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Reidar Conradi, NTH: "Session on Change and Meta-process"

Software evolution (change) is pervasive, from initial development via maintenance to termination. The production processes driving such evolution are exposed to evolution too, since humans constitute their main operational agents.

It is common to break down a software process into a production process and a meta-process, that can change all parts of the process including itself.

The meta-process "operands" are both external process elements, such as production tools, human resources, company procedures etc., and internal (computer-supported) process model fragments describing the former.

Evolution can be "technical" according to life-cycle phases, e.g. to first define a general process model (or to make a project plan), customize it, execute this, and continuously revise it based on actual process performance. Evolution can also be "logical", capturing deeper process improvement wrt. productivity, lead-time, or quality. Such improvement assumes a software experience database to facilitate systematic project and organizational learning. Systematic measurements and reuse are important technologies here.

Process model evolution must be supported by proper methodologies (e.g. what are the decisive factors in making and evolving process models), formalisms (e.g. with reflectivity), and tools (e.g. flexible interpretation and dynamic binding) and related information databases.

The ideal process modelling language to support all the above is not made, and inter-operability and flexible tool architectures are increasingly important. We also need to regard the entire process model as a versioned, composite object, with conventional procedures for access control, traceability, impact analysis, and total quality.

The two papers in this session cover aspects of the above. The first is a full paper, the last a position paper:

- Jin Sa and Brian C. Warboyes:
  "A Reflexive Formal Software Process Model".
  This reports work on a Software Method to support evolution through emphasis on a Reflexive Formal approach. An example is given.

- Ali B. Kaba, Jean-Claude Derniame:
  "Transient Change Processes in Process Centered Environments".
  This reports work on fine-grained process changes in such environments.
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