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## Teamwork and Group Dynamics

### A few tips on effective teamwork, meetings, and presentations

Derived by Anthony Hornof with permission from the original author, Michal Young, 1988

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## 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

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## Diverse Skills

- 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.

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## Team Roles

- Manager: responsible for schedule
  - System architect
  - Quality control
  - Technical documentation
  - User documentation
  - User interface
  - Configuration control (build-master)
- Not 1-1 with people. Backup for each role.*

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## 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*

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## "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
  - Once contributed, ideas belong to the group
  - Criticism is aimed at ideas, not people
- The best designers criticize their own designs!

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## ... 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?
    - Do they need an ego stroke?
    - Are they feeling ignored?
- Pride in accomplishment is ok, unless it interferes with accomplishment

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## 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
  - Consider reward structures
    - Are you rewarding trouble?

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## Managing a presentation

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- Someone is in charge (usually the speaker)
- This is part of having a plan:
  - Presentation must have and work towards a goal.  
All points should be expressed on the slides.
- Everything shown should be relevant.
  - The audience should never wonder why you are showing something
- Consider your goal
  - What information is necessary?
  - Organize appropriately

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## 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

*Consensus takes time and work, but is worthwhile*

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## Notes on effective meetings

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- Have a goal, and a plan
  - known to all
- Plan to goal:
  - Participants
  - Schedule
  - Intended outcome
- End with concrete, specific action items
- Prepare
  - Cost of wasted time = Time x people x hourly cost
  - Cost of individual prep time is much less

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## Presentation materials

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- Handouts
  - Slide handouts are good. People can focus on the content and not writing it down, can more easily take supplemental notes, and refer back to previous slides, if they are numbered.
  - Other handouts may distract.
- Don't spoon feed your slides
  - Trust that the audience will be able to manage their own attentional resources, and decide whether they can read ahead and still listen.
  - Don't make us keep your place for you.

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## Answering questions effectively

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- **Be sure you understand the question.**  
This is most often done poorly!
  - Ask for clarification
  - Back up if necessary
- **Manage the time**
  - If short or clarification, answer or deal with it
  - If an extended discussion point or a diversion (or when it becomes a diversion), push it offline. A polite interruption may sometimes be necessary.
- **Ask for confirmation**
  - "Is that what you asked?"
  - "Does that make it clear?"
  - "Does that address your concern?"

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## Speaking up

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- **Always consider:**
  - How will this contribute to the goal?
  - Is this the right time and forum?
- **Don't hold back**
  - out of fear of looking stupid
    - (people will remember the smart things more than the dumb)
  - out of fear of attack
    - (yes, it happens, but you'll survive)

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