# A Model of Team Development

Stage 1: Forming

Stage 2: Storming

Stage 3: Norming

Stage 4: Performing

Frequently an iterative process, phases often overlap

# Stage 1: Forming

- Team members begin to discover what behaviors are acceptable.
- Usually highly unstructured environment
- Attempt to identify tasks, how to accomplish them
- Decisions on what information is needed
- Hesitant participation
- Test behavioral assumptions, how to handle each other
- Intellectualizing
- Complaints about organizational issues
- Suspicions, fear, anxiety about new situation
- Minimal work accomplished

# Stage 2: Storming

- Some members become overzealous or hostile as a way to express individuality, resist group formation.
- Often infighting, defensiveness, competition
- Often establish unrealistic goals
- Often disunity, tension, jealousy over others roles
- Polarization of team members
- Concerns over excessive work
- Establish pecking order
- Recognize the extent of task requirements, often emotional responses from team.

## Stage 3: Norming

- Members accept team, team norms, their own roles, each others idiosyncracies.
- Attempts to patch up previously conflicting relationships.
- Team leader attempts to take charge.
- Anxieties about task outcome and products.
- Confusion over team priorities, usually temporary
- Excessive meetings

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## Stage 3: Norming (2)

- Distrust and blaming by some; higher level of sharing and confiding by others.
- Jockeying for position
- Stress reactions.
- Sense of team spirit and common goals emerge.
- Moderate work accomplished.

# Stage 4: Performing

- Members experience insight into personal and interpersonal processes.
- Constructive self-change occurs.
- Great deal of work accomplished.
- Team becomes capable of diagnosing and solving problems.

# Stress and Programmers

Fujigaki:

- Found high levels of stress among Japanese programmers
- Blamed on current tendency to manage programmers with techniques from manufacturing industry:

  "The software process is not the manufacturing process. The time management system that developed in manufacturing should not be applied to the software process without modificaions.

- Suggests that the software process is a learning and communication process. Management's role is to facilitate this learning and communication.

# Stress and Programmers (2)

Furuyama, Arai, Iio:

- Measured effects of stress.
- Programmers working under stress make far more mistakes
- 37% of mistakes would have been avoided "by appropriate scheduling and placing no stress on the developers."
- Design particularly vulnerable to stress-caused errors. Found 42% of all design faults directly attributable to programmer stress.

# Stress and Programmers

Zawacki: conducted studies on programmers 1979-1993

- Compared with rest of society, programmers had high need to succeed, low need to socialize with other people.
- Alarming drop in job satisfaction from 1979 to 1993.
- Need management better prepared to deal with changing needs of programmers in the 90's:
  - Find ways to improve motivation of programmers.
  - Improve feedback between managers and programmers.
  - Add more people to mix with higher social needs (to match more team-oriented, user-focused approaches of the 90s).

# Extroversion (E) and Introversion (I)

E: Other people is source of energy
Sociability charges batteries
Finds breadth more appealing
Multiplicity of relationships

I: Private spaces both mentally and physically
Being alone charges batteries
Likes to work alone or small group
Finds depth more appealing
Limited relationships

# Intuition (N) and Sensation (S)

(Differences place widest gulf between people)

N: Innovative, likes metaphor, futurist

Head may seem to be in the clouds, but able to take very complex ideas and see them as a whole.

Usually entrepreneurial, ingenious

S: Wants facts and data, believes in experience

Usually observant about details

Realistic, practical, down-to-earth

# Thinking (T) and Feeling (F)

T: Usually prefer impersonal choice when making decisions

Objective, principles, follow laws and policies

Usually hides feelings; may be thought of as cold or unemotional (not necessarily true, just able to cover up)

F: Personal basis and experience used when making decisions

Subjective, extenuating circumstances

Persuasive, social values

Often expressive of emotions

# Judging (J) and Perceiving (P)

J: Choose closure over keeping options open

May experience a sense of urgency pending a decision

Establishes deadlines and takes them seriously

Strong work ethic; plans ahead, decisive, "get the show on the road"

P: Likes to gather more data, decisions frequently left pending

Likes to adapt as they go, keep life open

Don’t think deadlines should be hard

Takes a "wait and see" and "something will turn up" attitude

## Metzger: Managing Programming People, 1987 (Prentice-Hall)

- A team made up of individuals, each with own personal goals.
- Project management task is to make team out of individuals whereby individual goals reconciled into one goal for project as whole.
- Important to identify project goals at early stage and communicate them to project members.
  - Ought to know what is expected of them.
  - If uncertainty, will determine their own goals.
  - Diverging goals may lead to severe problems.

## Debra Tannen: You Just Don't Understand

Differences between male and female communication styles