**Administrivia**
- Informal feedback meetings with LCO groups
  - FantasySportsLeague: still to come today
- Individual assignment #1 due this Fri by 10pm
- Group assignment #2 (LCA) announced
  - Due in two parts, next Tue and Thu
  - LCA presentations in class next Wed

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**Lecture 07:**

**Team Environment Issues (Part II)**

"Talent wins games, but teamwork and intelligence wins championships."  -- Michael Jordan

"We must all hang together or assuredly, we shall all hang separately.”  -- Benjamin Franklin

"If a team is to reach its potential, each member must be willing to subordinate his personal goals to the good of the team."  -- Bud Wilkinson

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**Outline**

- Team Models
- Creating a High-Performance Team
- Motivation Factors and Killers

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**Resources**

- "Rapid Development”, by Steve McConnell
  - Ch. 12, 13
- "The Pragmatic Programmer”, by Andrew Hunt and David Thomas
  - Ch. 8 (section 41: pp.224-230)
- Guest lecture by David Schmaltz & Amy Schwab
  - From summer 2003

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**Software Teams**

- Typically, software development teams include:
  - Several "developers" in a broad sense: programmers, testers
  - A person with lead developer/architect responsibilities
  - A person with functional management responsibilities
  - A person with project management responsibilities
- These could be all different team members!

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**Team Models and Management Structures**

**Dominion model**
- Pros: clear chain of responsibility; people are used to it
- Cons: single point of failure at the commander; less or no sense of ownership by everyone

**Communion model**
- Pros: a community of leaders, each in his/her own domain; inherent sense of ownership
- Cons: people aren’t used to it (and this scares them)

**Note:** Both models allow for having a point-of-contact person, responsible for completing a particular task.
Specifically for Your Team...

- Who will do the scheduling/planning?
- Who will do the development?
- Who will do the testing?
- Who will do the documentation?
  - Includes spec, design, write-ups, presentations, ...
- Who will do the build/release preparation?
- Who will take care of inter-team communication?
- Who will do the customer communication?
- Who will do ...?

More on Team Organization

Pragmatic Programmer Tip:
“Organize Around Functionality, Not Job Functions”

- What are some benefits of organizing teams around:
  - ... functionality?
  - ... job functions?
- In what context(s) might the former be superior?

Creating a High-Performance Team

Typically, teams go through 4 stages:

1. **Forming**
   - Exploration period, cautious and guarded, exploring boundaries
2. **Storming**
   - Deals with issues of power, control, leadership
3. **Norming**
   - Establish cohesiveness among team members
   - Appreciate differences, trust begins to evolve
4. **Performing**
   - Full functioning of team
   - Leadership is participative and shared
   - Sense of identity and high level of work accomplishment

How Can a Team Start “Performing” Faster?

- **Forming stage**
  - Clarify team’s purpose and goals
  - Clarify responsibility of each member
  - Validate skills each team member brings
  - Identify communication methods
- **Storming stage**
  - Establish norms of discussions
  - Model openness in resolving conflict
  - Ensure everyone participates on all key issues
- **Norming stage**
  - Let members take on more responsibility as productivity increases
  - Chart progress! Reward successes!
  - Reduce meeting time as things become smooth

What is Common among High-Performance Team Models?

**Results-driven structures:**

- Clear roles and responsibilities
  - Each person knows and is accountable for their work
- Monitor individual performance
  - Who is doing what, are we getting the work done?
- Effective communication system
  - Available, credible, tracking of issues, decisions
- Fact based decisions
  - Focus on the facts, not the politics, personalities, ...

Motivation

“Motivation is undoubtedly the single greatest influence on how well people perform. Most productivity studies have found that motivation has a stronger influence on productivity than any other factor.”

-- Barry Boehm (1981)
Motivation Factors

Think for a moment of up to 3 factors that most often affect your motivation!

Motivation Factors for You?
- Achievement
- Recognition
- Advancement
- Salary
- Possibility for growth
- Interpersonal relationships
  - Subordinate
  - Superior
  - Peer
- Status
- Technical supervision opportunities
- Company policies
- Work itself
- Work conditions
- Personal life
- Job security
- Responsibility
- Competition
- Time pressure
- Tangible goals
- Other?

Motivation Killers

Do you recall situations in which people around you managed to "kill" your motivation (whether intentionally or not)? How did they do that?

Motivation Killers (and There Are More...)
- Micro-management or no management
- Lack of ownership
- Lack of effective reward structure
  - Including lack of simple appreciation for job well done
  - Excessive pressure and resulting "burnout"
- Allowing "broken windows" to persist
- Lack of focus in the overall direction
- Productivity barriers
  - Asking too much; not allowing sufficient learning time; using the wrong tools
- Too little challenge
- Work not aligned with personal interests and goals
- Poor communication inside the team

What is Dilbert Motivated and De-motivated by?