



**Creating 3D Procedures and
3D Training Courses
With RapidManual and
RapidLearning**

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1. Introduction

This document gives practical recommendations for creating both interactive 3D visualization of complex technical procedures and 3D visual training, by reusing existing 3D CAD and Product Data Management (PDM) data.

A document containing a 3D procedure is a collection of one or more groups of textual information, called a procedure step, and each step is associated with a 3D visualization.

A training document is an application that contains the training tasks and 3D visualizations assigned by the author for the trainee. The training can run standalone or within the Learning Management System (LMS).

The RapidManual and RapidLearning Packages consist of the following applications:

Virtual Manual Editor (VME) (RapidManual Only) is a powerful authoring application for building interactive animated 3D procedures for technical support, maintenance and operations. This application provides both a visually oriented approach and a natural language based interface that allows people with little or no experience in 3D to rapidly build comprehensive 3D procedures. Published content can be delivered as standalone solutions or to integrate them into existing PLM, IETM or CRM systems.

Virtual Training Editor (VTE) (RapidLearning Only) is an expanded version of VME. In addition to the VME functionality, VTE also offers the user the ability to create SCORM-compliant multi-mode training applications by combining 3D procedures with existing training materials. Created training applications can be used standalone or integrated into existing LMS systems.

Virtual Manual Generator (VMG) is an application used to import 3D models of devices and equipment exported from CAD-like systems. To import 3D graphics data, VMG uses a set of customizable components (plug-ins) designed for different CAD systems.

Virtual Manual Administrator (VMA) is an application, which provides you with advanced abilities to manage projects and working folders for all the RapidProduct applications.

2. Process Layout and Basic Operations

The process of digital documents creation involves six basic steps:

- Preparing input data. 3D data and additional PDM data for the procedure is obtained from CAD-like system.
- Input data is imported into a new project using VMG.
- Editing imported 3D data in the project.
- Creating 3D procedure.
- Creating training procedure that is based on the 3D procedure (only in VTE).
- Publishing the project. Using VME or VTE, the author publishes to get the final 3D procedure and/or training.

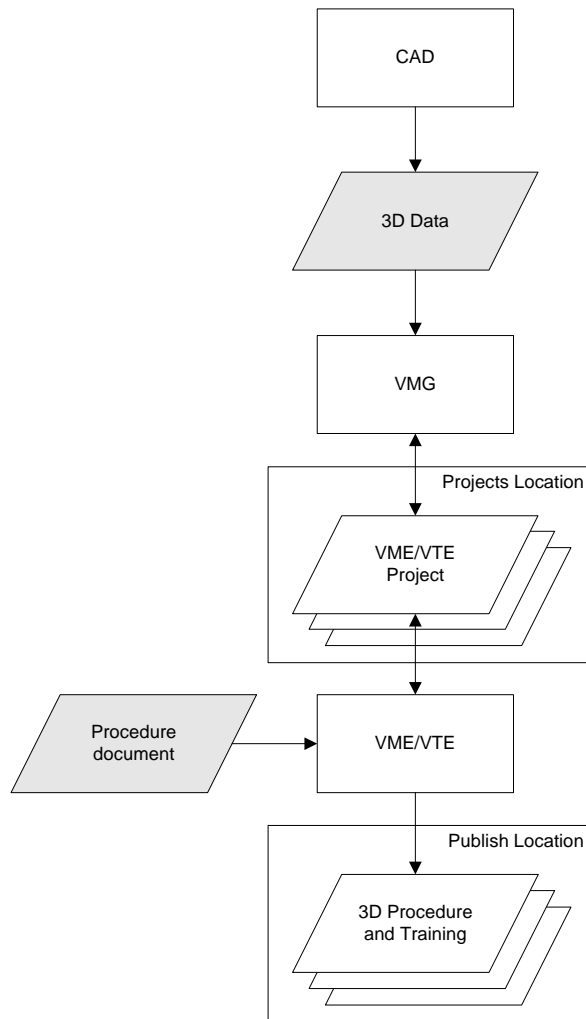


Fig.1. General work flow diagram. Box – an application; parallelogram – data. Dimmed figures – input and output data used in the development process.

2.1. Preparing Input Data

The following set of input data is required for creation of 3D procedure and training:

1. 3D graphics data in either VRML or JT file format.
2. Additional procedure document can be used for automatic generation of procedure and training scenario templates, for example S1000D procedural data modules.

2.2. Adding Data to Project

A project can be created and filled in with 3D graphics data using the following basic steps:

1. Creating a working area.
2. Creating a project.
3. Adding data to a project.

All of these steps are performed in the VMG application. To start VMG, choose **Start > Programs > ParallelGraphics > Virtual Manual Generator > Virtual Manual Generator**.

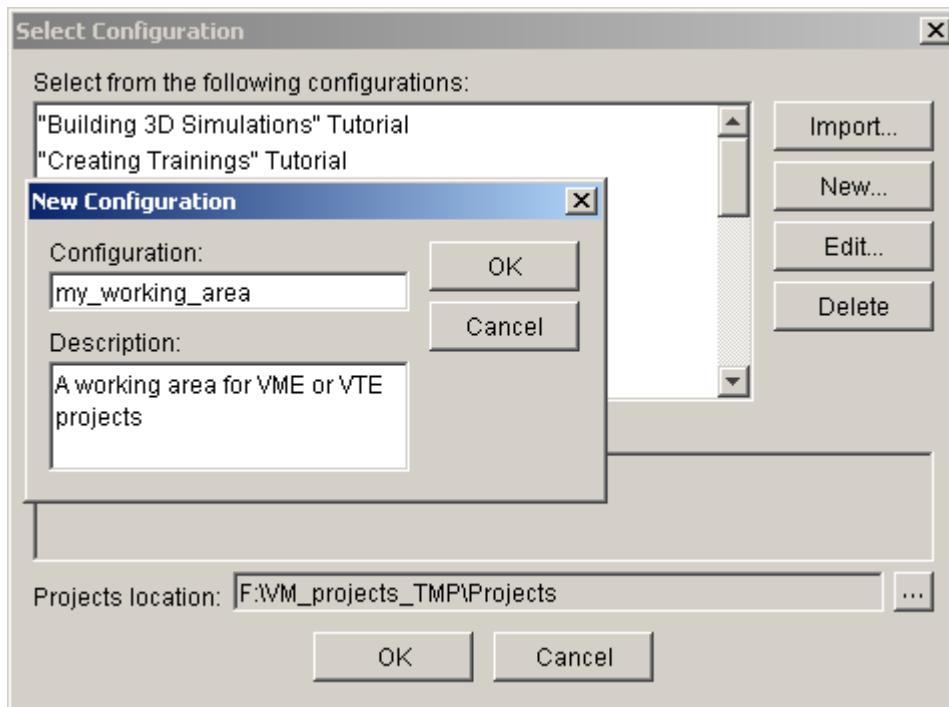
A project stores information about 3D graphics and other related data. A working area (or configuration) is a specially organized set of working folders that contain one or more projects and their published output. Configurations can be accessed in all of the RapidManual/RapidLearning applications.

In the working area the author creates a new project and fills it with the input data.

Procedure

1. To create a working area:

- In VMG, from the **Tools** menu, choose **Select Configuration**. The Select Configuration dialog box appears.
- In the **Select Configuration** dialog box, click **New**. The **New Configuration** dialog box appears.
- In the **Configuration** box, type a descriptive name of new configuration. In the **Description** box, type a text describing the new configuration (working area) in more detail. Click **OK**.



- The new configuration appears selected in the **Select Configuration** dialog box. Click **OK** to enable VMG to use the specified working area.

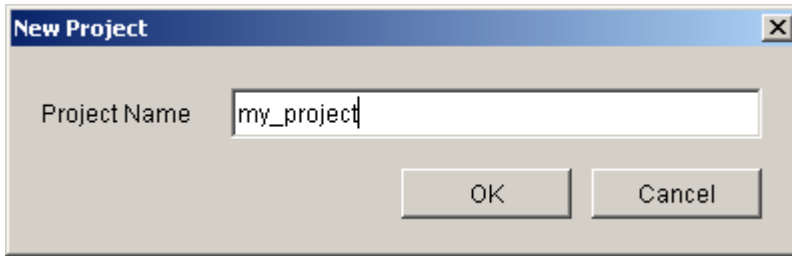
The working area is created in the following folder:

<System Disc>:\Documents and Settings\All Users\ Application Data\ParallelGraphics\VM

NOTE: Virtual Manual Administrator (VMA) provides advanced abilities to manage working folders including working folders on local server that is available to several users. For more information about this, see VMA help system.

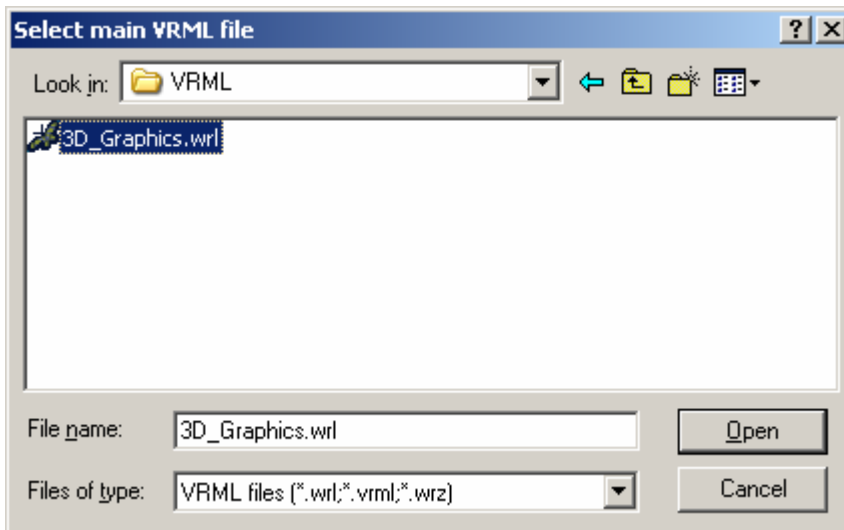
2. To create a new project:

- On the **File** menu, click **New Project**. The New Project dialog box appears.
- In the **Project Name** box, type the descriptive name for the project, and then click **OK**. This creates a new empty (that is, without any geometry data) project in the current working area.



3. To import input data to the project:

- Choose the required plug-in by clicking its name in the list of available plug-ins in the **Plug-in name** box.
- If required, specify the optimization parameters and settings for importing. To do this, on the **Tools** menu, click **Options**. Please note that it is recommended to use the default settings. For more information about settings, see VMG help system.
- If required, specify the settings for the selected plug-in. To do this, click **Settings**. Please note that it is recommended to use the default settings. For more information about plug-in settings, click the **Help** button in the currently open dialog box.
- To start importing the input data, click **Start**.
- In the **Select main VRML file** dialog box, select the supported geometry file to be imported, and then click **Open**.



- The length of time for import procedure depends on the amount of input data. If the default settings for importing have been specified, VMG saves the project in the end of the importing procedure. Otherwise, on the **File** menu, click **Save**.

3. Working with Project in VME or VTE

A project is edited using the VME or VTE application. To start it, click **Start > Programs > ParallelGraphics** and then finally choose Virtual Manual Editor or Virtual Training Editor.

Before getting started, it is important to become familiar with the application components and screen layout. This knowledge will help the author move freely and smoothly throughout the system.

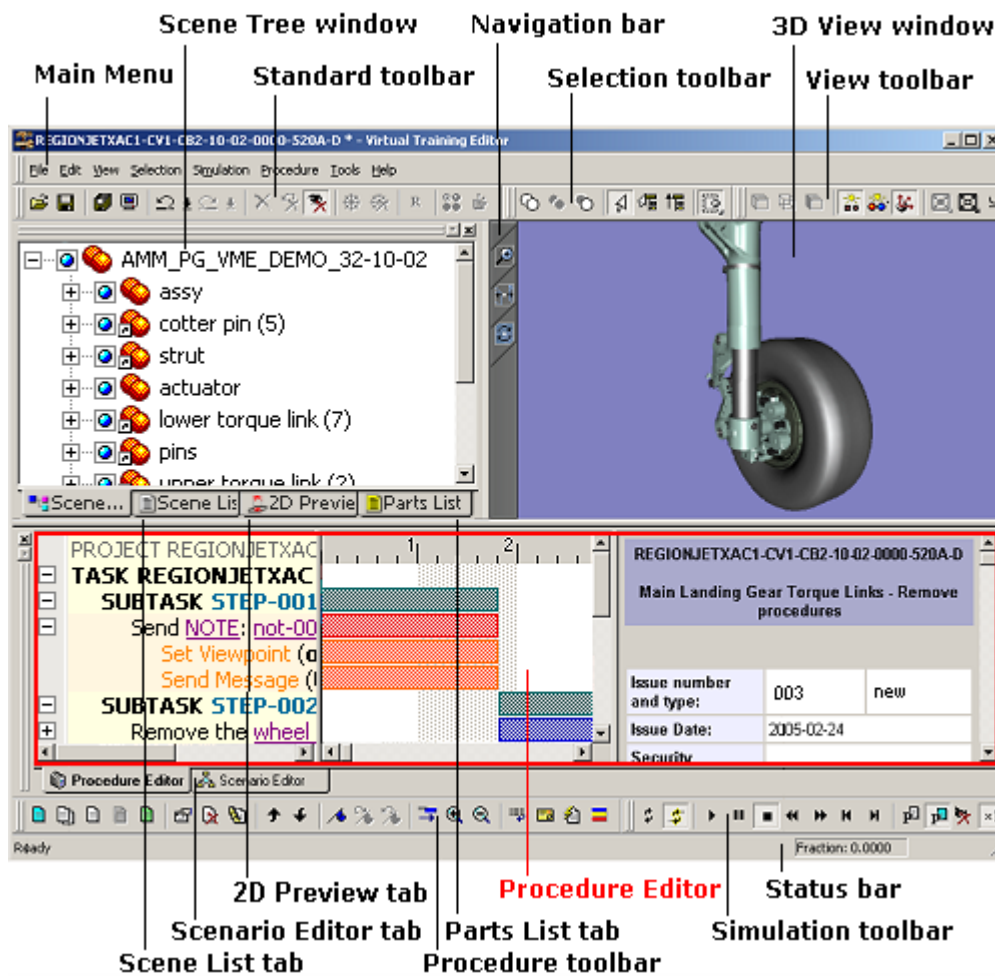


Fig.2. The VTE Screen Layout: overview.

Scene Tree window

The Scene Tree window is used for viewing, selecting, changing the scene tree hierarchy and deleting parts from the 3D scene. Common Scene Tree commands can be accessed from the right-click menu.

Scene List window

The Scene List window displays the current set of parts and allows the parts list to be sorted. Commands are similar to those in the Scene Tree window.

2D Preview window

The 2D Preview window renders an outline of the current view displayed in the 3D View window. The window is used for preparing and previewing a view that can be exported as a 2D CGM image. There are two types of image projection available for the 2D Preview window; orthographic and perspective.

Parts List window (only in VTE)

The Parts List window displays the current set of parts and their metadata that can be selected by the trainee in the published training and allows the parts list to be sorted. Parts used in the training scenario are automatically added to the Parts List. Using the context-sensitive commands, the author can add parts not used in the training scenario and add or edit the part viewpoints.

3D View window

The readymade 3D procedure is viewed in the 3D View window. You can navigate the camera using the mouse or keyboard and specify a navigation mode with the Navigation bar. ParallelGraphics' Cortona3D Viewer is used in this window. Some Cortona properties can be accessed by using the **Options > 3D View** command from the Tools menu.

Procedure Editor

Procedure Editor is used for viewing, selecting, creating, grouping and editing actions.

Scenario Editor (only in VTE)

Scenario Editor is used for creating training scenario.

Main menu bar

The menu bar, located directly under the VME/VTE title bar, provides access to the main menus for VME/VTE. The title of each menu indicates the purpose of the commands on the menu. Each menu uses standard Microsoft Windows conventions. Some commands are duplicated on several toolbars to enhance productivity and speed workflow.

Standard toolbar

Contains buttons for managing projects, modifications in the Scene Tree, choosing representations for the parts, and editing materials.

Simulation toolbar

Controls for 3D procedure: refreshing, VCR commands, displaying or hiding interface elements of the 3D procedure in the 3D View window.

View toolbar

Lets you show or hide each of the parts in the 3D View window. It contains buttons for highlighting in the 3D View window the parts corresponding the selected scene tree items, displaying the local coordinate axes, and controlling the camera.

Navigation toolbar

Located on the left of the 3D View Editor screen, the navigation toolbar contains buttons for controlling the navigation mode of the 3D View window of VME/VTE.


Procedure toolbar

Contains buttons for creating, editing, modification and grouping actions, changing their tree hierarchy in the Procedure Editor window, and changing parameters of the Action and Timeline sections.

Status bar

Located at the bottom of the VME/VTE screen, the status bar displays informational messages about menu items, tool buttons, and actions performed in VTE. In the lower right corner, the status bar displays the current fraction for 3D procedure, and the identifier for the currently activated warning message.

Flyouts

There are also flyouts that may have additional commands in the sub-menu. A flyout is an icon-based menu available from any button that has a small black triangle in the lower-right corner, for example . To access the flyout, click and hold the button. Then to activate a flyout menu item, drag to the item and release.

3.1. Opening a Project

Once a project has been created using VMG, it can be opened in VME or VTE.

Procedure

To open a project:

- Choose the same configuration that was specified in VMG for the project. To do this, click **Tools**, point to **Options** and click **Select Configuration**. In the **Select Configuration** dialog box, choose the name of configuration by clicking its name in the list. Click **OK**.
- On the **File** menu, click **Open Project**. In the **Open Project** dialog box, click the name of required project, and then click **OK**.

NOTE: If the specification component of the project is not specified, the Select Specification dialog box appears. This allows choosing a specification component for the project. See section 6.1 for more information about choosing a specification.

- When 3D data is imported into a project, it is initially hidden in the 3D window. To display the hidden items, select them in the Item Tree and make the items visible by using the **Show Solid** command (on the **View** menu, point to **Hide/Show Selection**, and then click **Show Solid**).
- Use the **Save Project** command from the **File** menu to save your work.

3.2. Selecting 3D Items

Once you've got some objects in your scene, you can start putting them where you want them, choosing their level of detail and material, and changing their position in the scene hierarchy. All manipulations with 3D items can be done by applying commands to selected 3D items. There are several techniques for selecting 3D items using different selection modes described below.

3.2.1. Selecting 3D Items in Item Tree/Item List


Procedure

To select item(s) in the Item Scene Tree/Scene List:

- Click the item name or icon. The name of the selected item is highlighted.



- To select multiple items, click the items one by one with the CTRL key pressed.
- To select a group of items that are next to each other, click the first item, and then click the last item while pressing the SHIFT key.
- To select items by a selection rectangle drawn in the Scene Tree/Scene List window, click somewhere in the Item Tree window and drag to pull out a selection rectangle. Continue dragging until the rectangle encloses all required items.


3.2.2. Selecting Items in 3D Window


Enabling the  Selection in 3D mode allows the selection of 3D items directly in 3D window. To do this, on the **Selection menu**, click **Selection in 3D**.

There are two ways for selecting 3D items in 3D window: clicking 3D item in the 3D window, or drawing a selection rectangle (the Frame Selection mode).

The **Frame Selection Mode** provides two selection options: Frame Crossing or Frame Bounding.

-  Frame Crossing selects those 3D items that are partially contained by the rectangle drawn in the 3D window.
-  Frame Bounding selects those 3D items that are completely contained by the rectangle drawn in the 3D window.

The  **Assembly Selection in 3D** mode allows the parent assembly of an item to be selected in the 3D window. To enable the mode, on the **Selection menu**, click **Assembly Selection in 3D**.

The  **Step-by-Step Selection in 3D** mode allows the parent item to be selected by clicking its child item in the 3D window. Each successive click will select the parent item of the current selection, progressing up the hierarchy in Item Tree. When the last parent item of the hierarchy is achieved, the selection returns to the item initially selected in the 3D window. To enable the mode, click **Step-by-Step Selection in 3D** on the **Selection menu**.

When the SHIFT, CTRL, or ALT key is pressed simultaneously with selecting items,

CTRL – adds to the selection,

ALT – subtracts from the selection,

SHIFT – if in the Frame Selection mode, selects from the already selected.

Procedure

To select a 3D item in the 3D window:

- Click the required 3D item in the 3D window. This highlights the item if the **Highlight Selection** button is pressed.

To select multiple 3D items in the 3D View window:

- Press and hold down CTRL, and then click each required 3D item in the 3D window you want to select.

To select 3D items by a selection rectangle:

1. Choose one of the available selection options – Frame Crossing or Frame Bounding by choosing the corresponding command from the Selection menu.
2. Click and drag anywhere in the 3D window to pull out a selection rectangle. Continue dragging until the rectangle encloses all the items to be selected. Be sure to start dragging at a point that will enclose the items required within a rectangle drawn from that point. Release the mouse button. The items that fall inside the selection rectangle appear highlighted.

3.3. Setting a Scene

After a 3D assembly has been imported into a project, it may need some modification to better suit the procedure. This includes deleting irrelevant 3D items, adding supplementary 3D items, moving objects, changing the scene hierarchy and changing the representation (level of detail) of 3D items. The Scene in the application contains all 3D items of the project.

Procedure

To delete a 3D item:

1. Select the 3D item(s) to be deleted in the Scene Tree, Scene List or 3D View windows.
2. On the **Edit** menu, click **Delete**. The deleted item can be restored.

To reorder a 3D item within the scene hierarchy, do one of the following:

- Right-click the item in the Scene Tree or Scene List window, click **Change Parent**, and then click a new parent name.
- Just drag an item in the Scene Tree to a new place.

To move or rotate an object in the scene:

1. Select 3D item you want to move or rotate.
2. On the **Edit** menu, click **Set Position**.
3. Specify translation and rotation with the manipulator and commands from the Edit Position dialog box.

To choose representation for a 3D item:

- Select the 3D item(s) to be changed.
- On the Edit menu, click Choose Representations by Weight or Choose Representation by Name.
- In the corresponding dialog box, choose the required level of details, and then click **OK**.

The application provides miscellaneous means of editing objects in the 3D scene. This includes material editing, trimming, merging shapes. See VME/VTE help system for other operations on editing 3D Scene (topic: **Editing 3D Scene**).

3.4. Enhancing a Scene

In addition to imported 3D data, objects from the Object gallery can be used to add special objects such as text labels, dimension lines, hoses, labels, callouts, ropes, tighten labels, and optionally user specified 3D

models. These objects can be part of your 3D procedure and used in the procedure similar to imported 3D objects.

When you add the object to the scene, a dialog box appears that allows you to specify its required parameters. The added object appears in the Scene Tree and Scene List windows and can be modified later on with the Edit Object Parameters context-sensitive command.

Procedure

To add an object from the Object gallery:

1. On the **File** menu click **Add Item from Object Gallery**.
2. Choose the object category by clicking the corresponding tab.
3. Choose one of the objects by clicking its icon and then click **Add**.

To edit objects that that have been added from the Object gallery:

1. Right-click the object in the Scene Tree or Scene List window and choose **Edit Object Parameters**.
2. Specify new parameters in the dialog box that appears, click **OK**.

See VME/VTE help system for other operations with gallery objects (section: **Object Gallery**).

4. Creating 3D procedure

A 3D procedure can be created both in VME and VTE. Please note that when opening a project for the first time the author should determine the information standard (specification) of the 3D procedure document. If an S1000D document is required, select *S1000D Issue 2.3 Procedure* in the Select Specification dialog. This allows you to attach an S1000D data module and automatically create the structure of procedure in the Procedure Editor. If you are uncertain about the specification, choose *Generic Procedure*. This allows you to create the 3D procedure from the scratch.

4.1. Creating Animations and Actions

When creating a procedure, the author uses a set of predefined actions based on Simplified Technical English. An action is an operation associated with any object and actions are the building blocks of a procedure. Actions are shown in the Procedure Editor and can be grouped into steps or subtasks to suit the structure of technical procedure.

By default, actions are executed sequentially. If you want to play several actions simultaneously, you have to group these actions under an action union. An action union is a special grouping item that is used to unite actions for their simultaneous playback and can contain other action unions and actions.



Procedure

To create an action:

1. Choose an existing group (by clicking it) or create a new grouping item (click **New Group** on the Procedure toolbar) in the Procedure window. All actions must be part of a group.
2. Select the item you want to create the action for.
3. Create an action by clicking **New Action** on the Procedure toolbar and selecting the action name in the New Action dialog. Please note that although it is possible to form new custom actions, we recommend you use actions without changing their internal structure of commands (atoms and

functions). For more details about creating animations, see *Basics of Creating Actions* in the VME Help system.

To view an action:

1. To view the animation, play it in 3D View. Before playing, click the  Refresh button (the Simulation menu). It is necessary to play procedure correctly.
2. Use the  buttons on the Simulation toolbar to control the playback of the 3D procedure.

4.2. Editing Actions

Actions applied to an item use default parameters. If the action does not appear correct when viewed, it can be edited and corrected. This can be done by changing fields of actions. A field is a data element that is contained in any action and can be edited by the author. A field has a name and a value of a particular type. The changeable part of a field is underlined.

Procedure

To edit an action:

1. Expand the action in the Procedure Editor.
2. Click the changeable part of a field that is underlined. Simple fields are edited by typing a new value. The others open the dialog box where you can change parameters with miscellaneous controls.

See VME/VTE help system for other information on editing Actions (topic: **Editing Actions**).

4.3. Making a Structure of the 3D Procedure

Actions shown in the Procedure Editor should be grouped depending of the document structure of technical procedure. The author creates grouping items in the Procedure Editor. There are two different ways to create structure of the 3D procedure. The first way is to create groups from the scratch. The Procedure Editor provides quick, easy, and efficient means of creating and changing structure of the 3D procedure.


The second way is to generate a structure on the basis of already existing document (XML file format) that describes a technical procedure. The file standard in this case should correspond to the specification chosen when creating the project. For example, if you have created a project according to *S1000D Issue 2.3 Procedure*, the input document of technical procedure should follow the S1000D 2.3 standard.

Each group may have procedure comments. Comments are normally used as a text description of the steps and sub-steps, and for generating the published 3D procedure document.

Once you have a clear understanding of the 3D procedure steps, begin with making a structure and only then add animations.


Procedure

To create a new grouping Item:

1. In the **Action** section of the Procedure Editor, click the item you want to create a grouping item for.
2. On the Procedure Editor toolbar, click  **New Group**.

3. In the **Edit Group** dialog box that appears, enter the descriptive name of the grouping item in the **Description** box, choose the hierarchy level for a new grouping item in the **Child of** box and then click **OK**.

To show or hide comments:

- Click the  Comments button on the Procedure toolbar.

Adding comments:

- Click in a blank area to the right of the task, subtask or action, and then type a comment.

To attach a document to a project:

1. On the **Edit** menu, click **Attach Document**.
The Attach Document dialog box appears.
2. In the **Attach Document** dialog box, select a document file to be attached, and then click **Open**.
The Document window appears.

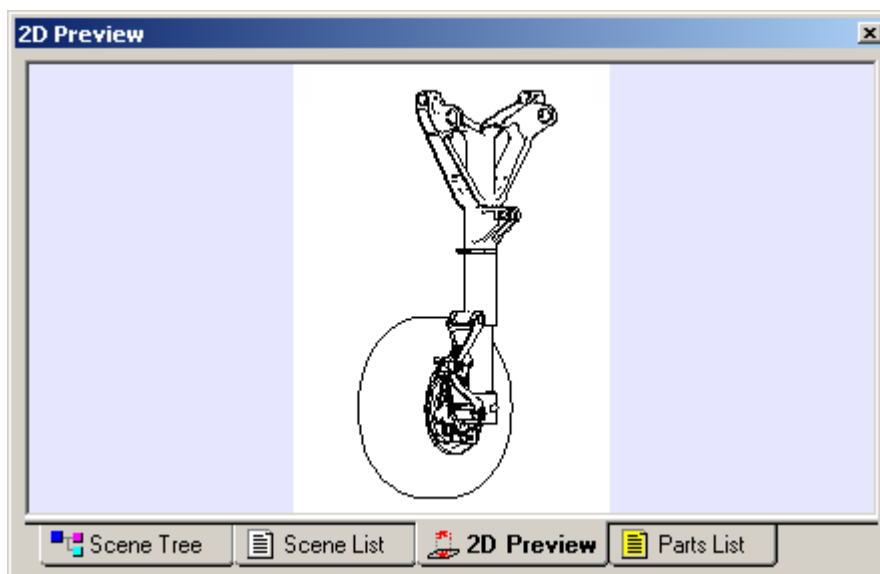
See VME/VTE help system for other information on making a structure of 3D procedure (sections: **Basics of Creating Actions, Working with Documents**).

4.4. Creating a 2D Image

The VME and VTE applications allow the author to generate outline images of the view in the 3D window. These images can be edited and stored within a project.


To create an outline image for a project:

- Click the 2D Preview tab to make the 2D Preview window active.



The 2D Preview window renders an outline of the current view displayed in the 3D View window. The window is used for preparing and previewing a view that can be exported as a 2D CGM image. There are two types of image projection available for the 2D Preview window; orthographic and perspective.

- Choose the desired moment of 3D procedure by dragging the time slider on the Time Ruler of the Procedure Editor.
- Choose the viewpoint of the outline graphics by navigating in the 3D View window.
- If necessary, choose the perspective view for the outline image. To do this, on the View menu, click Perspective 2D Preview.
- Once the outline graphics have been prepared, generate the outline image. To do this, on the View menu, click Create Outline Image.
- In the Create Outline Image dialog box, type the image name and description, and then click OK.


If necessary, preview and/or edit the ready-made outline images. To do this, on the View menu, click Edit Outline Images. Please note that editing outline images is done by Arbortext IsoView which should be installed separately. The created 2D image can be viewed with the  2D Graphics command.

See VME/VTE help system for other operations on editing 3D Scene (section: Working with Outline Images).

4.5. Publishing 3D Procedure

Once the 3D procedure has been completed and the preview is satisfactory, publish the procedure using the Publish command in the VME or VTE application.

NOTES:

- The appearance and visualization mode of the published procedure is defined by the specification used. The appearance and the mode can be edited using a set of options in the Publish Options dialog box (**Tools > Options > Publish**). See section 6 for more details about specifications.
- Previewing can be done by clicking  **Preview** on the **Standard** toolbar.

5. Basics of Creating Training (RapidLearning Only)

When creating training, the author reuses animations and actions created in the Procedure Editor. The Scenario Editor provides the functionality to create training scenarios. This section gives recommendations for creating training.

1. Open a project by choosing any training specification (its name contains the *training* key word).
2. In the Procedure Editor, design the structure of 3D procedure and create animations and actions.
3. Create a scenario for the training.
4. Add parts to the Parts List
5. Add viewpoints to the training scenario.
6. Save and publish the project.

5.1. Opening a project with VTE


When opening a training project for the first time, a training specification should be selected in the Select Specification dialog box. If, for example, you have S1000D document of any maintenance procedure, choose *S1000D Issue 2.3 Training*. This allows you to automatically create the structure of the 3D procedure in the Procedure Editor and the template of the training scenario from the existing 3D procedure. Otherwise, you can choose *Generic Training*.

5.2. Creating animations with VTE

The procedure of creating animations is similar to that of VME application. The only difference is the Switch element in the structure. The Switch element allows alternative actions to be added to the procedure. In other words, the author of the training can create the training procedure in such a way that the trainee will see different animations, depending of the parameters the trainee enters.

Procedure

To add a New Switch:

1. In the Action section of Procedure Editor, click **Subtask**, **Step** or **Action** that you want to create a new Switch element before.
2. Click the  New Switch on the Procedure Editor Toolbar.
3. In the Edit Group dialog that appears, type in the descriptive name of the Switch in the Description box. If you want to have the Switch element on the same hierarchy level as the subtask, make sure that Task is selected in the "Child of" list box and click OK. If you want to have the Switch element under the subtask group, choose the corresponding subtask name in the "Child of" list.

5.3. Creating a scenario from existing 3D procedure

The structure of a training scenario can be generated from a completed procedure.

Procedure

To generate a structure of training scenario from 3D procedure:

1. Open the Scenario Editor tabbed page by clicking the Scenario Editor tab.
2. On the **Scenario** menu, click **Generate Scenario** from Procedure.

5.4. Using scenario elements

Whenever the structure of training scenario is built, the author needs to add and modify scenario elements in the training scenario. There are three scenario elements: Operation, Request and Alert. The Operation element is used to set the task for the trainee (expected activity) and to specify the response of the training system when completed. The Request elements are used to request information from the trainee. The Alert elements are components that display a pop-up text message in the training.

The most frequently used element is the Operation element. The Operation elements are added to the training scenario to ask the trainee to locate and select objects or parts in the 3D window in the specified order. Elements are added to the scenario using the context sensitive commands and appear in the Scenario Editor.

Procedure

To add a new Operation element:

1. In the Scenario Editor, click <add element>
2. Select **Operation**, and then **All items** or **Any of items**.
3. Click **Browse**, and then choose the object(s) you want. Click **OK**.
4. If you want to add objects to the Operation element, click <add item> in the Scenario Editor and choose the object from the list.
5. To type the text message, use the insertion point as shown on the following figure:
Operation (**document reference:** TITLE:STEP 32-10-02.2)
6. If needed, add a question by using <add question>.
7. To specify the reaction of the training system in the case of the correct trainee action, use <add animation>, <add message>.
8. To specify parameters for conditional jumps, use <set parameter>.

To add a new Request element:

1. Make sure you have a scenario parameter or add a new one.
2. In the Scenario Editor, click <add element>
3. Select **Request**, type in the explanatory text in the **Prompting** box and in the **Parameter** list click the parameter of your choice.
4. Click **OK**.

To add a new Alert element:

1. In the Scenario Editor, click <add element>
2. Select **Alert**, and one of the notifications you want: **Note**, **Warning**, and **Caution**.
3. Type a description of the alert message.
4. Click **OK**

See VTE help system for other information on editing training scenario (section: **Creating Trainings**).

5.5. Creating training scenario from the scratch

If required, a training scenario can be created manually by the author.

1. Open the Scenario Editor tabbed page by clicking the Scenario Editor tab.
2. In the Scenario Editor, click Add scenario to the project.
3. To create the scenario of the training, you can give commands that are underlined control words. For example, if you would like to make a step in the training, you would click <add step>. Also there are command parameters that are underlined fields. Click on the underlined text to specify a new value.


4. Within the steps, add the required scenario elements: Operation, Request, and Alert. To add a new scenario element in the Scenario Editor, under the group item click [<add element>](#).

See VTE help system for other information on editing training scenario (section: **Creating Trainings**).

5.6. Publishing Training

Save and publish the finished version of your project. The **Publish** command from the **File** menu generates the training files. Please note that the default folder to save training is specified by the currently activated working area. The output folder contains both training and SCORM compliant training as a package of SCORM 2004.

NOTES:

- The appearance of the training can be edited using a set of options in the Publish Options dialog box (**Tools > Options > Publish**).
- Previewing can be done by clicking  **Preview** on the **Standard** toolbar.

6. Working with Specifications Components

The application uses a set of components for authoring 3D enabled document in accordance with various information standards (S1000D Training and S1000D Procedure).

Each specification component (specification) is designed for a particular information standard and defines the following:

Set of metadata fields required in accordance with the standard.

Set of declarations that describe the training/procedure appearance (for example, actions names, scenario structure, action default parameters and so on).

Set of additional software components that allow the training/procedure authoring in accordance with the standard.

Set of additional software components that allow publishing a project in formats required by the standard (for example, S1000D Issue 2.3 Training XML or S1000D Issue 2.3 Procedure XML) or additional formats requested by a customer.

Set of resource files (for example, images, styles, scripts) that defines appearance and functionality of the resultant HTML based document.

Note:

- Application can support one specification at a time.
- Each project saved by the application contains information about the specification used for creating such project.
- If the required specification component is not installed on your computer, the project cannot be opened.
- If the project specification is incompatible with the application, the project can be opened only using the *Open As* command.

6.1. Choosing Specifications

It is possible to change the specification used by a project. To do this, use the *Open As* command in the Open Project dialog box. In some cases, a project will have information that is not compatible with a specification and the project specific data will be lost.

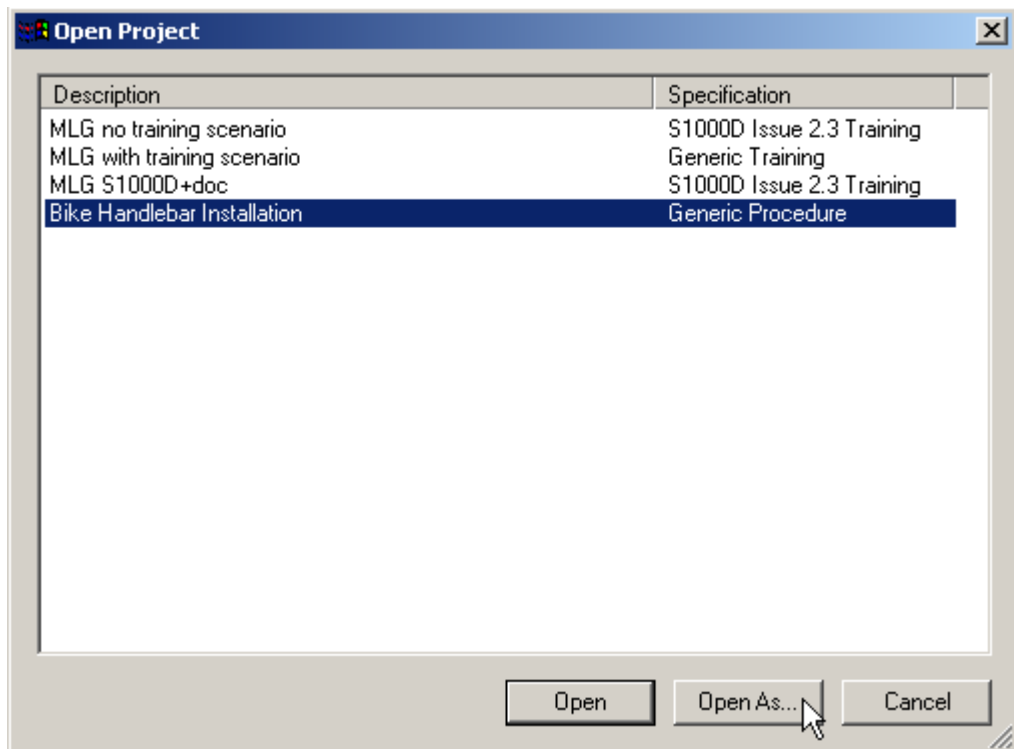
Use the *Open As* command:

- If the required specification component of the project is not installed on the computer.
- If the specification component of the project to be opened is incompatible with VME/VTE. This allows reusing the data of a project created with one specification to create a new project in accordance with another specification.

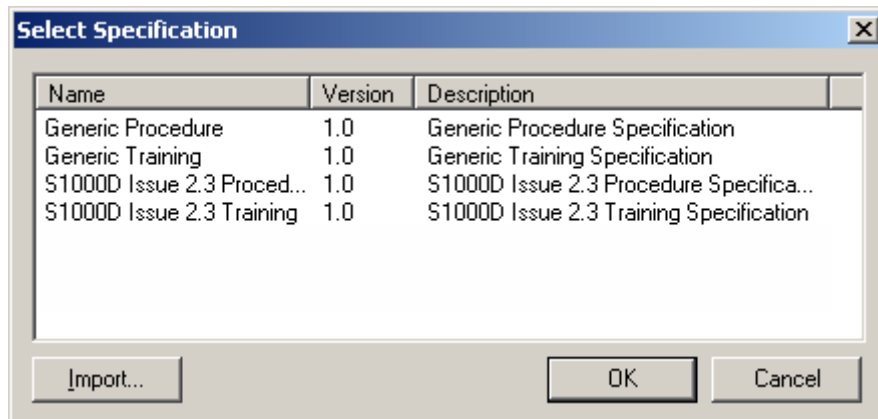
Procedure

To choose a specification for an existing project:

- On the **File** menu, click **Open Project**.
The Open Project dialog box appears.
- In the **Open Project** dialog box, click the name of the project for which a new specification to be chosen, and then click **Open As**.



- The Select Specification dialog box appears.
- In the **Select Specification** dialog box, choose the required specification, by clicking its name in the **Name** column.



- Click **OK** to save the choice and close the dialog box.

6.2. Opening a Project Created with incompatible Specification

For opening a project created with incompatible specification, it is recommended that the user should create a new working area for such a project.

Procedure

To open a project created with VME/VTE incompatible specification:

- Export the project from its working area (see 7.2 for more details).
- In the application, create a new working area for a project created with incompatible specification (Tools > Options > Select Configuration > New button).
- Import the project to the new working area (see 7.2 for more details).

6.3. Specification Details

Currently, the VME and VTE use the following specification components for 3D procedure and training correspondingly:

- S1000D Issue 2.3 Procedure
- Generic Procedure
- S1000D Issue 2.3 Training
- Generic Training

S1000D Issue 2.3 is a part of international specification for the procurement and production of technical publications.

Generic is a specification designed for wide range of users to create simple 3D enabled documents.

- The appearance and visualization mode of the resultant document is defined by the specification component used. The appearance and the mode can be edited using a set of options in the Publish Options dialog box (**Tools > Options > Publish**). In general, the options allow setting the appearance of 3D/2D window, document format and choosing a mode for visualizing the graphics. The detailed description of publish options for each specification component is available by clicking the **Help** button in the Publish Options dialog box.

7. Useful Additional Operations

7.1. Configure VME or VTE

With VMA you can specify and use several working folders for different groups of projects. This describes the mechanism that the application provides for easy switching from one working environment to another.

- To configure the program to work with the existing working folders:
- Click **Tools**, point to **Options** and click **Select Configuration**. In the Select Configuration dialog box, choose the name of working area by clicking it. Click **OK**.

7.2. Exchange projects between the illustrators

This section describes the mechanism that the VME or VTE application provides for exchanging data.

Exporting project:

- Start the applications and select the working area that contains the project(s) that you wish to export.
- On the **Tools** menu, click **Manage Projects**.
- Select the project you want to export from the Project list on the left and then click **Export**. Please note that you can select all projects by clicking **Projects**.
- Specify the location where you want to save the selected project(s) in the **Save in** field.
- In **File name**, type a name for the project archive (VMP file), and then click **Save**.
- Click **OK** to close the Manage Projects dialog box.

Importing project:

- Start VTE (if you import the project on another computer) and select the working project to contain the imported project(s).
- On the **Tools** menu, click **Manage Projects**.
- Click **Projects** in the List of projects and then click **Import**.
- In the Import Project dialog box, locate and open the folder containing the project archive (VMP file).
- Select the project archive and then click **Open**.
- If the project archive contains several projects, the Import Multiple Projects dialog appears. In the **Projects** list, select project(s) you want to import. Click **OK**. Please note that, by default, all projects in the Projects list appear selected.
- Click **OK** to close the Manage Projects dialog box.