



HOME

User Manual

DELMIA Process Engineer<sup>®</sup>

## General Introduction



# Foreword

This manual provides an introduction to the basic Process Engineer operations and functions.

While developing these functions we have made every effort to create a clearly organized, easy-to-understand program structure.

A user-friendly interface as well as a clear menu guide will enable you to quickly learn how to operate the program and to get familiar with its functions so that you can carry out your planning tasks in a quick and reliable way.

## **No Liability or Guarantee**

Our programs and manuals have been compiled with great care and to the best of our knowledge. They have also been tested in a production setting. However, we assume no liability and provide no guarantee that the software and related descriptions are free of error or are suitable for special purposes.

DELMIA assumes no liability for any damage that may arise from the use of this software. By using this software, the user acknowledges this exclusion from liability and shall hold DELMIA exempt from all claims.

## **Copyright**

The information in our documents may be copied and distributed for internal purposes provided it is done free of charge and the contents are not altered or distorted.

Any other form of usage, especially the sale on CD-ROM or in any other publication in whole or in part is only permitted after prior written consent by DELMIA.

Some parts of this software are owned by Unigraphics Solutions Inc. and are copyrighted © 2010. All rights reserved.

Some parts of this software are owned by combit® GmbH and are copyrighted. Report-/Print module List and Label® Version 8.0: Copyright combit® GmbH 1991-2010.

## **Modifications**

Moreover, DELMIA retains the right to make modifications and improvements to the product described in this manual at any time without prior notification.

DELMIA and the 3DS logo are registered trademarks of Dassault Systèmes or its subsidiaries, in the United States or other countries.

© 2001-2010 Dassault Systèmes - All rights reserved

# Table of Contents

<b>1. Introduction</b>	<b>1</b>
1.1 How to Use this Manual	1
1.2 Documentation Conventions and Symbols	1
1.3 New Functions in General Introduction	2
<b>2. Starting and Exiting</b>	<b>3</b>
2.1 Logging on the Process Engineer	3
2.1.1 Tools Menu	6
2.2 Saving Data Permanently in the Project Database	7
2.2.1 Saving Project Data	8
2.2.2 Exiting the Program	9
2.2.3 Program Crash	9
<b>3. Views in the DELMIA Process Engineer</b>	<b>11</b>
3.1 Main Views in the Process Engineer	11
3.2 PPR Navigator View	12
3.2.1 Navigating Views and Opening Menus	13
3.2.2 Getting Familiar with the Mouse	14
3.2.3 Using the Center Mouse Button in a Graph	14
3.2.4 Using Drag and Drop	15
3.2.5 Opening Views from the PPR Navigator	21
3.2.6 Closing Views	23
3.3 Display Area	25
3.3.1 Specifying Individual User Settings	25
3.3.2 Sorting Column Headings by Plantype	26
3.3.3 Deleting Plantype-Specific Column Sorting	27
3.3.4 Copying the Display Area onto the Clipboard	28
3.3.5 Library View and Search View	29
3.4 Working with Menus	30
3.4.1 Main Menus	30
3.4.2 Function Menus for Program Functions	33
3.4.3 Context Menus, Dialogs, and Properties Menus	33
<b>List of Figures</b>	<b>40</b>
<b>Index</b>	<b>42</b>

# 1. Introduction

This manual explains how to use the Process Engineer for your planning purposes.

## 1.1 How to Use this Manual

This manual enables you to get familiar with the operation and functions of the Work Positions. This manual briefly describes:

- Main menus provided by the Process Engineer
- How to start and exit the program
- How to execute menu functions and how to navigate in views



### Note

*This manual provides the basis for all further program modules. You will find a more detailed description on how to work with these modules in the respective manuals.*

## 1.2 Documentation Conventions and Symbols

The symbols used in this manual are intended to provide you with keys to the contents in an immediately understandable manner.



This symbol is used to introduce key concepts that are covered in the sections immediately following this symbol. As a result, this symbol most frequently appears at the beginning of chapters or sections.



### Note

*This symbol is used to mark notes, which provide you with additional information you need to have for further work. You will either find the Note sign at the beginning of a chapter or in a particular text passage in the chapter. Texts bearing this sign are additionally marked with **Note**. The text is always in italics.*




### Caution

*This symbol indicates that the text that follows describes particular circumstances that you must avoid to avoid potential errors with the operation of the program or harm to data. You will either find the Caution sign at the beginning of a chapter or near a particular text passage in the chapter. Texts that are introduced by this sign are additionally marked with **Caution**. The text is always in italics.*

**Example**

This symbol marks examples which serve to illustrate a certain situation.

- 1) This symbol marks the individual operational steps involved in a particular operating instruction. Operating instructions describe operational steps, for example, how to open a menu or execute a function.
- This symbol marks listed subjects. The symbol for listed subjects can be either used to structure a continuous text or to list main subject keywords.
- This symbol marks list inside a bulleted or numbered list.
-  This symbol marks cross reference information that is available in another manual.

## 1.3 New Functions in General Introduction

No new functionality has been added for this release.

## 2. Starting and Exiting

The DELMIA Process Engineer can be started either from the start menu (Please refer to the [Figure 1](#)) or by double-clicking the appropriate icon on your desktop. To view the Process Engineer icon on your desktop link it to the desktop using the start menu.

Once the program is started, you must log on with a user name.

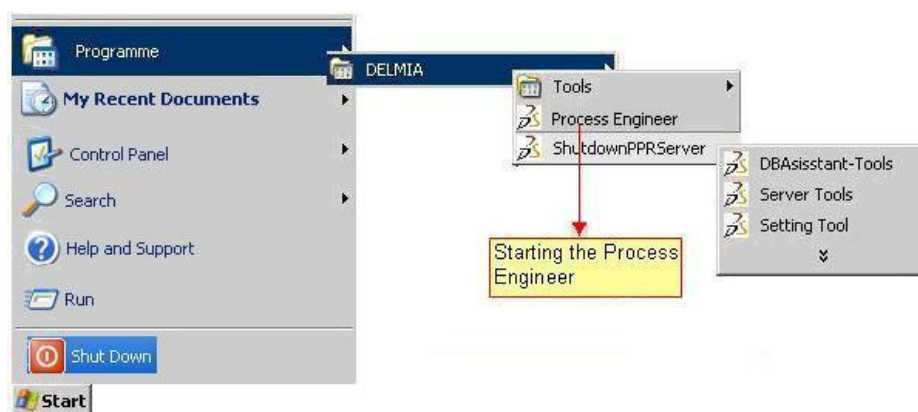


Figure 1: Starting the Process Engineer using the Start Menu or Icon

### 2.1 Logging on the Process Engineer

- 1) Enter the user name (admin) in **Name** field and password (admin) in **Password** field. Always observe the upper/lower case as defined by the administrator Please refer to the [Figure 3](#).
- 2) If the upper/lower cases have not been observed when entering the user name or password, a message appears

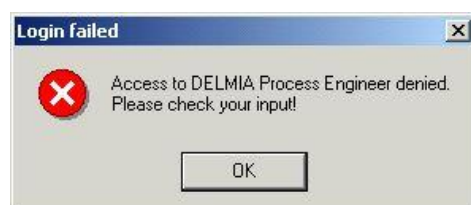


Figure 2: Login Failed Message

- 3) When this message appears, simply click **OK**. Then enter again your password and user name. Make sure you type them correctly. You can repeat this procedure as many times as you want



#### Note

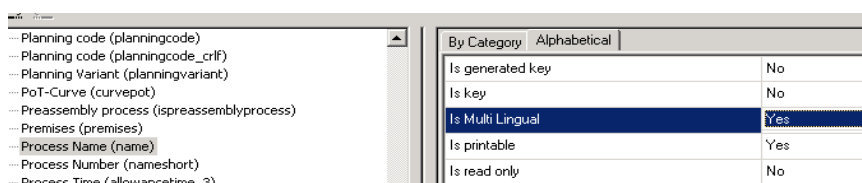
Your password and user name are registered by the administrator. According to the user assigned rights, a user is given access to specific Process Engineer functions. The administrator, for example, has access to all Process Engineer functions and administrator is the only person who is authorized to create user names and passwords. Please refer to the [Figure 3](#).

## Language Ids



**Figure 3: User Authorization Dialog Box**

- 4) Select the **Language ID** to store **values** of attribute in multiple languages. For attribute to be multilingual, set the property **Is Multilingual** to **Yes** on the attribute in the customization. If the attribute is customized as multilingual and the required language ID is set while login, server returns the corresponding value for the attribute.  
If you want to translate and store the value in database then you can launch two clients and store the value.  
Multilingual will be supported only for attributes of datatype String and RTF and control type Default, Edit, Multiline edit, and RTF Edit.
- 5) If no language ID is specified then the attribute will have the default behavior and will not be stored or retrieved as Multilingual attribute.



**Figure 4: Property on Attribute**

Finder also follows the language ID functionality. *Please refer to the [Finder Manual](#).*



## Note

You can specify the language in **poolingserverconfig.txt** file. By default no language is specified in the **poolingserverconfig.txt** file.

You have to edit the entry for the first time in order to enable the language combo box to be displayed in User Authorization dialog box. Please refer to the [Figure 3](#). It is not recommended to give duplicate language ID's.

```
<<multilingual>>
```

```
//List all Languages to be supported for external client modules
```

```
client_language:
```

```
    language_ids
```

```
['Language1', 'Language2', 'Language3', 'Language4', 'Language5']
```

You have to edit the entry for the first time in order to enable the language combo box to be displayed. *Please refer to the [Figure 3](#).*

The sequence of language is important and should not be changed once specified. The first language specified is the default language and the other languages are stored in Attribute value set table.

The languages updated in the **poolingserverconfig.txt** are updated in the login dialog box. *Please refer to the [Figure 3](#).*

All the calls using GetAttribute/SetAttribute and IEP\_Query respects the Language ID.

### Important points about Language Id

Language ID is specified while logging (connecting) to the server. The Language ID will be stored in transaction of the client connection and will be used to get or set attribute through the client. If the default language Id is used then the attribute will be handled in the default way i.e. if the attribute has a physical name ex: "m\_name" then the set or get of attribute will be from the column in the database, if the different language ID is selected then the set and get of attribute will be through attribute value i.e. the name will be internally mapped by server to name\_multilingual\_delmia\_1 for language 1 selected and name\_multilingual\_delmia\_2, if language 2 is selected.

- If you want to change the language Id, re-login DPE.
- The language selected while logging is not same as the language available in "Settings tool", the entry in settings tool is for translation of Static texts and not for the values.
- The property "Is Multilingual" can only be set on attributes of datatype String or RTF type. The attribute cannot take more than 1000 characters which are extendable to 4000 by extending the table size. This property cannot be set for transient attributes. On storing of more characters than the limits taken by database, then error message is displayed and no data is stored.
- If the control type is RTF then the decoration characters are also taken into account for number of character calculation (total characters = number of characters in decoration string + string length of actual data string).
- The language order once set should not be modified.
- There will be slight degradation in PCS as with this implementation more data is stored in database and object tends to become heavier depending on number of languages software is capable to handle and number of "Multilingual" defined attributes.
- This property will not be taken care for attributes having special implementation (e.g: extendedeffectivity, ehmh\_status, attribute name on type has etc).
- If the "Is Multilingual" attribute is set on the Plantype level then General finder cannot find the component with the attribute value. For this you have to customize the attribute on type level. For example:
  - If the attribute "name" on the plantype "Operation" is *overwritten* and customized to be multilingual then the attribute property is bound to plantype only. The project finder follows the customization and looks for



the plantype and searched for the specific plantype. General finder which is based on Type and not plantype will not be able to know the customization and will not return the desired results for multilingual search. To make the search successful the “Is Multilingual” flag for attribute “name” on type “ergocompprocessdefault” is also to be set to “Yes”.

### 2.1.1 Tools Menu

The executable functions in the Tools menu are generally not available to the normal user. These functions can be executed only by a **system administrator**.

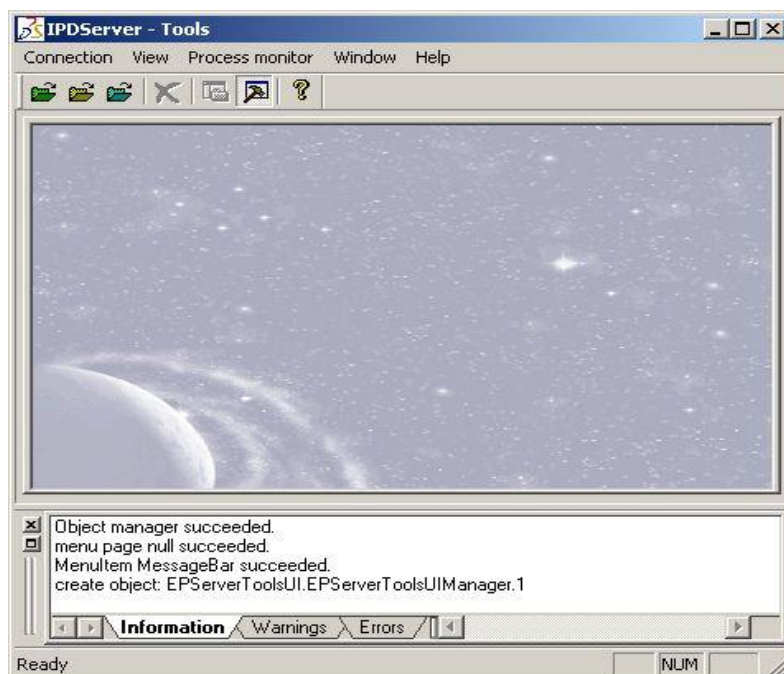


**Figure 5: The Tools Menu**

#### Server Tools

The Server Tools monitor the IPD Server processes and manage information on the logged-on clients. The server tools are installed on master and slave servers.

- 1) You can open the server tools either from the **start menu** or by double clicking **symbol** on the desktop.

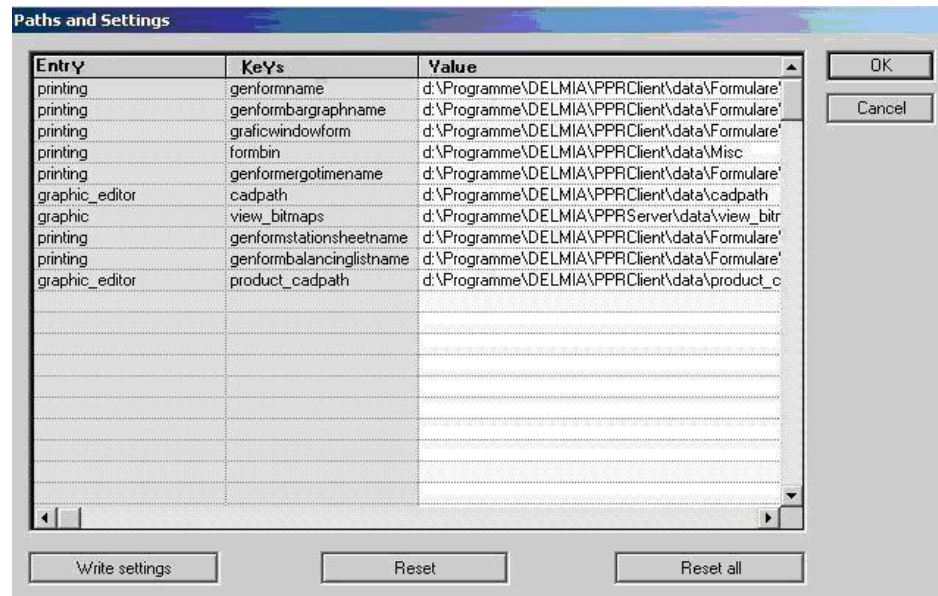


**Figure 6: Interface on Opening the Server Tools**

#### Setting Tool

In the **Setting** Tool you can find the paths set when the Process Engineer was installed. The paths can be changed after installation, i.e. upon the failure of a computer or server on which the database is locally stored. The paths must

then be changed to correspond to the new location where the database is stored.



**Figure 7: Setting Tools Dialog Box**

The **Setting Tool** dialog box is required for both new installations of the database as well as for updates. The standard settings are read from one file. Items are displayed as soon as they are available in the database.

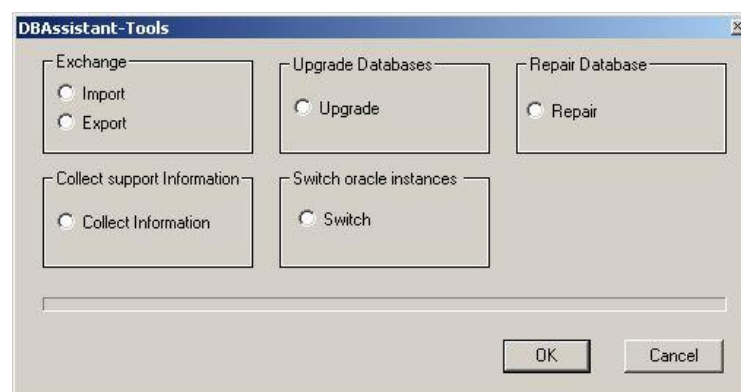
### DBAssistant Tools

The DBAssistant-Tool is used for installing the Oracle database. The data content and database structures are transferred upon both import and export. In addition it is possible to align data with an upgrade and query as well as edit support information and Oracle information.



### Note

*The DBAssistant may be used only by a trained system administrator.*



**Figure 8: Dialog - DBAssistant**

## 2.2 Saving Data Permanently in the Project Database

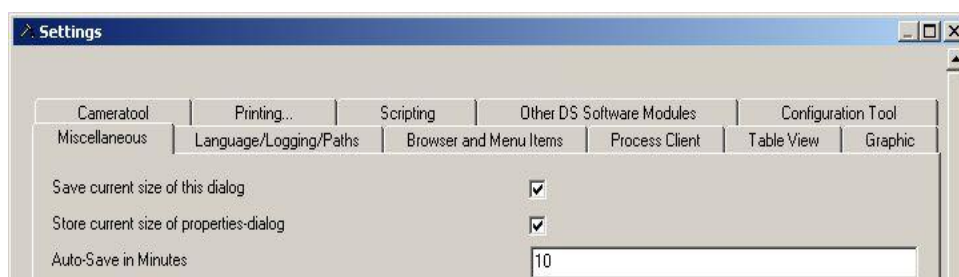
To avoid any loss of data that have been created, changed, or added to a certain project, save the data permanently in the project database.

## 2.2.1 Saving Project Data

Project data can be saved in two different ways:

- Using the menu
- Using the appropriate icon in the toolbar

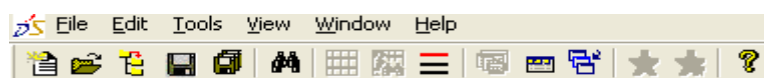
Furthermore, you can enter a time interval for automatic saving. The automatic saving process is always running in the background. You find the **Settings** dialog box in the **Miscellaneous** tab of the **Tools/Settings** menu. The time interval is entered in minutes. By default, the Process Engineer automatically saves after every 10 minutes. *Please refer to the [Figure 9](#).*



**Figure 9: Utilities Menu – Saving Data Automatically**

### Saving Data using the Icon

The two icons are available to save project data:



**Figure 10: Save Data through Icon**



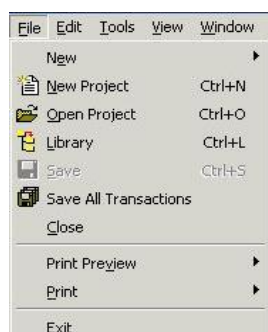
Use the **Save** icon to save transactions in the current window. This icon is only active if a transaction has been performed that is relevant to the saving process. Such transactions are creating new resources or changing data.



If you use the **Save All Transactions** icon, all performed transactions are saved. For example, you may have opened and edited multiple views. This icon is always active.

### Saving Project Data using the Menu

Using the **File** menu (*Please refer to the [Figure 11](#)*) provides another possibility to save project data. You can get the same result with icons also.



**Figure 11: Saving Data using the Menu**

If the **Save All Transactions** icon is inactive, you may have performed a transaction which is not relevant for the saving process or there may be no

hierarchical level selected in the PPR navigator. The icon gets shaded *Please refer to the [Figure 12](#).*

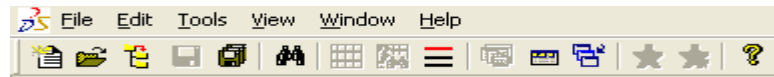


Figure 12: Inactive Save Icon

## 2.2.2 Exiting the Program

When you are closing a project or exiting a program with newly generated, yet unsaved data, a program message prompts you to save the data.

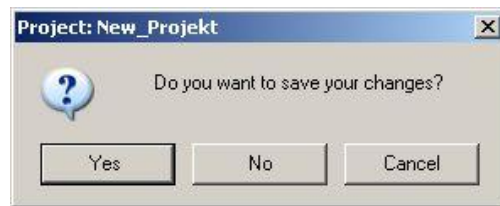


Figure 13: Prompt to Save Changes when Closing an Application



To exit a program, use the **File menu** or the **Close button** (cross symbol) in the title bar. *Please refer to the [Figure 11](#).*

## 2.2.3 Program Crash



### Note

*A program crash occurs when the entire hard drive space is used. If you have any technical problems with the application, please contact our hotline service team. (Please refer to the [Foreword](#)*

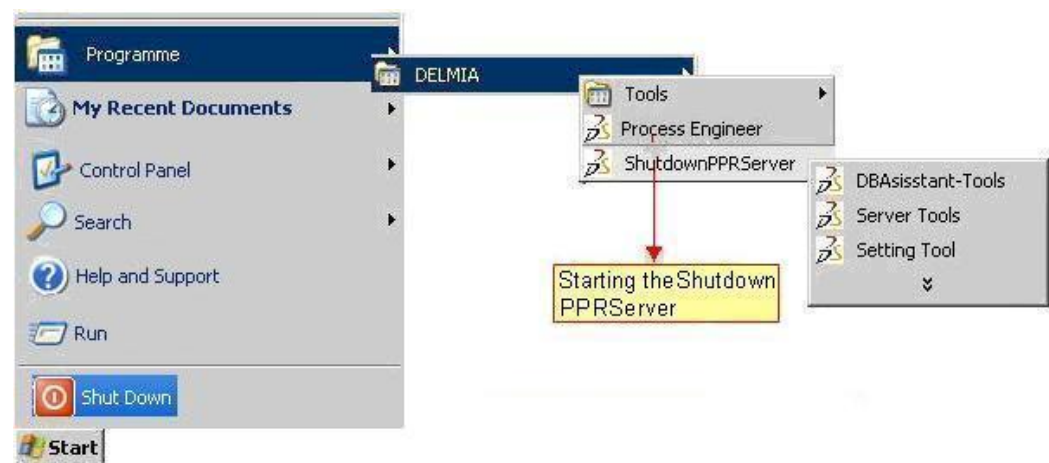
*The original database condition must be restored after each program crash . Execute the **ShutdownPPRServer** program to ensure that all tasks that have caused the program crash are stopped. You can activate the **ShutdownPPRServer** program by using the start menu or the program icon on your desktop (Please refer to the [Figure 14](#)). To view the **ShutdownPPRServer** icon on your desktop link it to the desktop using the start menu.*



### Note

*There is no saving process in the case of a program crash. Only the most recently saved planning situation is available after the crash.*

- 1) Activate the **ShutdownPPRServer** or **ShutdownPPRClient** before restarting the program after a crash. *Please refer to the [Figure 14](#).*



**Figure 14: Executing ShutdownPPRServer**

### 3. Views in the DELMIA Process Engineer

The display of views in the Process Engineer is based on Windows technology. If you are planning a digital factory, the Process Engineer provides you with multiple main views for specific use in individual modules of the program. A major benefit of the Process Engineer is the well structured presentation of these views. This helps you to navigate in a confident manner on all levels and quickly provides with the required results.



This chapter gives you a brief overview of the most important Process Engineer views available for your work. For more detailed information on how to execute the different program modules, *Please refer to the appropriate individual manuals.*

#### 3.1 Main Views in the Process Engineer

The Process Engineer provides you with the following views:

##### **PPR Navigator**

This view lists the basic procedures for the project you want to create. The PPR Navigator is a global program module which is used for all individual Process Engineer modules. The PPR Navigator displays and generates the project structure. For your work with the PPR Navigator, you get the three project views – Product, Process, and Resource View – as well as with a Project Library and a Plan Type Set. *Please refer to the [Figure 15](#).*



For more information on the PPR Navigator, *Please refer to the [PPR Navigator Manual](#).*

##### **Product View**

This view creates and displays the products you want to edit for a specific project. The display is structured in a hierarchical way. The individual hierarchical levels correspond to a bill of materials structure. The Product View is only available in the PPR Navigator. *Please refer to the [Figure 15](#).*



For more information on the product structure, *Please refer to the [PPR Navigator Manual](#).*

##### **Process View**

This view generates and displays the processes for a specific project. The display is structured in a hierarchical way. Unlike the Product View, the Process View allows you to open an additional view from the PPR Navigator. Furthermore, the Process View provides the user with additional functions. *Please refer to the [Opening Views from the PPR Navigator](#).*



For more information on how to generate and work with a process structure, *Please refer to the [PPR Navigator Manual](#) and the [Process Graph Manual](#).*

##### **Resource View**

This view generates and displays the resources for a specific project. The display is structured in a hierarchical way. Like the Process View, the Resource View allows you to open an additional view from the PPR Navigator. Furthermore, the Resource View also provides the user with additional functions. *Please refer to the [Opening Views from the PPR Navigator](#).*



For more information on how to generate and work with a resource structure, *Please refer to the [PPR Navigator Manual](#) and the [Manufacturing Concept Manual](#).*

### **Project Library**

The Project Library lists all data that are used for a project and which are valid only for this specific project. Changing these data will only affect the project at hand. *Please refer to the [Figure 15](#).*



For more information on the Project Library, *Please refer to the [PPR Navigator Manual](#).*

### **The System Library**

The Library is the location where system elements or Plan Type Sets are created. The Process Engineer uses the Library on a global basis i.e. the data are available for all projects. *Please refer to the [Figure 42](#).*



For more information on the Library, *Please refer to the [Project Library Manual](#).*

### **The General Search**

The General Search is used to quickly find and provide data. *Please refer to the [Figure 43](#).* The General Search is equipped with specific search functions related to a project.



For more information on the General Search and project-related search functions, *Please refer to the [Finder Manual](#).*



### **Minimising and Maximising Windows**

Use these arrows to minimize or maximize a window. The arrows indicate the direction in which you can adjust the size of a window. Furthermore, you can use the left mouse button to move the window bar individually until you have adjusted the required window size.

## **3.2 PPR Navigator View**

The PPR Navigator is divided into two windows. The left window shows the project structure along with the three structures – the Plan Type Set and the Project Library. The right window is the display area providing several tabs for display in the structure level to be selected. The display varies according to your selection: either you can get a list (as displayed in the [Figure 15](#)) or a Properties menu. Objects can be Processes, Resources, or Products. An object is the more general definition of structure levels.



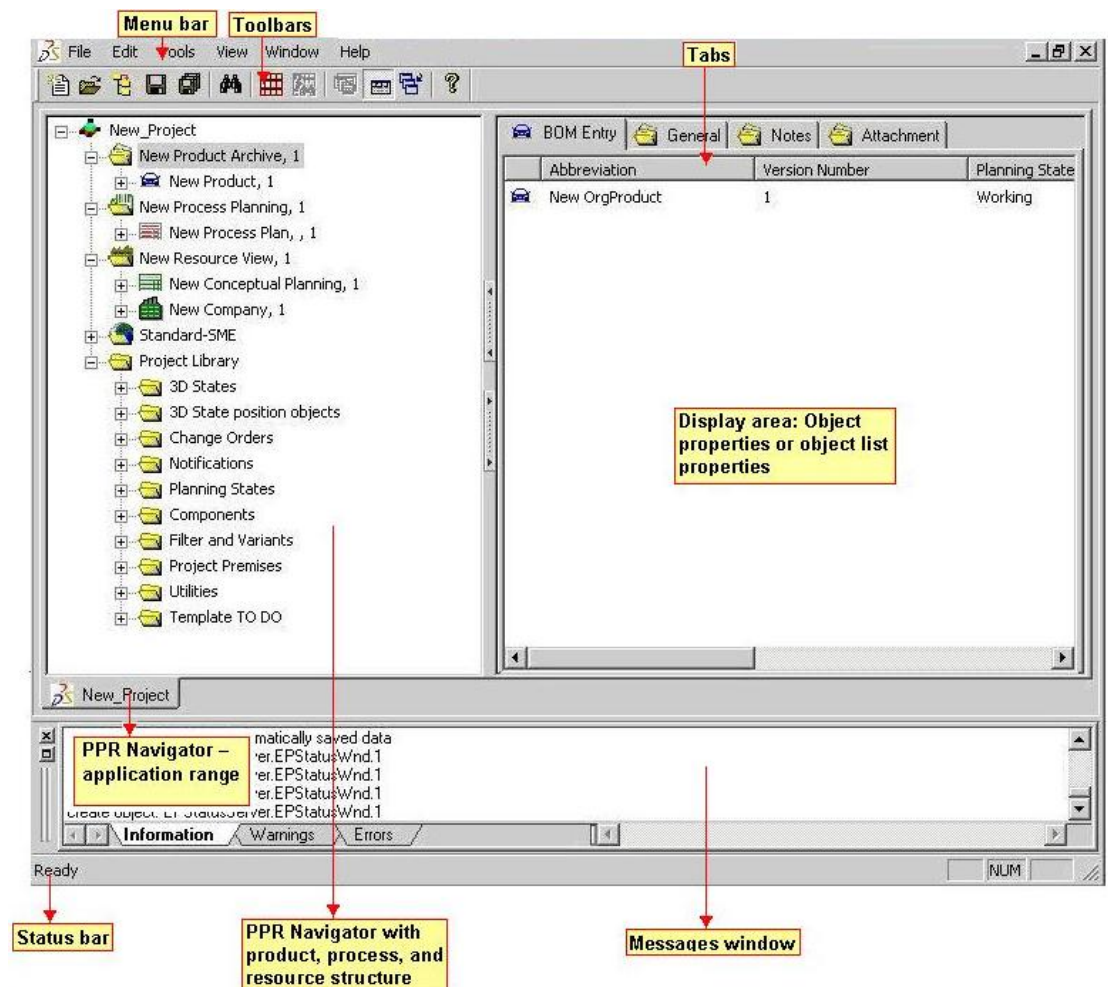


Figure 15: General Structure of the PPR Navigator View

### 3.2.1 Navigating Views and Opening Menus

The PPR Navigator can be defined as the general control centre of the Process Engineer. It is the starting point for most of the transactions in the Process Engineer that are to be performed in the individual program modules as the three-dimensional presentation of production lines or workstations, the definition of location premises or also for the planning process of a production concept.

The basic Process Engineer functions and operations can be summarized in three items:

- Applying Mouse Techniques: *Please refer to the [Getting Familiar with the Mouse](#).*
- Opening the Process or Resource View: *Please refer to the [Opening Views from the PPR Navigator](#).*
- Working with Menus and Context Menus: *Please refer to the [Working with Menus](#).*



### 3.2.2 Getting Familiar with the Mouse

To use all Process Engineer functions in the simplest possible way, you should have a scroll wheel mouse with three keys.

#### Applying Mouse Techniques



The mouse is one of the most important tools for your work in the **DELMIA Process Engineer**. Hold the mouse in your hands during all operations to choose options from the menu or to click buttons – buttons are usually used to start program functions – you can also use the mouse when working with context menus. Mouse is generally equipped with three operational keys – the left, centre, and right mouse button.

#### Using the Left Mouse Button



You normally use the left mouse button for operation. If no other mouse button is explicitly mentioned, always use the left key.

For left-handed users, the left mouse button function may be transferred to another key. In this case, the functions are assigned in a mirror-inverted order.

You can use the mouse button in order to:

- Open menus
- Select options
- Activate dialog boxes and input fields
- Highlight entries
- Start program functions using buttons

#### Using the Centre Mouse Button or the Scroll Wheel

The mouse wheel can be used like a key. You may operate the zoom function in a **three- or two-dimensional view**. You may also use the scroll wheel to display the complete contents from an open view. Normally, the view is additionally equipped with scroll bars.

#### Using the Right Mouse Button

The right mouse button is mainly used to open context menus. Context menus offer operational options in addition to the function currently activated.

#### Double-Clicking

You can use the mouse to double-click to start the Process engineer via the icon on your desktop or to restore the original size of a minimized window. Double-click means: clicking twice on an object with almost no time between the two clicks. Double clicks are always made with the left mouse button.

### 3.2.3 Using the Center Mouse Button in a Graph



Center mouse button is activated.

Using the center mouse button, you may navigate without limit vertically and horizontally in a graph (as of PE 5.15). There is no limitation anymore, such as that navigation is possible only to cell 282 when the zoom is set to 100%.

#### To Activate the Scroll Function

- 1) Click the graph with the center mouse button. The arrows indicate the current direction of motion. You can navigate in eight directions.

- 2) Navigate in the graph (horizontally or vertically) to achieve the desired view.
- 3) To deactivate the scroll function, click graph with the left mouse button.

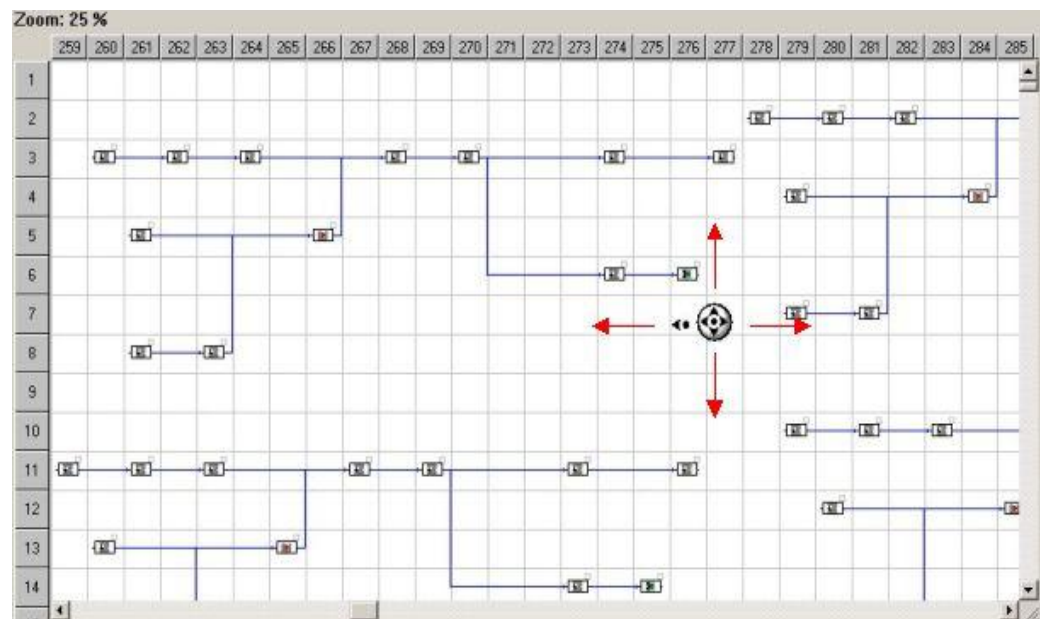


Figure 16: Navigating in a Graph

### 3.2.4 Using Drag and Drop

You can execute three functions in the Process Engineer by drag and drop:

- Copy and paste
- Move
- Creating a reference

#### Copy and Paste

Copied objects remain in the source location and are copied to a target location.

In the Process Engineer you can

- Copy objects within the same structure
- Copy objects between different structures
- Copy objects between projects with the same plantype set



Drag and Drop behaves similarly for all copy processes. You can learn more about the behavior of drag and drop on two examples – copying within a structure and between two projects.



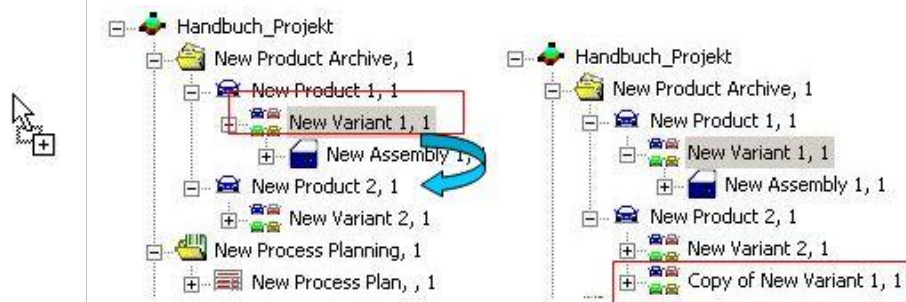
In order to copy objects, press the **left mouse button** (standard assignments for mouse buttons) and the **control key**.

#### Example

##### Copying within a Structure

- 1) First select the object you want to copy – in [Figure 17](#) the variant New Variant 1 is selected.

- 2) Press control key and hold until the object to be copied is added to the target location.
- 3) During the copy process, the appearance of the mouse pointer changes so that you can immediately see that a copy process is taking place



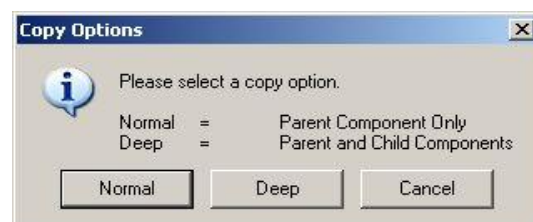
**Figure 17: Copying by Drag and Drop within a Structure**

- 4) You can then stop pressing the mouse button and the control key. Now you must confirm two messages.
- 5) Confirm the message with **OK**. The message shows that a copy process is to be executed.



**Figure 18: Execute Copy Message**

Determine whether only the selected object (normal) is to be copied or the structure of the object (deep) is also to be copied.



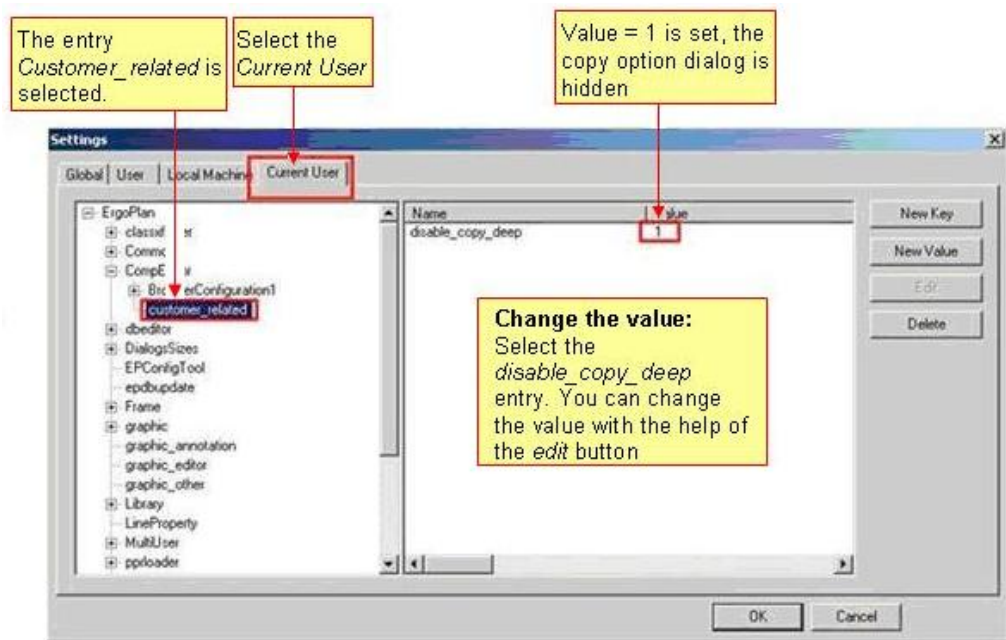
**Figure 19: Type of Copying – Normal and Deep**

Confirm the message and the object is copied. (Please refer to the [Figure 17](#) for copying of the New Variant 1).

### Hiding the Copy Options Dialog Box

The customer\_related entries enables you to determine if the **Copy Options** dialog box should be displayed during the copying process (Please refer to the [Figure 19](#)).

- If the value is set to **one**, the dialog is not displayed during the printing process.
- If the value is set to **zero**, the dialog is displayed during the printing process.



**Figure 20: Set the Value – Hide the Copy Options Dialog Box**



For more information on global settings, Please refer to the [Settings Manual](#).

### Example

#### Copying between two Projects

It is possible to copy objects between two different projects by drag and drop in the same way as one does within a project.

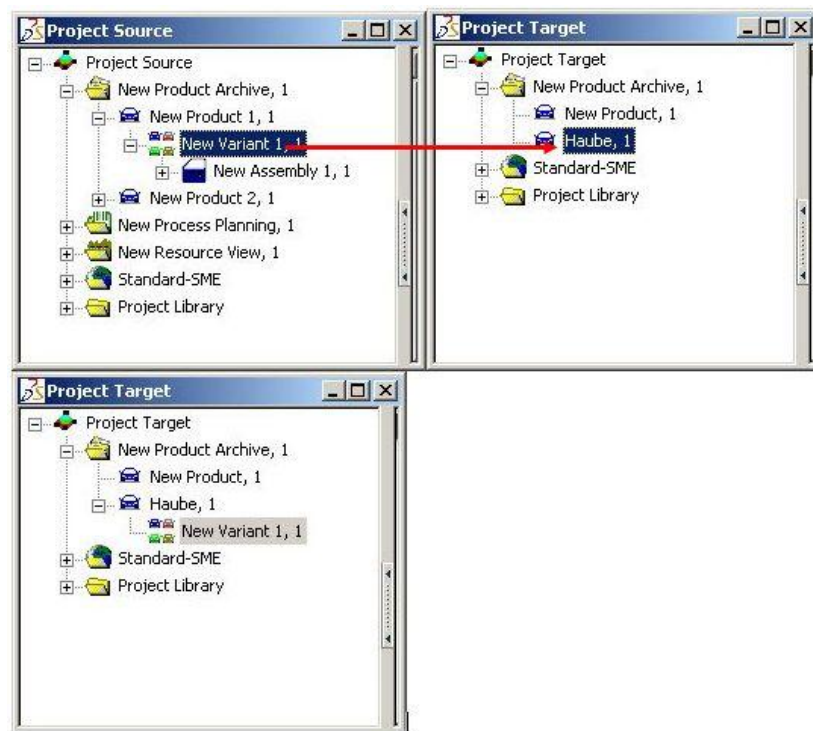


Copying between two different projects is possible only if both projects use the **same plantype set**. You can copy single objects as well as entire structures (partial projects). **Moving** and **referencing** between two projects is not possible.



#### Note

*When copying between two projects, time analyses in the source project are not copied to the target project – when copying partial projects. However the assigned rights of objects are copied.*



**Figure 21: Copying Between Two Projects – Same Plantype Set**

### Translate

When objects are moved, they do not remain in the source location; they are moved to another location (target).

In the Process Engineer you can

- Move objects within the same structure
- Move objects between different structures
- Drag and Drop behaves similarly for all move processes



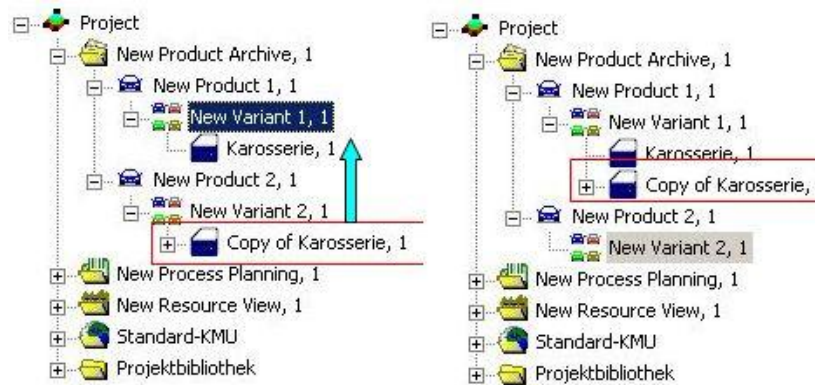
In order to move objects, press the **left mouse button** (standard assignments for mouse buttons) and the **Alt key**.

### Example

Moving within a structure is demonstrated in the example given below:

- 1) Moving follows the principle of deleting (source) and inserting (target).
- 2) First select the object you want to move – in the example, **Copy of car body** is selected.
- 3) Press the Alt key and keep it hold until the object to be moved is added to the target location.
- 4) During the move process, the appearance of the mouse pointer changes so that you can immediately see that a move process is taking place.





**Figure 22: Moving by Dragging and Dropping Objects**

- 5) Release both the mouse button and the **Alt** key. You must now confirm a message.
- 6) Confirm the message with **OK**. The message shows that a move process is to be executed. *Please refer to the [Figure 22](#) for copying of the Karosserie.*



**Figure 23: Execute Move**

### Creating a Reference

References are created in order to make other usages of a single object possible. Other usages of objects means that all objects always have the same properties: changes to one of the referenced objects apply to all objects. *Please refer to the [Figure 26](#).*

Referencing objects is different from copying in moving, in which objects can continue to be edited independently and have no further reference to the initial situation (at the source location).

System elements of the system library are referenced exclusively – for example when a system element is linked to an object of the resource structure.

### Referencing

Referenced objects remain in the source location and are copied to a target location. In the Process Engineer you can:

- 1) Reference objects within the same structure
- 2) Reference objects between different structures
- 3) Reference objects between system elements from the system library and objects in the PPR Navigator



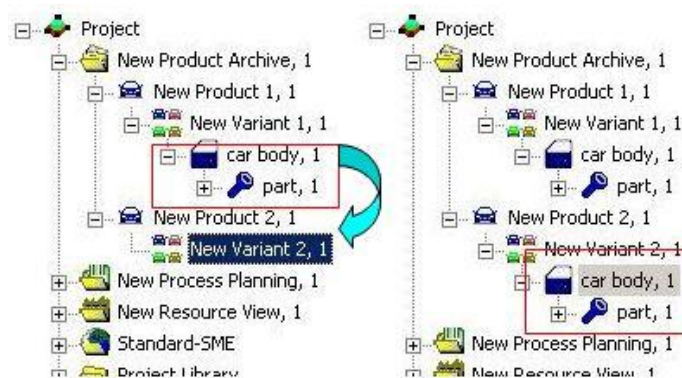
Drag and Drop behaves similarly for all processes. In order to reference objects, press the **left mouse button**. No additional keys are required for referencing.

Referencing within a structure is demonstrated in the example.



## Example

- 1) The referencing of objects follows the principle of copying (source) and inserting (target), and the reference to the source object is maintained.
- 2) First select the object you want to reference – in the example the **car body** subassembly is selected.
- 3) Press left mouse button and keep it held until the object to be referenced is added to the target location.
- 4) During the referencing process, the appearance of the mouse pointer changes so that you can immediately see that a reference is being created.
- 5) The corresponding structure is also copied, in contrast to copying and moving.



**Figure 24: Referencing by Dragging and Dropping Objects**

- 6) Release the left mouse button. You must now confirm a message.
- 7) Confirm the message with **OK**. The message shows that a reference is to be created. The target object is referenced by the object source.



**Figure 25: Execute Link (Create Reference)**

## Example

Referenced objects do not lose their reference to the source object. If you change the **names of the source or target object**, the change will immediately be executed for both objects.

If you delete a referenced object, all corresponding referenced objects are deleted.

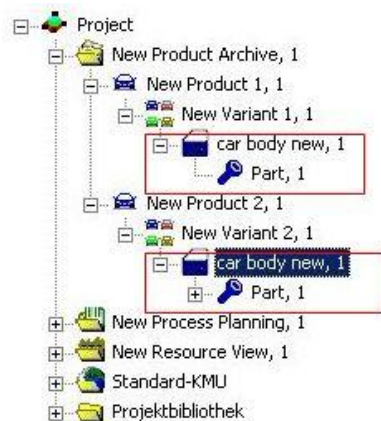


Figure 26: Example: Name Changed – Linked Object

**Drag and Drop between different Projects and Templates**

	<b>COPY</b>	<b>MOVE</b>	<b>LINK</b>
Project to Project	Top level as well as other components. Copy Symbol appears for non root level component.	Not Supported	Not Supported. For not top level components, though the “link symbol” appears, the operation is not supported. Attempt to link would display an error message.
Project to Template	Top level as well as other components. Copy Symbol appears for non root level component.	Not Supported	Not Supported. For not top level components, though the “link symbol” appears, the operation is not supported. Attempt to link would display an error message.
Template to Project	Top level as well as other components. Copy Symbol appears for non root level component.	Not Supported	Both top level and otherwise supported.
Template to Template	Top level as well as other components. Copy Symbol appears for non root level component.	Not Supported	Not Supported. For not top level components, though the “link symbol” appears, the operation is not supported. Attempt to link would display an error message.

**Note**

*You can COPY or LINK the components from “Project” to “Process Engineer Client” and vice versa. MOVE is not supported for the same scenarios.*

**3.2.5 Opening Views from the PPR Navigator**

To execute further functions for process or resource structures, the Process Engineer provides individual views for these two structure types, i.e. the Process View and the Resource View. Both structures are generated in the PPR Navigator. The Product View does not require an additional view, as all functions are executed by the PPR Navigator.



PPR Navigator views are opened using the context menu (*Please refer to the Figure 27*) of the right mouse button. Views can be opened from any hierarchical level of the structure currently selected, i.e. process or resource structure.

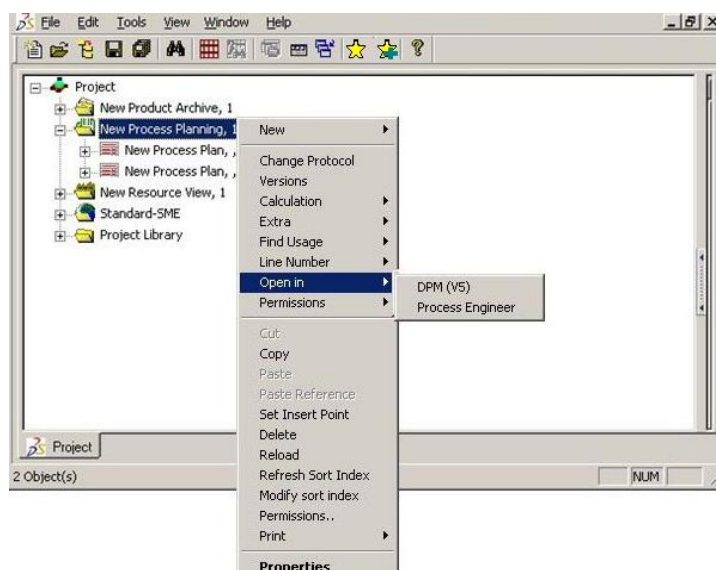
### To Open a View

#### Note



*The procedure is the same for both structures. For example, you can move to the Process or Resource View, if you want to create or edit a process graph or a manufacturing concept.*

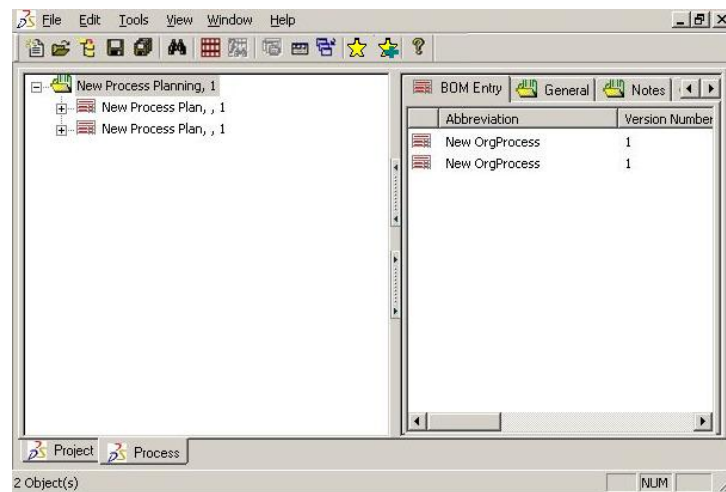
- 1) Select the hierarchical level you want to work with from the appropriate PPR Navigator structure.
- 2) Select **Open in** from the context menu.



**Figure 27: Opening Views from the PPR Navigator**

- 3) Select the view you want to open (here: the process engineer).

The basic settings allow you to define whether you want the view to be firmly linked to the PPR Navigator or whether you want the view to be available as a separate window to be edited. The Figure 28 shows a situation where a firmly anchored structure has been chosen as a basic setting. The range of functions is the same for both settings. Depending on your personal preferences, you may choose either of two methods for window presentation.



**Figure 28: Open Resource and Process Views in a Firmly Anchored Structure**

### Navigating Horizontally and Vertically

Horizontal navigation (*Please refer to the [Figure 27](#)*) in the Process Engineer means to open views from the PPR Navigator. Vertical navigation in the Process Engineer means to open (*Please refer to the [Figure 29](#)*) process structures. Thus, horizontal and vertical navigation describe the work direction used between individual program modules or global functions such as the Search (Finder) or the (System) Library.

### To Open and Close Structures

To navigate horizontally or vertically, you can use (*Please refer to the [Applying Mouse Techniques](#)*) the mouse.

- 1) Click the plus symbol in the structure. As a result, the next hierarchical level gets open.
- 2) Click the minus symbol in the structure. As a result, the opened hierarchical level gets closed.



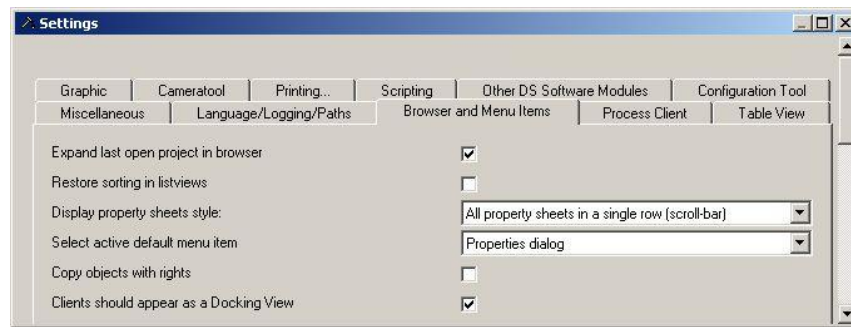
**Figure 29: Opening and Closing a Structure**

## 3.2.6 Closing Views

The closing procedure of a view that has been opened from the PPR Navigator, i.e. Process View or Resource View depends on the selected settings. There are two possibilities for your work with views:

- 1) Either with a firm link to the PPR Navigator
- 2) Presenting views without any link

You can define this setting in the dialog: Select **Clients should appear as a Docking View** from the **Browser and Menu Items** tab in the **Tools/Settings** menu. *Please refer to the [Figure 30](#)*. Both views linked to the PPR Navigator get displayed.



**Figure 30: Presenting Views in a Lose or Fixed Structure**



### Note

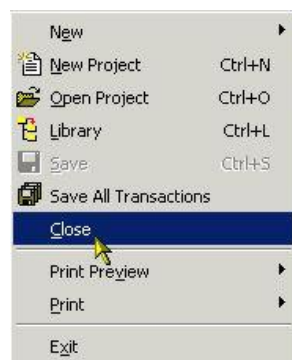
*You cannot use the Close button (cross symbol) to close a view that is firmly linked to the PPR Navigator. Views can only be closed using the File menu. Please refer to the [Figure 31](#).*

### Closing Views Firmly Linked to the PPR Navigator

If you work with a display structure that is firmly linked (anchored) to the PPR Navigator, use the **File** menu to close an open view, i.e. Process or Resource View.

You can only close an open view that is currently selected from the application range. *Please refer to the [Figure 15](#).*

Then select **Close** from the File menu. As a result, the open application gets closed.

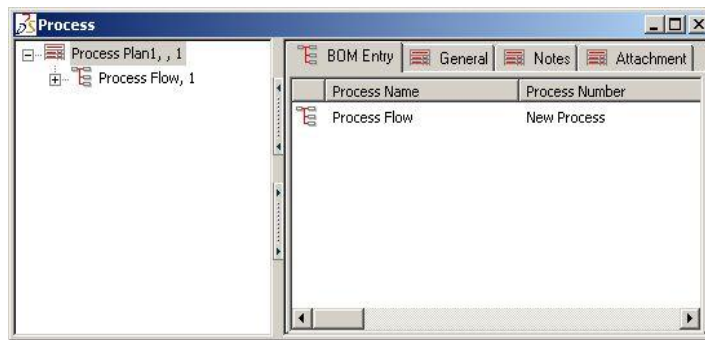


**Figure 31: Closing a Firmly Anchored View – using the File Menu**

### Closing Views that are not Linked

Views that are not firmly linked to the PPR Navigator provide different options to close a Process or Resource View:

- 1) Using the menu
- 2) Using the Close button (cross symbol) in the title bar
- 3) Using the Windows menu
- 4) Select the view you want to close



**Figure 32: Resource View – not Firmly Anchored**



The icon for window selection is only active if the views are **not firmly linked** to the PPR Navigator or if additional functions such as the Search (Finder) or the (System) Library have been activated.

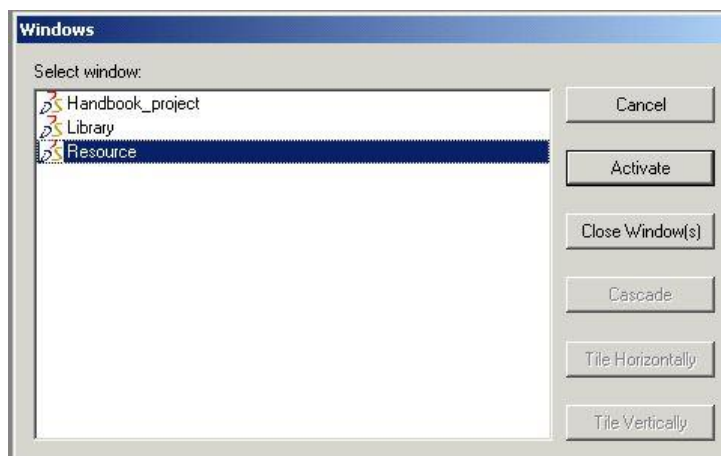
When you activate this icon in the toolbar, the Windows dialog box opens where all open functions and views are displayed.

#### To Close a View or Function

Select the required view from the dialog. Then click **Close Window(s)**. The selected view gets closed.

#### To Activate a View or Function

Select the required view from the dialog box. Then click **Activate**. The selected view gets displayed in the foreground on your screen. *Please refer to the Figure 33.*



**Figure 33: Windows Dialog with Open Views**

## 3.3 Display Area

### 3.3.1 Specifying Individual User Settings

Anyone can arrange column headings according to the specific needs. This arrangement remains unchanged until the administrator specifies a new arrangement of column headings.

#### To Arrange Column Headings Individually

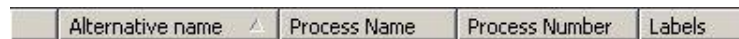
- 1) Left-click the column heading you want to rearrange in the display area.

- 2) Move this column heading to the new position.
- 3) Release the left mouse button. *Please refer to the [Figure 34](#).*



**Figure 34: Rearranging Column Headings**

- 4) The column heading has now changed its position. Refresh the view.



**Figure 35: Example – Individually Arranged Column Headings**



- 5) Save these settings as usual.

### 3.3.2 Sorting Column Headings by Plantype

At the beginning of a project, the default settings which have been specified by an administrator with **super user rights** are available in the display area.

The arrangement of column headings in the display area can be changed by locally in the project. For this purpose, there is no need for any **super user rights**. Thus, everyone has the possibility to customize the work environment shown in the display area according to his specific requirements. This means, that locally, user rights and administrator rights are identical.



#### Note

*An **administrator** with super user rights is allowed at any time to delete column headings that have been individually arranged by a user. He can assign new default settings. This may be the case, for example, if a standardized solution is expected to yield better results or if there are plans to completely redesign the display area.*

Column headings can be sorted for a specific plantype in the display area (called Listview in the information below). Only the **Administrator** may set up the default settings for sorting column headings.

This arrangement of column headings by specific plantype in a Listview can then be accessed by all other users within the project. *Please refer to the [Specifying Default Settings by the Administrator](#).*

#### Example

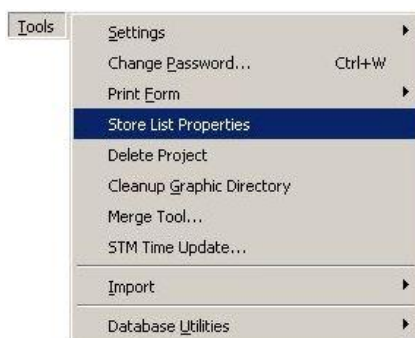
##### Specifying Default Settings by the Administrator

To provide all users with default settings, the administrator saves all users in the **Database** via the **Store List Properties** function after the column headings have been arranged.



**Figure 36: Example of Column Headings Arranged by the Administrator**

The two functions **Store list Properties** and **Delete Customer Settings** may only be executed by an **Administrator**.



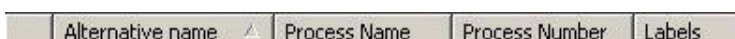
**Figure 37: Tools menu – Store List Properties**

When the column headings have been arranged, click **Store List Properties** in the Tools menu.

To distinguish this column arrangement by the administrator, the column arrangements of the respective users are stored in the registration editor.

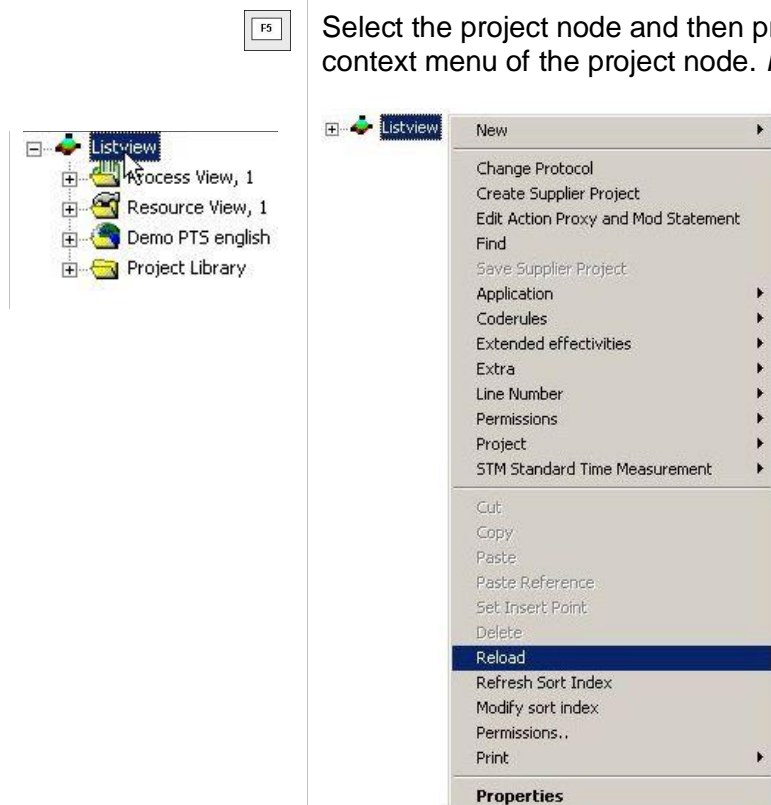
### Refreshing the Listview

After storing, refresh the Listview to ensure that the new column arrangement is active. Please refer to the [Figure 39](#).



**Figure 38: Example – Newly Arranged Column Headings**

Select the project node and then press the **F5** Key or select **Reload** in the context menu of the project node. Please refer to the [Figure 39](#).



**Figure 39: Refreshing the List View**

### 3.3.3 Deleting Planttype-Specific Column Sorting

Again, only the **Administrator** may delete the default planttype-specific sorting arrangement.





### Note

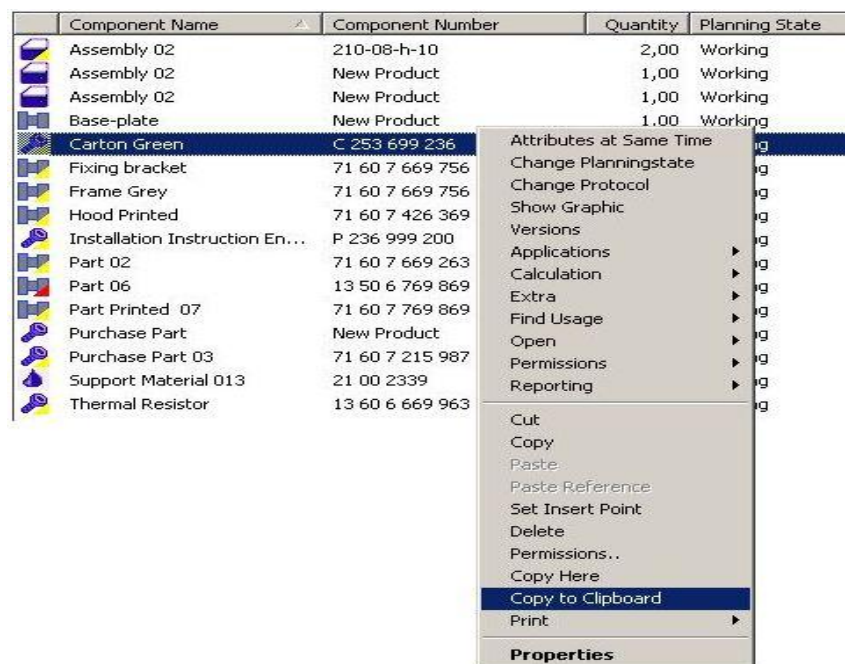
The menu item **Tools/Delete customer settings** is omitted from the Version PE 5.12. The entries are now deleted in the new dialog box **Tools/Settings/Maintenance**.

## 3.3.4 Copying the Display Area onto the Clipboard



Only the selected lines get copied onto the clipboard.

- 1) With the help of the **Control key + A** shortcut, all objects in the list are selected.
- 2) You can select individual objects by pressing the **Control key** and the **left mouse button**.
- 3) You can select all the intermediate objects by pressing **Shift key** and the **left mouse button**.
- 4) Select one or several elements in the display area and open the context menu.



**Figure 40: Context Menu: Copy to Clipboard**

- 5) Select the entry **Copy to Clipboard**. The selected lines get copied onto the clipboard. The entire display area is copied to the clipboard.

In order to continue to use the content of the clipboard, open Microsoft Excel and select the entry Insert in the menu Edit.

The content of the clipboard is copied to Microsoft Excel. *Please refer to the Figure 41.*



Figure 41: Example for Paste Data from the Clipboard

### 3.3.5 Library View and Search View

#### Library View



The (System) Library can be used for any project on a global basis.

The Library can be opened using the appropriate icon in the toolbar or using the **File** menu.



The Library is described in more detail in a separate manual. *Please refer to the [System Library Manual](#).*

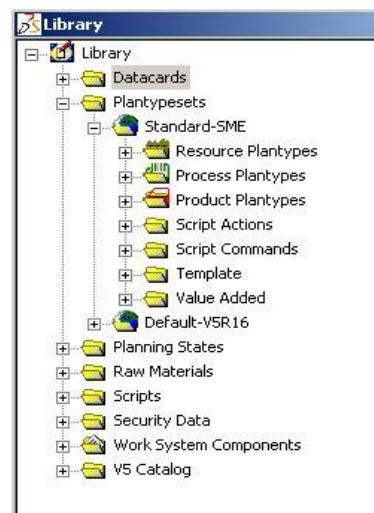


Figure 42: Library in the Process Engineer

#### Search View



The Search within the Process Engineer is an elegant means to quickly find and provide data.

The General Search function can be opened using the appropriate icon in the toolbar or using the Edit menu.



The General Search function is described in more detail in a separate manual. *Please refer to the [Finder Manual](#).*



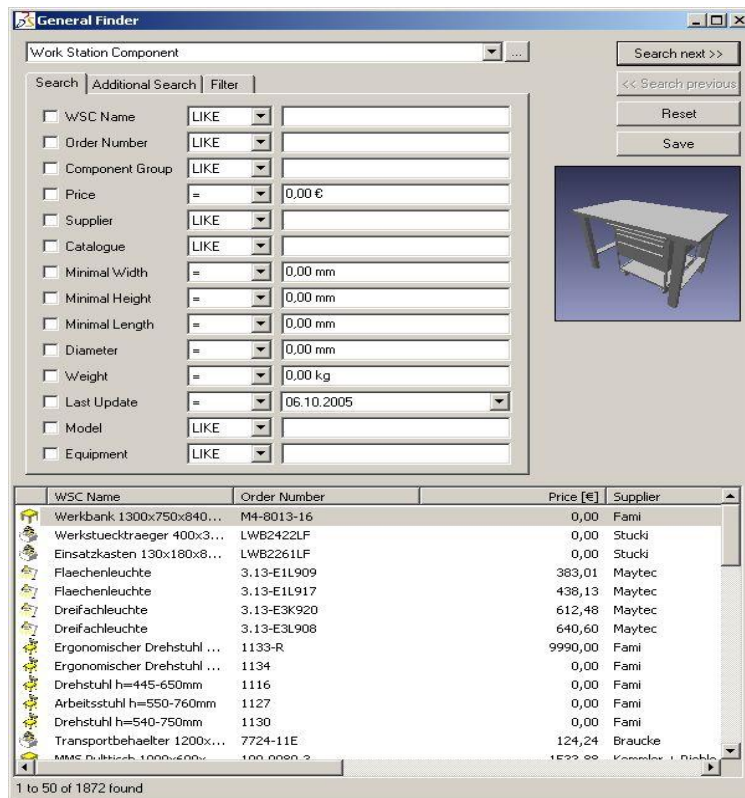


Figure 43: General Search Display

## 3.4 Working with Menus

The Process Engineer provides three basic menu types:

- Main menus in the menu bar
- Right mouse button context menus
- Function dialogs



This section of the chapter provides you with an introduction to basic operations of the different menu types. For project-related information on menus and functions, *Please refer to the respective manuals.*

### 3.4.1 Main Menus

The main menus are used to activate the basic functions in the Process Engineer. The main menus can be opened from the menu bar.



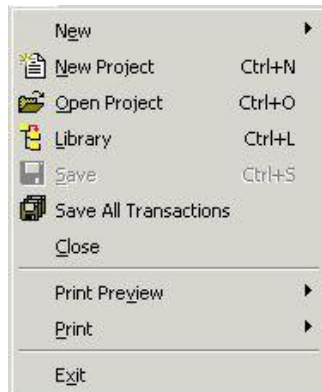
These three **symbols** in the title bar are used to minimize, close, or maximize the current window.



Figure 44: Menu bar Featuring the Main Menus

#### File Main Menu

This menu can be used to (Please refer to the [Figure 45](#)) open a new project, to save a project or to exit the Process Engineer. This menu is mainly used for project-related work.

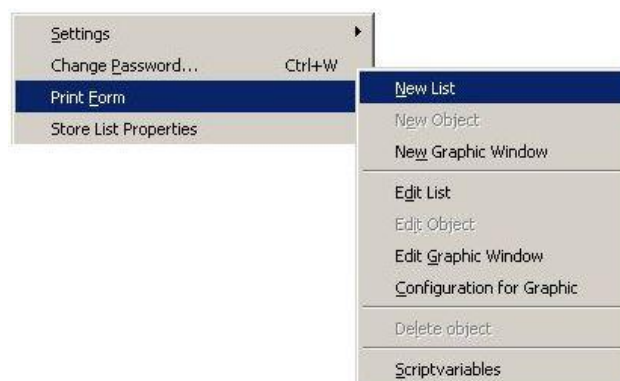


**Figure 45: Functional Range – File Main Menu**

### Activating Menu Functions

Perform the following steps to activate functions from a main menu:

- 1) To open a main menu, select the required menu from the menu bar (Please refer to the [Figure 44](#)). To do this, use the left button of your mouse to click the required menu item.
- 2) To activate a function in the main menu, select the required function from the main menu. To do this, use the left button of your mouse to click the selected function.
- 3) If you want to activate a function along with additional functions please select another function from the menu. These functions are also marked with an underscore in the main menu.
- 4) Move your cursor (Please refer to the [Figure 46](#)) to the additional menu and left-click on one of the functions offered.



**Figure 46: Functions with Additional Functional Range**

### Edit Main Menu

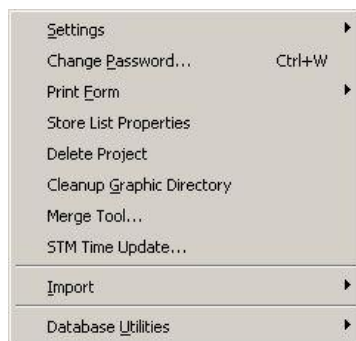
You can use this menu (Please refer to the [Figure 47](#)) to copy transactions from a project, to open properties of a selected object or to assign specific access rights for objects. Furthermore, you can start the General Search. You can also use this menu for any specific, project-related work.



**Figure 47: Functional Range – Edit Main Menu**

### Tools Main Menu

You can use this menu (*Please refer to the [Figure 48](#)*) to define the basic settings for the Process Engineer, to select print forms, to delete a project, or to import data. Moreover, the Database Utilities menu item provides you with configuration utilities and the user management. This menu is mainly used for general work in the Process Engineer that is not related to a specific project.



**Figure 48: Functional Range – Tools Main Menu**

### View Main Menu

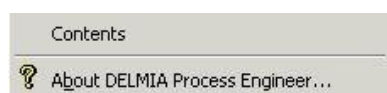
You can use this menu (*Please refer to the [Figure 49](#)*), to show and hide the toolbar or the browser window. You can mainly use this menu to provide different views for your work with the Process Engineer.



**Figure 49: Functional Range – View Main Menu**

### Help Main Menu

You can use this menu (*Please refer to the [Figure 50](#)*) to access any available manuals from the program. You can mainly use this menu whenever you need help on a specific subject. The yellow question mark provides you with updated information about the currently installed Process Engineer version.



**Figure 50: Functional Range – Help Main Menu**

### 3.4.2 Function Menus for Program Functions



#### Note

*In addition to the main menus shown, the Process Engineer provides further menus. These menus are only available for specific functions of a program, such as when working with graphic or camera tools.*

#### Function Menu – Graphic

This menu is available only when you edit a graphic.



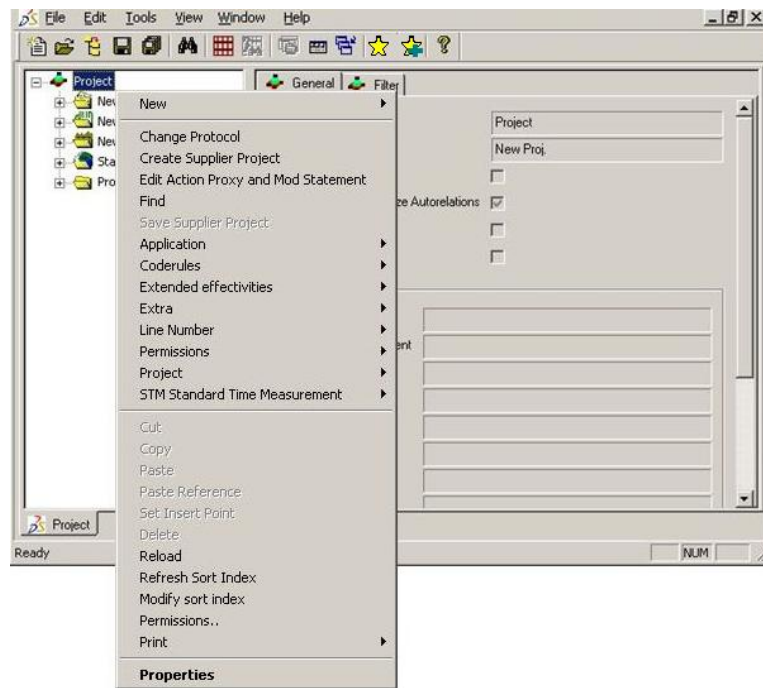
Figure 51: Functional Range – Graphic Function Menu

### 3.4.3 Context Menus, Dialogs, and Properties Menus

In addition to the hierarchical level selected, a context menu provides functions that you may require or use for your current work process. Dialogs either provide displays for a specific subject or you can enter data in these dialogs. Properties menus define data for a specific object, i.e. for a project.

#### Opening Context Menus

Context menus are accessed using the right mouse button.



**Figure 52: Opening a Context Menu using the Right Mouse Button**

#### **To Open a Context Menu**

- 1) Use the left mouse button to select the hierarchical level from where you want to open the context menu.
- 2) Press the right mouse button.
- 3) The context menu opens. *Please refer to the [Figure 52](#).*
- 4) To activate the functions provided in the context menu, left-click one of the available functions.

#### **Dialogs in the Process Engineer**

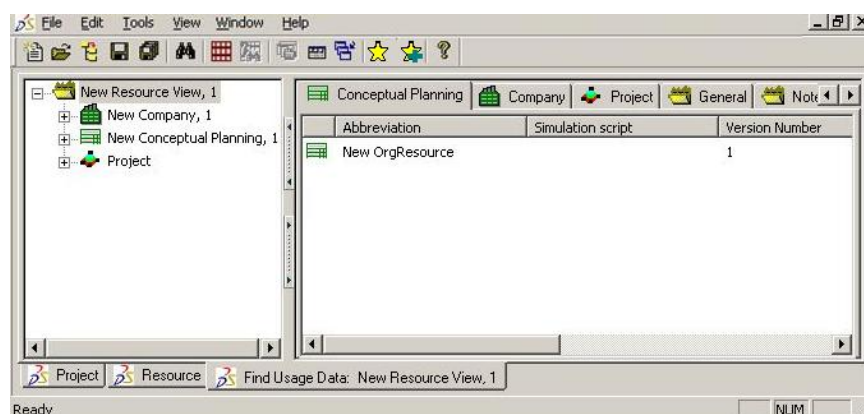
All program modules provided by the Process Engineer use dialogs in the context of currently used functions. The following two examples illustrate the use of dialogs.

#### **Example**

##### **Example of a Display – Find Usage**

This example shows the usage of the selected Resource View. The individual tabs provide you with further information. The tabs may change with each dialog or also with a selected hierarchical level.

To obtain information about a specific tab, Left-click a tab to view the tab information required.

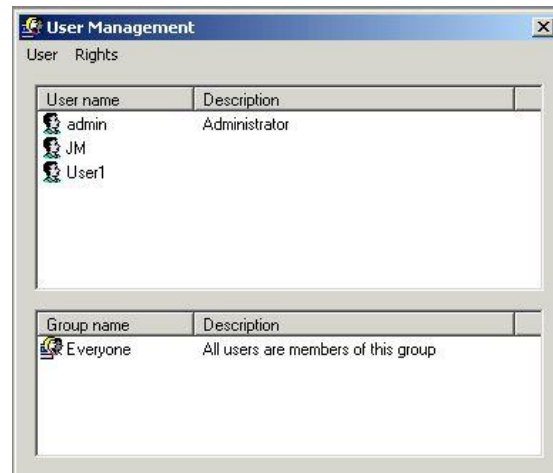


**Example****Figure 53: Find Usage – Resource View****Example of Entered Information – User Management**

The User Management dialog allows you to enter data, for example, to create a new user or to delete a user. For more information on user management, *Please refer to the [Administrator Manual](#).*

The following functions of this dialog are executed by the administrator:

- To create a new user, you must open the User menu.
- To assign rights, you must open the Rights menu.

**Figure 54: Editing the User Management****Opening Properties Menus**

The Properties menu is available on almost all hierarchical levels. Properties menus are accessed using a context menu (*Please refer to the [Figure 52](#)*) of the selected level. The following example illustrates the use of a Properties menu.

**Example****Project Properties Menu – General Tab**

Tabs may vary for each Properties menu. Tabs are provided according to the hierarchical level selected.

The **General** tab defines general Properties data. In our example, these Properties data relate to the current project.

Figure 55: Project Properties Menu – General Tab

**Example****Project Properties Menu – Filter Tab**

The Filter tab defines filter information. This is helpful, for example, if you want to view a display that has been selected according to special filter criteria. Filters can be coderules, production numbers, or coderule macros. The Filter tab is only available in the Project Properties menu.

Figure 56: Project Properties Menu – Filter Tab

**Note**

*You can change a filter on a project from project properties dialog box, only if the project is opened with a filter.*

**Example****Project Properties Menu – Boundaries Tab**



The Boundaries tab defines information about the workers, production processes, and the papers required. This information applies to the entire project. The Boundaries tab is only available in the Project Properties menu. The boundaries tab in project properties is hidden by default.

Worker		Production	
Number of Employees	0	Production Technology	
Number of Men	0	Conveyor Element	
Number of Women	0	Transport Container	
Number of Skilled Workers	0	Area per Station	0,00 m²
Number of Semi-Skilled Workers	0	Total Area	0,00 m²
Wage Structure		Production Method	
Payment System		Production Depth [steps]	0
Absenteeism		Planning Cycle [months]	0
Fluctuation		Working Time	0,00 h
Number of WorkPlaces	0		
Number of Workplace Types	0		

Papers	
Production Papers	
Test Sheets	
Acknowledgement Receipts	

**Figure 57: Project Properties Menu – Boundaries Tab**

### Example

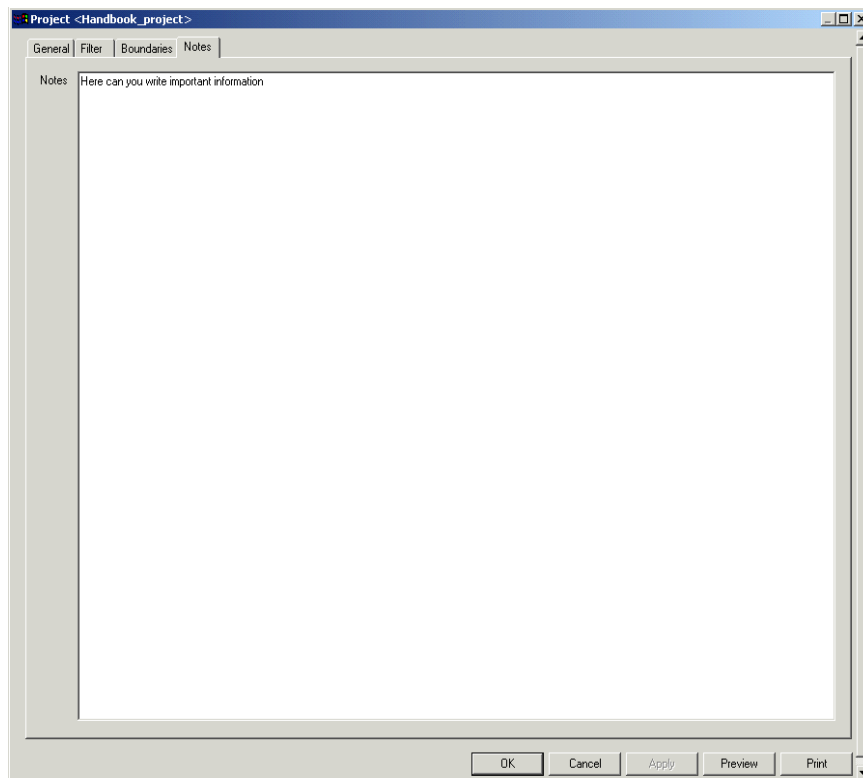
#### **Project Properties Menu – Notes Tab**

This tab is virtually the subject heading of the Properties menu. The Notes tab allows you to write important information concerning the Properties. The information you type in this field only makes sense if it corresponds to a subject from the hierarchical level selected. In our example, this applies to any project-related information. This tab is available for all Properties menus.

The context menu allows you to change the size, font, or color of the characters used.

To do this, highlight the typed text and press the right mouse button.





**Figure 58: Project Properties Menu – Boundaries Tab**

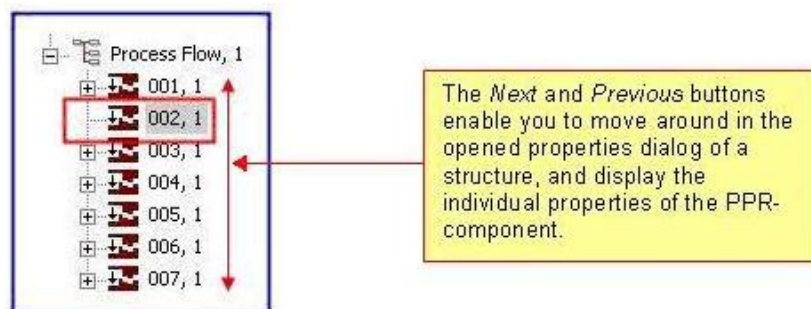
### Using the Next and Previous Buttons in the Properties Dialog

With the help of both the **Next** and **Previous** buttons of an opened properties dialog, you can display and even change the properties of PPR-components in another opened structure.

By using this procedure with the help of the opened properties dialog you can move forward or go back in an opened structure. The PPR-component properties that you move to are always the ones that are displayed. The PPR-component with the properties dialog that was opened first remains selected.

- 1) Open up a structure in the PPR-Navigator.
- 2) Select a PPR-component in the structure – *Process 002* in the example.

### Example



**Figure 59: PPR Component**

You can open the properties dialog via the context menu.

**Figure 60: Example – the Properties Dialog of a Process**

- 3) Click **Next** button – the properties of the *Process 002* are displayed. If you want, change the displayed properties of the *Process 002*.
- 4) You can save any changes without closing the properties dialog box.
- 5) Confirm the message with **OK** in order to save the changes. This message appears only if you have made changes. *Please refer to the [Figure 61](#).*



**Figure 61: Save Changes Message**

- 3) If you want to display the properties of the previous process, click **Previous** button.

# List of Figures

Figure 1: Starting the Process Engineer using the Start Menu or Icon .....	3
Figure 2: User Authorization Dialog Box .....	4
Figure 3: Property on Attribute .....	4
Figure 4: Login Failed Message .....	3
Figure 5: The Tools Menu .....	6
Figure 6: Interface on Opening the Server Tools .....	6
Figure 7: Setting Tools Dialog Box .....	7
Figure 8: Dialog - DBAssistant .....	7
Figure 9: Utilities Menu – Saving Data Automatically .....	8
Figure 10: Save Data through Icon .....	8
Figure 11: Saving Data using the Menu .....	8
Figure 12: Inactive Save Icon .....	9
Figure 13: Prompt to Save Changes when Closing an Application .....	9
Figure 14: Executing ShutdownPPRServer .....	10
Figure 15: General Structure of the PPR Navigator View .....	13
Figure 16: Navigating in a Graph .....	15
Figure 17: Copying by Drag and Drop within a Structure .....	16
Figure 18: Execute Copy Message .....	16
Figure 19: Type of Copying – Normal and Deep .....	16
Figure 20: Set the Value – Hide the Copy Options Dialog Box .....	17
Figure 21: Copying Between Two Projects – Same Plantype Set .....	18
Figure 22: Moving by Dragging and Dropping Objects .....	19
Figure 23: Execute Move .....	19
Figure 24: Referencing by Dragging and Dropping Objects .....	20
Figure 25: Execute Link (Create Reference) .....	20
Figure 26: Example: Name Changed – Linked Object .....	21
Figure 27: Opening Views from the PPR Navigator .....	22
Figure 28: Open Resource and Process Views in a Firmly Anchored Structure .....	23
Figure 29: Opening and Closing a Structure .....	23
Figure 30: Presenting Views in a Lose or Fixed Structure .....	24
Figure 31: Closing a Firmly Anchored View – using the File Menu .....	24
Figure 32: Resource View – not Firmly Anchored .....	25
Figure 33: Windows Dialog with Open Views .....	25
Figure 34: Rearranging Column Headings .....	26
Figure 35: Example – Individually Arranged Column Headings .....	26

Figure 36: Example of Column Headings Arranged by the Administrator .....	26
Figure 37: Tools menu – Store List Properties .....	27
Figure 38: Example – Newly Arranged Column Headings.....	27
Figure 39: Refreshing the List View .....	27
Figure 40: Context Menu: Copy to Clipboard .....	28
Figure 41: Example for Paste Data from the Clipboard .....	29
Figure 42: Library in the Process Engineer .....	29
Figure 43: General Search Display .....	30
Figure 44: Menu bar Featuring the Main Menus.....	30
Figure 45: Functional Range – File Main Menu.....	31
Figure 46: Functions with Additional Functional Range .....	31
Figure 47: Functional Range – Edit Main Menu .....	32
Figure 48: Functional Range – Tools Main Menu.....	32
Figure 49: Functional Range – View Main Menu.....	32
Figure 50: Functional Range – Help Main Menu .....	32
Figure 51: Functional Range – Graphic Function Menu .....	33
Figure 52: Opening a Context Menu using the Right Mouse Button .....	34
Figure 53: Find Usage – Resource View.....	35
Figure 54: Editing the User Management.....	35
Figure 55: Project Properties Menu – General Tab .....	36
Figure 56: Project Properties Menu – Filter Tab.....	36
Figure 57: Project Properties Menu – Boundaries Tab.....	37
Figure 58: Project Properties Menu – Boundaries Tab.....	38
Figure 59: PPR Component.....	38
Figure 60: Example – the Properties Dialog of a Process .....	39
Figure 61: Save Changes Message .....	39

# Index

## A

Applying Mouse Techniques.....	13
Centre Mouse Button .....	13
Double-Clicking.....	13
Left Mouse Button .....	13
Right Mouse Button.....	13

## C

Column Heading	
Administrator Specifies Default Settings.....	24
Specifying Individual User Settings .....	24
Column Headings	
Store List Properties.....	25
Copy Options	
Hide the Copy Options Dialog.....	15

## D

Drag and Drop	
Copying between two Projects.....	16
Copying Objects.....	14
General Information .....	14
Moving Objects .....	17
Referencing Objects.....	18

## E

Editing Views	
Main Views in the Process Engineer .....	10
PPR Navigator Display .....	11
The General Search.....	11
The PPR Navigator .....	10
The Process View .....	10
The Product View.....	10
The Project Library.....	10
The Resource View.....	10
The System Library .....	10

## G

General Search Display.....	28
-----------------------------	----

## L

Library Display.....	27
----------------------	----

## M

Mouse Techniques, Application	
Using the Center Mouse Button in a Graph.....	13

## N

Nonliability .....	ii
--------------------	----

## O

Opening Views .....	20
Opening Structures.....	22

## P

Properties Dialog	
Use the Next and Previous Buttons .....	37

## S

Starting the Program	
Entering the Password.....	3
Entering the User Name.....	3
Exiting the Program .....	8
Logging on the Process Engineer.....	3
Program Crash, What to do.....	9
Saving Project Data.....	7

## T

The Menus	
Activating Menu Functions .....	29
Becoming Familiar with Main Menus .....	29
Dialog Examples.....	33
Edit Main Menu .....	29
Example of a Function Menu.....	31
File Main Menu.....	29
Help Main Menu .....	31
Opening a Context Menu .....	32
Properties Menus with Examples .....	34
Right Mouse Button Context Menus .....	32
Tools Main Menu .....	30
View Main Menu .....	31
Tools Menu	
DBAssistant.....	6
General Information .....	5
Setting Tool.....	6