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Possible Benefits of Bridging Eclipse-EMF & Microsoft "Oslo"

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MoDisco

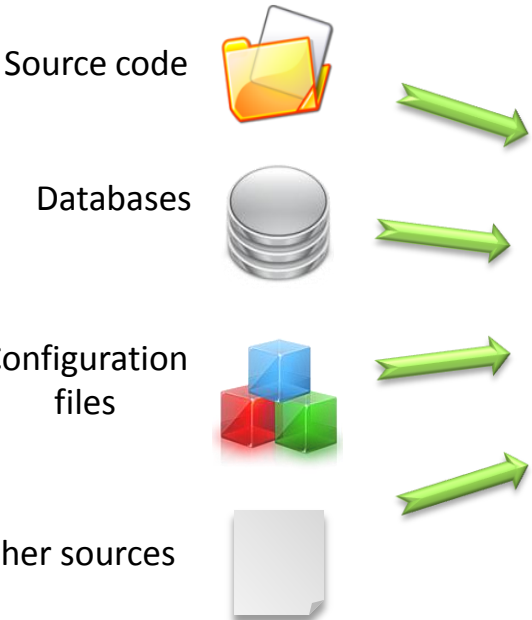


A Model Driven Reverse Engineering (MDRE) Framework

Eclipse DemoCamp Indigo
Nantes (France) – Thursday 30th of June 2011

Different Possible MDRE Scenarios

Legacy Technologies

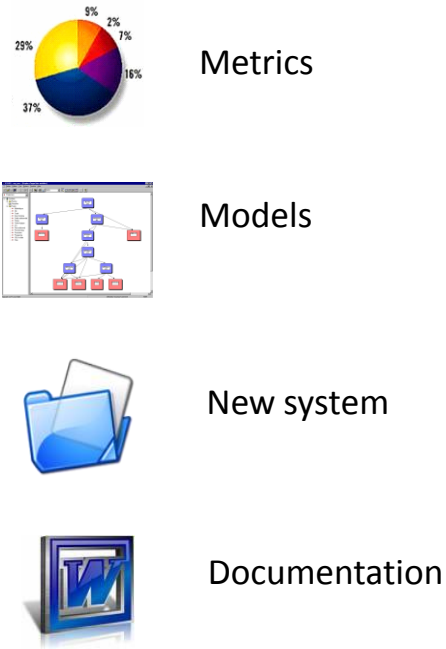


Scenarios

- Quality Analysis
- Understanding
- Code Refactoring
- Technical Migration
- Etc

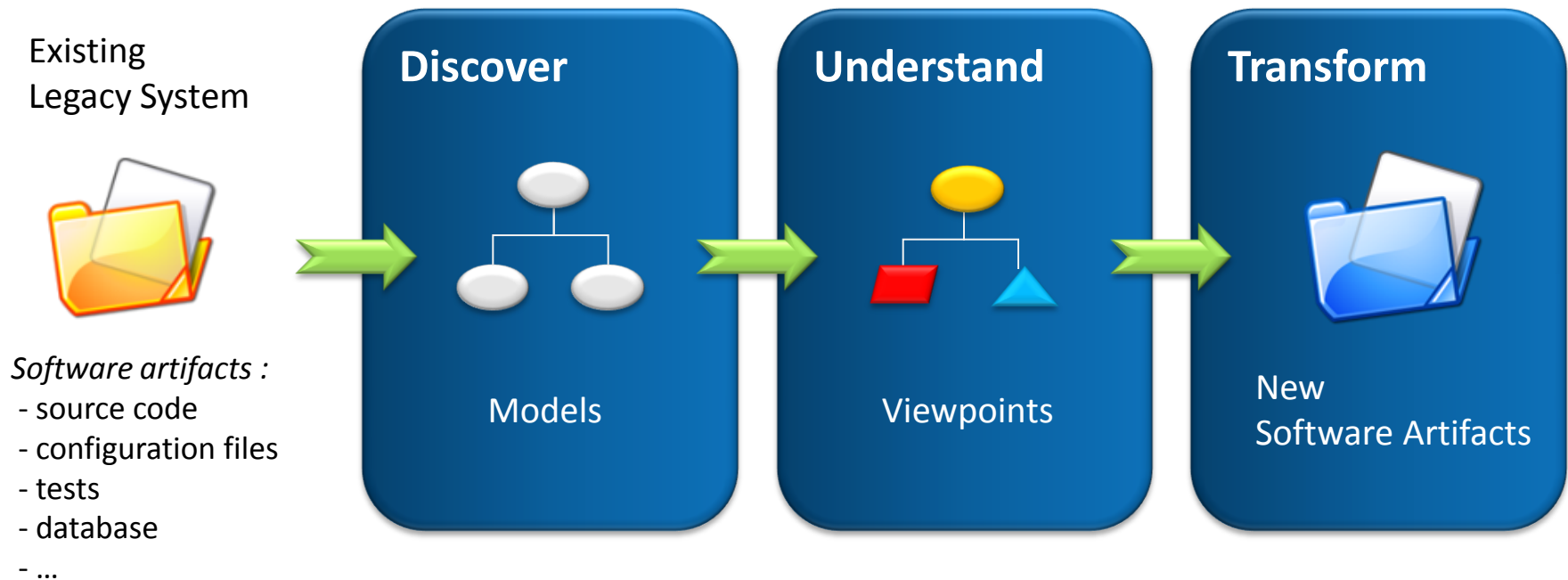
MoDisco

Outputs



Model Driven Reverse Engineering (MDRE) Approach

- Use **models** to represent and manipulate **artifacts** from existing systems



Eclipse-MDT MoDisco Project

- An **Eclipse framework** to support the elaboration of **MDRE** solutions

- Official Eclipse Modeling project (in MDT)

- Open-source (EPL)
- Based on other Eclipse Modeling projects
- Released with Helios & Indigo



- Supported by the 

OBJECT MANAGEMENT GROUP

- Reference implementations for
 - KDM (Knowledge Discovery Metamodel)
 - SMM (Structured Metrics Metamodel)
 - ASTM (Abstract Syntax Tree Metamodel)



MoDisco: Global Architecture

Supported Technologies

Java

- ✓ Metamodel
- ✓ Discoverer
- ✓ Generator
- ✓ Transfo. to KDM/UML

JSP

- ✓ Metamodel
- ✓ Discoverer
- ✓ Generator

XML

- ✓ Metamodel
- ✓ Discoverer
- ✓ Generator

...

Discovery Manager



Plug and orchestrate transformations

Model Browser



Navigation through complex models

Customization & Extensibility



Definition of specific viewpoints

OMG/ADM Standards



Pivot metamodels (KDM, ASTM, SMM)

Infrastructure

Eclipse Modeling projects

References

- Useful links

- MoDisco homepage

- <http://www.eclipse.org/MoDisco>

- MoDisco wiki (documentation)

- <http://wiki.eclipse.org/MoDisco>



- Contact

- Hugo Bruneliere (MoDisco project co-leader)

- hugo.bruneliere@inria.fr

- MoDisco forum

- <http://www.eclipse.org/forums/eclipse.modisco>

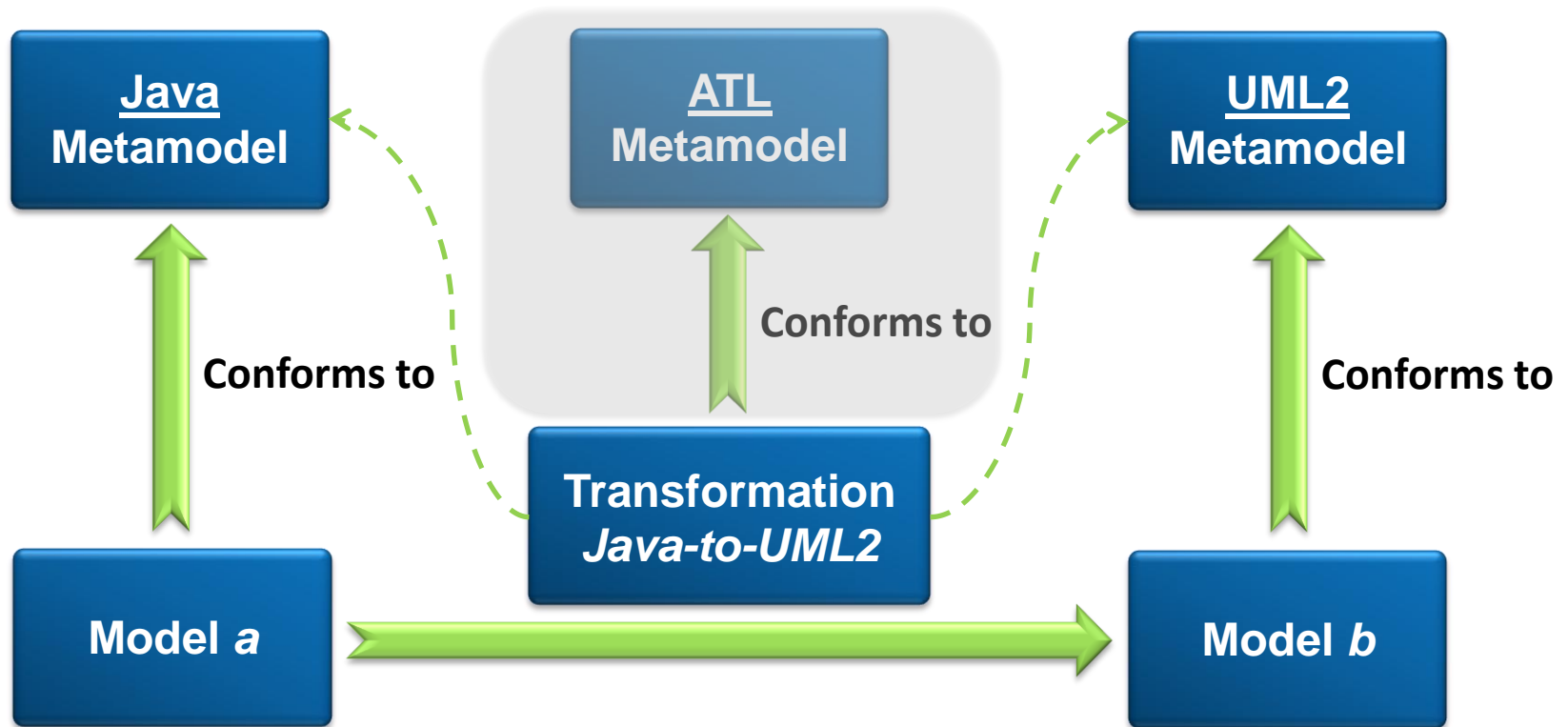


A Model-to-Model (M2M) Transformation Language & Environment

Eclipse DemoCamp Indigo
Nantes (France) – Thursday 30th of June 2011

Model-to-Model (M2M) Transformation Approach

- Use **transformations** to implement mappings at the **model level** (semantic & syntactic)



Eclipse-M2M ATL Project

- An **Eclipse environment** to support the development and execution of **Model-to-Model** transformations
 - Official Eclipse Modeling project (in M2M)
 - Open-source (EPL)
 - Based on the Eclipse Modeling Framework (EMF)
 - Using the Object Constraint Language (OMG OCL)
 - Released with Ganymede, Helios & Indigo
 - Complete Eclipse Tooling
 - ATL language (declarative, QVT-like)
 - ATL Virtual Machine (VM)
 - ATL Integrated Development Environment (IDE)
 - ATL use case & transformation library



References

- Useful links

- ATL homepage

- <http://www.eclipse.org/atl/>

- ATL documentation

- <http://www.eclipse.org/atl/documentation/>



- Contact

- Hugo Bruneliere

- hugo.bruneliere@inria.fr

- M2M forum (use the [ATL] tag in the subject)

- <http://www.eclipse.org/forums/eclipse.modeling.m2m>