



ATL 3.0 Galileo Simultaneous Release

ATL PMC

Planned Review Date: 2009-06-10

Communication channel:

<news://news.eclipse.org/eclipse.modeling.m2m>

William Piers <william.piers@obeo.fr>



Overview

- Introduction
- Features
- Non-code Aspects
- Testing and Packaging
- Community & Support
- Intellectual Properties
- Project Plan

Introduction



- ATL: ATLAS Transformation Language
- ATL is a language and a Virtual Machine dedicated to model transformation
- ATL is an Eclipse Model-to-Model (M2M) component, inside of the Eclipse Modeling Project (EMP)
- ATL has been moved from GMT to M2M in 2007





Features (Core)

- A syntax adapted to Model To Model transformation
 - Hybrid (Declarative and Imperative)
 - Model navigation using OCL
- A Virtual Machine
 - Executes ATL transformations pre-compiled into low-level transformation-specific bytecode
 - Provides execution environment for any transformation language
 - The M2M QVT Relational project is based on the ATL Virtual Machine

[http://wiki.eclipse.org/M2M/Relational_QVT_Language_\(QVTR\)](http://wiki.eclipse.org/M2M/Relational_QVT_Language_(QVTR))

<http://www.eclipse.org/m2m/atl/usecases/QVT2ATLVM/>

Features (IDE)

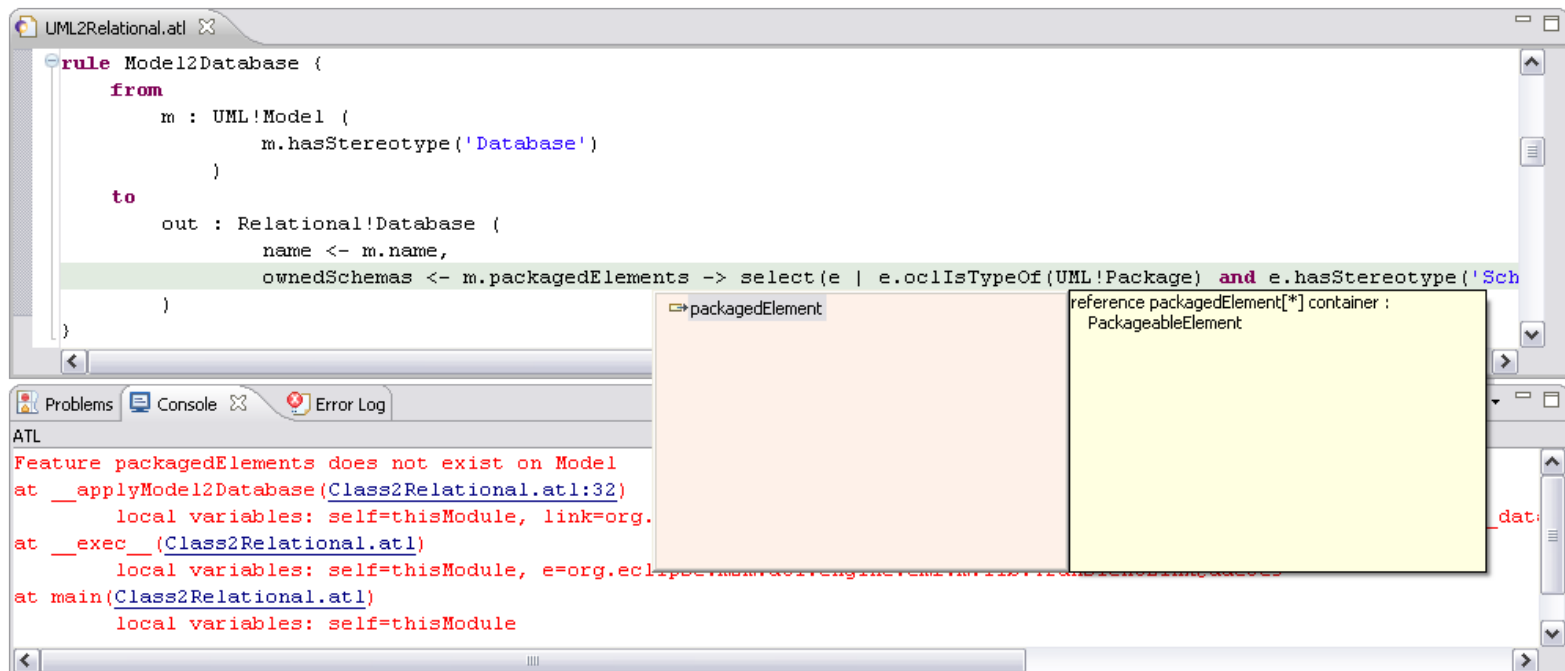


▪ Eclipse based IDE

- Project nature and builder
- Perspective, wizards
- Launch configuration
- Execution console

▪ ATL Textual editor

- Syntax color
- Code assist
- Code folding
- Outline





API Changes

- Goal: simplify API for clients use
- Provide support for architecture extensions
- ATL VM management
 - Modular implementation
 - Do not systematically wrap every model elements
 - Improved EMF ResourceSet management
 - Standalone execution support
- Many changes => passing version from 2.0.x to 3.0.x



Non-code aspects

- Wiki-based FAQ, User Guide, Developer Guide
 - All informations have been merged into the ATL wiki
 - Conversion to the ATL doc plugin, thanks to Mylyn WikiText
 - Allows users to easily contribute and improve documentation
- ATL Help plugin
 - API Javadoc
 - ATL User Guide (synchronized with ATL wiki)
 - ATL Developer Guide (synchronized with ATL wiki)
- Web site
 - ATL Transformation Zoo
 - 100+ scenarios, with contributions from the community
 - Complete use cases (20+, with contributions from the community)
 - Articles

Testing and Packaging



- ATL uses the Modeling Project Releng system to build and promote versions
 - Also used by EMF, EMFT, M2T, and MDT components
- Each new build is tested with Eclipse 3.5, 3.4, 3.3, 3.2
- ATL is integrated into the Galileo update site since January 2009
- A non-regression test suite checks that the engine still executes correctly existing transformations
 - Reuse of ATL Transformation Zoo
 - Resulting models are compared using EMF Compare
 - Non-regression evaluated for parsing, compilation, execution

Community and support



- Newsgroup: very active community, more than 2000 posts since its creation
- EclipseCon 2008, 2009 : tutorial

<http://www.eclipsecon.org/2009/sessions?id=511>

- Publications about ATL:

<http://www.eclipse.org/m2m/atl/publication.php>

- Bugzilla:

		Status				
		NEW	REOPENED	RESOLVED	CLOSED	Total
Severity	critical	<u>. </u>	<u>. </u>	<u>5</u>	<u>. </u>	<u>5</u>
	major	<u>3</u>	<u>. </u>	<u>3</u>	<u>. </u>	<u>6</u>
	normal	<u>17</u>	<u>1</u>	<u>53</u>	<u>4</u>	<u>75</u>
	minor	<u>. </u>	<u>. </u>	<u>2</u>	<u>. </u>	<u>2</u>
	trivial	<u>. </u>	<u>. </u>	<u>1</u>	<u>. </u>	<u>1</u>
	enhancement	<u>4</u>	<u>. </u>	<u>7</u>	<u>. </u>	<u>11</u>
	Total	<u>24</u>	<u>1</u>	<u>71</u>	<u>4</u>	<u>100</u>



IP Issues

- All plugins contain appropriate about and license files
- IP process followed
- A third-party library is used: antlr 3.0
 - IPzilla CQ 1548
 - Use of the matching ORBIT library for build
- (Automatic) IP Log available at
http://www.eclipse.org/projects/ip_log.php?projectid=modeling.m2m
- Released under EPL

Project Plan



- <http://www.eclipse.org/projects/project-plan.php?projectid=modeling.m2m>
- Future developments
 - Core
 - ATL transformations deployment utilities
 - Advanced UML profiles management
 - IDE
 - ATL Editor content assist improvements
 - ATL Editor hyperlinks
 - ATL Debugger UI refactoring
 - ATL Profiler contribution integration
 - Documentation, examples and tutorials improvement