Modelling Research- and Software-Development Teams

Looking for Motivation and Innovation

Pascal Jäger 10.11.2011
Overview

- Motivation
- Placement in Research
- Current Research Issues
- My Master Topic
- Setup
  - Dependencies
  - Risks
- Outlook / Road Map
Motivation
Motivation

- Project Management
- Employer Branding
- Diversity
- Motivation
- Communication
- Innovation
- WALK – Research Team
The Idea:

Modelling a Team
Placement in Research
Conferences / Journals

- SIG MIS
  Special Interest Group of the ACM on Management Information Systems
- SIG CPR
  Computers and People Research
- ITiCSE
  Innovation and Technology in Computer Science Education
- International Journal of Human Resource Management
- Academy of Management Review
- Journal of Management

- Until now, not yet considered in detail:
  - Journal of Organizational Behavior
  - International Journal of Cross-Cultural Management
Current Research Issues
Staffing/Workforce Planning

Assigning available resources with the appropriate skills to tasks. Sticking to short- and long term strategies.

- **Staffing a Software Project**: a Constraint Satisfaction Approach
  (Barreto and Werner 2005)

- **Simulation-based workforce assignment in a multi-organizational social network**: (multi objective optimization)
  (Celik et al. 2011)

- **IT Workforce Planning**
  (Adya and Niederman 2011)
Psychological Aspects (1/5)

THE NECESSITY OF OTHERS IS THE MOTHER OF INVENTION (Grant, Berry, and Carolina 2011)
Psychological Aspects (2/5)

Fig. 3. Simulation-based optimal workforce assignment considering network embeddedness. (Celik et al. 2011)
Psychological Aspects (3/5)

Globally Distributed Teams: The Effect of Diversity on Trust, Cohesion and Individual Performance
(Garrison et al. 2010)
Effects of shared leadership on team creativity through knowledge
(Kun Chang Lee, Dae Sung Lee, and Seo 2011)

H6 and H9 have been rejected
Psychological Aspects (5/5)
The Relationship Between Being Perceived as Trustworthy by Coworkers and Individual Performance

Being perceived as trustworthy (trustor = coworker)

Receiving resources from coworkers

Social Exchange

Sharing resources with coworkers

Individual Performance (Actor)

Perceiving coworkers as trustworthy (trustor = actor)

The shaded parts of the diagram represent the focus of this research; the unshaded part represent previous studies.

Other Issues

- Making Things Happen: A Model of Proactive Motivation
  (Parker, Bindl, and Strauss 2010)

- Measuring Organizational Performance
  (Richard et al. 2009)

  (Moliterno and Mahony 2010)
My Master Topic
Modelling Research- and Software-Development Teams

- What strives people?
- What motivates them?
- What makes them innovative?

- What can companies and managers do to make their employees innovative?
Multi Agent System
Setup
The Setup

- **WALK**
  - Access to the walk team to perform research
- **Cielarko – South Africa**
  - General support
  - Access to development teams
  - Formulating interesting questions on the model
- **Microsoft Deutschland GmbH (Consulting Services)**
  - Access to consulting teams
  - Formulating interesting questions on the model
Dependencies

- WALK
  - Emotional/Intelligent Agents
  - Agent Steering DSL
  - Event Processing
  - Visualization of Group Information

- Access to teams to get enough empirical data
Setup

Risks
Risks

- Access to teams
- Focus of the model is too large or too small for the master thesis
- Difficulties to formulate clear managerial decisions
Road Map
Master Road Map

Original

Original

Modell

Modell

Research Dependencies
Generating Data

Managerial Decisions

AW1 AW2

Pr1 / Pr2 Master

Simulation in Agent System

Validation/ Interpretation Comparable Measures

AW1 AW2

Master

Master Road Map

AW1/2

Pr1/2

Master


