Open Model: Vision, Goals, Challenges

A brief introduction to the Open Model initiative

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Motivation: „Open Source“ goes „Open Model“

- development, acceptance, and use of reference models rather disappointing despite attractive promise
- goal: promote considerable potentials of reference models
- requires: overcoming current obstacles (chasm between practice and academia, effort too large for single research group, ...)
- inspiration: „successful“ free/open source software (FOSS)
- however: substantial differences between artefacts, i.e., between source code and conceptual models
- commends: analysis of differences and of potentials of open models

Working hypotheses

- main hypothesis: collaborative modelling following legal, technical, and social provisions of FOSS promises to overcome obstacles (‚open model')
- hypothesis 1: development of ‚good' reference models requires participants from academia as well as software businesses and prospective users (in business and academia)
- hypothesis 2: development and acceptance of reference models requires collaboration with prospective users
- hypothesis 3: participation of prospective users and researchers requires effective incentives
- hypothesis 4: fundamental principles behind free/open source software development can be transferred to conceptual modelling

Vision

- long-term: build a repository of reference models for use in software development, organisational planning, business redesign, strategic analysis, ...
- mid-term: build and sustain open modelling communities
- short-term: initiate open modelling processes
- supports: teaching and research
- requires: tools for collaborative modelling (model version management, model documentation, model review, ...)
- modelling domains (examples): next generation ERP, simulation models, IT management, model-based case studies, ...

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Basic ideas

- legal foundation: licensing of models similar to free/open source software licenses
  - non-exclusive rights to use, modify and share modifications
  - with provisions for commercial reuse
  - sans royalties
  - legal provisions still up for discussion
  - examples, include Mozilla Public License, Creative Commons, ...
- open modelling communities: open and public
  - geographically distributed participants from academia and business
  - professionals e.g. as model reviewers and domain experts
  - develop a distributed modelling culture and community organisation

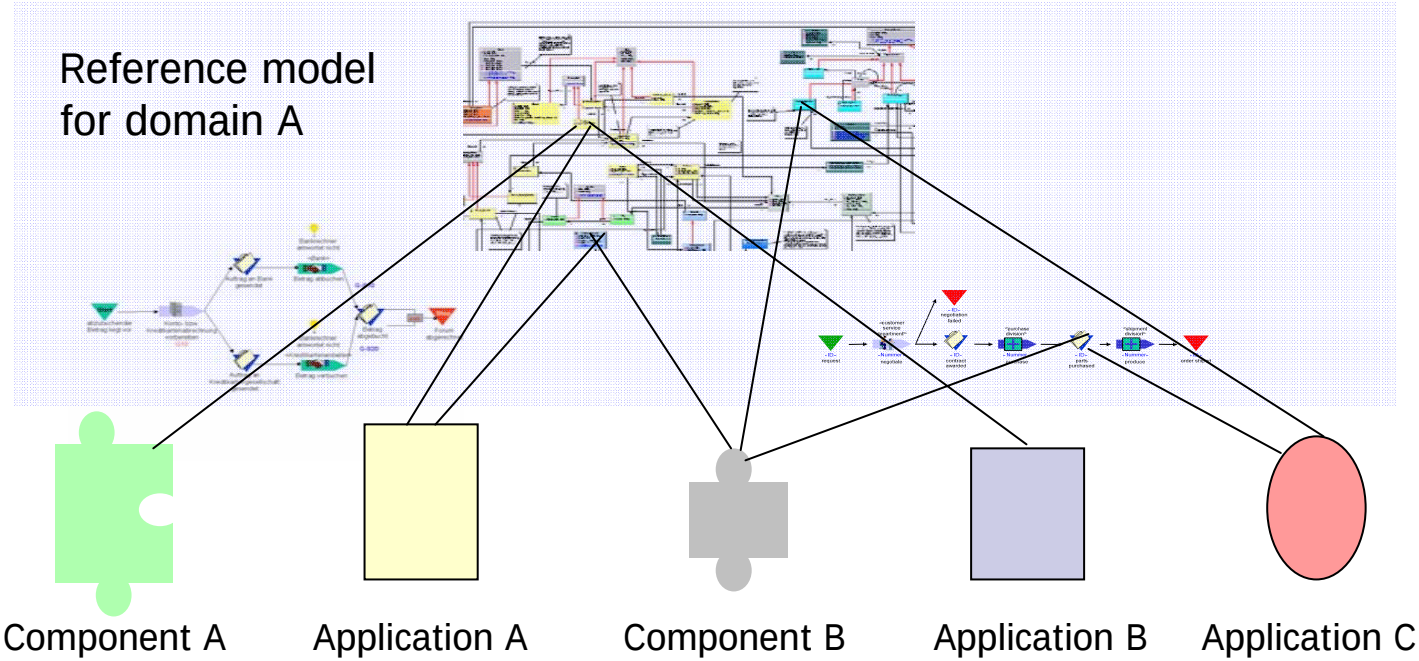
Background: Conceptual models

- reference models as conceptual models represent abstractions of real-world phenomena relevant to a certain modelling task
- aimed at representations of software systems accessible not only to modellers and software developers, but also to domain experts and prospective end users
- focus on general concepts commonly used in a certain domain abstracting from technical aspects
- allow for various abstractions, e.g. data abstraction, object abstraction, and process abstraction
- help to reduce complexity and risks
- take into account certain characteristics of implementation-level languages (generally support transformation to source code)

Background: Reference models

- claim to suit not just one system, but a whole range of systems
- reference models are intended to provide appropriate generalisations of existing domains
- aimed at delivering blueprints for good system design.
- reification of an attractive vision: promise higher quality of information systems at less cost
- however: often requires significant adaptations for a specific application

Reference models as drivers of integration



Integration through references to common concepts

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Current state of ‚Open Model' initiative

- openmodels.org as central hub for open model community
- endorsed by German Informatics Society SIG on Modelling Business Information Systems
- initialisation through German modelling community (10+ research groups)
- interest expressed by practitioners and attendees of talks
- announcement in Enterprise Modelling and Information Systems Architectures (EMISA) journal
- explicit topic for Enterprise Modelling and Information Systems Architectures conference (EMISA 2007)

Challenges

- establish globally accepted legal provisions
- create sufficient incentives for participation of both researchers and practitioners
- overcome barriers of acceptance with prospective users
- provide easy-to-use tools for collaborative modelling and for accessing the model repository (e.g. search and compare models)
- conceive a promising process model for the initialisation
- select promising initial model domains
- competing industry-driven initiatives, e.g. modeldriven.org, 3gERP

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Perspectives

- Reference models as ...
  - object and objectivation of research on information systems
  - medium to foster communication/cooperation between researchers and practitioners
  - subject of training and teaching
- Model repository as ...
  - laboratory for research and teaching
  - multi-perspective knowledge base
  - partial substitute for/supplement of publications

Future plans

- cooperation with related initiatives/projects (3gERP, ...)
- cooperation with FOSS projects (Eclipse, ArgoUML, ...)
- collaboration with software vendors (Redhat, SAP, ...)
- collaboration with prospective users (consultants, domain experts)