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# 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?

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- **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

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- 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

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- 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?

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- 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

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*(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

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- 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

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- 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

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- 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

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- 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

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- 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
- Good managers are rare.

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# Effective Meetings

# Notes on effective meetings

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- 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)

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- 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

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- 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