CIS 422/522
Teamwork and
Group Dynamics

A few tips on effective teamwork, meetings, and presentations

From lectures by Michal Young, 1988, Anthony Hornoff 2001, with permission.
What is a Great Team?

• Diverse Skills
  – People skills, communication and writing skills, design skills, implementation skills and knowledge

• Coherence
  – Ability to build and maintain a shared vision
  – Shared expectations

• 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

• At least one person with experience in team projects, preferably with some management experience.
• At least one person with strong skills in programming and program design, preferably including networking.
• At least one person with strong communication skills and good written English.
Team Roles

- Manager: responsible for schedule
- System architect
- Programmer
- Quality control
- Technical documentation
- User documentation
- User interface design/build
- Configuration control (build-master)

Not 1-1 with people. Backup for each role.

Discussion: what are 1) the responsibilities and 2) skill set needed for each
What do software developers do?

- One way to measure: how do they spend their time?
- IBM study (McCue, 1978):
  - 50% team interactions
  - 30% working alone
  - 20% not directly productive

*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 conscientious critic is your best ally
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)
  – Consider reward structures
    • Are you rewarding trouble?
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
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 leaders not dictators
- Good managers are rare.
Effective Meetings
Notes on effective meetings

• Only hold meetings if **necessary**
  – “Necessary” means that the only or 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
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
Assignment

• Reading for Monday
  – Text: Chapter 3.1
  – “Fake-It” paper (handout)

• Project
  – First meeting (in class)
  – Plan and hold at least one project meeting
  – Keep the work products in a project notebook (Manager)
    • Agenda
    • Meeting summary
    • Action items