Managing Requirements Knowledge (MaRK’08)

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Abstract

MaRK’08 focuses on potentials and benefits of lightweight knowledge management approaches, such as ontology-based annotation, Semantic Wikis and rationale management techniques, applied to requirements engineering. Methodologies, processes and tools for capturing, externalizing, sharing and reusing of knowledge in (distributed) requirements engineering processes are discussed. Furthermore, the workshop is an interactive exchange platform between the knowledge management community, requirements engineering community and industrial practitioners. This proceeding includes selected and refereed contributions.

Motivation

Research has shown that capturing and sharing of tacit knowledge about requirements (a) enhances reuse, (b) enables traceability, (c) supports requirement evolution and (d) improves collaboration between participants in distributed projects [1,2,5]. However, current requirements engineering processes and tools do not give enough room for managing requirements knowledge. In the age of agile methodologies and with the increasing distribution, scale and complexity of development projects, the need for managing requirements knowledge continues to increase, while the major constraint is to have a lightweight, usable, intelligent and personalized capturing and sharing approach. Requirements engineering infrastructures should capture and formalize tacit knowledge and requirement stakeholders should be able to answer questions about requirements at any time, using their common vocabularies.

Traditional knowledge management solutions require formal processes, extensive maintenance policies, large upfront configuration and long time investments.

Recent advancements in knowledge management such as ontological engineering, mining techniques, semantic annotation as well as search and assistance tools bring new potentials for the requirement engineering [3,4]. Therefore, this workshop discusses the issues and approaches regarding capturing, externalizing, accessing, sharing and maintaining of knowledge in requirements engineering.

Contributions

This proceeding includes two types of selected and refereed contributions:

- Five short papers (5 pages) state the position of the authors within the scope of the workshop, and can describe solution concepts in a premature state.
- Five full papers (6-10 pages) describe problems, needs, novel approaches and frameworks within the scope of the workshop. Evaluations of new approaches are included in full papers.

The topics discussed in the papers include:

- Approaches for knowledge capture and sharing during requirements elicitation, specification and analysis as well as during change management
- Automatic and context-aware capture of problem domain knowledge
- Mining requirements repositories
- Intelligent assistance tools such as semantic search and recommendation on requirements, or context awareness tools for supporting requirements elicitation, analysis, traceability and reuse
- Ontology-based requirements and traceability management
- Capture and maintenance of rationale information for volatile and evolving requirements as well as product lines and service-oriented architectures
• Economic models for applying knowledge management in requirement engineering
• Empirical studies on advantages and drawbacks of particular knowledge management approaches

Target Group
The workshop and its proceedings targets researchers from the area of knowledge management with interests on requirements engineering as well as researchers from the area of requirements engineering with interests on knowledge management. In addition topics discussed in the workshop are relevant for practitioners involved in (distributed) requirements engineering and outsourcing projects.

Outlook
From MaRK series we envisage a stronger cooperation between requirements engineering and knowledge management communities. Moreover, MaRK should be a leading platform to identify open issues, novel approaches and potential, future research directions in the area of knowledge management in requirements engineering.

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References