



Vienna University of Technology

Model Engineering @ BIG since 2004

2009 Bellairs CAMPaM Workshop

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Who am I?

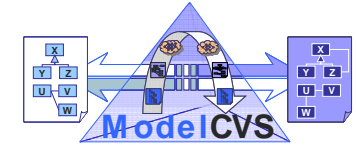
- 2008 – current: Post-Doc at TU Vienna
- 2005 – 2008: PhD Student at TU Vienna
 - Supervisor: Gerti Kappel
- 2004 – 2005: Teaching assistant at TU Vienna
- Research Interests
 - Model Engineering
 - UML 2 & model-driven software development
 - Model-based tool integration and model transformation
 - Web Engineering
 - Ubiquitous web applications
 - Model-driven Web Engineering
 - Reverse Engineering
 - Textual representations as models

Projects

- *TROPIC* (Transformations on Petri-Nets in Color), FWF, 1.1.2009-31.12.2011)
- *AMOR* (Adaptable Model Versioning, FIT-IT Semantic Systems, 1.1.2009-31.12.2010)
- *ModelCVS* (Developing a semantic infrastructure for model-based tool integration, FIT-IT Semantic Systems, 1.1.2006-31.12.2007)

ModelCVS

A Semantic Infrastructure for Model-Based Tool Integration

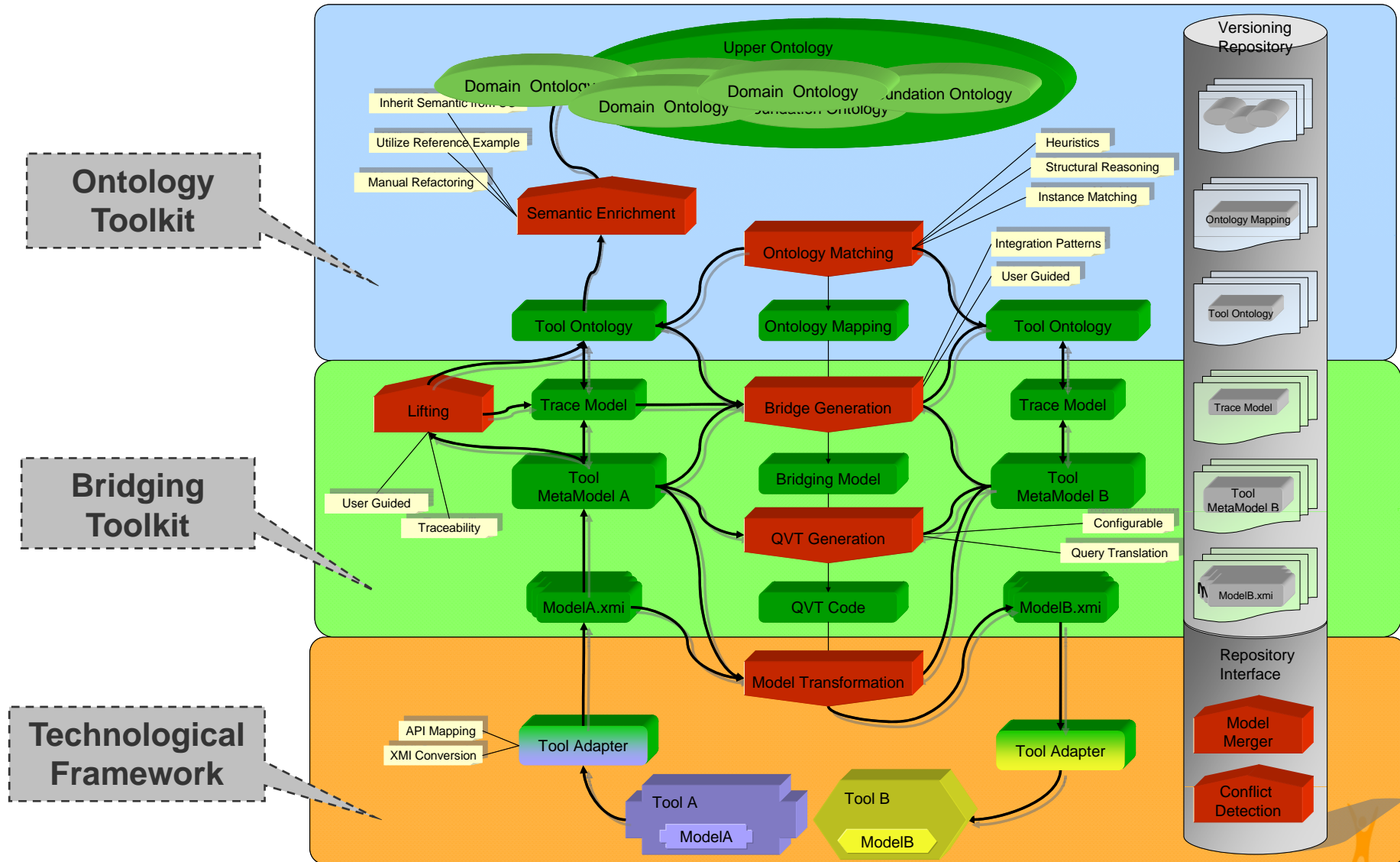
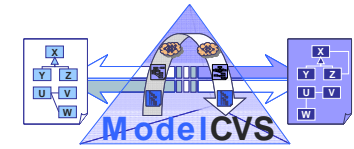


- FIT-IT Funded Project (2006-2007)
- Project Partners
 - Vienna University of Technology
 - Johannes Kepler University Linz
 - Arikan Productivity Group
 - Austrian Ministry of Defense
- Problem
 - Huge amount of assets trapped in legacy modeling tool
 - Exit strategy required
- Goal
 - Migrate models to other modeling tools
 - Allow different modeling tools to interoperate
- Further information: <http://www.modelcvs.org>



ModelCVS (cont'd)

Technological Tree

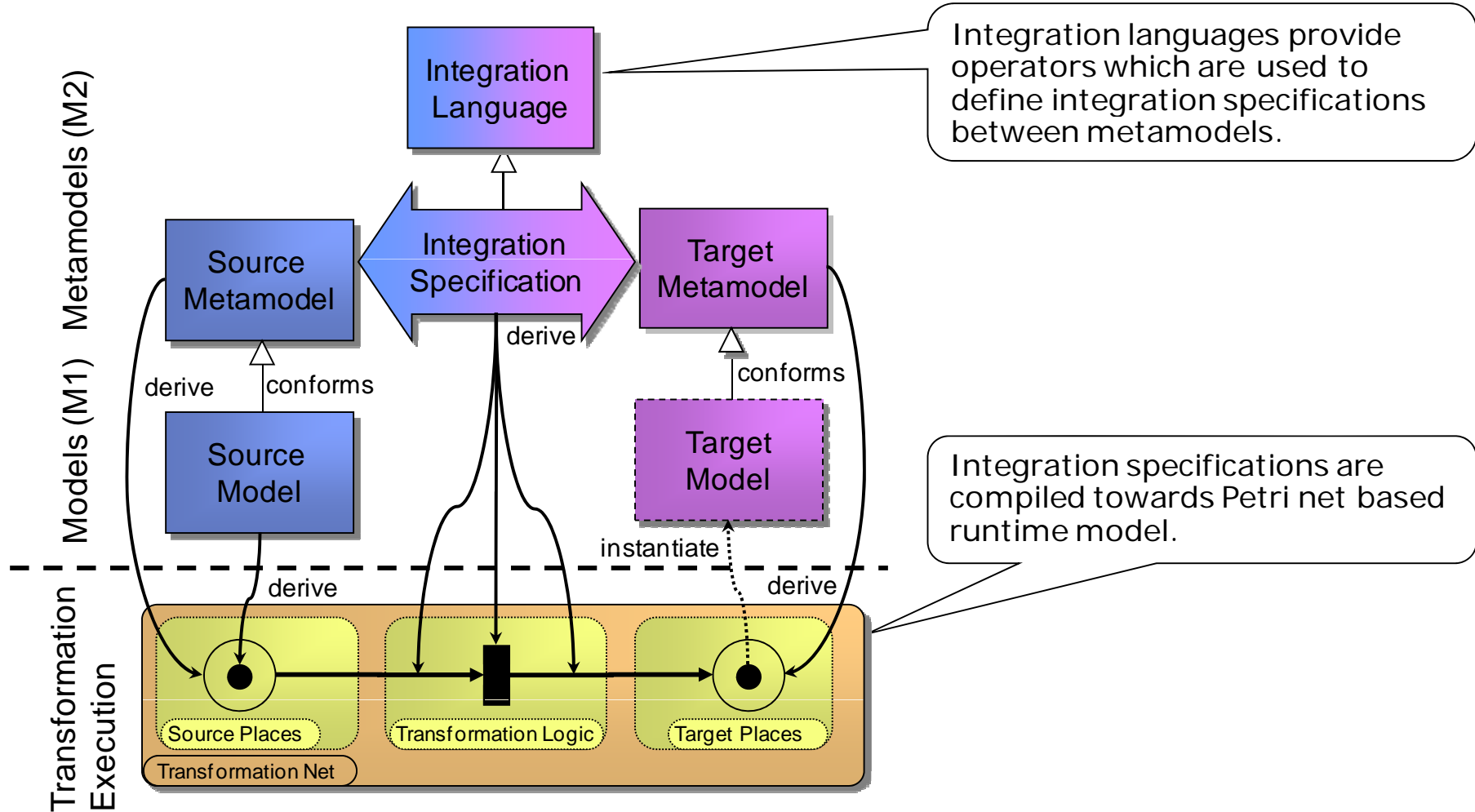




- FWF Funded Project (2009-2011)
- Project Partners
 - Vienna University of Technology
 - Johannes Kepler University Linz
 - University of Aarhus
 - Darmstadt University of Technology
 - Université de Nantes
- Problem
 - Lack of suitable reuse mechanisms for model transformations
 - Impedance mismatch between specification and execution
- Goal
 - Generic library of recurring transformation logic
 - Provide simulation environment for model transformation executions
- **Further information:** <http://www.modeltransformation.net>

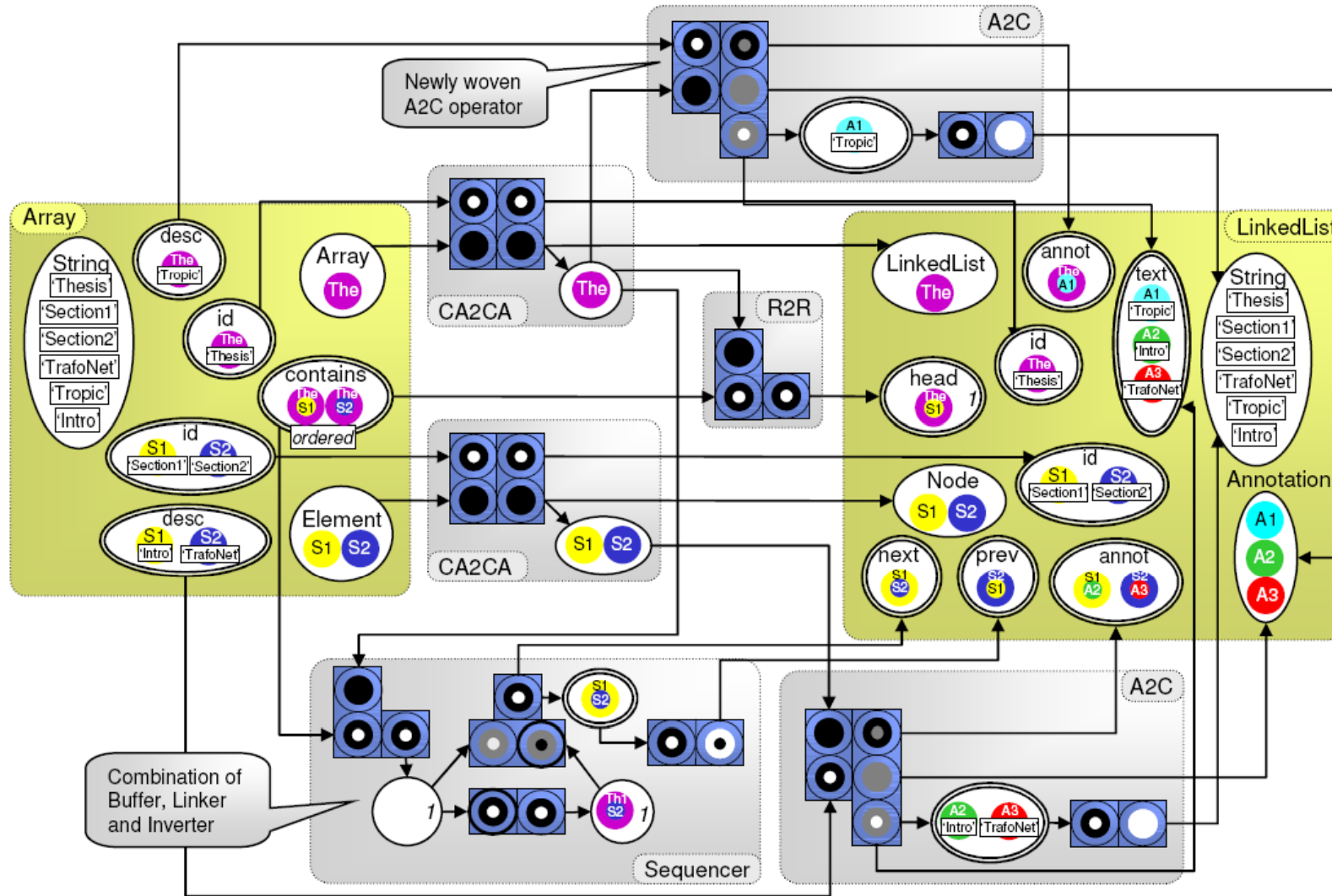
TROPIC (cont'd)

Architecture



TROPIC (cont'd)

Example



AMOR

Adaptable Model Versioning



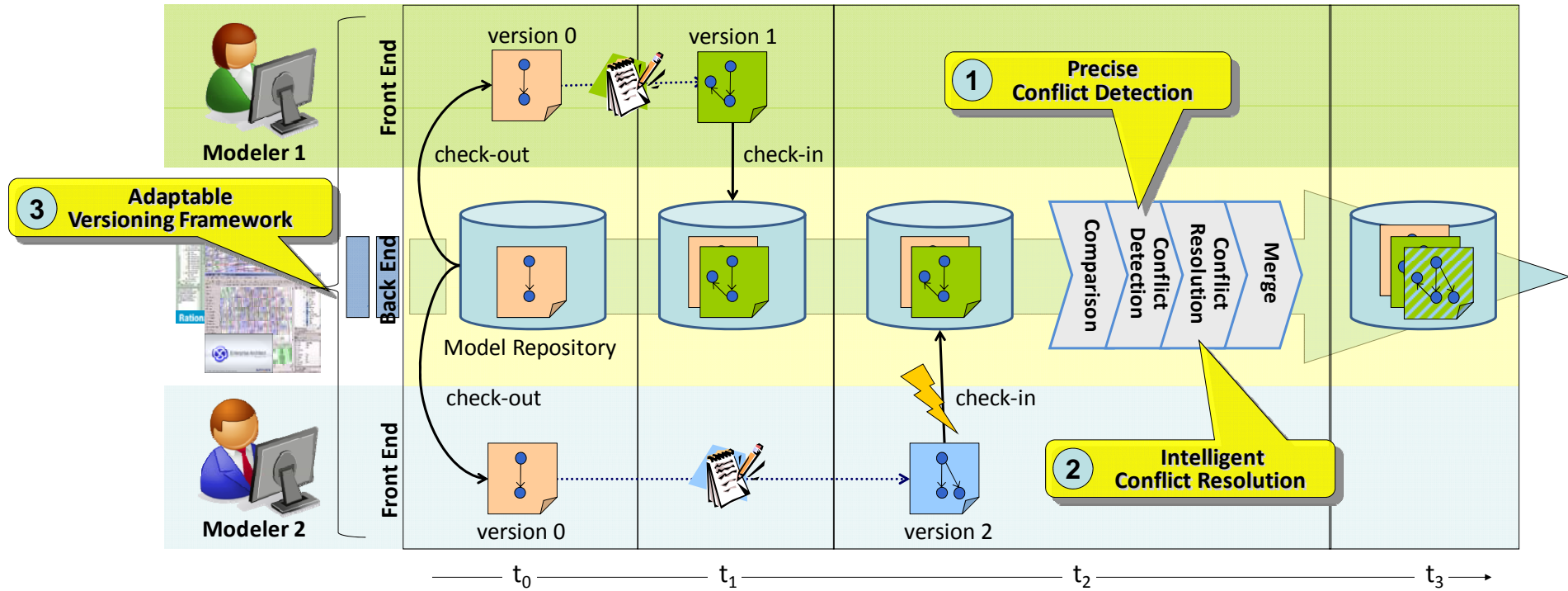
- FIT-IT Funded Project (2009-2010)
- Project Partners
 - Vienna University of Technology
 - Johannes Kepler University Linz
 - Sparx Systems
- Problem
 - Erroneous Conflict Detection
 - Unsupportive Conflict Resolution
 - Inflexible VCS
- Goal
 - Precise Conflict Detection
 - Intelligent Conflict Resolution
 - Adaptable Versioning Framework



- **Further information:** <http://www.modelversioning.org>

AMOR (cont'd)

Adaptable Model Versioning



Expectations?

- Get in touch with graph transformation people
 - Learn more about VMTS, ATOM3, ...
- Find people who are interested in
 - Debugging model transformations
 - Building reusable model transformation modules
- What is solved/What is open?
 - Metamodeling
 - Model Transformations
 - Model Management (Diffing, Versioning, Merging, ...)
 - Model (Co)Evolution