Training Data Maintenance/ Variable: Variable-Overview

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Content

1. Introduction

Objective of this exercise

- Getting to know the flexibility and reducing the effort spent on data acquisition by using variables.

The abbreviations used

- **CP**   Construction Principle
- **PD**   Part Definition
- **_C_**   Set in the name of data objects instead of "_C_", e.g. "M_" for "Miller" to mark the data object as your own.
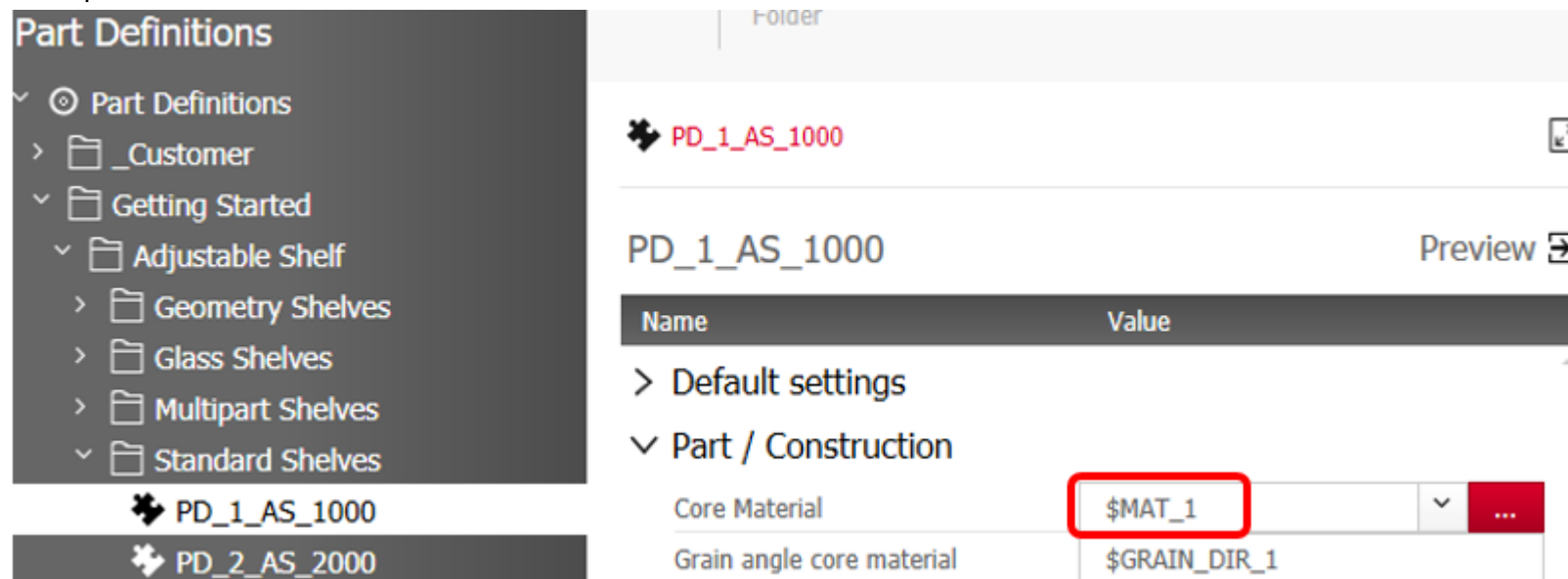
2. Function of the Variables

Variables function rather like "Header data" to an order or to an article. In numerous data objects (e.g. article, CP, PD, connector set, etc.) variables can be used instead of real characteristic values.

For example, a variable named "$MAT_1" can be entered in the PD instead of a fixed assigned core material "iX_PB19_MEL_White_G". The user can set the value of the variables "$MAT_1" differently in every order and in every article of an order.

Without using these variables, the user would have to create an own PD for every core material.

The entry of a variable as characteristic value is always performed with a leading "$"-Sign. If the "$"-Sign is not set, then the system cannot identify the entered value as a variable.

Example of a PD with a variable as value for the material.

Setting of the variables "MAT_ 1" in the Variable Manager:

Name	Default Value	Order Value	Articlevalue
▲ 🗟 Getting_Started		←	←
▲ 🗟 Basic_Data		←	←
▲ 🗟 Materials_Case		←	←
▶ 🗟 Material_Back_1		←	←
▲ 🗟 Material_Case_1		←	←
X GRAIN_DIR_1	0	0	←
▣ MAT_1	iX_PB19_MEL_White_G	iX_PB19_MEL_Black_G	iX_PB19_MEL_iRed_G

By using variables, the quantity of the main data to be applied is drastically reduced. As a further result the user profits from a high flexibility when using data objects in the order or in the article.

The effect of the variable "MAT_ 1" on the definition of an article.

Default Value iX_FPY19_Mel_White_G: **Order Value** iX_FPY19_Mel_Black_G: **Articlevalue** iX_FPY19_MEL_iRed_G:

3. Maintenance of Variables in the Main Data

You find the entry to the maintenance of variables in the Element Manager.

Variables are organized in Variable Families. The setup of a family structure is similar to the folder structure in the Element Manager. The bottom level displays the variable itself with its value.

4. Which characteristic values can be controlled by variables?

Variables can be optionally created as well as optionally organized in families by the user. When inserting customer-specific variables, it is advisable to orient to the structure of the delivery data.

Every variable has a type which defines the use of the variables with the Program. The available types are predefined by the system and can be assigned when inserting a variable. The numerous types enable an extended use of variables.

5. Some examples for using variables in the main data

5.1 Variable of the type part definition

The front CPs usually use a variable as Part Definition
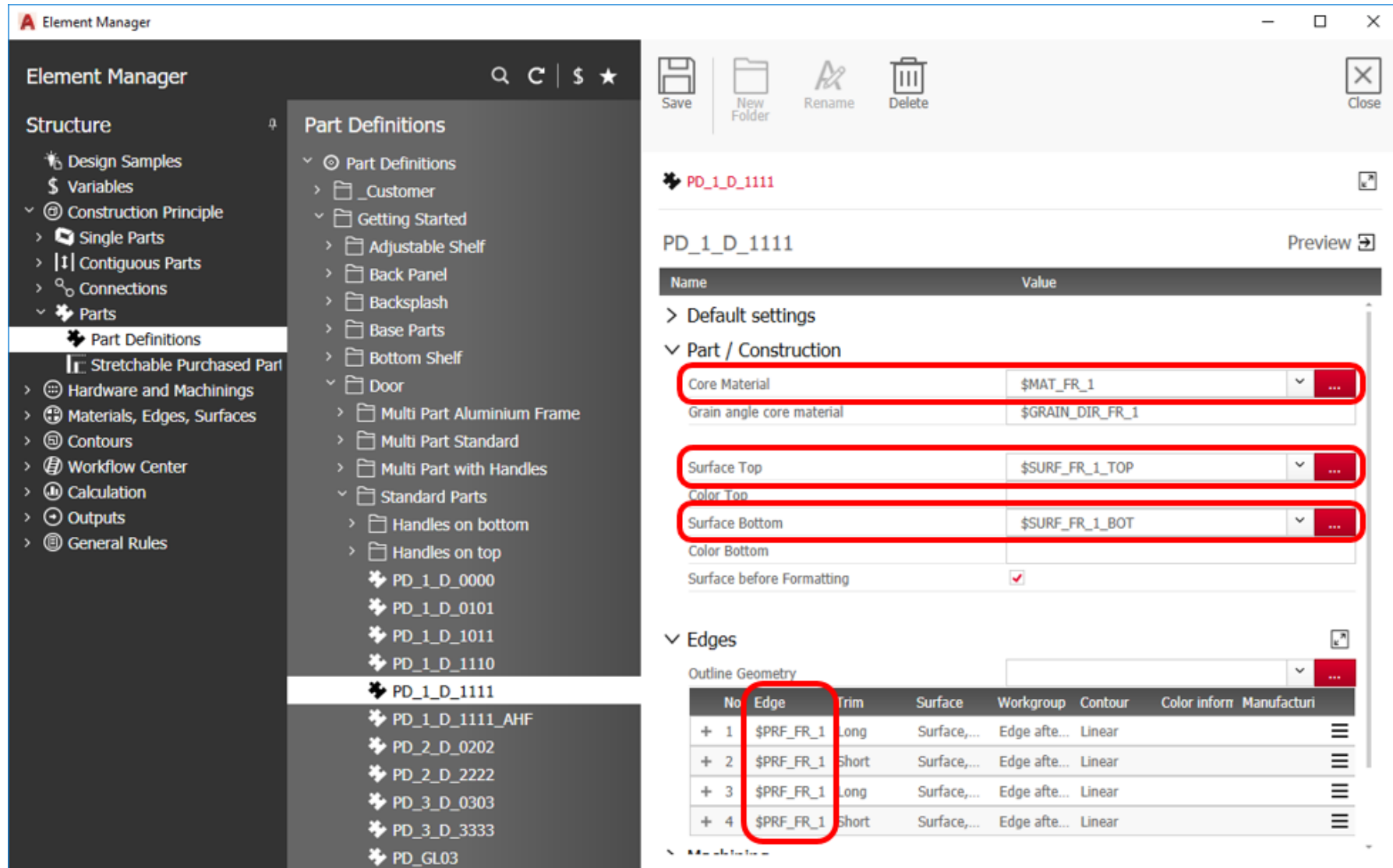
So, it's possible to use an article in an order with different Front-PD's. For the cabinet below the value for an aluminum framed door was assigned to the variable as an article related value.

Name		Default Value	Order Value	Articlevalue
▲ 🐾 Getting_Started			←	←
▶ 🐾 Basic_Data			←	←
▲ 🐾 Construction			←	←
▶ 🐾 Adjustable_Shelves			←	←
▶ 🐾 Connectors			←	←
▶ 🐾 Design_Parameter_Gaps			←	←
▲ 🐾 Doors			←	←
▶ 🐾 Hinge_Side			←	←
▲ 🐾 Wall_Front			←	←
ab Handle_Distance_Wall		0mm	0mm	←
ab Hinge_Type_Wall		STD	STD	←
✸ PD_Front_Wall		MP_1_D_1111_B	MP_1_D_1111_B	MP_D_ALF_GL04_50x20

5.2 Variable of the types material, profile, surface

Nearly all PDs of the default data contain variables for the characteristics of material, surface and edges.

6. Variable of the type connection situation

By assigning a variable of the type connection situation, e.g. to a top shelf, it is possible to change the CPs connection situation (such as dowels, Cam-Connectors or screws) via the order- or article related variables. Using variable connection situation decreases the amount of data to be maintained and also increases the flexibility of the data drastically.

Name		In order	Type	Default Value	Order Value
▲	👹 Connection_situation	No	Family		←
	👥 C1_Bottom	No	Connection Situation	Dowel_CAM	←
	👥 C1_Left	Yes	Connection Situation	Dowel_CAM	Dowel_CAM
	👥 C1_Right	Yes	Connection Situation	Dowel_CAM	Dowel_CAM
	👥 C1_Top	No	Connection Situation	Dowel_CAM	←
	👥 C2_Bottom	No	Connection Situation	Dowel_CAM	←
	👥 C2_Left	Yes	Connection Situation	Dowel_CAM	Dowel_CAM
	👥 C2_Right	Yes	Connection Situation	Dowel_CAM	Dowel_CAM
	👥 C2_Top	No	Connection Situation	Dowel_CAM	←
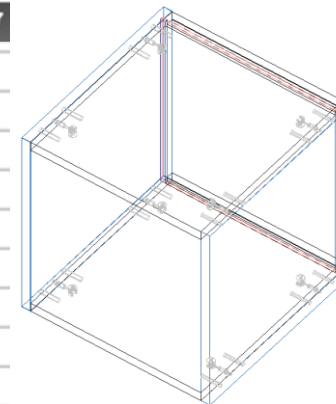
The modification of the order-specific or article-specific values shows the following display:

Name	Default Value	Order Value	Articlevalue
▲ 👹 Getting_Started		←	←
▶ 👹 Basic_Data		←	←
▲ 👹 Construction		←	←
▲ 👹 Connectors		←	←
▲ 👹 Connection_situation		←	←
👥 C1_Left	Dowel_CAM	Dowel_CAM	Confirmat
👥 C1_Right	Dowel_CAM	Dowel_CAM	Dowel
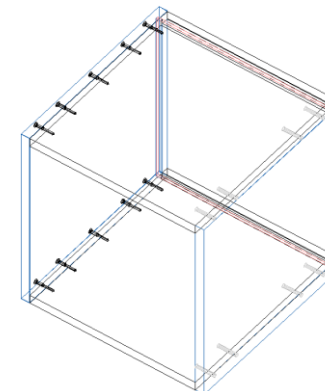
7. Variable of the type connector

The variable type 'Connector' can influence order-specific and article-specific the content of connector sets, for example. A very distinctive application is the setting of the desired pull model and its position by variables of the type 'Connector' and 'Number'.

Name			In order	Type	Default Value	Order Value
⯆	🐻	Handles	No	Family		Handle_128_Horizontal
	▶ 🐻	Handle design	No	Family		←
	X	Handle_Gap	Yes	Number	0	←
	ab	Handle_Position_DRW_X	Yes	Text	64mm	64mm
	ab	Handle_Position_Flap_X	No	Text	64mm	64mm
	ab	Handle_Position_X	Yes	Text	64mm	64mm
	ab	Handle_Position_Y	Yes	Text	140mm	124mm
	X	Handle_Rotation_Base	Yes	Number	0	0
	X	Handle_Rotation_Flap	No	Number	0	0
	X	Handle_Rotation_Tall	No	Number	0	0
	X	Handle_Rotation_Wall	Yes	Number	0	0
	ab	Handle_Type	Yes	Text	Hale_160_Ss_9070796	Hale_128_Ss_9070750

The modification of the order-specific or article-specific values shows the following display:

| Name			In order	Type	Default Value	Order Value
⯆	🐻	Handles	No	Family		Handle_128_Vertical
	▶ 🐻	Handle design	No	Family		←
	X	Handle_Gap	Yes	Number	0	←
	ab	Handle_Position_DRW_X	Yes	Text	64mm	64mm
	ab	Handle_Position_Flap_X	No	Text	64mm	64mm
	ab	Handle_Position_X	Yes	Text	64mm	128mm
	ab	Handle_Position_Y	Yes	Text	140mm	30mm
	X	Handle_Rotation_Base	Yes	Number	0	90
	X	Handle_Rotation_Flap	No	Number	0	0
	X	Handle_Rotation_Tall	No	Number	0	90
	X	Handle_Rotation_Wall	Yes	Number	0	90
	ab	Handle_Type	Yes	Text	Hale_160_Ss_9070796	Hale_128_Ss_9070750

8. Variable of the type number

Variables of the type 'Number' can be used in many areas in the system.

8.1 Number variable in linear divisions

Instead of real numbers variable in linear divisions can be used. Here is a variable panel reveal as an example.
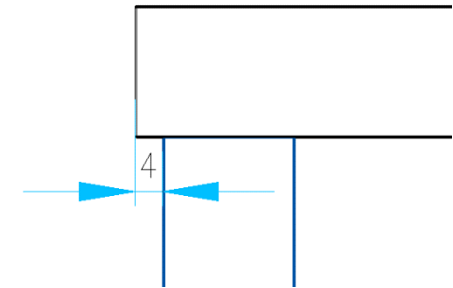
Hint

The unit of the number variables in a linear division must be separated by a 'blank space' from the name of the variable.
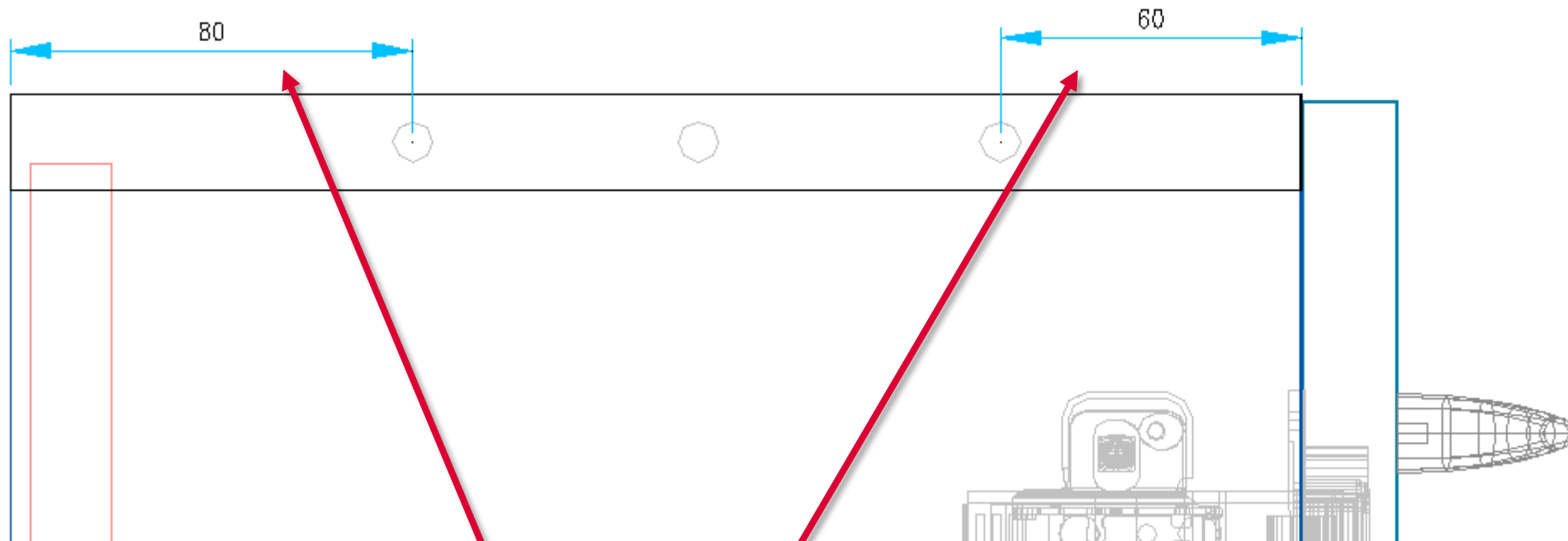
| First Linear Division | $_EL mm:1:$:ER mm | ... |

8.1.1 Number variable in descriptors

A variable of the type 'Number' can also be used in descriptors. A descriptor for allocating dowels is shown here as an example.

Name	Type	Default Value	Order Value
▲ ☐ _Customer	Family		←
▸ ☐ _C_Basic_Data	Family		←
▲ ☐ _Construction	Family		←
▲ ☐ _Dowel	Family		←
X _C_DSTB	Number	37	80
X _C_DSTF	Number	57	60

No.	Description	Linear Division	
− ↓ ↑ 1 -		$_C_DSTF mm:1:$_C_DSTB mm	×

And ×

| + | X | ⌄ | Less than or eq | ⌄ | 200 | × |

8.2 Number variable in characteristic values

A variable of the type 'Number' can be directly applied as a characteristic value. Here is an example of the value for 'Protrusion front' for a top shelf.

9. Value sets

The variables of a family can be completely converted with an entry by means of a value set.

In this example the value set "**iX_PB18_MEL_Mahogany_G**" has been set for the family "Material_Front_1". All variables of the family "Material_Front_1" obtain preset values with this entry.

Name		In order	Type	Default Value	Order Value
▲	Material_Front_1	No	Family		iX_PB18_MEL_Mahogany_G
X	GRAIN_DIR_FR_1	Yes	Number	0	←
	MAT_FILL_1	No	Color Principle	iX_Walnut_M	iX_Mahogany_G
	MAT_FR_1	Yes	Material	iX_PB19_MEL_Walnut_M	iX_PB18_MEL_Mahogany_G
	PRF_FR_1	Yes	Profile name	iX_ABS_Walnut_2mm_M	iX_ABS_Mahogany_2mm_G
	SURF_FR_1_BOT	Yes	Surface	NO_SURF	←
	SURF_FR_1_TOP	Yes	Surface	NO_SURF	←