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Variant Management User Manual

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Change Record

Issue	Date	Section / Paragraph affected	Reason / Initiation Documents / Remarks
1	2012-03-31	all	Initial Revision

Table of Contents

Chapter 1. Introduction

1.1. Purpose

The purpose of the Variant Management function is to transform a source UML or SysML model, the "product family model", into a target model, the "product model".

The product model contains a subset of the variants modeled in the product family model.

The user of the Variant Management function can pick which variants to include in the product model using a graphical user interface, and specify a file system location. The function then creates the product model's project at the specified location and removes the variants that have not been picked by the user from the product model.

1.2. Prerequisites

The product family model must be modeled in MagicDraw according to the definitions of the "Cookbook for MBSE with SysML".

In order to do that, the product family model must contain a profile that defines certain stereotypes for variant management, as shown in the following picture:

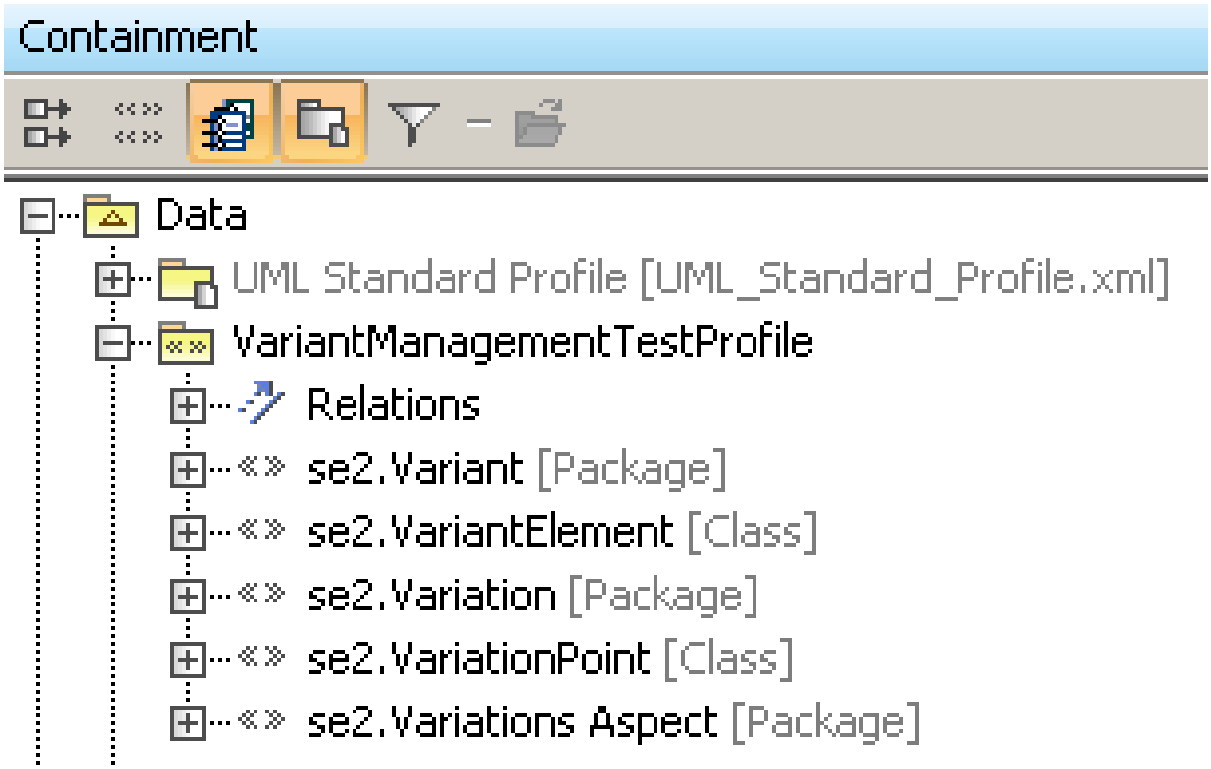

Figure 1.1. A profile for variant management

Note that the se2. prefix is optional, so you could for example use <<Variations Aspect>> or <<Variation>> as stereotypes in your product family model's profile instead.

Both the SE2Profile and the SYSMOD profile contain the above stereotypes and can be used in your projects. Alternatively, you can have a look at the test/variantmodels folder for a minimum profile that can be used in your product family model.

1.3. How this document was made

This document was generated from the MagicDraw model "VariantManagementUserManual" located in the samples folder.

1.4. Copyright

The software described in this document is subject to the following copyright statement:

Chapter 2. The Variant Management Function

1. Open MagicDraw and open the MagicDraw project that contains the product family model.

2. Right click on a package, select MBSE > "SE2: manageVariations".

3. The function shows the graphical user interface. This is what it looks like for the APE model:

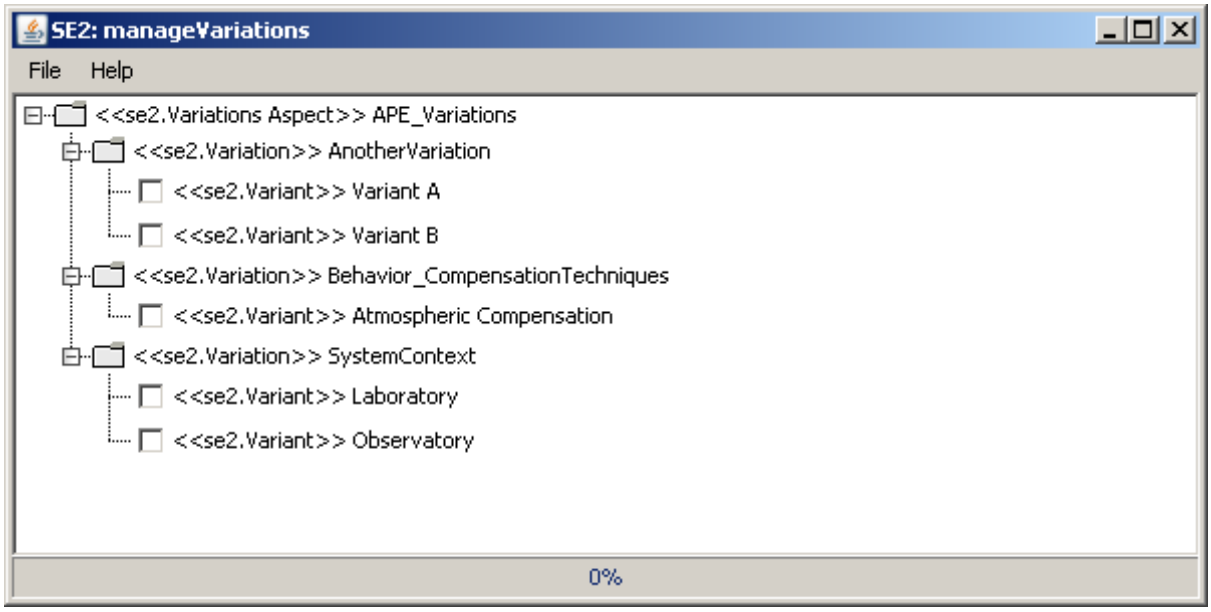

Figure 2.1. The user interface for selecting variants

4. Check the variants that you want to be included in the product model.

5. Select File > "Create product model.." from the dialogs menu.

6. Select a destination where you want to save the product model's project (make sure it is different from the product family project's location).

7. Wait until the progress bar at the bottom of the dialog shows completion.

As a result of running the plugin, a product model is created that contains only the selected variants. All other variants are deleted from that model, so **do not overwrite your product family model.**

Chapter 3. Further Features

You can save configurations and open them again (see File menu). Saving a configuration means: saving the state of the checkboxes plus the path to the product family model's project in one XML file. If you open a configuration XML file later on, these settings will be restored. If you create a product model after opening a configuration, the product family model's project saved in the configuration is loaded before the product model is created.

Chapter 4. Limitations and Known Issues

1. Teamwork server projects are not supported for product family models.

2. No dependencies between variants may be specified.

3. No refactoring of the product model is performed, just deletion of the variant packages that have not been picked by the user.

4. So far, only little documentation is available.

Chapter 5. Release History

Date	Release	Author	Change description
25 July 2011	V0.1.1	Bertil Muth	Contributed code.
24 October 2011	V0.1.2	Bertil Muth	Added Help menu. Integrated plugin into MBSE plugin Updated documentation.
31 December 2011	V0.1.3	Carlos Ortega	Enabled modeling of more than one top level variations aspect.
31 March 2012	V0.1.4	Bertil Muth	Added more flexibility concerning used stereotypes and profiles. Added Carlos Ortega as contributor in Help menu. Added unit tests to the variants package (test package). Moved documentation to own MagicDraw model.

Table 5.1.