CIS 422/522

Teamwork &Group Dynamics
Effective Meetings

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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

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What makes a great project team?

- Together must cover all aspects of a project
- Diverse Skills
  - Intellectual: requirements, design, code, test
  - Managerial: estimation, planning, scheduling, reporting
  - People skills: communication (written, verbal), negotiation, collaboration
- Coherence
  - Shared expectations
  - Ability to construct 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 real world professionalism

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Roles and Responsibilities

- Roles should reflect *ownership of responsibilities*
- Each role is responsible for specific activities and artifacts
  - Manager: responsible for schedule
  - Tester: responsible for test plan, unit testing
- A person in the role *owns* the corresponding artifacts
  - Does not mean he/she does all the work
  - Does mean he/she is responsible for artifact's completeness and quality
- *Project Risk*: failure to be specific about individual responsibilities and holding people accountable
  - One of the most frequently cited project problems

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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 (focus on improving the product)
  - Once contributed, ideas and artifacts belong to the group
  - Criticism is aimed at artifacts, 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
    - Applies to all aspects of profession and life

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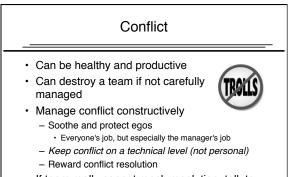
. . . but we are not egoless people

- Ego investment is normal
  - be aware of it, be in control of it
  - Take control, ask for critique
- Consider the egos of others
  - Examine your own motivations: 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

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Consensus Decision Making

- Consensus is not counting votes
  - Democracy is 51% agreement
  - Unanimity is 100% agreement
- Consensus is neither
  - Everyone has their say
  - Everyone accepts the decision, even if they do not prefer it
  - It is "buying in" by group as a whole, including those who disagree
- Usually *best approach for peer groups*
  - "Buy-in" is critical for coordinated progress
  - Avoids winners and losers

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
- If team really cannot reach resolution, talk to instructor
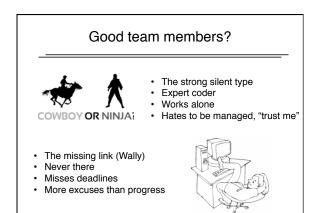
Being a Good Team Member

- 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
- Also part of your grade
  - Collect from peer evaluations, blogs, etc.
  - Can significantly raise or lower project grade

Where's Wally?

Evaluation/Teammate Name or initials	Self	Wally	xxx.	xxx.	xxx.
Effective and timely communication with other team members	5	0	5	6	4
Cooperates and works effectively with team members	6	0	5	6	5
Follows agreed to project plan	6	0	6	6	5
Regularly attends team meeting and makes a positive contribution	6	0	6	6	3
Does his/her fair share of the work or more	6	0	5	6	4
Dependably does what he/she agrees to on time	6	0	6	6	4
Overall contribution to team effort	6	0	6	6	4

Add any additional comments regarding your teammates' contributions, strengths, or weaknesses

At the beginning of project 2, there were long periods of time (3+ days) where the team was not able to get a hold of neither Wally nor his status on action items. Emails, text messages, and phone calls were sent/made. Modules assigned to him in iterations 1 & 2 were late, incomplete and with little regard to the architecture and module design created by the team architects – which were documented and verbally discussed beforehand at meetings. Wally never communicated to the team any issues or impediments regarding his assigned tasks.

Wally was never up to speed on project progress or his action items, even though they were documented and emailed to him directly. The team gave Wally many chances to start over and contribute to the group. The documentation tasks that were assigned to him in iteration 3 were never completed.

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Good team members?

- The strong silent type
- Expert coder
- Works alone
- Hates to be managed, "trust me"

COWBOY **OR** NINJA?

- The missing link (Wally)
- Never there
- Misses deadlines
- More excuses than progress

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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

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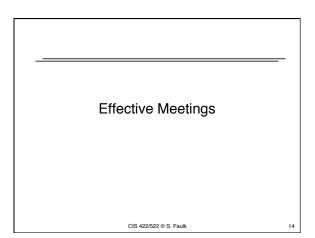## Introverts & Extroverts

- Where does your energy come form
  - Extroverts energized by social interactions
  - Introverts energized by internal reflection
- Both have value
  - Extroverts work well in group settings especially with new people
    - May tend to "shoot from the hip"
  - Introverts tend to think more deeply about issues
    - May be reticent to get involved, share thoughts
    - Important to ensure that introverts are heard
  - i.e., explicitly take turns asking for inputs
  - Provide smaller venues for discussion

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Effective Meetings

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Notes on effective meetings

- Only hold meetings if <u>necessary</u>
  - "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
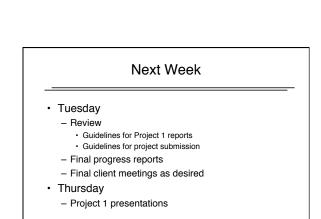 - Cost of individual prep time is much less

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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
- Reflect items in the schedule and developer logs

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Next Week

- Tuesday
  - Review
    - Guidelines for Project 1 reports
    - Guidelines for project submission
  - Final progress reports
  - Final client meetings as desired
- Thursday
  - Project 1 presentations

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Questions?

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