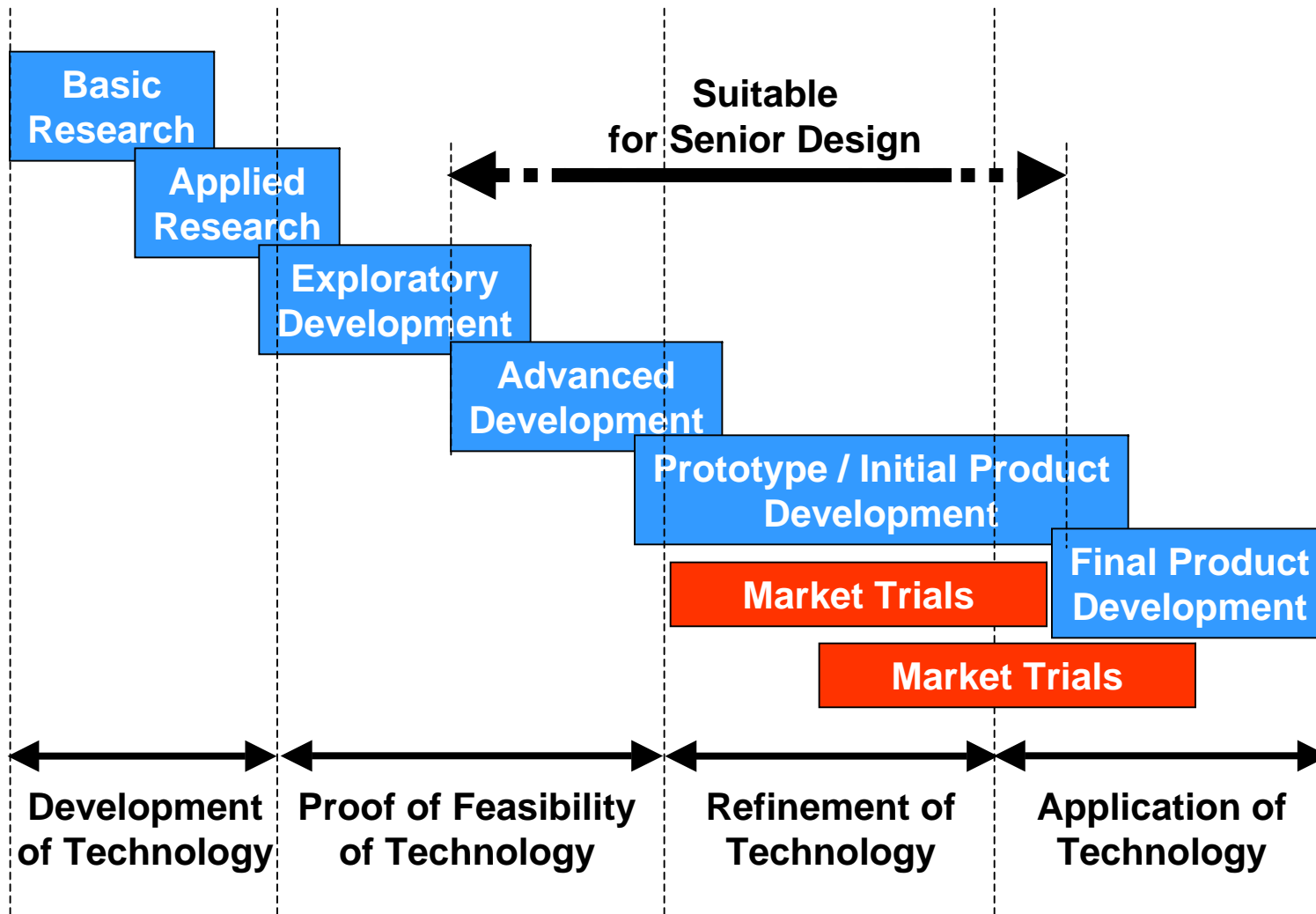
Students Not in Groups

Clayton Allen	Jonathan Garcia	Aleh Khapalow	Chris Rollins
Christopher Becker	Angel Georgiev	Kenneth Kolodziej	Sean Schumer
Brian Behr	Joseph Giunta	Danny Kwok	Randy Simat
Derek Busico	Alex Gulagaci	Robert Leming	Ricardo Slater
Brian Chan	Tae Ha	Patrick McCabe	Gregoire St. Louis
Nor Che Nazran	Katie Haskins	Robert Mengert	Jake Stolarski
Victor Cordero	Megan Hayes	Serge Ovchinnikov	Bhavin Tailor
Kevin Crowley	James Hoogmoed	Mrugesh Patel	Stanford Vogel
Hoang Dang	David Insley	Suresh Patel	Jamaal Watkins
Amit Desai	Matthew Jacoby	Achal Pathak	Wei Yang
Adam Duda	Nirav Jhaveri	Vadim Pinskiy	Xiaoxu Zhao
Marie-Joan Dutreuil	Olorundamilola Kazeem	Vidya Rao	Robert Zienowicz
Edwardo Garcia			

Senior Design Tasks – Fall '06



Stages in Development Cycle



Constraints That Can (Should?) Be Relaxed For Prototype

- **Physical size**
 - Level of integration (VLSI vs. FPGA, μ C, LSI/MSI, etc.)
 - **Implementation platform**
 - simulating a Palm on a laptop,
 - simulating functions in software that would normally be in hardware, and vice versa
 - **Feature set**
 - What is essential to demonstrate concept, vs. what could be imagined/assumed
 - What is known to be doable vs. what is to be demonstrated
 - **Performance**
 - Speed, capacity, etc.
 - **Environmental constraints**
 - Operating temperature range, shock, vibration, etc.
- Focus on *key* attributes of end design, not every detail

Now that you've (hopefully) formed a group...

- 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**

EE/CpE 423-424 WEEKLY STATUS REPORT					
Group #	XX	Week ending:	XX/XX/XX	Report #	XX
Project Title:					
Group Leader:			Advisor:		
Sponsor/Client:					
Total number of person-hours spent on project by group during past week:					
Is project on schedule?			Yes	<input type="checkbox"/>	No <input type="checkbox"/>
Weekly status:					
Weekly report is due to Senior Design Coordinator by Noon Monday					
<small>Template version: 9/1/03</small>					

Now that you've formed a group...

- Group Effectiveness Survey
 - Use ONLY the template provided to ensure consistent format:
 - Template is on Senior Design web site (see below)
 - **EACH** group member must submit survey **EACH** week (electronically)
 - **Group grade will be influenced by timeliness, completeness of reports**
 - Individual grades will NOT be influenced by content of these reports
 - I encourage (but do not require) that you share content with your other team members
 - **DO NOT SEND EFFECTIVENESS REPORTS TO ADVISOR!!!**
 - The tutor doesn't need to see these reports
 - If your group has non-ECE members, do not include them in group effectiveness totals.
 - Check your arithmetic: $\Sigma = 100$

EE/CpE 423-424 GROUP EFFECTIVENESS SURVEY			
Group #	XX	Week ending:	XX/XX/XX
Project Title:			
Report Submitted By:			
Assign a score between 0 and 100 to each team member (<i>including yourself and the team leader</i>) to indicate how much YOU believe that team member contributed to the overall accomplishments of the group for the week. The total number of points assigned must total 100.			
Team member's name	Score (0-100)		
Sum of scores	100		
Comments on team effectiveness: <div style="border: 1px solid black; height: 100px; width: 100%; margin-top: 5px;"></div>			
Does the team regularly assess its effectiveness?	Yes	[]	No []
Have you shared your thoughts on the team's effectiveness with the rest of the team?	Yes	[]	No []
Report is due to Senior Design Coordinator by Noon Monday			
Template version: 9/1/03			

Emailing submissions

1. Send to bmcnair@stevens.edu (me)
 mschurgo@stevens.edu (TA)
 mhames@stevens.edu (communications tutor)
2. Send to sd@koala.ece.stevens-tech.edu
3. Mail from within WebCT

Emailing submissions

1. Send to `bmcnair@stevens.edu`
`mschurgo@stevens.edu` ← No issues with attachments,
`mhames@stevens.edu` ← no permanent record in mailbox
2. Send to `sd@koala.ece.stevens-tech.edu`
3. Mail from within WebCT ←

Mail is permanently saved in WebCT folder

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They mess up attachment file names that come from Windows
(use no spaces in file name – use `_` or `-` instead)

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The attached file name must indicate:

course number (423 or SD is sufficient),

group number (this will be supplied when group is formed),

due date (Monday at Noon), and

what the attachment is (“weekly report” or “effectiveness survey”)

Failure to do so will probably result in uncredited submissions, which might influence group’s final grade

Upcoming Discussion/Seminar Topics

- What is important to define a project/start a business
- Patents, Trade-secrets, Intellectual Property and Technical Business Ethics
- GPS and Geolocation Services
- RS-232 Interfacing with Uncooperative, Non-Standard Devices
- Embedded systems
- RoHS
- I'll add other topics as they occur to me or students propose them

Other Resources

- Circuit Cellar Magazine
- http://www.ece.stevens-tech.edu/~bmcnair/senior_design-06-07/hw_sw.htm

