

EMF Feature Model

Creation Review

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1 Introduction

During the last years Feature Modeling has become the "standard" for variability management in the field of Software Product Lines. Feature Models are easy to understand and provide a generic way to represent variability information, independent of a specific application domain. Several independent projects using the Eclipse platform / EMF have each defined their own meta model for feature models. Although these meta models have considerable structural differences, their core semantics are similar. A brief description of feature models can be found at [Wikipedia](#) and this [article](#) describes a small feature modeling example. The EMF Feature Model project will define a standard representation of Feature Models inside the Eclipse platform. The intent is to provide a uniform representation for variability information for tools based on the Eclipse Modeling Framework. This will allow easy and consistent access to variability-related information, such as variation points and variant decisions, in DSLs, M2M transformations, and other contexts where variability information is produced or consumed.

2 Scope

The objectives of the EMF Feature Model project are the following:

- Define Feature Meta Model
- Define an extensible evaluation framework and provide an exemplary engine implementation
- Provide extensible editors and visualizations for the EMF Feature Models

3 Code Contribution

The initial contribution will be from the pure::variants – Connector for Ecore. pure::variants is a commercial variant management tool, which already provides a mapping for its internal feature models to Ecore models. The Connector for Ecore source contains the Ecore meta model and related APIs. Xpand and Xtext already have interfaces to this meta model. The pure::variants feature meta model is mature and has been used for modeling in commercial and research applications for several years now and thus should provide a solid basis for the EMF Feature Model.

4 Committers

- Holger Papajewski
Holger is a director of the pure-systems GmbH. He is responsible for the design and development of the pure::variants tool chain.
- Markus Völter
Markus works as an independent researcher, consultant, and coach for itemis AG in Stuttgart, Germany. His focus is on software architecture, model-driven software development, and domain-specific languages, as well as on product line engineering.

5 Mentors

- Ed Merks
- Cédric Brun

6 Interested Parties

Particular interest has been expressed by the following organisations:

- pure-systems GmbH
- itemis AG
- Geensys
- General Motors Corp.
- Open Canarias S.L.
- IKV++ AG
- Generative Software Development Lab, University of Waterloo
- Andreas Rummler, SAP Research

7 Roadmap

October 14th	Creation Review
October 27th	Discussion about meta model at ESE 2009
November	First milestone to provide a preview of the meta model

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