International Workshop on Tool Support and Requirements Management in Distributed Projects (REMIDI'07)

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Abstract

Today, distributed projects, often subsumed under terms like global software development (GSD), global collaboration, offshoring etc. are common ways to overcome time and budget restrictions or lack of personnel. Thus, today's projects take place in a global context. But developing software with geographically distributed teams presents a unique set of challenges that influence virtually all aspects of a project and make them more complex. This workshop addressed topics relevant in multi-site projects like tooling, process support, economic aspects, project management and collaboration and communication.

1. Introduction

Developing software with geographically distributed teams presents a unique set of challenges influencing all aspects of a project and increasing complexity. In these projects, many aspects of project members' daily work have to be reconsidered. For example, there is a lack of proven requirements engineering (RE) concepts and practices in the context of global software development (GSD). Also aspects like knowledge management and project tracking ask for appropriate tools to help project members reaching their goals.

Besides other challenges, planning, coordinating and controlling of requirements engineering, implementation and testing in distributed settings are far more complex than in one-site projects.

First, the processes of requirements elicitation, system modeling, coding, testing and rollout need to be planned and organized differently. Second, the methods used to share and discuss early design ideas, coding decisions or test results need to take into account the fact that some project members involved in these phases and tasks are spread over multiple sites and organizations and don't have contact to end-users. For all these tasks, a sophisticated tool chain is needed.

Experience shows that an adequate tool chain increases efficiency and success of distributed projects and need to be properly supported. This is why we focused on this aspect. This workshop walked through methods, tools and concepts that are or should be used in requirements engineering, software development and testing in global software development projects.

2. Topics

One of the main objectives of this workshop, held at ICGSE 2007 in Munich, was to structure the major research topics and to define a research agenda for further work in the area of tool support in distributed system development. To this end, we solicited position papers presenting field reports, case studies, analytical frameworks and key research questions, which serve to improve our knowledge on the different aspects of infrastructure and tools in a GSD context, e.g.:

- *Tooling*: Which are the issues inherent with GSD? How to support global development project with tools in an appropriate way? Are the tools for project management or workflow-support different to those used in on-site projects?
- *Administration and tracking of architectural documents*: What are the consequences for the process and the design tools if the process of architecture definition is distributed?
- *Process support*: What does an adequate process for distributed development look like and how should it be supported by tools and techniques?
- *Economic aspects*: How can we evaluate the efficiency of geographically dispersed requirements engineering, also compared to on-site projects? What is Return on Investment in dedicated tools in distributed development?
- *Project management*: Which tools can help to plan, control and track a project? Are risk management or workflow management tools different to those used in on-site projects?
- *Collaboration and communication*: How do RE and software development need to be organized when teams are spread over two or more sites? How can projects achieve efficient collaboration? What are the lessons learned on tools and infrastructures for aligning in RE, development or test?

3. Workshop Presentations and Discussions

The topics mentioned above were discussed based on presentations by participants. Four position papers, from ten authors based in four countries, were accepted to be published in the workshop proceedings (available in hardcopy from CTIT and in PDF format at http://www4.in.tum.de/~kuhrmann/remidi07.shtml). The papers covered a wide range of topics, including:

- Communication Tools in Globally Distributed Software Development Projects
- Groupware System for Distributed Collaborative Programming: Usability Issues and Lessons Learned
- Sensitivity Analysis Approach to Select IT-Tools for Global Development Projects
- Requirements Management Infrastructures in GSD

One of the main objectives of this workshop was to define structure the major research topics and to define a research agenda for further work in the area of tool support in Global Software Development. In addition to the papers from researchers and practitioners, we therefore invited two keynote speakers who have in-depth knowledge and manifold experiences with distributed development. Daniel J. Paulish of Siemens Corporate Research gave a thrilling introduction into the pitfalls and experiences of distributed software development. Rupert Stuffer, CEO of ACTANO Group reported on the challenges his company faces when developing software that is specifically used to help managers planning and controlling software development projects. Their presentations are also available at http://www4.in.tum.de/~kuhrmann/remidi07.shtml.

After the keynotes, paper presentations and a joint session with TOMAG 2007 workshop, the participants discussed the research areas which are most relevant for practitioners in their work in distributed software development.