Eclipse EMF Compare
Project description

Introduction

The EMF Compare Project is a proposed open source project under the EMFT project.

Background

The Eclipse Modeling Project focuses on the evolution and promotion of model-based development technologies within the Eclipse community by providing a unified set of modeling frameworks, tooling, and standards implementations.
Model based technologies leverage on having a common standard (MOF/EMOF) to represent their data (models) and the implementation in Eclipse is the EMF Framework. There is a great adoption of this technology in the community and there are a lot of tools being built on top of the EMF Framework.
With the GMF Framework release, it is now also possible to build Domain Specific Modelers (DSM) that are going to ease the adoption of modeling techniques.

Still, one of the key to success of these frameworks will be the ability to comply with the industry requirements, part of it being scalability. Scalability is a vast domain including being able to work on models with large teams. This concern has been solved on the development layer, and we've got now effective tools that deals with file difference, merge and version control.
During the Eclipse Modeling Symposium at the Eclipse Summit 2006 in Germany, several members expressed the need to build an industry standard class tool dealing with model comparison and merge. As these members were already working on some implementations, we are proposing through the EMF Compare project to gather those efforts.

Project Description

The EMF Compare project will provide the fundamental infrastructure and components for comparing and merging EMF based models. A particular focus will be made on integration with the Eclipse Core Team API for end user tight integration.
The objectives of the EMF Compare project are to :
–   Provide an EMF model difference engine that will compare models from the same meta-model, the difference output being a model
–   Provide a generic and extensible framework so that other parties can plug their own EMF model difference engine
–   Provide 2 and 3 input models comparison capabilities
–   Provide specific support for implementations of industry standard meta-models provided by the MDT project
–   Provide tree and graphical comparison, as well as manual and automatic merging capabilities
–   Provide UI and features that are familiar to existing Eclipse repository tools such as CVS, by plugging EMF Compare on the Eclipse Core Team API

It is not in the scope of the EMF Compare to become a warehouse for model difference engines, the project will host only keys diff/merge engines that will be provided as reference implementations and that will validate the extensibility of the framework. Each such integration will be a separate component so as to be separately distributable and installable.
Nevertheless, other third parties components may be referenced on a dedicated web page of the project.

The initial code for this project is based on code contributions from the Intalio and Obeo. Intalio provides the UI and Eclipse Core Team API integration part, and Obeo will its comparison engine.

Organization

We propose that this project be undertaken as part of an Eclipse Modeling Framework sub-project.

Initial committers

The following companies will contribute committers to get the project started :

- Obeo (www.obeo.fr)
  - Cédric Brun (project lead)   cedric.brun@obeo.fr
  - Jonathan Musset   jonathan.musset@obeo.fr
- Intalio (www.intalio.com)
  - Antoine Toulmé   atoulme@intalio.com

Interested parties

The following organizations have expressed interest in the project :
- Obeo www.obeo.fr – creators of Acceleo
- Intalio www.intalio.com
- ATLAS Team www.sciences.univ-nantes.fr/lina/atl/
  - The ATL team expressed its interest in contributing its own diff/merge engine (Jean Bézivin)
- IBM (EMF) www.ibm.com
- Ericsson www.ericsson.com
- Airbus – with the Topcased project http://www.topcased.org/
- Others TBD

Participation

Critical to the success of this project is participation of interested third parties to the community. We intend to reach out to this community and enlist the support of those interested in making a success of the EMF Compare project. We ask interested parties to contact news://news.eclipse.org/eclipse.technology.emft to express interest in contributing to the project.