Migration and Evolvability of Long-life Software Systems MELLS-03

Workshop at the Conference NetObjectDays 2003, September 25, 2003, Erfurt, Germany.

Abstract.

Long-life software systems often require significant changes in order to fulfill the business demands and to satisfy the customers' requirements. A system has to migrate from one version to another. For many systems, such migration will be repeated several times over the years. There are several ways of migration, i.e. refactoring, re-development from scratch or replacement of a system by other commercial off-the-shelf products. Regardless of the used technique, migration has to be done methodically in order to assure consistency. Because migration is a high-cost and a high-risk task, it is frequently postponed until it has to be done by necessity. Therefore, migration should be done in smaller, iterative steps within the development process to reduce the risks. Some approaches like XP introduce such an integration of migration activities into development steps. Methodologies for assuring evolvability of large, long-life software systems are needed. Planned reuse and refactoring has to be integrated in the development process to prevent architectural decay during changes. Improvements of existing software systems in terms of maintainability and evolvability have to be synchronized with improvements of the development processes.

Goals

The goal of this workshop is to bring together researchers and industrial software engineers to share their experience about long-life software systems. In addition, the workshop provides a forum to study the latest research results, and discuss and exchange ideas concerning ongoing work. There will be a strong focus on industrial applicability of the methods and supporting tools. This workshop is particularly directed …

- to determine important industrial problems of migration, evolvability and maintenance of long-life software systems
- to resent the topics of current research in this domain
- to provide a comprehensive overview of existing software engineering techniques relevant for migration of large software systems
- to determine the foundations and define the methodological base for software migration

Workshop topics

Topics of this workshop include, but are not limited to:

- Software migration
- Migration experience reports (successes and failures)
- Migration techniques
- Refactoring
- Reengineering
- Wrapping legacy systems
- Legacy issues towards new technologies
- Substitution by commercial off-the-shelf products
- Program transformation

- Language migration
- Migration tool support
- Application of software modeling
- Maintenance
- Software evolution and architecture recovery
- Evolvability of software systems
- Risk management
- Cost estimation

Organizers

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List of Workshop Papers

Christer Norström, Anders Wall, Johan Andersson and Kristian Sandström
Increasing maintainability in complex industrial real-time systems by employing a non-intrusive method

Lei Wu, Houari Sahraoui, Petko Valtchev
Migrating Legacy Software towards New Technology

Tilman Seifert, Markus Pizka
Supporting Software-Evolution at the Process Level

Adeniyi Onabajo, Iryna Bilykh, Jens Jahnke
Wrapping Legacy Medical Systems for Integrated Health Network