

## 2<sup>nd</sup> Workshop on Software Development Governance (SDG)

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### Abstract

*The main role of software development governance is to achieve a strategic alignment with the business. Exploring governance in software development environments is an important evolutionary step for software engineering. The implementation of governance through tools and techniques provides teams and organizations with the ability to effectively steer the business of software development.*

### 1. Workshop theme

Software development teams and organizations need to perform in a complex and demanding environment, and they are required to deliver more value in an effective and efficient manner while controlling the operational risks and meeting regulations.

Software Development Governance (SDG) is a relatively new field that deals with empowering software teams to reach project goals [1-6]. It involves setting roles and responsibilities, focusing on the decisions associated with the responsibilities. Further, mechanisms of control and follow-up that are gained by audit and reflection are used for monitoring and on-going assessment of the process and product. These mechanisms shape the SDG lifecycle to enable the refinement of goals and mechanisms as per the project evolution.

Governance has four main aspects that occur iteratively: (1) setting the goals and assigning roles and decision rights, which give individuals responsibility to perform actions in order to meet the goals; (2) the determination of measurements, policies, and controls to understand and constrain the dynamic behavior and performance of an organization; (3) the execution of these mechanisms in practice; and (4) the assessment of the execution based on the mechanism in order to refine the goals and evolve. Implementing governance

in software projects enhances the ability to deal with risks and supports a consistent decision making.

Workshop participants of last year worked on the definition of governance in general and of software development governance in particular. Further, several implementations of governance techniques and mechanisms were examined. The articles are available in *ICSE 2008 Proceedings* and the slides and participants work are available at the SDG'08 site (<http://www.cs.technion.ac.il/~yael/SDG2008/>).

This one-day workshop focuses on software development governance and deals with the issues that are special to software organizations. Topics covered in the workshop include:

- Governance in agile teams
- Governance in distributed teams
- Governance models and frameworks
- Development environment support for software development governance
- Governance mechanisms (policies, controls and measurements) that relate to contemporary software development projects and organizations
- Governance roles and responsibilities in software development settings
- The lifecycle of software development governance
- Ways to assess software development governance and its effects
- Methods and tools to define and deploy software development governance approaches
- The role of software development governance in understanding the business value and risk associated with projects
- Effective measurement of software development governance
- Risk and valuation techniques for software development governance
- Individual, societal, ethical or cultural issues raised by software development governance

## 2. Workshop goals

Following the fruitful workshop last year (SDG'08), we continue this year aiming to examine the research and practice that have emerged and to strengthen the relationships that have evolved.

The workshop also has a set of specific technical goals:

- Investigate the relationship between governance models and software development environments and processes; e.g., the project or program management processes.
- Examine the lifecycle of software development governance and how it relates to the software engineering lifecycle.
- Explore and evaluate existing implementations of software development governance.

## 3. Workshop evolution

This is the second time we run the SDG workshop. Regarding last year, in addition to the workshop slides (see <http://www.cs.technion.ac.il/~yael/SDG2008/>), one can find the participants' work from the different activities we guided. We would like to draw special emphasis to the suggestions for future work that were given by the participants (see the last activity mentioned in the web site). Using the technique of a stand-up-meeting at the end of the workshop, each of the participants was asked to share one thing that he/she learned in the workshop and one thing he/she thinks is a good research topic in SDG context. Following are some examples for future research directions as expressed by the participants (the complete list is in the SDG'08 site):

- "Integrate governance ideas with other domains and processes like traceability and configuration management; define terminology clearly and reuse existing terminology where possible."
- "Agile people do lots of governance without even knowing; would like to analyze this."
- "I'm with Clay on the value thing--how do we actually value each backlog item and make decisions?"
- "Define what we mean by governance. Sounds like we're trying to sneak "process" in through the back door. To help define governance is to step out of the engineering field and look at how other

fields define governance. For example, how do lawyers or CPAs define governance? We also have to deal with such people in corporations, and in our litigious society."

## 4. Workshop committee

Michel Benaroch, Syracuse University  
Erran Carmel, American University  
Aileen Cater-Steel, University of Southern  
Queensland, Australia  
Sunita Chulani, Cisco  
Kate Ehrlich, IBM Watson Research  
Rick Kazman, SEI, CMU  
Chris Kemerer, University of Pittsburgh  
Jyrki Kontio, Helsinki University of Technology,  
Finland  
Peri Tarr, IBM Watson Research  
Giuseppe Valetto, Drexel University  
Clay Williams, IBM Watson Research  
Avi Yaeli, IBM Haifa Research Lab  
Annie t Ying, IBM Watson Research

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