Document Modeling Plugin User Guide

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1. Getting started

Document Modeling Plugin is designed to assist for modeling the document structure. This plugin is familiar to system engineers as concepts from the OMG SysML standard are used. The plugin is designed not only for systems engineers, but also for systems analysts, systems architects, or other persons who need to model a document structure for the specific project. The Document Modeling Plugin allows reviewing a prepared document structure in the document preview dialog, save document in the .pdf, .html, or .xml file formats. The following SysML concepts were used for the document modeling:

- Conform

- Viewpoint

- View

- Expose

2. Creating Document Model project

A new Document Model project can be created in the same way as any other project in MagicDraw. To create a new Document Model project, please follow the procedure:

- Create a new project in one of listed ways: On the main menu, click File > New Project on the main toolbar, click the New Project button, or press CTRL+N.

- In the Other category, select the Document Structure Model Project icon.

- In the Name text box, enter a file name.

- In the Project location text box, specify a project location.

- In the Use Project box, specify a reference project that should be used by a new project you are creating.

- In the Document Structure Model box, specify a project wherein the document structure is modeled and which should be used as a template for a new project that you are creating.
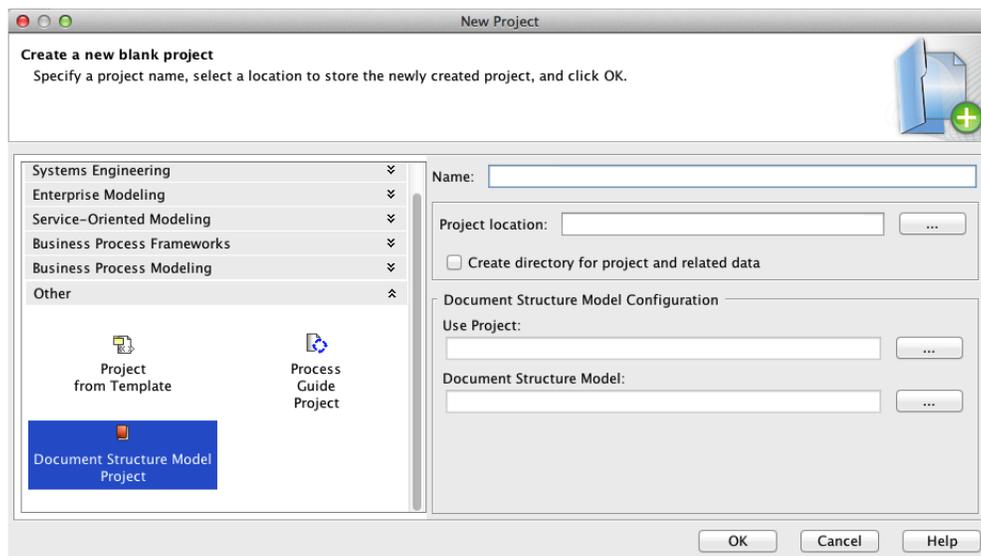
Figure 2.1. New Project dialog

3. Working with Document Modeling Plugin

Learn to create a new View&Viewpoint diagram, combine different viewpoint configurations, and construct the whole document structure model using views.

## 3.1. Constructing report fragment

A document structure fragment is constructed using View and Viewpoint elements. The View element represents the concrete document structure fragment. View element construction rules describe the Viewpoint that conforms the View. Data that should be used by the Viewpoint for constructing the View are exposed by that View.

Figure 3.1. View, viewpoint and relationships

Constraint: a view must conform at least viewpoint.

A document structure hierarchy is created by composing views. Each top-level view represents a chapter that is a top-level element in the document structure hierarchy. The sub-view that represents a section or subsection in the report hierarchy is created by using an Aggregation relationship as it is displayed in the following figure.
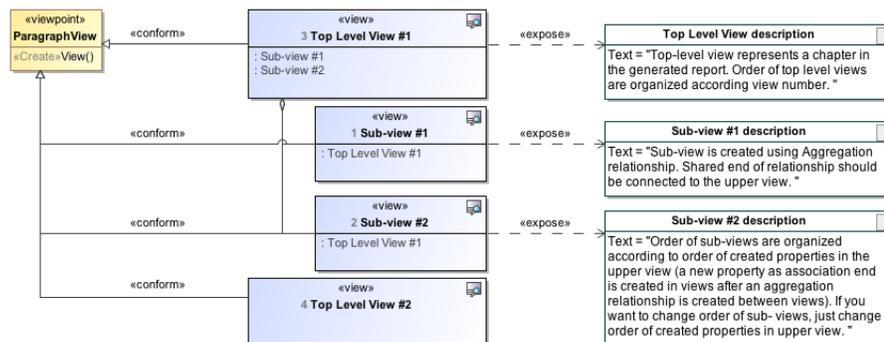
Figure 3.2. Constructed hierarchy in the report

3.2. Creating viewpoint

3.2.1. Paragraph

A viewpoint that uses the Paragraph method implementation is used to produce a text type view. The paragraph method can be configured by specifying parameters such as:

- Property Used For Paragraph - a parameter that defines what properties of the exposed elements is used as a source to produce a paragraph text. The property specification syntax is: QPROP:Element:<property name>.

- Represent As – a parameter that defines how a paragraph is constructed from exposed elements. There are two modes. A single paragraph can be produced from multiple exposed elements or separate paragraphs can be produced for each exposed element.

- Property Used For Title – a parameter that defines what property of exposed elements is used as a paragraph title source. This parameter is mandatory only if the paragraph kind is set to formal. The property specification syntax is: QPROP:Element:<property name>.

- Paragraph Kind – a parameter that defines a paragraph type. The paragraph can be produced as a simple paragraph, formal paragraph, or ordinary paragraph. A simple paragraph is a text fragment without a title and indented in the first row. The formal paragraph is a text fragment with a title. The first line of the formal paragraph text is indented. An ordinary paragraph is an itemized list. A new item in the itemized list is created from each exposed element.
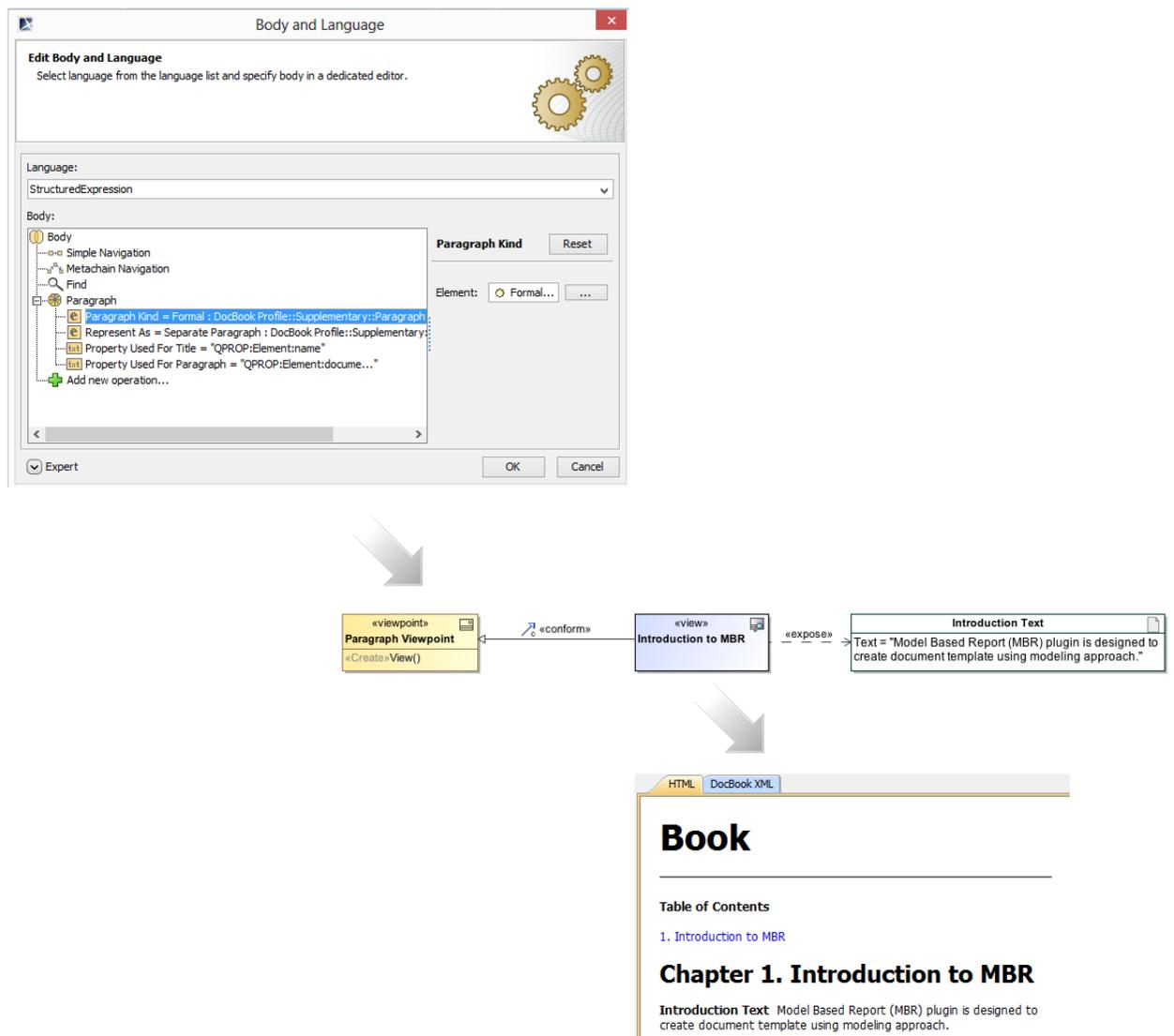
Figure 3.3. Paragraph sample

3.2.2. Table

If a table shape is exposed directly, then a clone of the table will be produced in the document view. The produced view can be refined by specifying what columns of the exposed table should be displayed in the produced view. For this reason, a parameter of a used Table method should be specified by entering information of properties that should be kept in the produced Table view.

The property specification syntax is
: *QPROP:Element:<property name>.*

If a collection of elements is exposed by the view that conforms a Table viewpoint, then a list of properties that should be displayed in the produced Table view as columns should be specified in the Table method.

The property specification syntax is
: *QPROP:Element:<property name>.*

The viewpoint that uses the predefined Table method implementation is used to produce a table view in our constructed report. The table can be constructed in two ways. The table view can be produced by exposing the table shape directly or by exposing an element or collection of elements and specifying what properties of exposed elements should be displayed as columns.
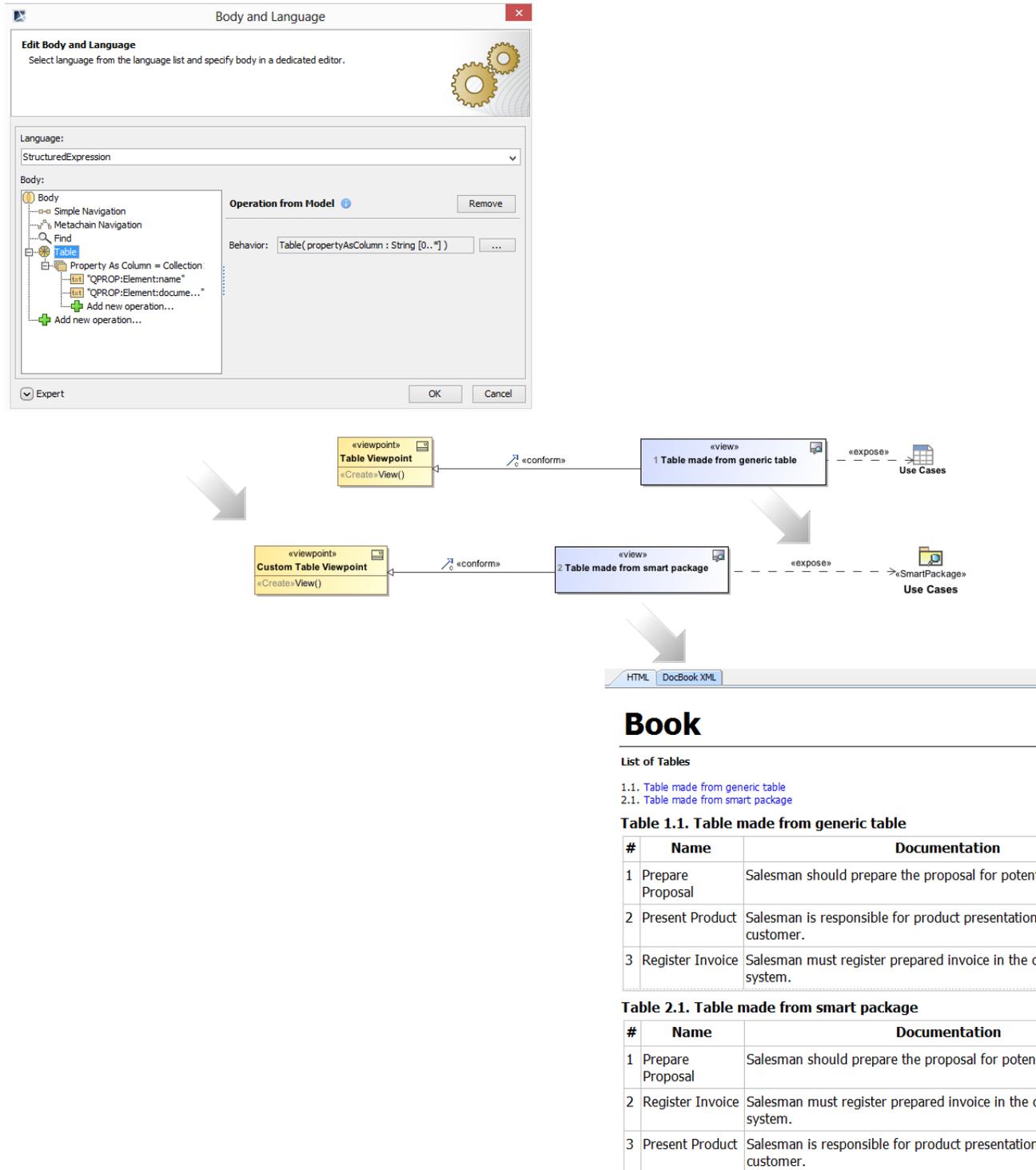
Figure 3.4. Table sample

3.2.3. Figure

The Figure method implementation allows constructing a viewpoint that specifies how an image object should be included into the view. The image object is constructed from the diagram shape that is exposed by the view. The figure viewpoint can be configured by selecting an image object aligning option and specifying a scale ratio.
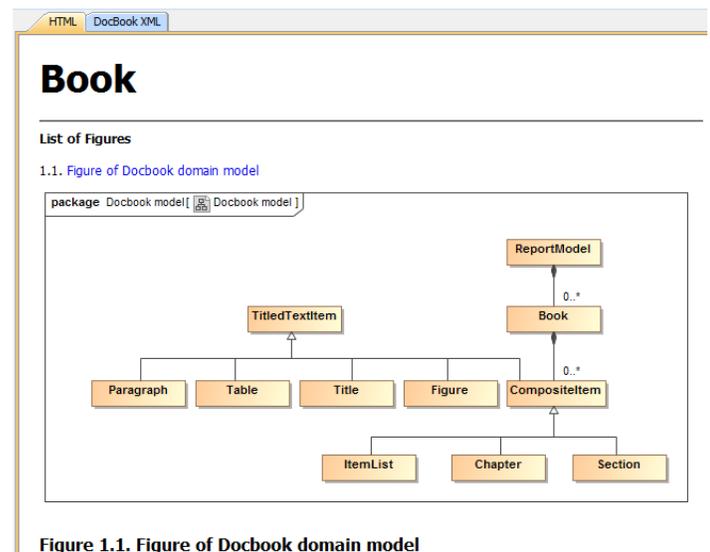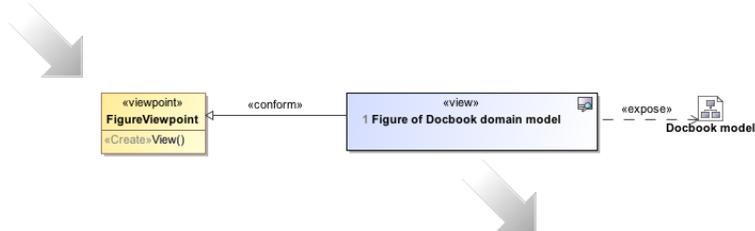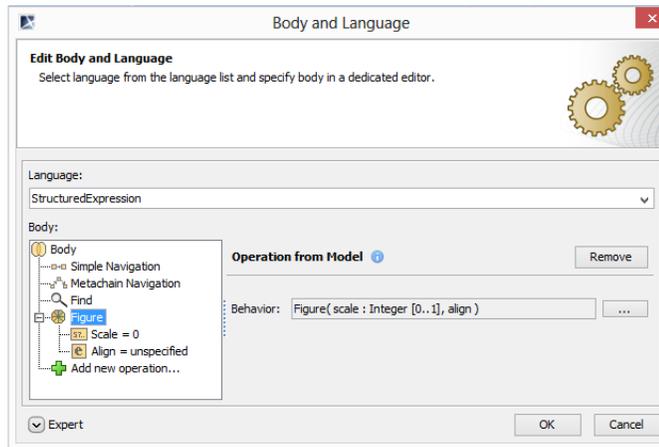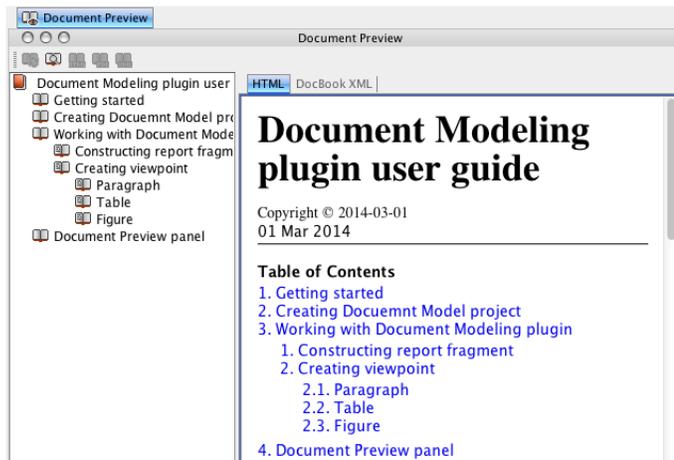

Figure 3.5. Figure sample

4. Document Preview panel

Document Modeling Plugin provides an ability to review a modeled document before generating a file. On the diagram pane, open the shortcut menu and click Document Preview. The preview panel opens.

The Document Preview panel consist of a document structure browser, preview panel, and actions toolbar.

Figure 4.1. Document Preview dialog

All buttons that are listed in the Document Preview toolbar are described in the following table:

#	Name	Documentation
1	Refresh button	If any changes are made in the document model, you should refresh a displayed view. On the panle's toolbar, click the Refresh button to refresh the document's view.
2	Search button	Opens the Find dialog that helps you to search for a specific place in your document.
3	Save to PDF button	Opens the Save PDF dialog to save your document in the .pdf file format.
4	Save to HTML button	Opens the Save HTML dialog to save your documdent in the .html file format.

#	Name	Documentation
5	Save to XML button	Opens the Save XML dialog to save your document in the .xml file format.

Table 4.1. Buttons in Document Preview dialog