Declarative QVT Component Proposal

Introduction

The Declarative QVT component is an open source component under the Eclipse Modeling / Model-to-Model transformation (M2M) project. Its primary goal is to provide an implementation of QVT Relations.

Background

The Eclipse Model-to-Model transformation (M2M) project aims at developing a model-to-model transformation framework. Currently, there are three languages components within the M2M project (ATL, Declarative QVT, Imperative QVT).

The Imperative QVT (QVT Operational Mapping – QVT-OP) initial contribution is currently being reviewed. The ATL component is being actively developed and supported.

Description

This document focuses on the Declarative QVT transformation language (QVT Relations, or QVT-R), and proposes an implementation on top of the ATL Virtual Machine (ATL VM), which has been studied in [1]. The ATL VM is part of the ATL component, and is used as an execution engine for the ATL language.

Follow-on development phases will accommodate community feedback and the knowledge gained during the initial development phase.

Initial contribution

A proof of concept will first be provided before December 2007. This should be able to demonstrate complete handling of simple QVT-R programs.

Development Plans

Starting with this initial contribution, the objective is to get feedback, to gather community and to proceed to full implementation by the end of 2008.

Initial committers

OBEO

Quentin Glineur (component lead)
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Interested parties

The following companies have expressed interest in the project (evaluation):

- Thales Research and Technology, France
- CEA LIST, France
- Software Engineering Group, University of Twente, the Netherlands
- TNI-Software

References

[1] Jouault, F, and Kurtev, I: On the Architectural Alignment of ATL and QVT, In: Proceedings of the 2006 ACM Symposium on Applied Computing (SAC 06). ACM Press, Dijon, France, chapter Model transformation (MT 2006), pages 1188—1195. 2006.

[2] OMG QVT Final Adopted Specification, MOF QVT final adopted specification, OMG document ptc/05-11-01, November 2005