Eclipse Enterprise Modeling Day

Models as First Class Citizens in the Enterprise

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SECTION 1

Model Centric
UBS introduced a new process framework that covers the different activities to realize high quality software products.

The aim is the alignment with market standards to be a competitive player on the market. A major goal of the initiative is the description of requirements and their analysis and design as formal models unlike the widely-used informal prose description.

The models must be a first class citizen in our enterprise.

A Model captures a view of something specific. It is an abstraction, with a certain purpose. Thus the model completely describes those aspects that are relevant to the purpose of the model, at the appropriate level of detail.
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Model Centric

♦ Enterprise Disciplines
  – Enterprise Business Modeling
    - Business Capability
    - Business Process
    - Business Concept
    - Business Glossary
    - Requirements
  – Enterprise Architecture
    - Architecture Meta Model
    - Architecture Model
    - Reference Architectures

♦ Everything can be modeled ...

♦ Model
  – with a purpose
  – has a syntax (grammar)
  – has semantic (meaning)
  – simple as possible
  – syntactical correctness

♦ Project Disciplines
  – Business Modeling
    - Business Process
    - Business Concept
    - Business Glossary
  – Requirements
    - Software Requirements
    - Use Case
  – Analysis and Design
    - Analysis
    - Design
    - Data
    - Deployment Model
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Model Centric - Enterprise vs. Project

- Permanent
  - Preserves the knowledge
  - Guidance for new projects
  - Suspect to supervision
  - Supports temporality
  - Large shared model
  - Distributed edited

- Transient
  - Capture new knowledge
  - Refine knowledge
  - Delete / invalidate knowledge

Enterprise

Requirements
Processes
Applications
Components
Models

New Knowledge

Refine Knowledge

Workflows guarantees the backflow into the enterprise

EUP

RUP

guidance
SECTION 2

Current Tooling
- Point to point integration
- Data redundancy and inconsistency
- Outdated data
- No online accessibility (private storages like shared drives, local drives)
- Lots of unstructured content (Word, Visio, PowerPoint)
- Lack of semantic
- Traceability hard to achieve
SECTION 3

Vision SDLC Modeling Platform
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Vision SDLC Modeling Platform

♦ Platform supporting Modeling & Engineering disciplines of our Software Development Process
  – Model Centric
  – Scalable & Collaborative
  – Forward Engineering (for new project)
  – Reverse Engineering (understand the current implementation, enable transparency)
  – Integration through repositories
  – Role specific tooling support
  – **Consistence knowledge base**
  – Enable Software Factory approach for specific areas

→ Demo – Proof of concept SDLC Modeling Platform
  - CDO
  - EMF
  - Zest
  - Eclipse Forms

→ Proof of concept motivation
  - Evaluate possible technology candidate for the EMP
  - Prioritize EMP requirements
SECTION 4

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**Eclipse Modeling Platform**

- Share and sound vision with other companies
- Alignment of eclipse technology for enterprise usage
- Additional Capabilities needed (findings from POC)
  - Meta Model Evolution (Migration of Model Instances)
  - Generic Traceability Support
  - Generic Workflow (Processes) Support
  - General Purpose Modeling Language Support
  - Graphical Editing (Graphiti)

**Value**

**Modeling Platform**

UBS Vision
Base tooling support on an open platform stack.
Participation to establish the vision.
SECTION 5

Appendix
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**Tooling principles (1/2)**

- Developer workplace is centered around the Eclipse IDE
  - For modeling and implementation
  - Fast navigation in model and code and roundtrip between model and code

- Use technologies and tools based on open standards
  - Avoid vendor lock-ins
  - Prefer 'use' over 'buy' over 'build'
  - Support different sourcing strategies

- Follow 'separation of concerns' ('low integration')
  - Separate editor, model and generator
  - Model and technology aspects
  - Abstraction levels
  - Integration through repositories
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Tooling principles (2/2)

♦ Modeling Principles
  – Early validation / testing
  – Guidance, wizards and content assistance
  – Keep it as simple as possible, prefer ease of use
  – Model with a purpose
  – Prefer content over representation
  – Prefer convention over configuration
  – Enable collaborative work
  – Embrace change

♦ Sounding / Expertise
  – Sounding against internal and external experts
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Eclipse Modeling Platform – UBS Top 5 Requirements

♦ Prio 1 - A1 - Managing versions on various model granularity, meta-model and instances
  – 1.1 a) + E-Config-1 - Versioning of metamodels and instances
  – 1.2 a) - Support of multi-user and distributed development teams

♦ Prio 2 - A6 – Migration
  – 6 a) - Support for automatic application of metamodel changes to model instances

♦ Prio 3 - A5 – Traceability
  – 5.1 a) - Creation of relationships between model elements that are independent of their metamodel(s)
  – 5.1 b) - Visualization of these relationships and traceability between model elements

♦ Prio 4 - A3 – CompareMerge
  – 3.1 a) + E-Comp-1 - Parallel work on different parts of a model and merge of resulting changes into a common model

♦ Prio 5 - A2 - ChangeTracking
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