
CIS 422/522

Class Pages and Projects
Teamwork
Group Dynamics
Effective Meetings

What is a project team?

- Members of the project team make all the decisions going from problem to solution
- Intellectual control - making correct decisions about:
 - System requirements, system structure (decomposition), interfaces, detailed design, etc.
 - Realizes the functional and quality requirements
- Managerial control - making effective decisions about:
 - Overall budget and schedule, allocation of people to tasks, tasks to time, when tasks are complete
 - Realizes requirements for on-time and budget delivery

What is a Great Team?

- Diverse Skills
 - People skills, communication and writing skills, design skills, implementation skills and knowledge
- Coherence
 - Shared expectations
 - Ability to build and work toward a shared vision
- Mutual Respect and Responsibility
 - You don't *have* to like each other, but you *need* to trust and respect each other — and to earn your teammates trust and respect
 - This is an enduring part of professionalism in the real world

Desired Skill Mix

- Ideal is a mix of skills: technical, communication, management
- At least one person with experience in team projects, preferably with some management experience*
- At least one person with strong skills in programming, program design, preferably including networking
- At least one person with strong communication skills and good written English

Team Roles

- Manager: responsible for schedule
- Requirements analysts
- System architect
- Quality control (tester, reviewer)
- Technical writer
 - Technical documentation
 - User documentation (may be different skills)
- User interface designer
- Programmer
- Configuration control (build-master)

Not 1-1 with people. Have a backup for each role.

What do software developers do?

- One way to measure: how do they spend their time?
- IBM study (McCue 78):
 - 50% team interactions
 - 30% working alone
 - 20% not directly productive

i.e., Technical excellence is not enough

"Egoless" design

(Weinberg, Psychology of Computer Programming)

- Investing ego in group
- "Letting go" of ego investment in code, design, ideas
 - No winning or losing design debates (focus on improving the product)
 - Once contributed, ideas belong to the group
 - Criticism is aimed at concepts, not people
- The best designers criticize their own designs!
 - Our own assumptions are the hardest to critique
 - Corollary: A good critic is your best ally
 - The hardest lesson to learn but one of the most valuable

. . . but we are not egoless people

- Ego investment is normal
 - be aware of it, be in control of it
- Consider the egos of others
 - What are you attacking? Why?
 - What is motivation of the other person?
 - Are they feeling ignored? Not valued?
- Pride in accomplishment is ok, unless it interferes with accomplishment

Consensus decision making

- Consensus is not counting votes
 - Democracy is 51% agreement
 - Unanimity is 100% agreement
 - Consensus is neither
 - It is "buying in" by group as a whole, including those who disagree
- Everyone has their say
- Everyone accepts the decision, even if they don't prefer it
- Usually best approach for peer groups

Consensus takes time and work, but is worthwhile

Conflict

- Can be healthy and productive
- Can destroy a team if not carefully managed
- Manage conflict constructively
 - Soothe and protect egos
 - Everyone's job, but especially the manager's job
 - Keep conflict on a technical level (not personal)
 - Reward conflict resolution

Being a Good Team Member

- Attributes most valued by other team members
 - Dependability
 - When you say you'll do something, you do it
 - Correctly
 - On time
 - Carrying your own weight (doing a fair share of the work)
 - People will overlook almost everything else if you do these
- These are qualities we ask about in the peer evaluations at the course end

A Word on Managing

- A good manager supplies what is needed for the team to succeed. This includes (but is not limited to)
 - Resources
 - Planning and coordination
 - Pitching in when needed
 - Protection (especially from upper management)
 - Emotional support, etc.
- Good managers are are leaders not dictators (especially true for *peer* teams)
- Good managers are rare

Effective Meetings

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Notes on effective meetings

- Only hold meetings if necessary
 - “Necessary” means that the most cost effective way to accomplish a goal is by meeting
- Have a goal, and a plan (agenda)
 - Clear meeting objectives
 - Known to all in advance (I.e, distribute via email)
- Plan to goal:
 - Participants - Invite only the necessary people
 - Schedule
 - Intended outcome
- Prepare
 - Cost of wasted time = Time x people x hourly cost
 - Cost of individual prep time is much less

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Notes on effective meetings (2)

- Start on time, end on time
- Write down and disseminate the results
 - Leaves an audit trail of decisions
 - Makes people feel included
 - Limits the number of (informational) invitees
- End with concrete, specific action items
 - What must be done
 - Who should do it
 - What the follow-up is

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Questions?

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