

CSE 403 Lecture 7

Motivation

Announcements

- This week:
 - Motivation
 - Is software different?
 - Risks analysis
- Reading Assignment
 - Mythical Man Month, Chapters 7-9
- Project

Successful software teams

- Studies show a 10 to 1 difference in productivity of programmers
- Equal differences observed in productivity of teams
- Substantial differences observed in performances of teams *even when the strength of the programmers is equivalent*

What makes a successful team?

- Shared, elevating vision or goal
- Team identity
- Results driven structure
- Competent team members
- Commitment to the team
- Mutual trust
- Interdependence among team members
- Effective communication
- Sense of autonomy
- Sense of empowerment
- Small team size
- High level of enjoyment

Team building

- Team members derive satisfaction from the team's accomplishments
- Important to both
 - Reward the team's success
 - Maintain individual accountability

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. (Boehm 1981)

What motivates you?

Motivation Survey

Achievement	Interpersonal relationships, superior
Recognition	Interpersonal relationships, peers
Work itself	Technical-supervision opportunities
Advancement	Company policies
Salary	Working conditions
Possibility for growth	Personal life
Interpersonal relationships, subordinate	Job security
Status	Responsibility

Top five motivation factors for developers (Boehm)

- Achievement
 - Ownership
 - Goal setting
- Possibility for Growth
- Work itself
 - Skill variety
 - Task identity
 - Task significance
 - Autonomy
 - Job feedback

Top five motivation factors


- Personal life
- Technical-supervision opportunity
 - Assign each developer to be technical lead for some particular product area

Think about the following

- Identify an episode in your life where you were exceptionally motivated and the motivation led to high performance. It could be school or work related.
- What factors motivated you?

RJA's example

- Graduate School: Analysis of Algorithms qualifying exam. Very challenging course followed by a week long take home exam.
- Motivational factors:
 - Achievement – significant technical challenge
 - Direct recognition – feedback on the work from experts
 - Work itself
- Non-factors:
 - Public recognition (status)
 - Passing the exam (advancement)
 - Learning something useful (personal growth)



How not to manage: Morale killers

- Management manipulation
- Excessive scheduling pressure
- Lack of appreciation for team member's efforts
- Inappropriate involvement of technically inept management
- Not involving team members in decisions that affect them
- Productivity barriers
- Low quality
- Heavy handed motivation campaigns
- Frequent changes in direction



Student Project Teams

- I've observed a high success rate
- But failures happen . . .