Mauri Leppänen's research areas

1. Method engineering

Method engineering (ME) means all those actions by which an ISD method is developed and later customized and configured to fit the needs of an organization or ISD project. We have constructed an ontological framework, called OntoFrame, for conceiving, understanding, structuring, and representing the phenomena related to the ISD method and its engineering. We have also devised a methodical skeleton, called MEMES, to support the ME process. OntoFrame comprises a number of ontologies with a multi-dimensional structure, covering Core ontology, Abstraction ontology, Context ontology, Layer ontology, Model level ontology, Perspective ontology, ISD ontology, ISD method ontology, ME ontology and ME ontology. MEMES is a normative prescription of ME, structuring and guiding the accomplishment of ME work. It consists of three ME workflows: ISD method requirements engineering, ISD method analysis, and ISD method evaluation. For each of the ME workflows, ME approaches, ME principles and ME steps are suggested. Publications: http://users.jyu.fi/~mauri/Pub_Method_engineering.pdf

2. Enterprise Architecture Planning

Enterprise Architecture (EA) is a conceptual framework that describes how an enterprise is constructed by defining its primary components and the relationships among them. It is used to guide, direct and manage an enterprise, and as groundwork for planning ISD projects. Enterprise Architecture Planning (EAP) is the process of defining architectures for the use of information in support of the business and the plan for implementing those architectures. Our research aims to engineer an EA planning method and construct an adaption model. Publications: http://users.jyu.fi/~mauri/Pub_EA.pdf

Researchers

- Katariina Valtonen, post-graduate student
- Mauri Leppänen, PhD, lecturer
- Mirja Pulkkinen, PhD, senior researcher

3. Interaction design

Interaction design means a design process that aims at designing interactive software products to support people in work or in everyday life. It is composed of usability and user experience requirements engineering, developing alternative designs, and evaluating the solutions. Here, we are especially interested in usability requirements engineering and assessment. Publications: http://users.jyu.fi/~mauri/Pub_Interaction_design.pdf

Researchers:

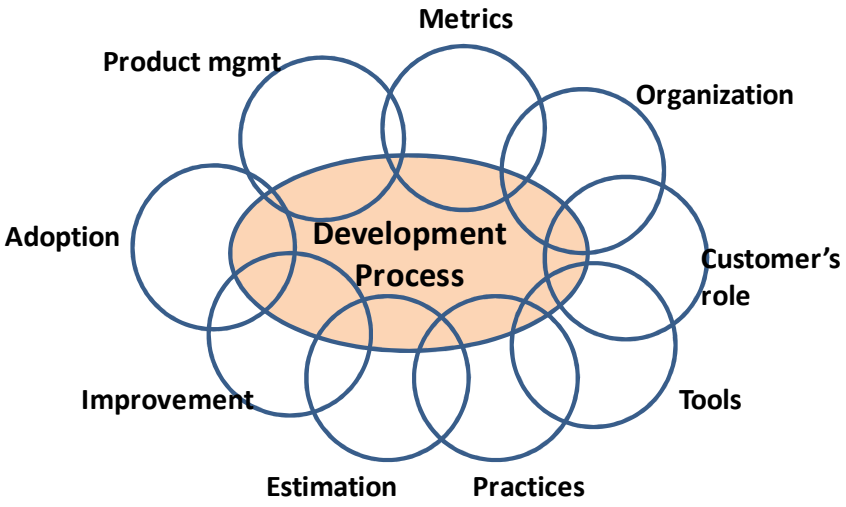
- Juha Lamminen, post-graduate student
- Mauri Leppänen, PhD, lecturer
- Pertti Saariluoma, professor

4. Agile methods, principles and practices

Agile software development has become increasingly common in the past 10 years. Agility in software engineering is believed to help a project reduce time-to-market, improve product quality, increase customer-value, and improve developers' motivation. Our research interests concern agile development from many perspectives (see Figure below):

- Adoption of agile methods, principles and practices
- Agile development process
- Agile methods and practices
- Agile estimation
- Agile metrics
- Organizing agile development
- Customer's role in agile development
- Agile product management
- Agile development process improvement

Publications: http://users.jyu.fi/~mauri/Pub_Agile_methods.pdf



Perspectives into Agile Software Development