Modeling Knowledge Intensive Processes

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This is the fourth year of the minitrack focusing on models and tools to represent and manage *process knowledge*, i.e., the processes involved in developing models, artifacts and decisions in complex organizational problem solving. The focus of this minitrack is to provide a continuing forum for emerging research on process knowledge, with particular emphasis on integrating diverse aspects of the problem including models for capturing implicit knowledge and tools to support the management of process knowledge. Papers in this year's minitrack reflect this trend. Of the five papers accepted, two focus on methodologies and three are motivated by knowledge intensive applications.

Hickey and Davis study the requirements elicitation process in software development as a knowledge intensive activity. Using a mathematical model of the elicitation process they establish the critical role played by knowledge in this process as well as in the section of appropriate techniques to be used in this process.

Hasan proposes a model of knowledge processes, based on the concept of activity developed from the Cultural-Historical Activity Theory. The implementation of the model and the results of an evaluation of its suitability and effectiveness are presented to justify its usefulness and practicability for the knowledge extraction to support group memory and knowledge processes.

Xu and Ramesh also investigate software development as a knowledge intensive process. Their work is focused on supporinting the reuse and tailoring of software processes by capturing knowledge about context in which a process is defined and tailored. They present a framework that represents the process knowledge and describe a prototype tool to support the understanding, reuse and maintenance of this process knowledge.

van Leijen and Baets develop a framework for improving knowledge-intensive administrative processes. Challenging the notion that changing business processes amounts to manipulating process knowledge in humans and machines, they take a cognitive perspective on business processes, in order to be able to design the proper coordination, maintenance and use of operational knowledge in service organizations. They discuss the implications of this model for analyzing, redesigning, and implementing knowledge-intensive processes.

Kaindl addresses the important topic of making relevant knowledge available to perform knowledge intensive work. Based on several real-world experiences, this research presents a pattern of patterns to structure models of knowledge-intensive processes and discusses a tool to support such modeling.

We hope that the rich diversity of problems and approaches represented in these contributions will lead to a fruitful collaborative exchange.

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