Eclipse-MDT "MoDisco" Project

An extensible MDE framework dedicated to software modernization

(in the Helios Eclipse Simultaneous Release - 2010)
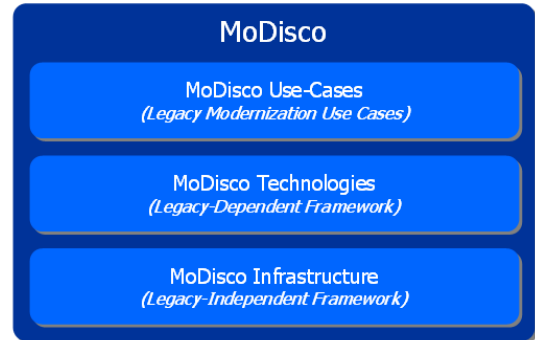
▶ **Website:** http://www.eclipse.org/MoDisco
▶ **Forum:** news://news.eclipse.org/eclipse.modisco

▶ **Providers:** ATLANMOD **AtlanMod Team (INRIA & EMN)**
Mia-Software *model-driven agility* **MIA-Software (SODIFRANCE)**

Software Modernization

Changing markets; Merging, acquiring and/or diversifying existing legacy systems; Getting a faster time to market; Shrinking budgets; Increasing compliance and compatibility; Integrating new technologies. With all these **challenges**, how can you stay focused on **growth**, **productivity** and **innovation** in order to create added value within your organization? As such **modernization projects** face with both technologies combination and various modernization scenarios, **model-driven approaches and tools** offer the required abstraction level in order to design and build-up **mature**, **flexible** and **efficient solutions**.

An Extensible Framework For Model-Driven Reverse Engineering

MoDisco

- MoDisco Use-Cases *(Legacy Modernization Use Cases)*
- MoDisco Technologies *(Legacy-Dependent Framework)*
- MoDisco Infrastructure *(Legacy-Independent Framework)*

▶ What Is MoDisco?

MoDisco provides an extensible **model-driven reverse engineering framework** to support various **software modernization** use-cases:
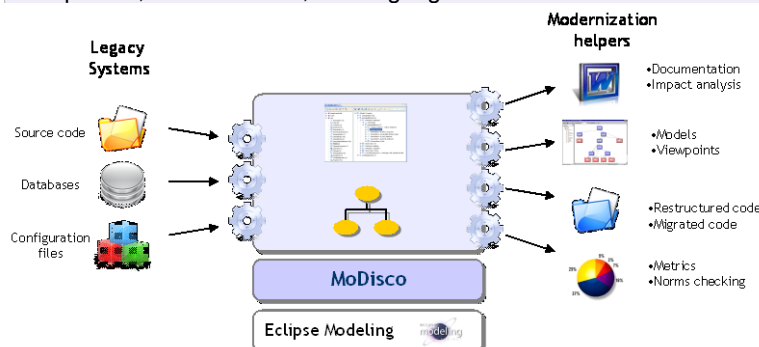
• **Quality Assurance**: verifying the system according to provided requirements (detection of anti-patterns, computation of metrics, etc)
• **Documentation**: extraction of information from it to understand a given aspect (structure, behavior, persistence, data-flow, etc)
• **Improvement**: transformation of an existing system to integrate better coding norms or use more efficient design patterns.
• **Migration**: transformation of an existing system to change a component, the framework, the language or its architecture

▶ The 3 Modernization Phases

• **Describing** the information extracted out of the artifacts of this system
• **Understanding** the extracted information in order to take the better modernization decisions
• **Transforming** this information into new artifacts facilitating the modernization (metrics, document, generated code…)

▶ MoDisco Components

• **Metamodels** to describe existing systems (KDM, SMM, Java™, XML, etc)
• Associated **discoverers** to automatically create models of these systems
• **Generic tools** to understand and transform these complex models (model browser, discovery manager & workflow, query & facet manager, converters, etc)
• **Use-cases** to illustrate how **MoDisco** can concretely support modernization processes (e.g. combining Java & UML2)

▶ Contact Us

Please, use the project's forum in priority

Partner websites:

- AtlanMod Team http://www.emn.fr/x-info/atlanmod
- MIA-Software   http://www.mia-software.com/

▶ Related Projects

Eclipse-M2M ATL: http://www.eclipse.org/m2m/atl/
Eclipse-EMFT EMF Facet:
http://www.eclipse.org/modeling/emft/emf-facet/
Eclipse-GMT AMW: http://www.eclipse.org/gmt/amw/
Eclipse-GMT AM3: http://www.eclipse.org/gmt/am3/

ECOLE DES MINES DE NANTES   Mia-Software *model-driven agility*