User Manual

Management of CAD data and documents in SAP

SAP Engineering Control Center Interface to Solid Edge

SAP Engineering Control Center Interface to Solid Edge manages design data in SAP.

Given by the SAP Engineering Control Center Interface, tight integration of the CAD system to the SAP PLM data available to the company at an early stage in the design process are available. Product lifecycle management thus already begins with the start of design work and not through an interface at the end of it. The coupling between the CAD system and the SAP Engineering Control Center allows you to manage the components designed in the CAD system.

This user manual describes the installation and use of the SAP Engineering Control Center Interface to Solid Edge and describes the functionality provided by this software as well as its operation.

Introduction

The SAP Engineering Control Center Interface to Solid Edge provides access to the SAP Engineering Control Center directly from Solid Edge. This is made possible by making the necessary functionalities over the control elements Ribbon Bar, Contextual Menu available directly from within Solid Edge. Through this close link between Solid Edge and the SAP Engineering Control Center Interface to Solid Edge, the manual transfer of document data and details on the execution of the functionality of the SAP Engineering Control Center is eliminated as this information is automatically read from the document currently open in Solid Edge and in most cases can be simply configured and executed.

System requirements

To install and operate the SAP Engineering Control Center Interface to Solid Edge, certain system requirements are necessary.

Detailed information on the system requirements for the product can be found in the current product matrix.

Installation

The following section describes the installation of SAP Engineering Control Center Interface to Solid Edge.

Due to the fact that some data models are different a parallel operation with the Cideon CDESK-Interface for Solid Edge is **not** supported!

With automatic installation, the process starts with a provided setup package, which consists of a file containing all the required files and modules. An installation wizard appears that guides the user step by step through the installation process.

Please note that in either case, **administration rights** are required for the installation!
It is strongly recommended being logged in using the **administrator account** during the installation!

Product scope

SAP Engineering Control Center Interface to Solid Edge includes a number of files and modules.

The package includes the following files or modules:

- CdnECTRInterfaceSLE64.dll
- plm_conn.dll
- CdnECTRInterface_messages_de.txt
- CdnECTRInterface_messages_en.txt
- CdnECTRInterface_messages_es.txt
- CdnECTRInterface_messages_fr.txt
- CdnECTRInterface_messages_it.txt
- CdnECTRInterface_messages_ja.txt
- CdnECTRInterface_messages_pt.txt
- CdnECTRInterface_messages_ru.txt
- CdnECTRInterface_messages_zf.txt
- CdnECTRInterface_messages_zh.txt
- default.txt
- dtype.xml
- options.xml
- menu.guidef
- menu_macros.txt
- plm_setenv.bat
- attributes-from-sap.xml
- attributes-to-sap.xml
- Start_application_sle.exe
- renamer3sle.exe
- Cideon_ECTR-Interface_to_Solid_Edge_User_Manual.pdf
- Cideon_ECTR-Interface_to_Solid_Edge_Configuration_Manual.pdf
- SelectAndDownloadDocumentVersion.txt in directory "*basis\scripts\macros*"
- Solid Edge model templates in directory "*templates-template*"
- Templates for customizing files for ECTR in directory "*templates-customize*"

NOTE:
The texts of the messages, dialogs, menus etc. of the SAP Engineering Control Center Interface to Solid Edge are stored for different languages in the files "CdnECTRInterface_messages_<*LANGUAGE*>.txt" and can be customized. How this is done is described in more detail in the chapter "Using user-specific texts in the integration".

IMPORTANT!
The SAP Engineering Control Center Interface to Solid Edge runs only with a 64-bit version of Solid Edge! Since it is also possible to install the 32-bit version of Solid Edge on a 64-bit version of Windows, it should be checked before installing the SAP Engineering Control Center Interface to Solid Edge, whether Solid Edge as 64-bit version is present!

You can check whether Solid Edge is installed as a 64-bit version on the target machine in Solid Edge by using the "*Help -> About Solid Edge...*" menu item to open the dialog with the version information about Solid Edge. It is here in the first row next to the name of the Solid Edge version the words "x64" (see red marked area in the figure) denote the 64-bit instance. If this codicil is missing, then it is a 32-bit installation that is present.

Solid Edge "Info" dialog

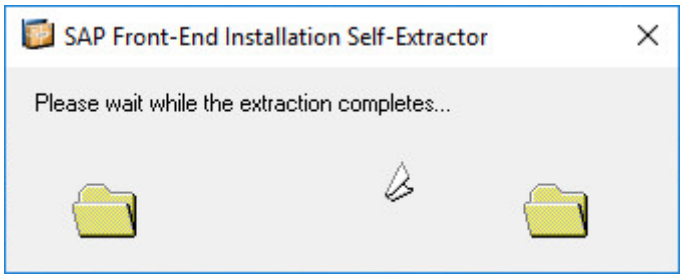
Automatic installation

For the automatic installation, an installation package is provided. It simply consists of an executable file.

IMPORTANT:
■ Please note that **administrator rights** are required for the installation! It is strongly recommended being logged in as **administrator** when you install the product.
■ Please ensure that the **SAP Engineering Control Center** and **Solid Edge ST8 or higher (64-bit!)** are already installed on the target machine before running the installation of the SAP Engineering Control Center Interface to Solid Edge. Apart from that, the installation process failed!
■ After successful installation, a **restart** may be necessary!

To start the installation process, the application must execute. This is a self-extracting ZIP archive.

After start, the containing files will be extracted.

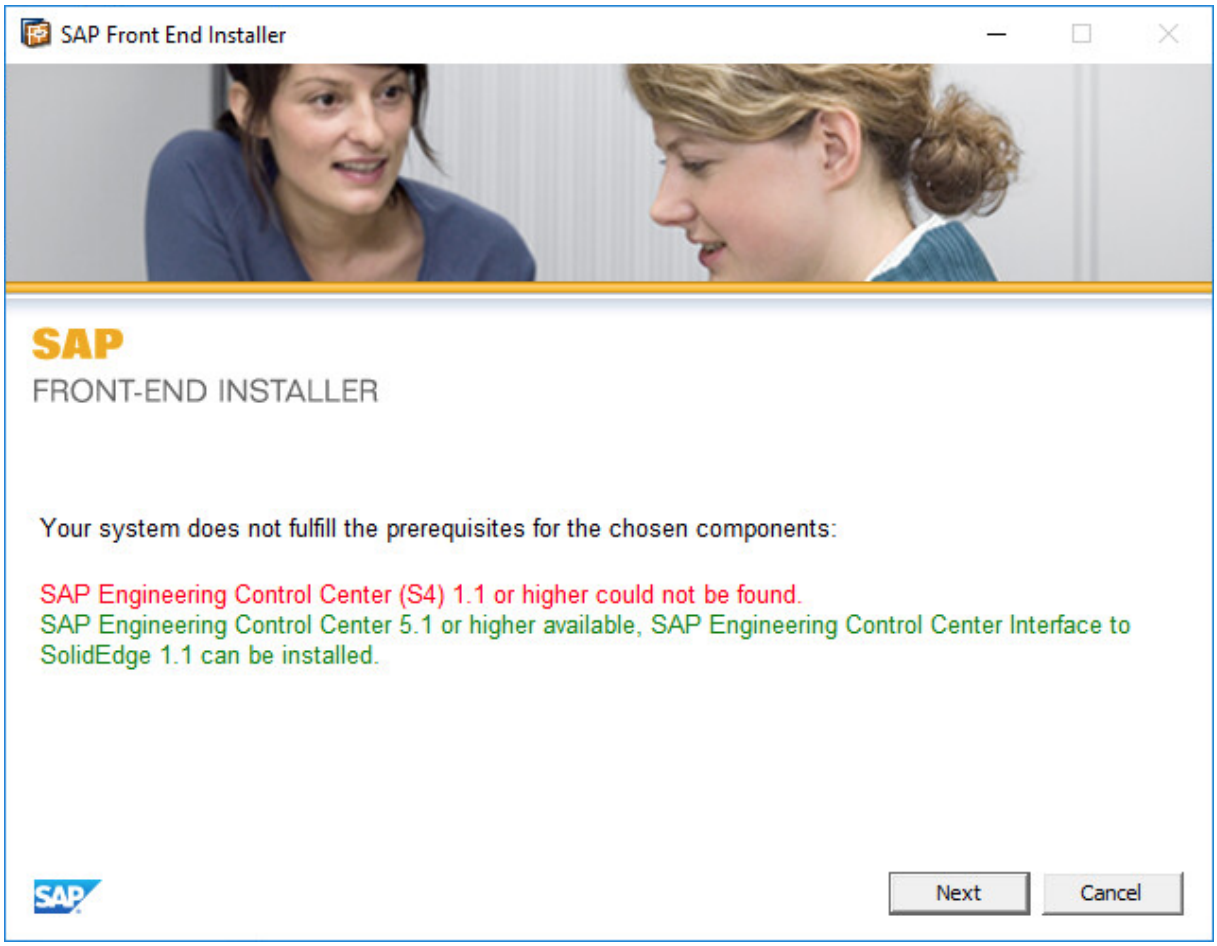


Extracting the installation files

After this process has finished, the start screen of the installation assistant appears.

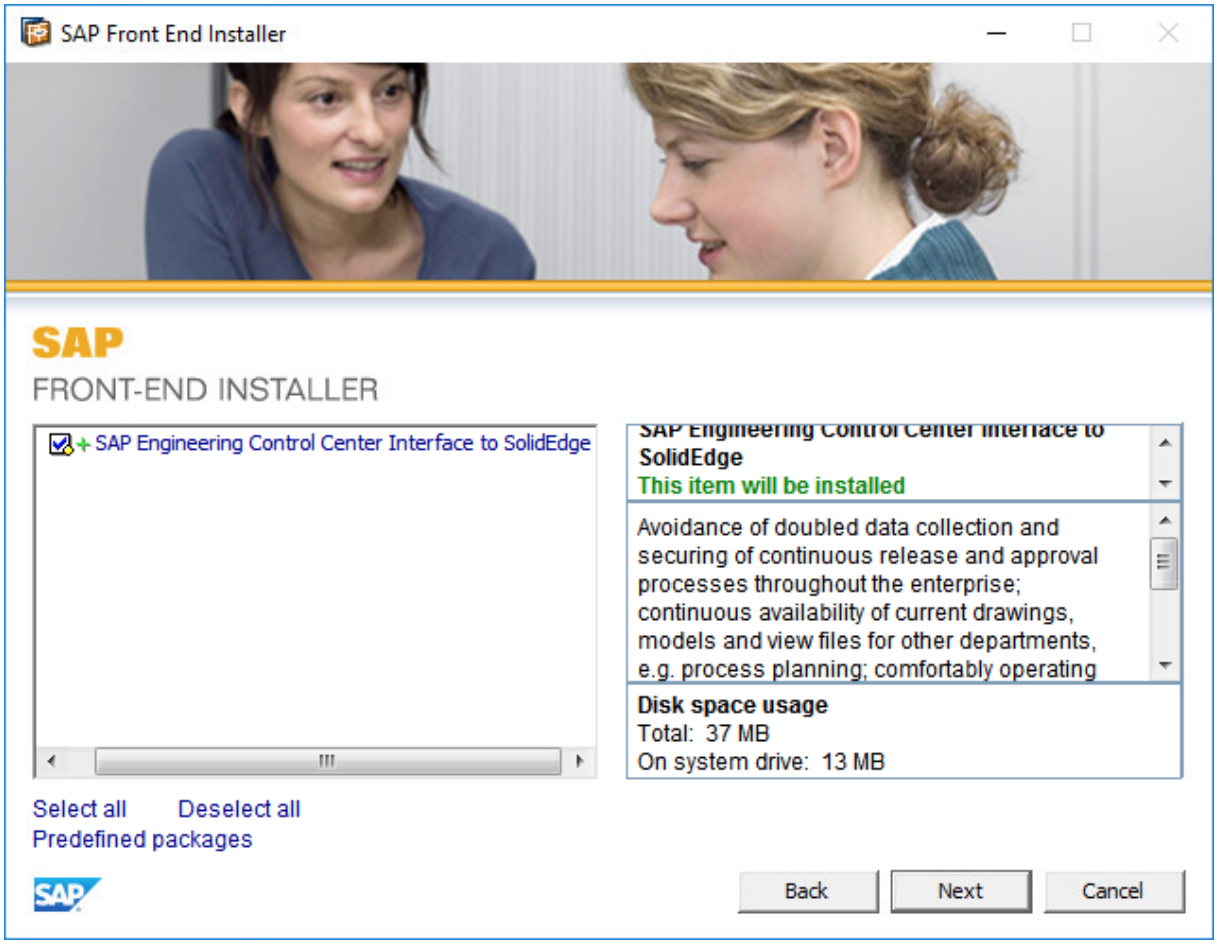
At least now close all running SAP and Solid Edge applications! This is important to prevent failures during the installation process!

Use the "Cancel" button to abort the entire installation process. Navigate with the "Back" button to previous screen, i.e. to correct some choices. If the installation wizard detects that an essential prerequisite for the installation has not been met, it will inform you and the installation process may be aborted.



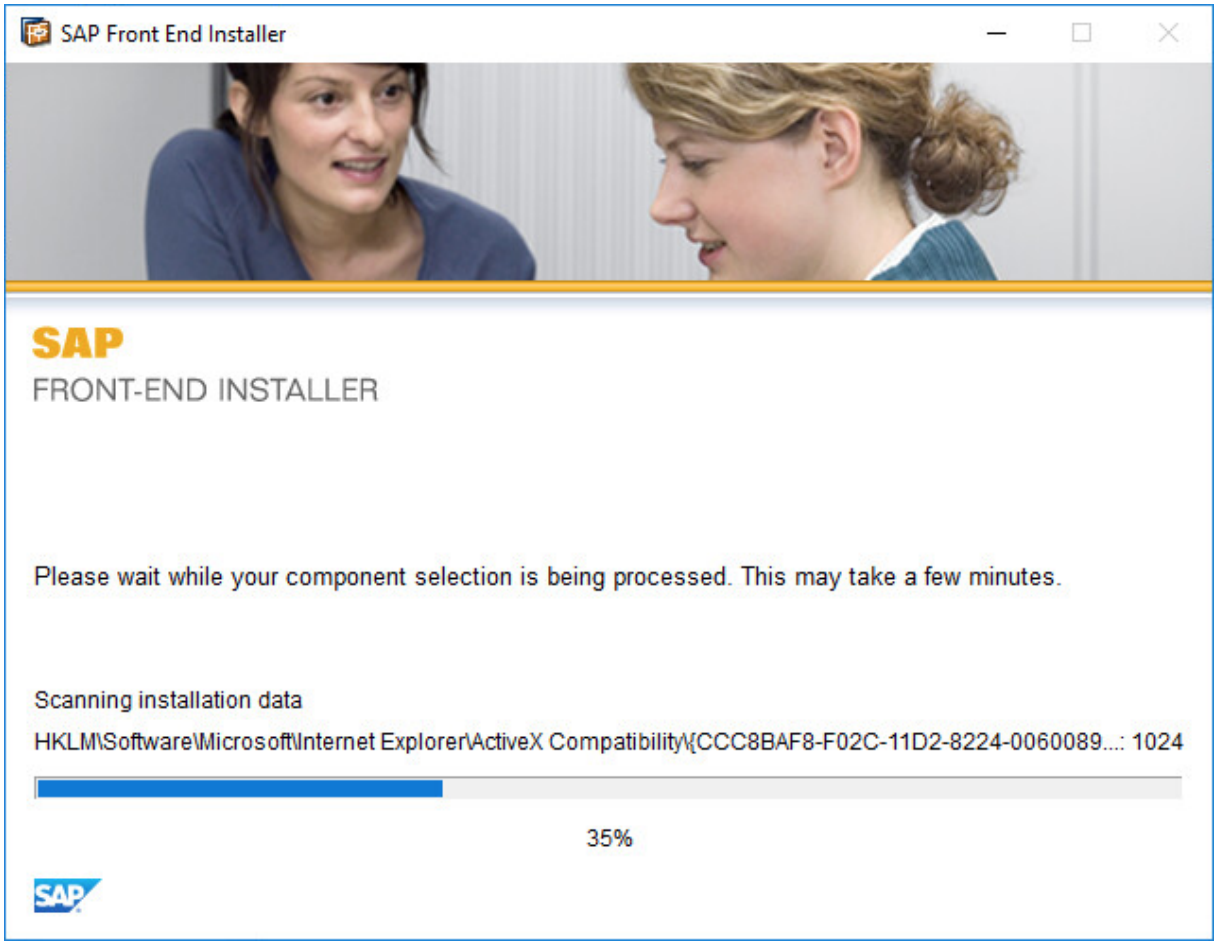
Installation assistant - Start screen

The button "Next" browses to the component selection screen. Set a check mark into a checkbox on the left side to choose the right component. If necessary you can browse to the previous screen with the "Back" button.



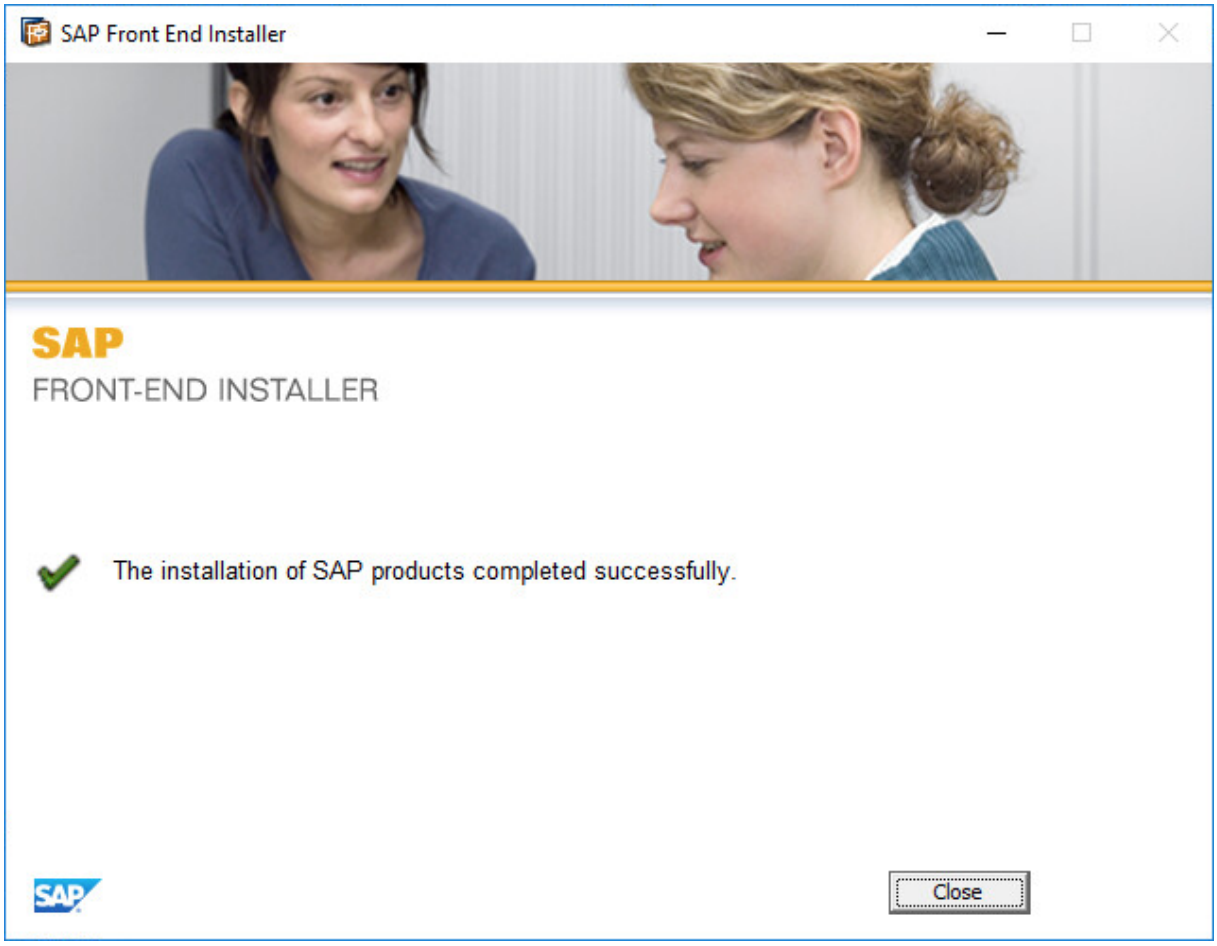
Installation assistant - Component choice

After selection of the component, a click on the "Next" button starts the installation process. Now a screen appears that informs you about the progress of the installation.



Installation assistant - Progress screen

If the installation process has been finished, the completion screen appears. Complete the installation by clicking the "Close" button here.



Installation assistant - Installation completion

Parameter-controlled installation

The installation of an SAP product can be controlled using command line parameters, e.g. for:

- Silent installation or uninstallation (without user interface and interaction)
- Product-specific installation or uninstallation

Parameters for the setup launcher

Parameters	Meaning
/Product:ECTR<CAD> /Product:ECTRS4<CAD>	Internal name of the product, <CAD> = Id for the CAD system.
/Silent	Silent mode without interaction, parameter "/Product" is required, special case: If the product is not specified, the installation is always carried out for the ECTR and the ECTRS4, so the requirements of both products are also checked.
/noDLG	Only progress dialogs are displayed, parameter "/Product" is required.

Parameters	Meaning
/X="<Path>"	Extracts the contents of the *.cab files to the specified directory. If the directory does not exist, it is created.
/Uninstall	Uninstalls the product, the parameter "/Product" is required.

Examples

```
Installs SAP ECTR Interface to <CAD> only if ECTR is installed.
<setup.exe> /Silent /Product:ECTR<CAD>
Installs SAP ECTR Interface to <CAD> only if ECTRS4 is installed.
<setup.exe> /Silent /Product:ECTRS4<CAD>
Installs SAP ECTR Interface to <CAD> only if ECTR and ECTRS4 are installed.
<setup.exe> /Silent
<setup.exe> /Silent /Product:ECTR<CAD>+ECTRS4<CAD>
Installs SAP ECTR Interface to <CAD>, even if no ECTR is installed (not recommended).
<setup.exe> /Silent /IgnoreMissingProducts /Product:ECTR<CAD>
Uninstalls SAP ECTR Interface to <CAD>
<setup.exe> /Silent /Uninstall /Product:ECTRS4<CAD>
```

Detailed information on the installation or uninstallation process can be found in the directory “C:\Program Files (x86)\SAP\SapSetup\LOGs” in the file “NWSapSetup.log” or in the directory “%TEMP%” in the file “<file name of setup.log>”.

List of return codes

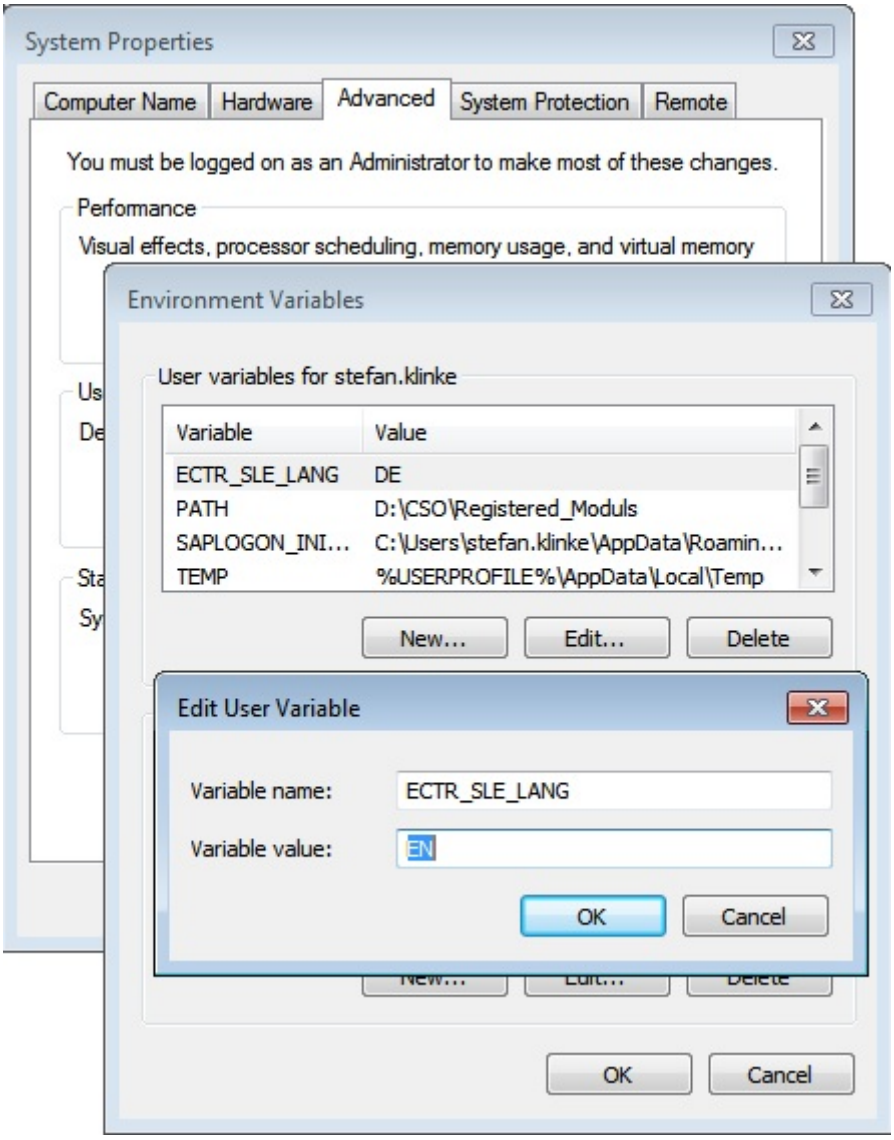
Return code	Return code description
0	The process was terminated without an error being detected.
48	General error
67	The installation was canceled by the user.
68	Invalid patch
69	Installation routine failed
70	Invalid XML files
129	Restart recommended
130	Restart was forced
144	Error report was created.
145	An error report has been created and a restart is recommended.
146	An error report has been created and a restart is forced.

More information on the SAPSetup can be found in SAP Note 1587566 and the associated documentation at https://help.sap.com/sapsetup.

Language settings

The SAP Engineering Control Center Interface to Solid Edge is supported in English and German, by default the language of the CAD system is used. But you can change the language using the environment variable "ECTR_SLE_LANG". The value "DE" for German and "EN" for English can be used.

For this, the environment variable "ECTR_SLE_LANG" has to be created, and the proper variable has to be assigned. This happens in the advanced System Properties in the Control Panel of Windows.



Windows dialog "Environment Variables"

Please consider that this environment variable is not set as a system variable, but set for the individual user. Therefore, "ECTR_SLE_LANG" has to be configured in the Windows-Dialog "User variable for <User>" within the "Environment Variables"!

The SAP Engineering Control Center has to be restarted, for the changes in the Environment Variables configuration to take effect!

Using user-specific texts in the integration

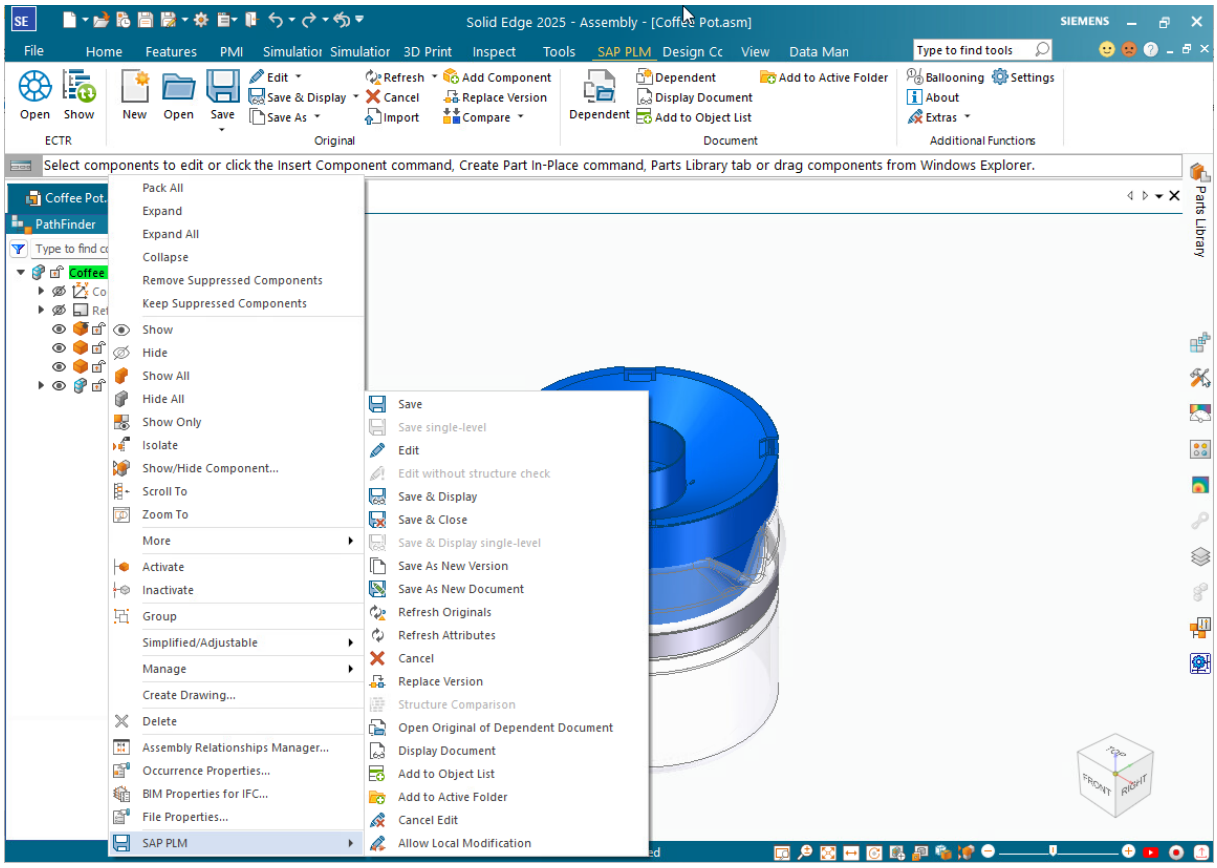
The texts of the messages, dialogs, menus etc. of the SAP Engineering Control Center Interface to Solid Edge are stored in the files "*CdnECTRInterface_messages_<LANGUAGE>.txt*" for the different language versions ("*<LANGUAGE>*" stands for the respective language abbreviation, e.g. "de", "en" etc.). These texts can also be adapted individually.
Language files with the name "*CdnECTRInterface_messages_<LANGUAGE>_customize.txt*" can be created for this purpose. In these files, the texts to be displayed can be configured in accordance with the structure of the original language files. It is not necessary to use all texts, but only those that are to be overwritten. If these customized files are stored next to the original files in the same directory as the installation, they will be used preferentially by the interface.
The customized language files are not overwritten by an update installation, and thus the user keeps his own texts even after an update.

User interface and controls

The SAP Engineering Control Center Interface to Solid Edge offers three different controls that are fully integrated into the Solid Edge user interface. These are all labeled "SAP PLM":

- Multi-function bar (Main Menu)
- Context Menu

The following figure shows the user interface of Solid Edge, including the individual controls of the SAP Engineering Control Center Interface to Solid Edge.

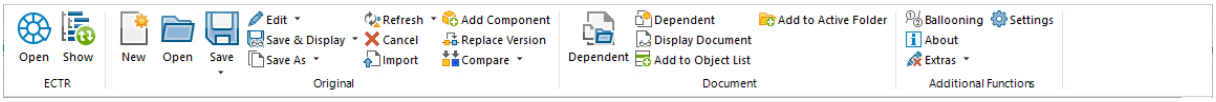


Solid Edge user interface with SAP PLM

By default, the "SAP PLM" menu of the SAP Engineering Control Center Interface to Solid Edge is immediately available after Solid Edge is launched, while the "SAP PLM" toolbar only appears once a document has been opened.

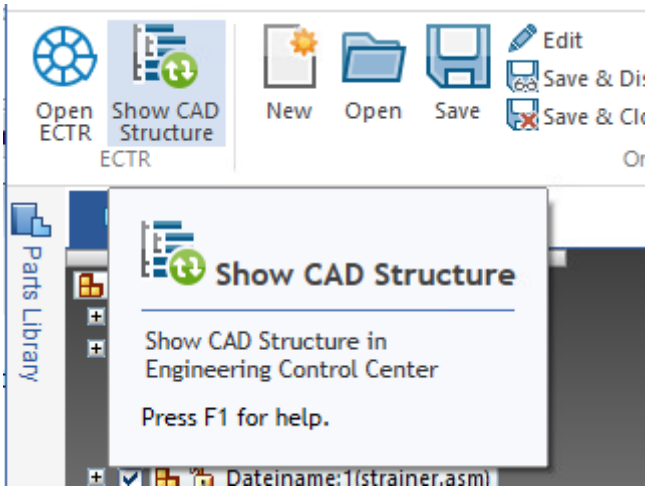
Multi-function bar (main menu)

The "SAP PLM" menu is located in the multi-function bar of Solid Edge and is the main menu of the SAP Engineering Control Center Interface to Solid Edge. It contains all executable functions:



Multi-function bar "SAP PLM" in Solid Edge

If the mouse is hovered over one of the buttons, its function will be displayed as a balloon-style tooltip:

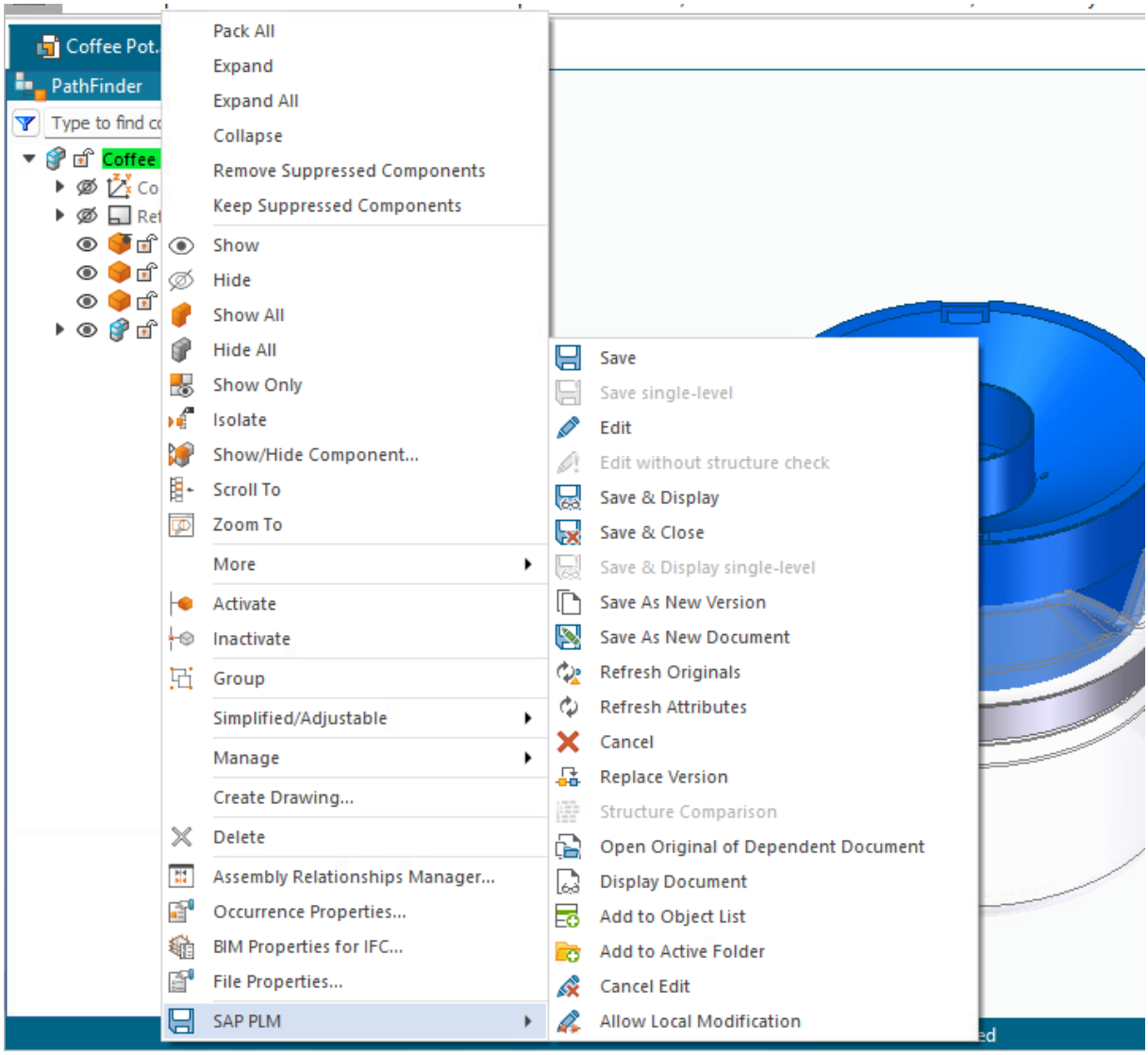


Multi-funktion bar with tooltip

NOTE:
The actual position of the main menu "SAP PLM" of SAP Engineering Control Center Interface to Solid Edge within the Solid Edge multi-function bar depends on how many and which other add-ins are loaded and used! It can, therefore, differ from the position shown in the figure.

Context menu

The "SAP PLM" context menu is embedded as a submenu in the context menu of a document in the Path Finder of Solid Edge. As the Path Finder is only available when a document is open, this also applies to the "SAP PLM" context menu. The "SAP PLM" context menu contains all functions of the SAP Engineering Control Center Interface to Solid Edge that make sense for open documents.
Again, functions that are currently unavailable are disabled or "greyed out" in the context menu.



Submenu "SAP PLM" in the context menu of the Path Finder

Function description

A variety of functions of the SAP Engineering Control Center can be accessed directly from the user interface of Solid Edge using SAP Engineering Control Center Interface to Solid Edge. These functions are described in the following text.

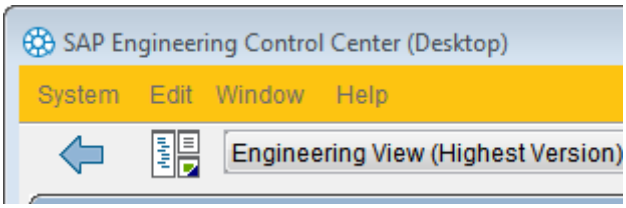
It should be noted that SAP and the SAP Engineering Control Center offer extensive configuration options, and the actual behavior of the functions may differ on a case-by-case basis from those described here. The function description in this user's Manual is based on the default configuration of the SAP Engineering Control Center.

General behavior

If a function is triggered using the SAP Engineering Control Center Interface to Solid Edge, a message will be displayed in the center of the working range of Solid Edge, which provides information about the current action which is being implemented by ECTR.

Information about running ECTR processes

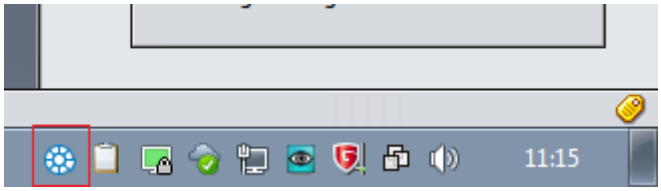
The SAP Engineering Control Center indicates activities initiated by Solid Edge with a yellow colored menu bar during an activity:



ECTR activity indication

This is the standard behavior of the SAP Engineering Control Center, but it is configurable.

The running SAP Engineering Control Center is represented by the ECTR icon in the notification area (known as "Systray") of the Windows taskbar (see red mark in figure).



ECTR icon in the Windows "Systray" area

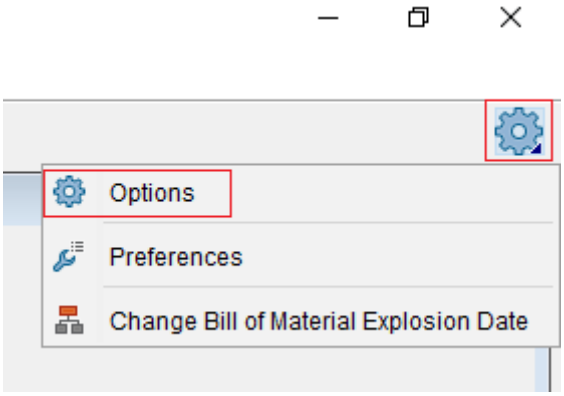
Depending on the context or status, a document loaded in a Solid Edge document SAP Engineering Control Center Interface to Solid Edge may not have access to some of the functions. In this case, the functions concerned are deactivated and shown "greyed out".

Logging

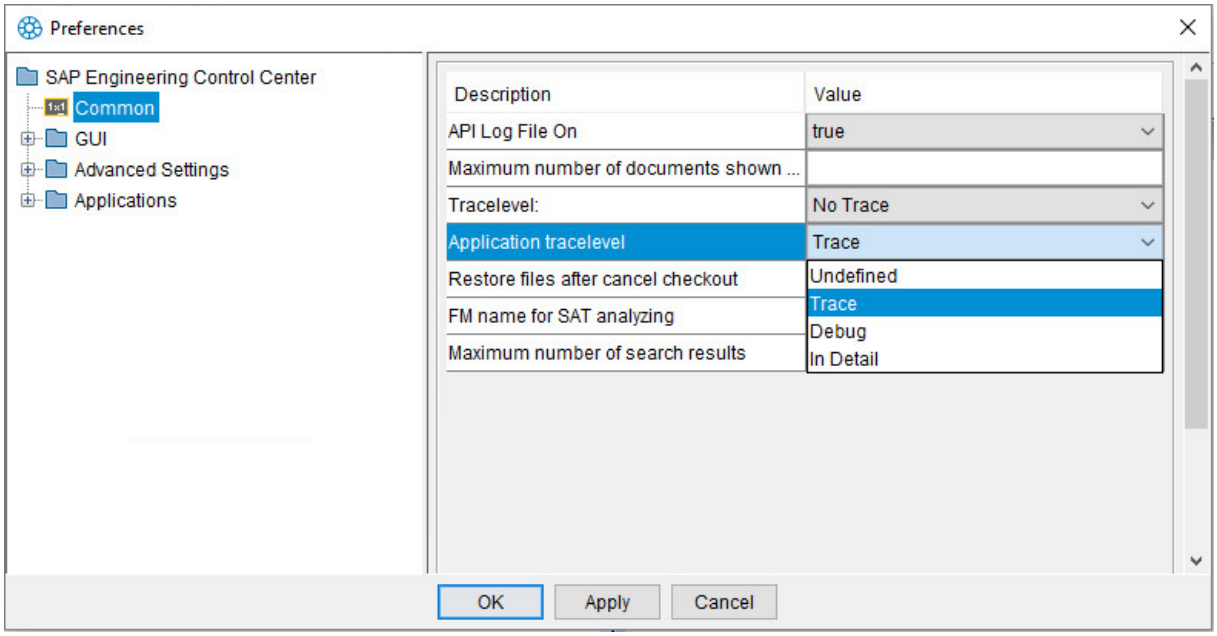
The SAP Engineering Control Center Interface to Solid Edge offers the ability to log its work and stores it in a log file. This is particularly useful for questions regarding Cideon support.

ATTENTION:
In order to use logging with an older ECTR version prior to **5.2** or **5.1.15**, the preference "ECTR-LOG-DIR = @PLM_LOGDIR@" must be set in the interface-specific configuration file "*default.txt*"!
From ECTR version 5.2 or 5.1.15 this is no longer necessary and the preference is obsolete.

To activate logging, the "*Application tracelevel*" option under "*Common*" must be set in the Options menu of the ECTR under "*Preferences*" of the SAP Engineering Control Center, which is accessible via the gear symbol ("*Settings*") at the top right:



Options menu of the ECTR



ECTR Option "Application tracelevel"

The different detail levels "Trace", "Debug" and "In Detail" can be selected for the information stored in the log file. The value "Undefined" means the initial state after the installation of the ECTR and is equivalent to "Trace". If the trace level has been changed once, it can no longer be reset to "Undefined".

The log files are stored in the directory path for log files of the ECTR under

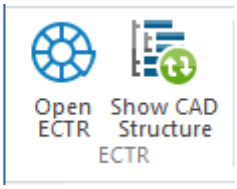
<LW>:\SAPPLM\tempdir\logs\applications\sle

The file name of a log file contains a date and time stamp and has the following structure:

plm_connector_YYYY.MM.DD-HH_MM_SS.log

General functions

General functions provide access to the SAP Engineering Control Center and are used in administration. They are located in the section "ECTR" of the multi-function bar.

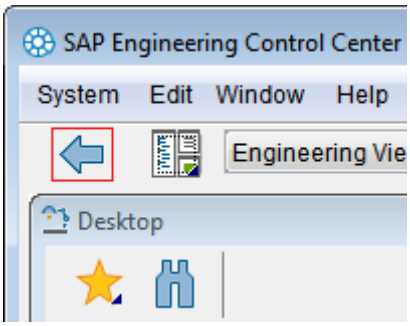


Multi-function bar section "ECTR"

Open ECTR

With the function "Open ECTR", the SAP Engineering Control Center is activated or started and brought to the front. Depending on a running function, Solid Edge may be blocked for all actions and inputs, until the control is passed back from ECTR to Solid Edge. In that case, the blue "back" button in ECTR (see red mark

in figure) is usable to continue working in Solid Edge. Otherwise, the button is deactivated (greyed). In any events, Solid Edge will be back in control when the SAP Engineering Control Center is closed.

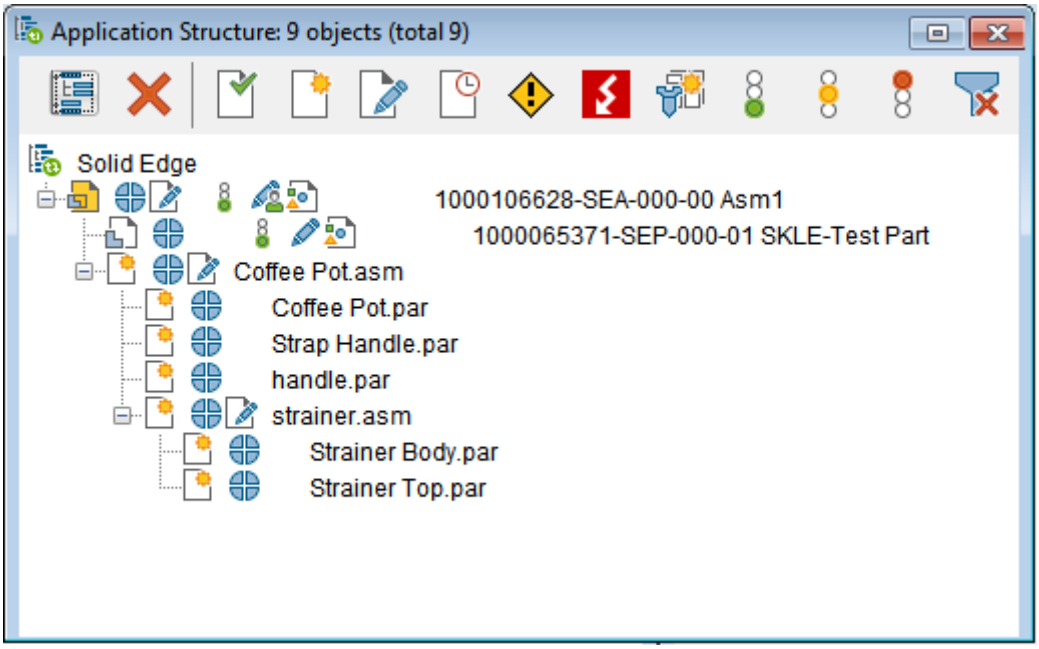


"Back" button in ECTR

Show CAD Structure

The function "Show CAD Structure" is used to bring the SAP PLM Engineering Control Center in the foreground and open the structure view in which the structure of an open and active document will be displayed.

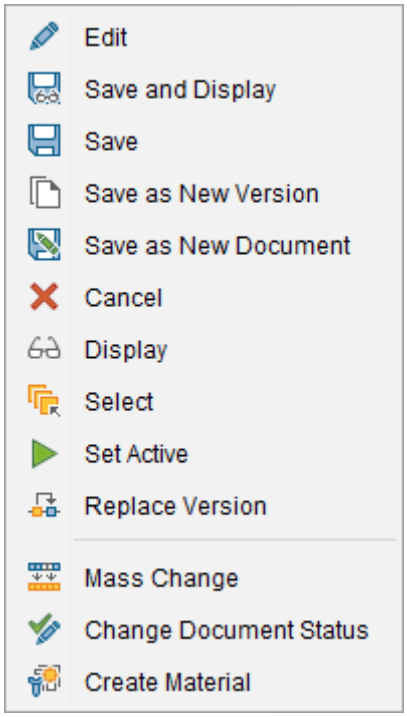
The "Application Structure" window in the ECTR shows originals and their structures that are loaded in the CAD application. It is possible to refine the view using the filter buttons provided in the dialog.



ECTR view "Application Structure"

The ECTR may add overlay icons to the displayed icons to visualize certain states in which the displayed objects are located. For the meaning of these symbols, please refer to SAP's ECTR documentation.

In the application structure view, a context menu is available for the selected object.



Context menu in ECTR view "Application Structure"

Please note the following points during work with the context menu in the application structure view of ECTR 5.1:

- Multi-selection is only available with the function "Edit" and "Select".
- An import works only for the top document.
- A successful import causes a refresh of the application structure.
- The function "Display" opens the selected document and causes a refresh of the application structure.
- Function "Set Active": The shoring in an assembly is opened in the "Edit on site" mode.
- "Select": Selected elements from the application structure are selected in the active file in Solid Edge. It may happen that the function is deactivated because no selection can be created in Solid Edge (e.g. if the preference "Show Drawings" is set in the settings in the section "Application structure" and drawings are displayed for the active file, "Select" is deactivated for the drawings). If it was not possible to make a selection, then information about this is output in the log file.
- Unknown commands open a message box with information about that command to detect wrong configurations.

It is possible to customize the amount of information and the way to display in the application structure view. For this purpose, it exists a number of options in the settings for SAP Engineering Control Center Interface to Solid Edge in the "Application structure" branch.

Special cases with the "Select" function

The following special cases must be noticed for the "Select" function:

Special case Family of Assemblies:
For Family of Assemblies (FOA) the functionality depends on the preference "plm.document.FOA.Handling.SLE" in the configuration file "*default.txt*":

1. The preference has the value '0' (No special treatment of FOAs):

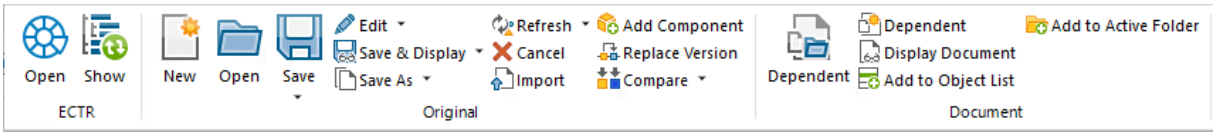
All shoring elements from the assembly are displayed, irrespective of the members in which the shoring elements are located. Only the shoring elements that are present in the active member or in shored members can be selected. No selection is made for all others.

2. The preference has the value '1' (Use MaintainGeneric):
   Only the shoring elements that are present in the active member can be selected. The shoring elements in the other members are displayed in the application structure, but cannot be selected.

Special case Drawings:
If the selected element is not on the active sheet of the drawing, the sheet in which the element is installed is activated. Only elements on the first level can be selected. If, for example, there are assemblies in the drawing, the shoring elements are displayed in the application structure. However, the shoring elements cannot be selected.

SAP PLM functions

The SAP Engineering Control Center provides various SAP PLM functions. The SAP Engineering Control Center Interface to Solid Edge allows access to these functions directly from the Solid Edge user interface. These functions are located in the main menu sections "Original" and "Document" and described here.



Main menu sections "Original" and "Document"

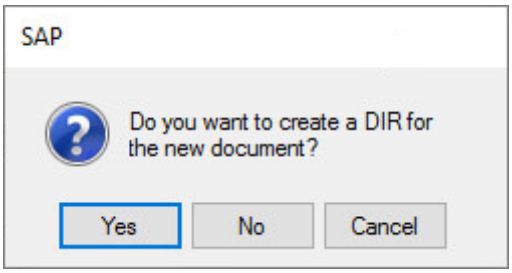
IMPORTANT:
If functions of the SAP Engineering Control Center were executed from the SAP Engineering Control Center Interface to Solid Edge, all ECTR dialogs during the execution are generally modal, i.e., access to Solid Edge is blocked until the dialog is closed. Only then can the work in Solid Edge proceed!

If a document that has a document info record (DIR) in SAP PLM, stored (checked in) in SAP PLM, meaning that the symbol appears for it in SAP Engineering Control Center, the associated document file is in principle read-only in the working directory!

New

The function "New" creates a document info record (DIR) in SAP PLM. It is either a new, blank document or a new document that takes over the contents of an existing document, created and opened in Solid Edge.

If the function "New" from Solid Edge is clicked, the following dialog appears if configured:

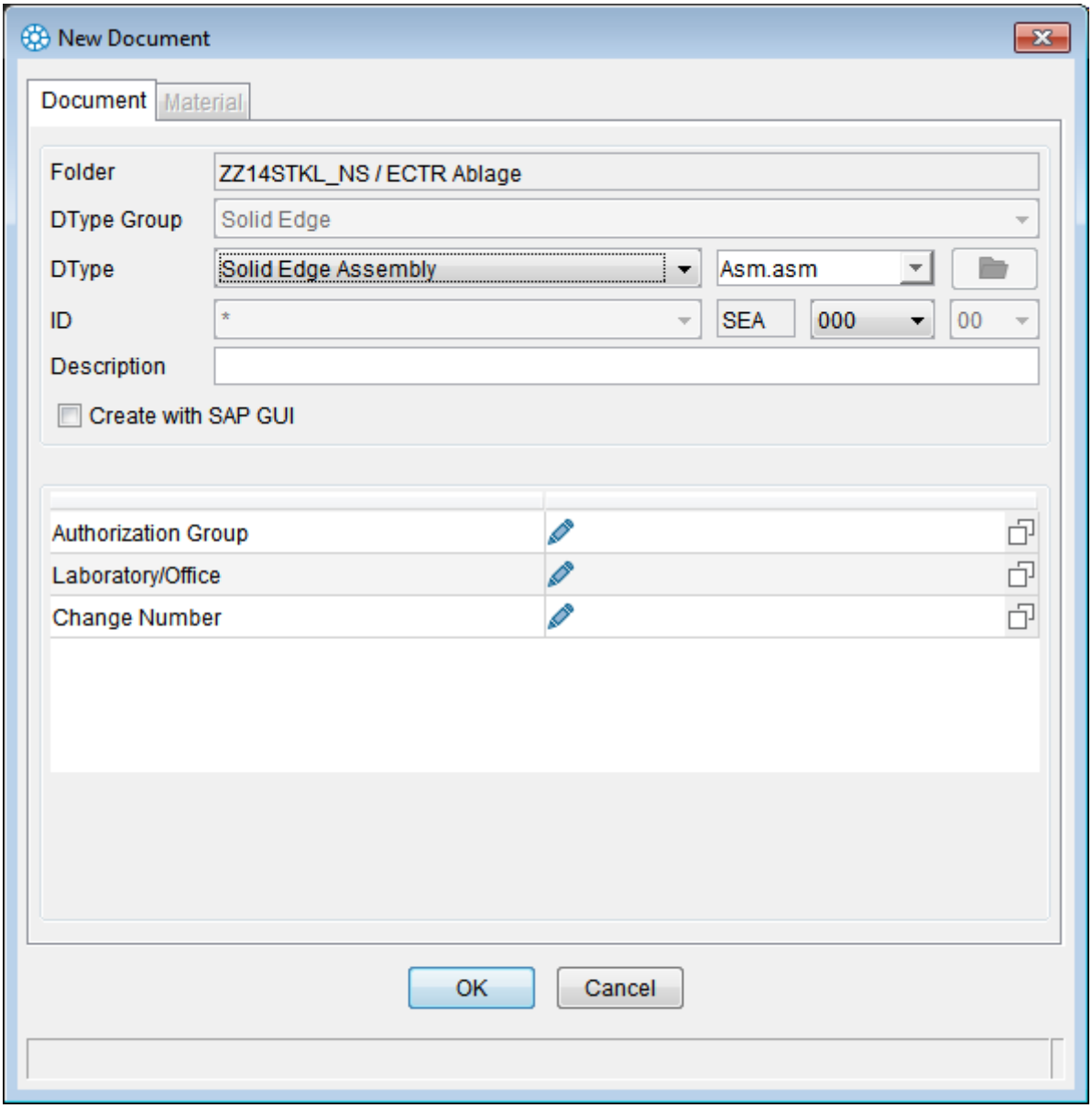


Dialog "Create DIR for new document"

If "Yes" is clicked, the ECTR dialog "*New Document*" appears and the next steps are the same as further described. If the "No" button is clicked, the Solid Edge dialog for new documents comes up.

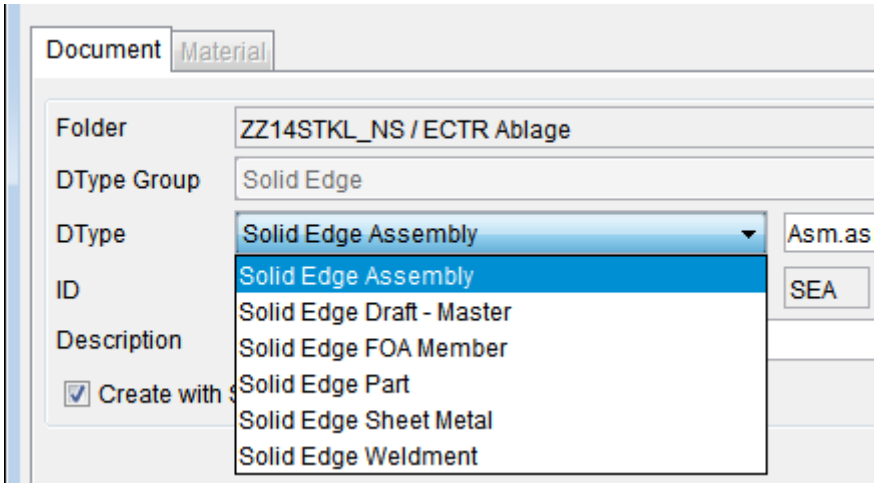
It is configurable whether the dialog comes up or not and the general behavior of the interface at this point. It exists the option "*Create DIR for new document*" in the settings for the SAP Engineering Control Center Interface to Solid Edge in the "Miscellaneous" branch.

After selecting the "New" function, the "New Document" dialog of the SAP Engineering Control Center appears.



The "New Document" ECTR dialog

The "New Document" dialog is used to select the DType to apply for any Solid Edge document type and whether a new, blank document or an existing document selected, its contents will be copied into the new document.

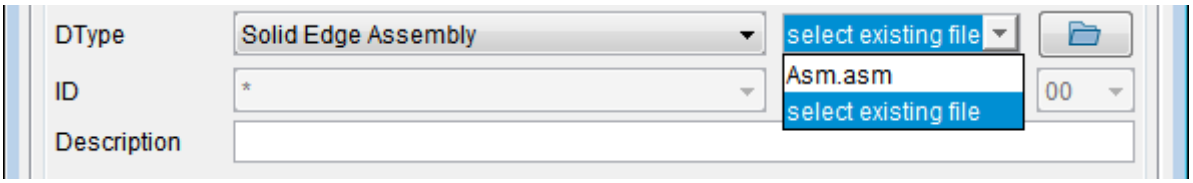


The "Create Document" ECTR dialog – DType-Choice

The newly created document is always saved in the current working directory of the SAP Engineering Control Center.

If one of the provided types is selected in the selection list, a new document of this type is generated in Solid Edge. In some cases, it is necessary to choose a template file. To do this use the now activated folder button to open a file selection dialog, a Solid Edge template file can be searched and selected whose contents are thus copied.

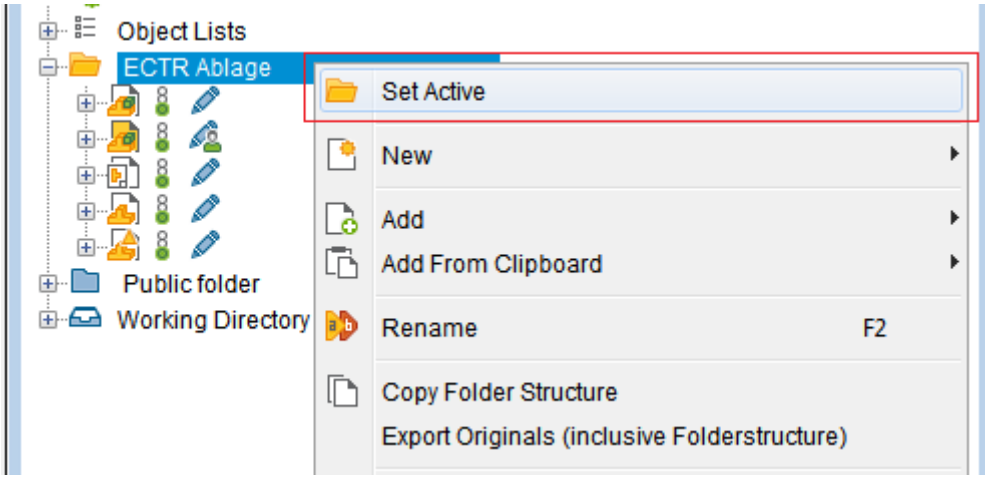
It is also possible to use an existing Solid Edge document of the selected type as template. To do this, choose "select existing partfile" in the Selection List nearby and use the now activated folder button to open a file selection dialog to select a Solid Edge document whose contents are thus copied.



The ECTR "Create Document" dialog - Selection of an existing Part

If an existing Solid Edge document is selected, in any case a copy from this file specified under "Folder" in the currently active folder with a file name generated by the ECTR and the document info record provided.

The active directory can be changed via the desktop view of SAP Engineering Control Center. In addition, the desired folder is selected in the tree view and the "Set Active" context menu command is executed (in Figure marked in red).

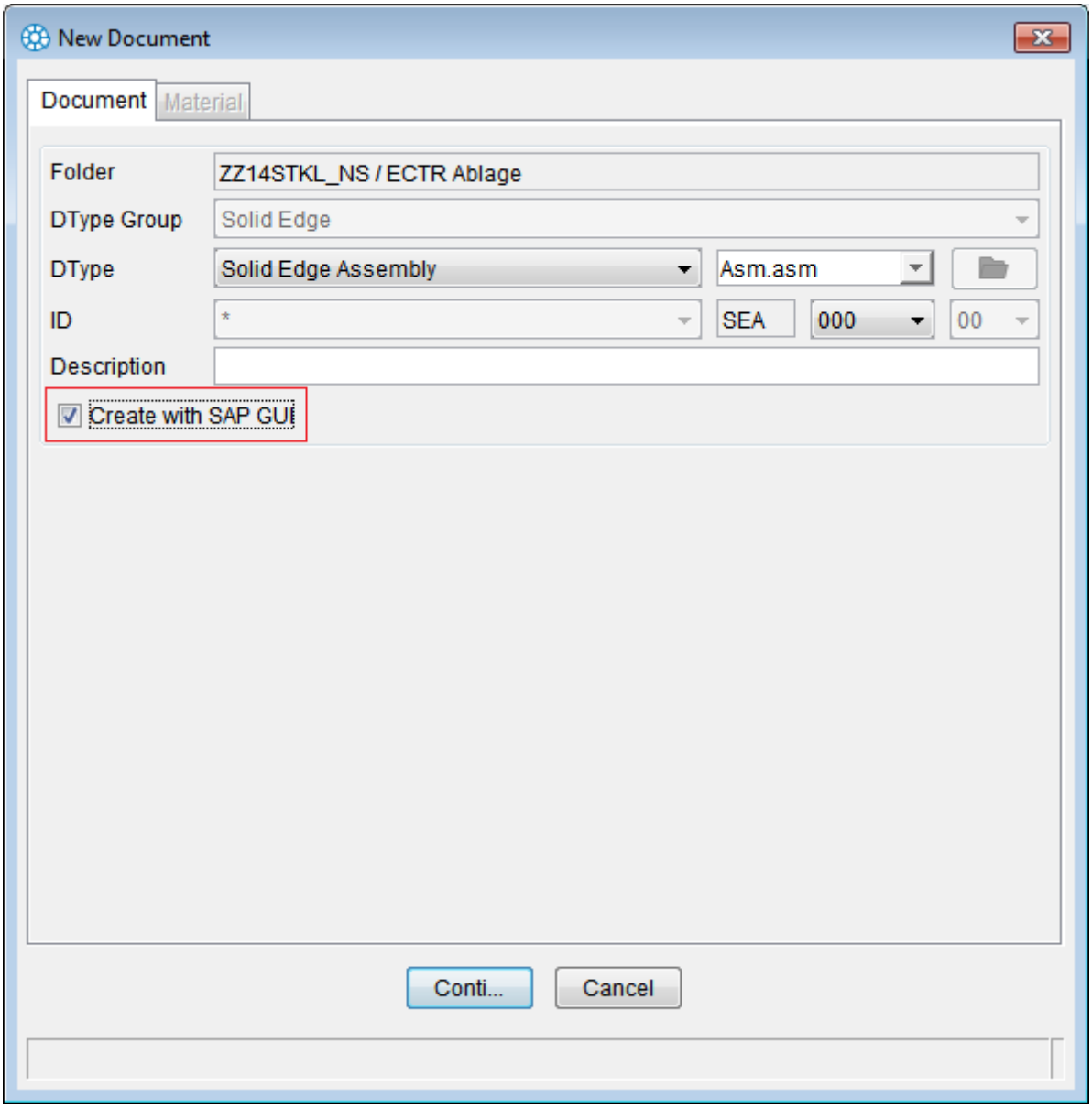


ECTR "Desktop" view – Context menu

Furthermore, all metadata must be recorded to be included in the document info record (DIR).

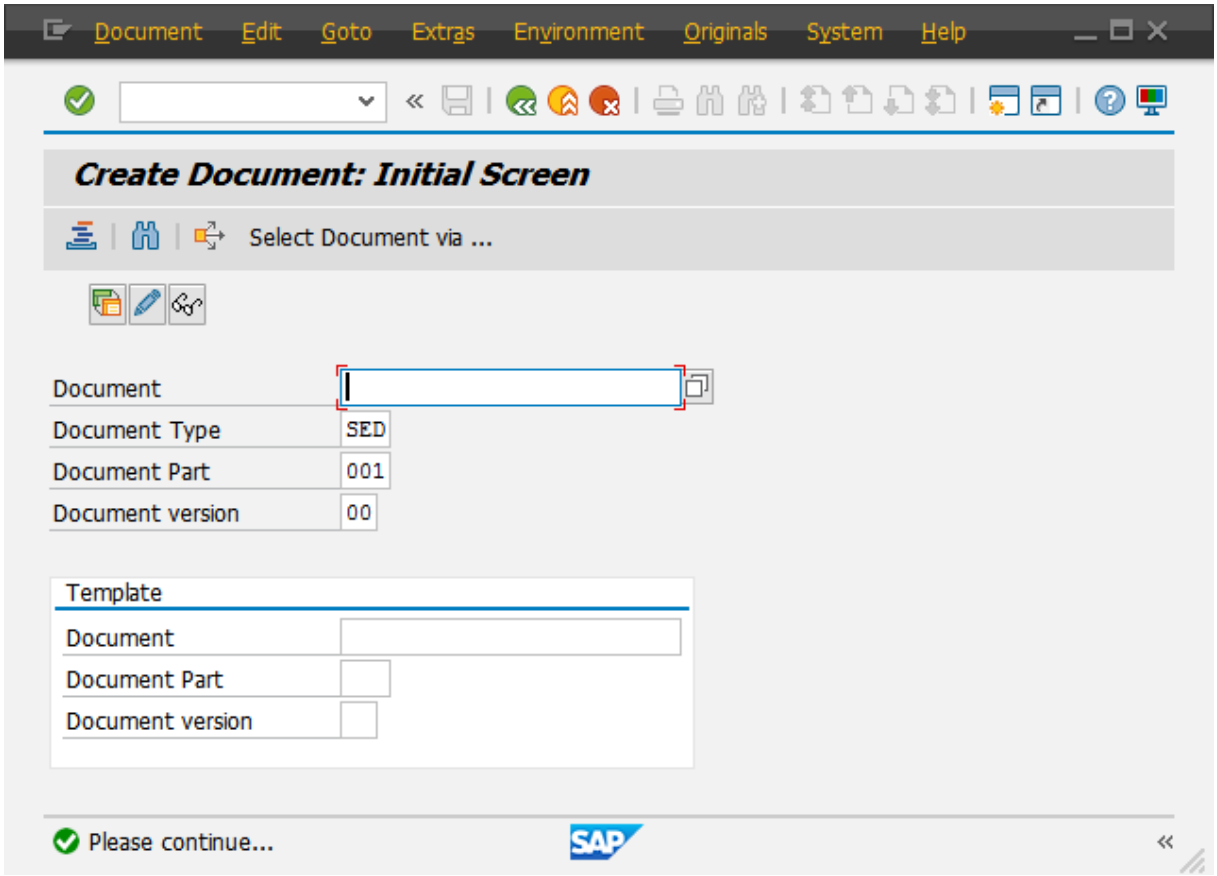
The nature and scope of the metadata for the document info record, which can or must be specified, are different for each Solid Edge document. Therefore, the "New Document" dialog for each document comprises different input options.

Alternatively, it is also possible to implement the installation of the document info record (DIR) on the SAP User Interface (SAP GUI). For this purpose, the checkbox (Figure 5.11) is used to enable "Create with SAP GUI" and the "Continue" button is selected.



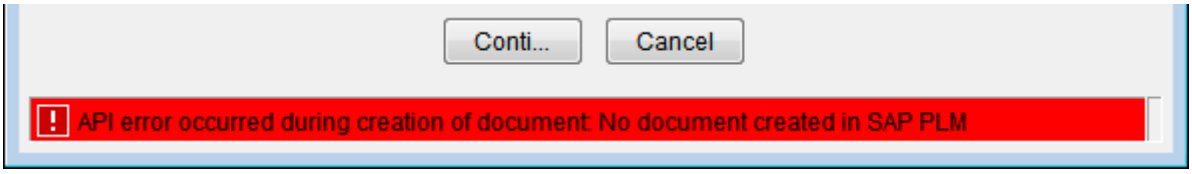
Option "Create with SAP GUI"

This will display the SAP view "Create Document View: Initial Screen", in which all the other entries are performed.



SAP GUI View "Create Document: Initial Screen"

If the process within the SAP GUI is aborted with , terminated with or navigated back with , you will find yourself back in the ECTR "New Document" dialog. A dialog then indicates with an error message that no document has been created.



ECTR "New Document" dialog - error message

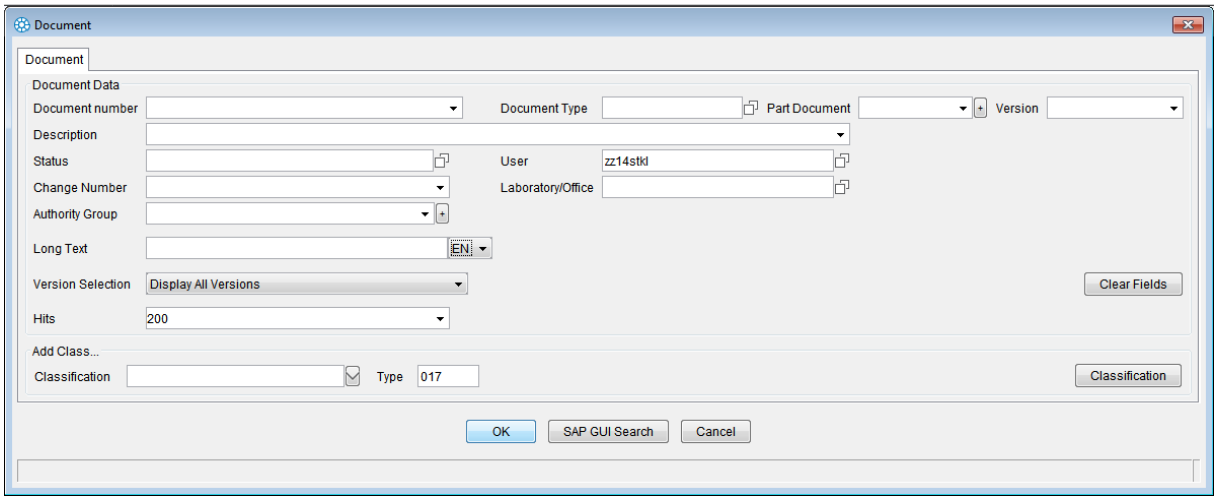
With the "Conti..." (means "Continue") button the SAP view "Create Document" is reopened; with "Cancel", the entire operation is aborted, the "New Document" dialog is closed and control is returned to Solid Edge.

Open

With the "Open " function, one or more documents in SAP PLM can be searched and opened in Solid Edge using different search criteria.

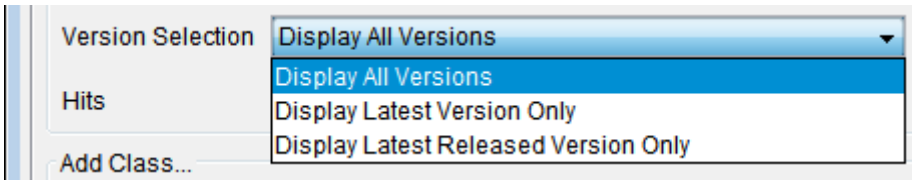
When this function is selected, the "*Document Search*" dialog of the SAP Engineering Control Center is opened.

Here, various search criteria can be entered for the search for the desired document. When entering search criteria, the wildcard "star" character ('*') is allowed, which makes it possible to specify a substring to search for.



ECTR "Document Search" dialog

Under "Version Selection" you can choose how and to what extent different versions of this document should be taken into account if multiple versions of the document exist.



ECTR "Document Search" dialog - Version selection

The following choices are available:

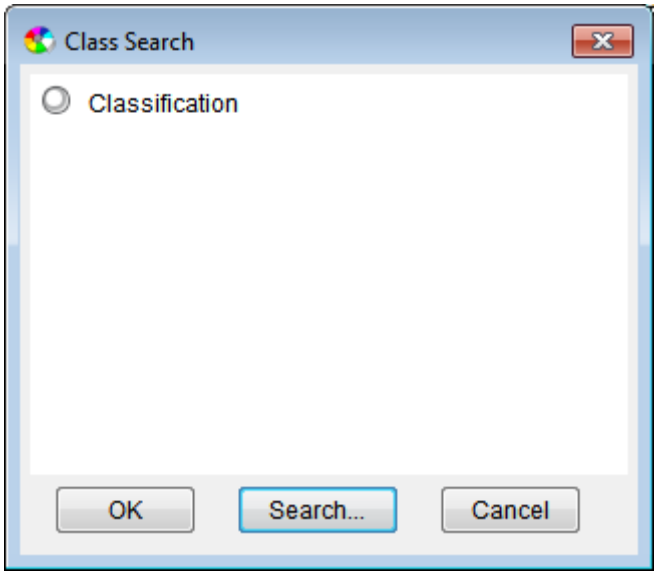
- Display all Versions
- Display Latest Version Only
- Display Latest Released Version Only

According to the selection, the corresponding versions are then presented in the results.

The "Clear Fields" button removes all existing records from the fields of the dialog.

With "Add Class ..." it is possible to select a class as a search criterion. In this way the search is restricted to the documents conforming to the criterion entered. For this purpose, the class name is entered in the "Classification" field.

It is also possible to search according to classes. These will be initiated via the Classes Search Assistant button.

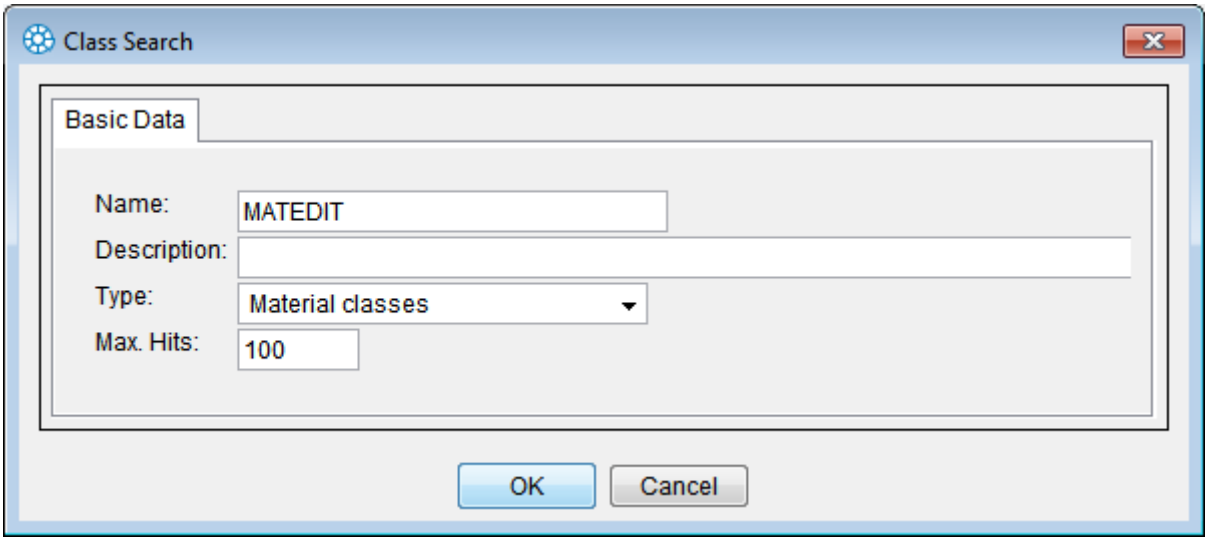


ECTR "Classification" dialog

With the "Search..." button, you get into the actual class search dialog. Here, you can specify various search criteria for the class search. In the name and description here, the wildcard character '*' is also allowed.

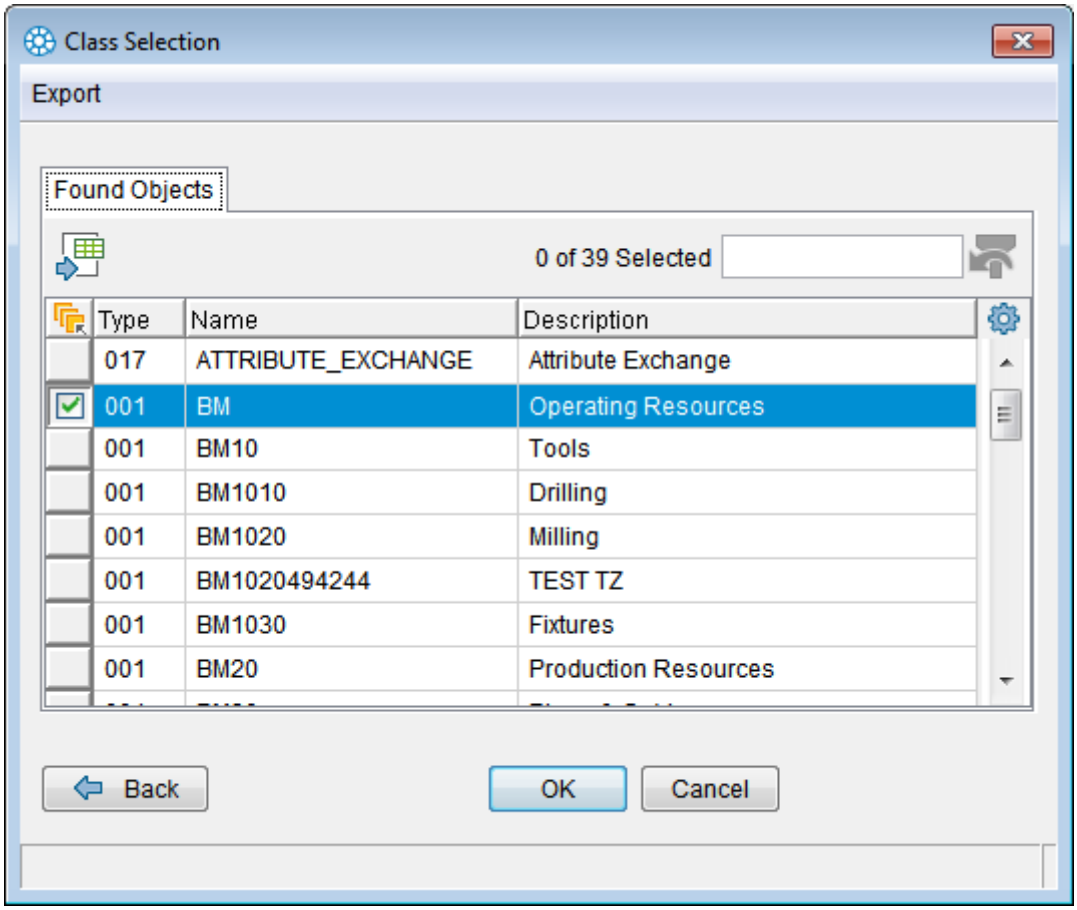
Here, if all fields are left blank, all available classes are delivered as a result.

For type, you can select from a list of available class types or "All Class Types".



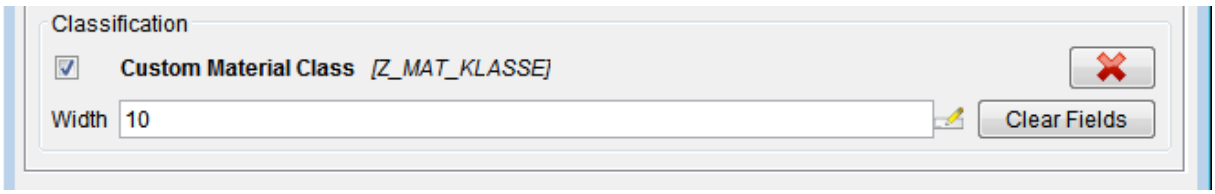
ECTR "Class Search" dialog

The result of the search class is displayed as a table. Mark the required class and press the "OK" button to accept it.



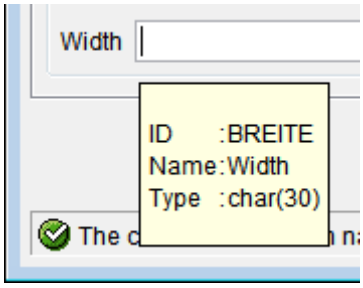
ECTR "Class Selection" dialog

If the selected class classification parameters are stored, they can be assigned a value. With the "Classification" button, it is possible to classify input parameters. Here, the values for each classification parameter can be entered.



ECTR "Document Search" dialog – Add classification data

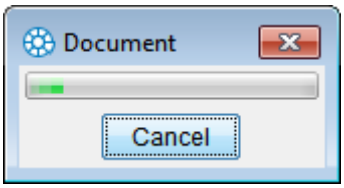
By moving the cursor over the input field of a classification parameter, a note ("tooltip") with technical data for orienting that parameter is displayed.



ECTR "Document Search" dialog – Classification data tooltip

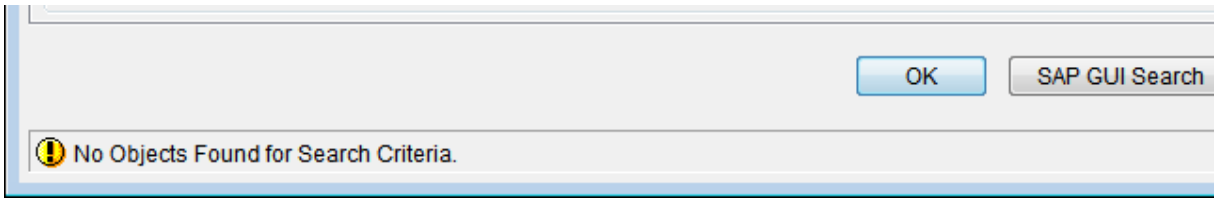
If the registered class does not store classification parameters, clicking the "Classification" button has no effect.

Once search criteria have been entered, the search is initiated with the "OK" button. It appears a dialog with progress bar.



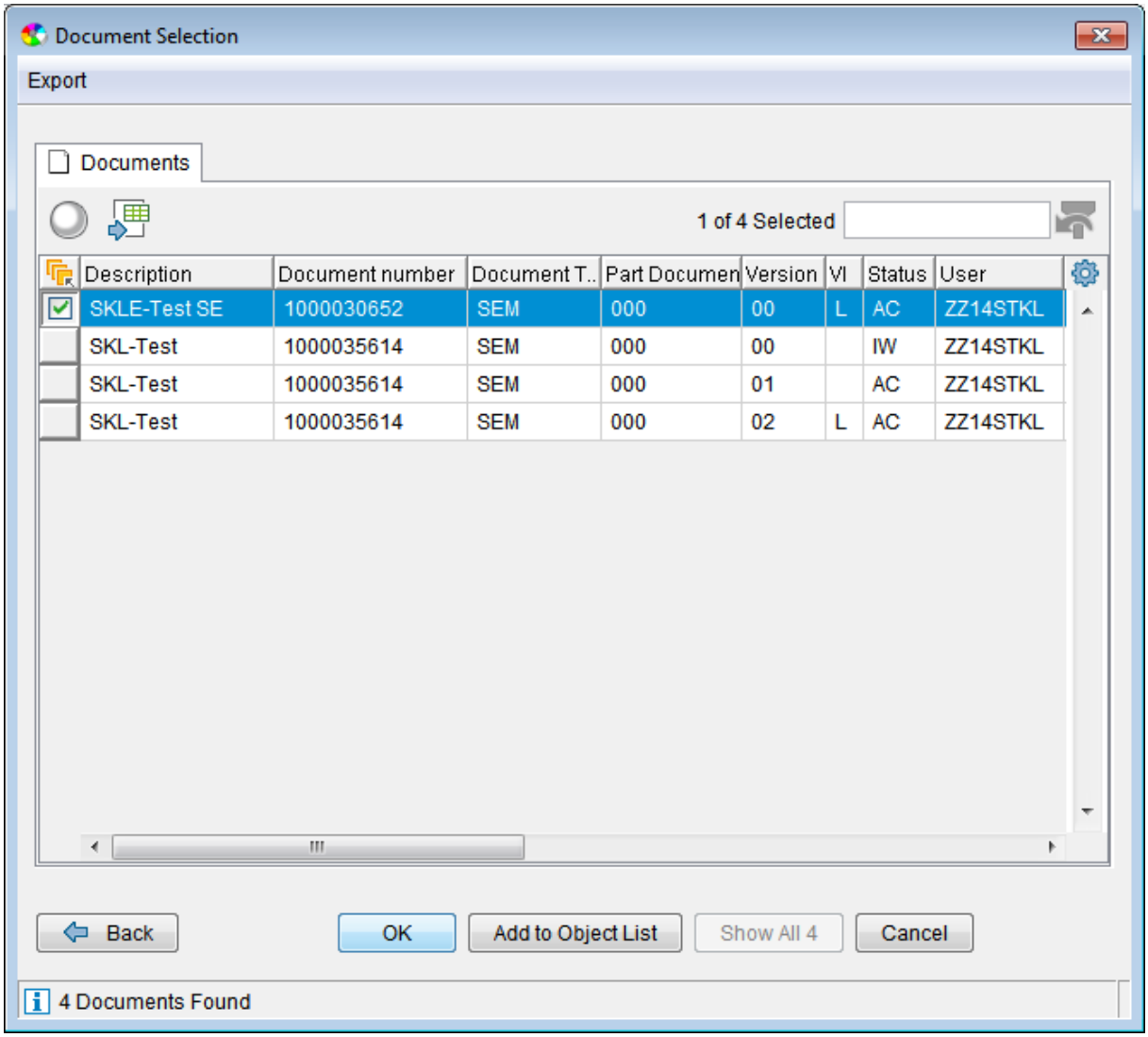
ECTR "Document Search" dialog - error message

Should a document not be found, an error message is displayed informing you that no document was found that matches the given search criteria.



ECTR "Document Search" dialog - error message

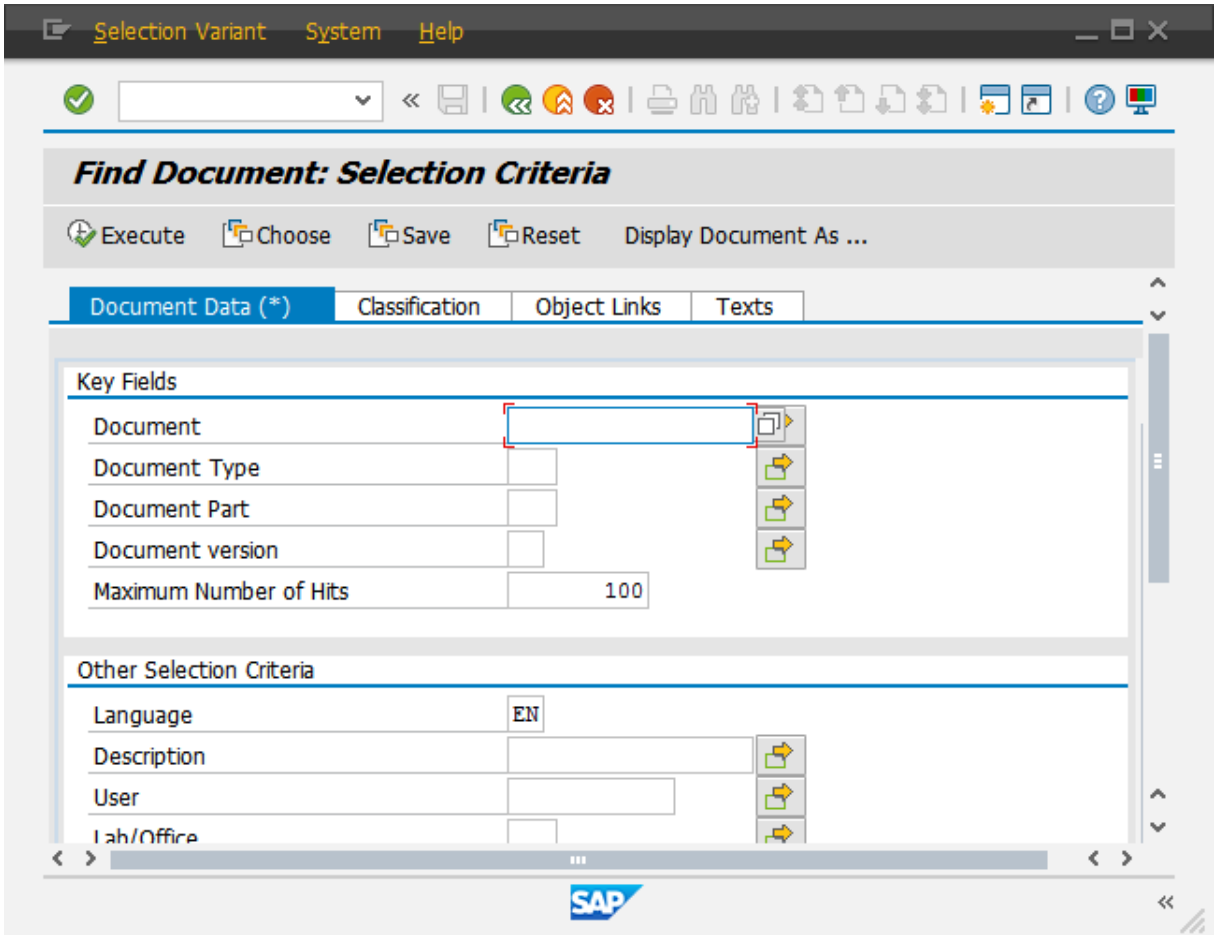
If successful, the search result is displayed as a table. There may be one or, if present, several found documents selected in this table.
If the "OK" button is pressed, the selected documents are opened automatically in Solid Edge. Should this not be possible for a document, e.g. if there is a version mismatch, an error message is displayed for this document in all other documents opened against it.



ECTR "Document Selection" dialog

If you click on the "Back" button, the entire process is aborted, all dialogs are closed and control returned to Solid Edge.

It is also possible to perform the document search entirely via the SAP GUI. For this purpose, the "SAP GUI Search" button is used in the "Document Search" dialog. If this is selected, the SAP "Search Document View: Selection Criteria" appears. Here it is possible to enter the search criteria as usual in SAP PLM, starting the search with "Run".

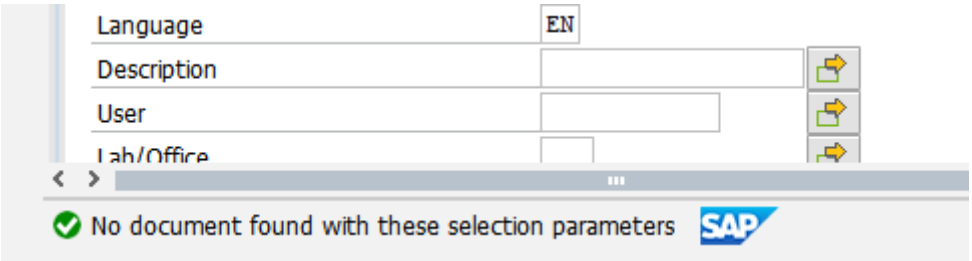


SAP GUI view "Find Document: Selection criteria"

With the "Back" (), "Exit" () and "Cancel" () buttons, the SAP view is closed, and you are taken back to the ECTR-Document Search.

When opening the SAP-Document Search by clicking on the "SAP GUI Search" button, none of the "Document Searches" or selected search criteria already registered in the ECTR dialog will be copied! This must therefore be entirely entered manually in the SAP-View fields.

If no search hits are achieved, this will be signaled through an error message in the SAP-View.

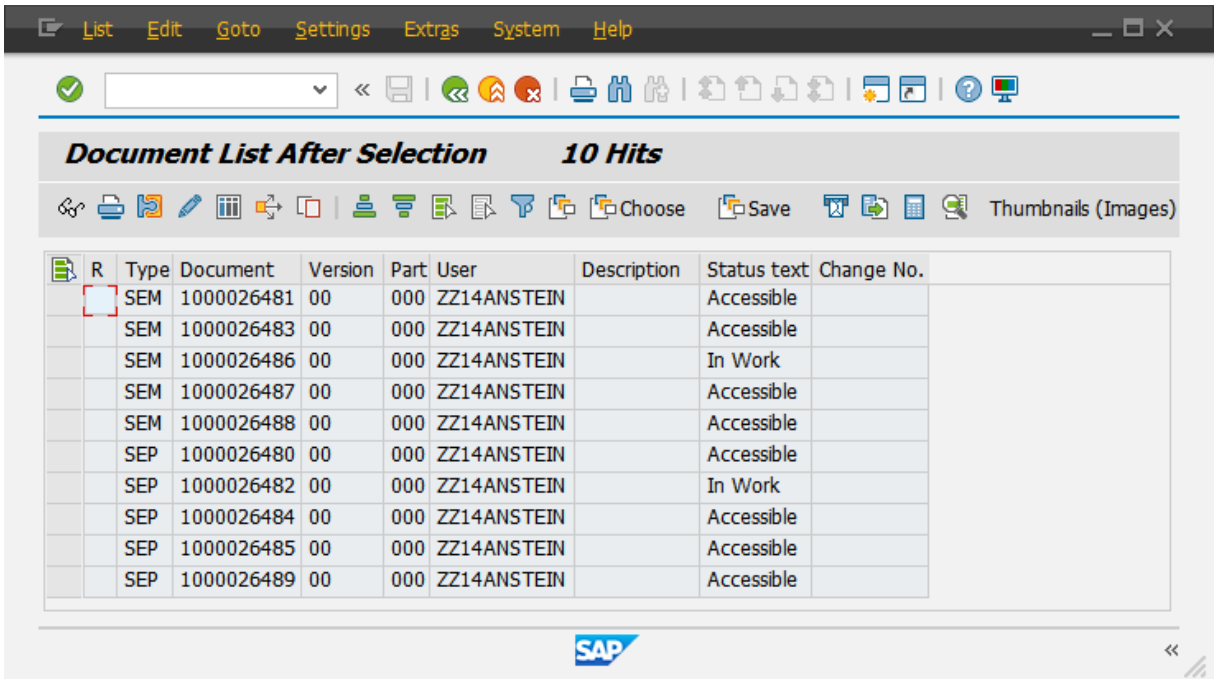


SAP GUI view "Search Document: Selection criteria" - error message

However, if the search on the SAP GUI was successful, the retrieved documents are displayed as a table.

A document registered here can be selected and opened with a double click in Solid Edge. Should this not be

possible, e.g. if there is a version conflict, an error message is displayed.
In both cases, the entire process is aborted, all dialogs are closed and control is returned to Solid Edge.



R	Type	Document	Version	Part	User	Description	Status text	Change No.
	SEM	1000026481	00	000	ZZ14ANSTEIN		Accessible	
	SEM	1000026483	00	000	ZZ14ANSTEIN		Accessible	
	SEM	1000026486	00	000	ZZ14ANSTEIN		In Work	
	SEM	1000026487	00	000	ZZ14ANSTEIN		Accessible	
	SEM	1000026488	00	000	ZZ14ANSTEIN		Accessible	
	SEP	1000026480	00	000	ZZ14ANSTEIN		Accessible	
	SEP	1000026482	00	000	ZZ14ANSTEIN		In Work	
	SEP	1000026484	00	000	ZZ14ANSTEIN		Accessible	
	SEP	1000026485	00	000	ZZ14ANSTEIN		Accessible	
	SEP	1000026489	00	000	ZZ14ANSTEIN		Accessible	

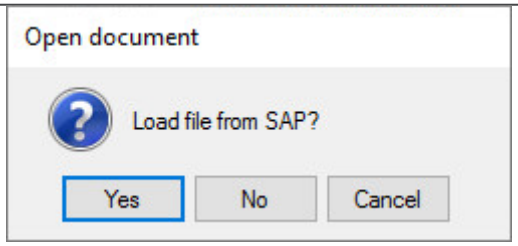
SAP GUI view "Document List After Selection"

Although multiple documents can be selected, only one of them can be opened by double-clicking in Solid Edge!

Open (Solid Edge)

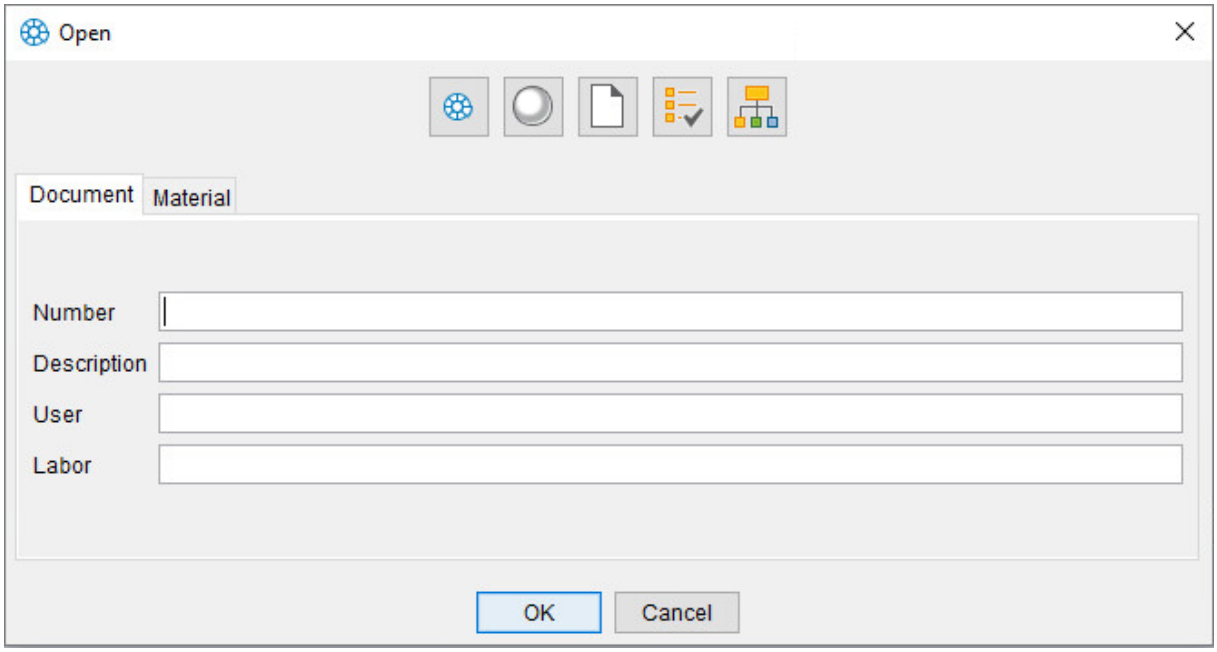
When the Solid Edge function "Open" is invoked, the SAP Engineering Control Center Interface to Solid Edge offers the option to directly load a document from SAP. Depending on the configuration of the interface, the following dialog may appear:

It is configurable whether the dialog comes up or not and the general behavior of the interface at this point. It exists the option "*Load document from SAP when clicked 'Open'?*" in the settings for the SAP Engineering Control Center Interface to Solid Edge in the "Miscellaneous" branch.



"Open document" dialog

When "Yes" is selected, the SAP Engineering Control Center's "*Open*" dialogue appears:



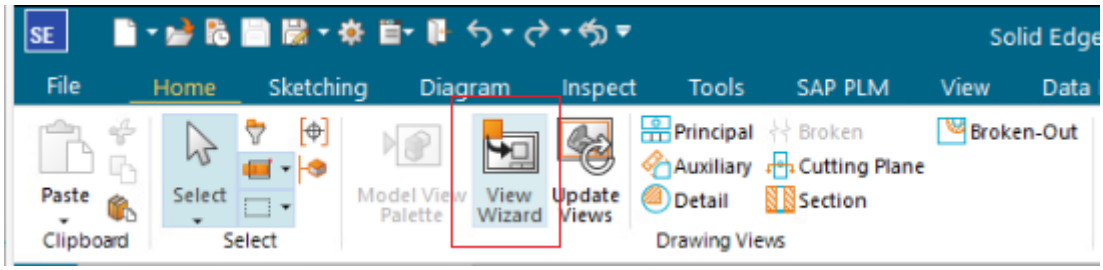
ECTR dialogue "Open"

With this dialogue, the document to be loaded from SAP can be chosen. When the "No" button is clicked, the Solid Edge dialogue "*Open*" opens. Here, a document to be opened can be chosen locally. The "Cancel" button cancels the entire process.

Open from SAP through the insertion of a component

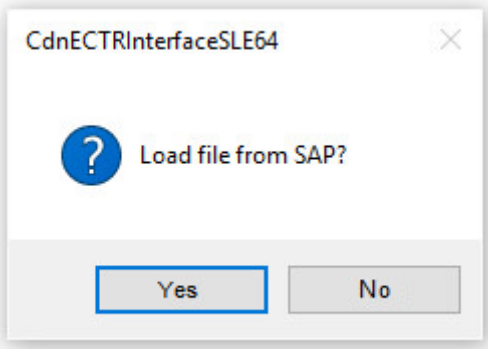
Components can be inserted into an open drawing in Solid Edge in several different ways:

- With Drag & Drop from the SAP Engineering Control Center into a drawing already opened in Solid Edge
- Using the *View Wizard* provided by Solid Edge
- With the function Add Component



Choosing the "View Wizard" of Solid Edge

If you intend to insert a component that is not already open in Solid Edge, the SAP Engineering Control Center Interface to Solid Edge provides the ability to select a component in the SAP PLM and paste it into the currently opened document. This opens a dialog that offers this possibility:



Dialog "Load file from SAP?"

With the "*Load file from SAP?*" dialog, you can now select whether to insert the component to be loaded as a file from SAP PLM or from a local file. If confirmed with the "Yes" button, the "*Part Selection*" dialog of the SAP Engineering Control Center is displayed, with which the component can be selected. If, however, the answer is "No", or the ECTR "*Part Selection*" dialog is aborted, the normal Solid Edge "*Choose Model*" dialog appears, by which a document can be opened from a local disk.

Save

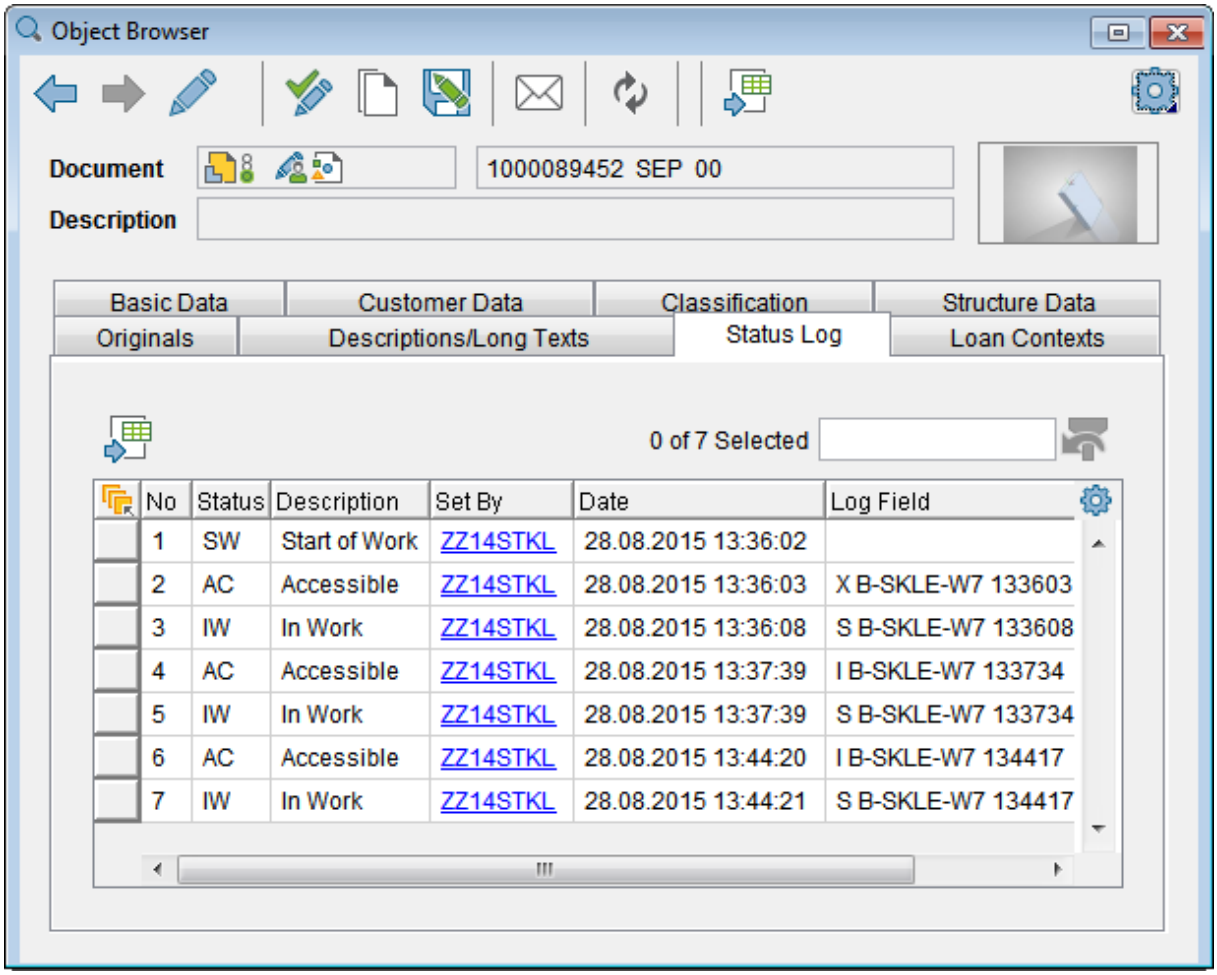
If a document has a document info record (DIR) that has been taken into work (checked out), opened and edited in Solid Edge, it should be saved at regular intervals. This can only be accomplished using the "Save" command in Solid Edge if the document is saved as only locally on the hard disk or in the currently active working directory, but not updated in SAP PLM.
A caching, which updates the document in SAP PLM, provides the "Save" function of the SAP Engineering Control Center, which can easily be accessed from Solid Edge via the SAP Engineering Control Center Interface to Solid Edge.

The following steps are implemented in this way:

1. The document is stored locally on the hard disk or in the currently active working directory. As a result, the created document file is updated.
2. The document will be stored in SAP PLM (checked in).
3. The document from SAP PLM is immediately put back into operation (checked out), so that further processing can be continued in Solid Edge.

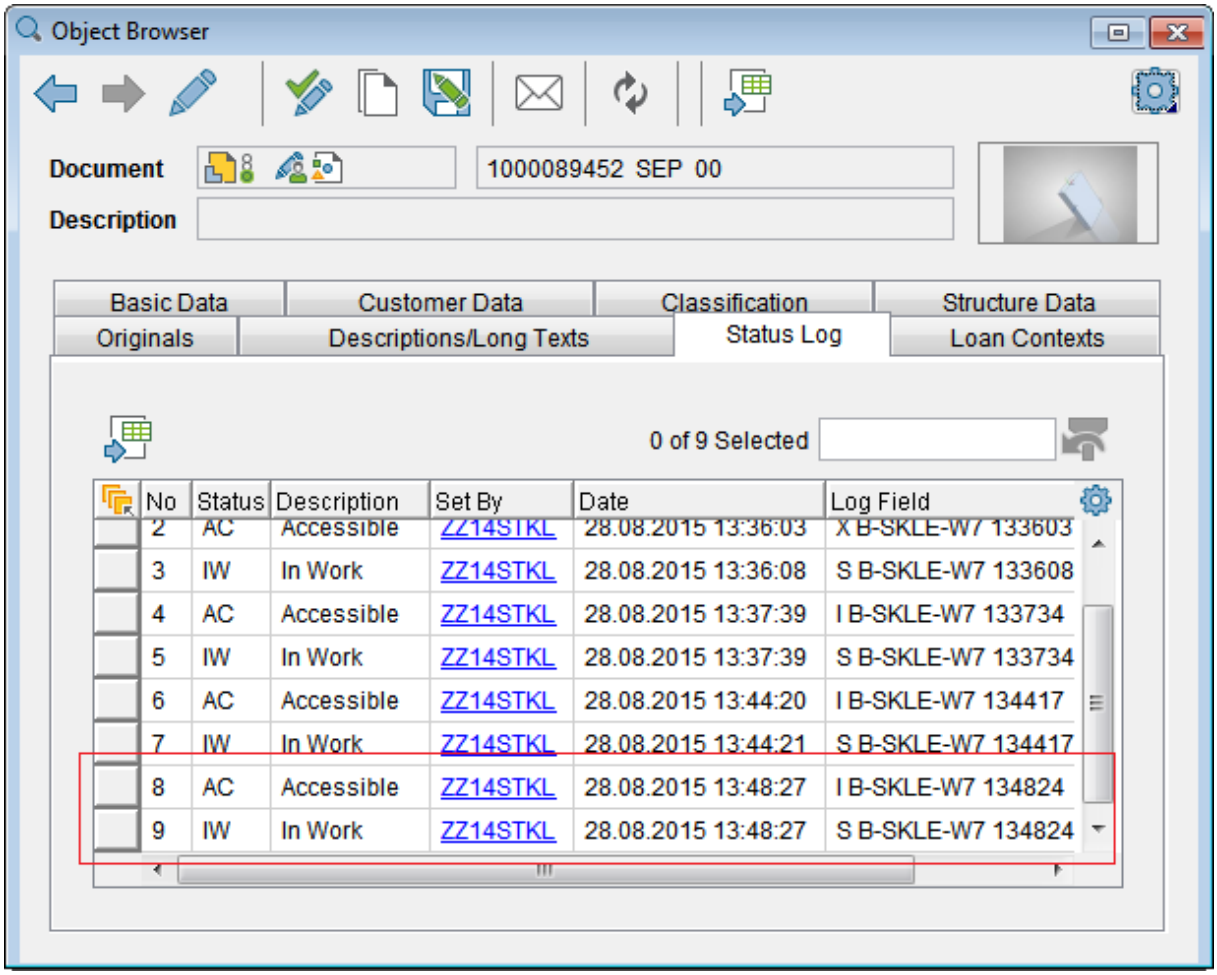
The effect of this function is visible in the browser of the SAP Engineering Control Center, to which two entries have been added in the status log of the document stored in the object, that record that the document is stored in its SAP PLM (checked in status "AC") and has been immediately taken for processing (status "IW" checked).

The state before executing the function "Save" is shown in the figure:



ECTR Object Browser before executing "Save" function

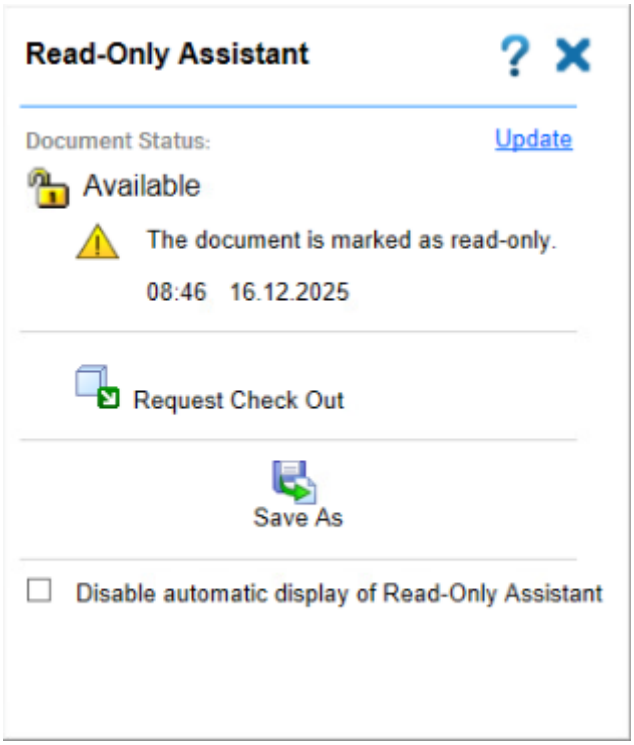
In the figure below, the new status after the end of the command can be seen (see red marking):



ECTR Object Browser after executing "Save" function

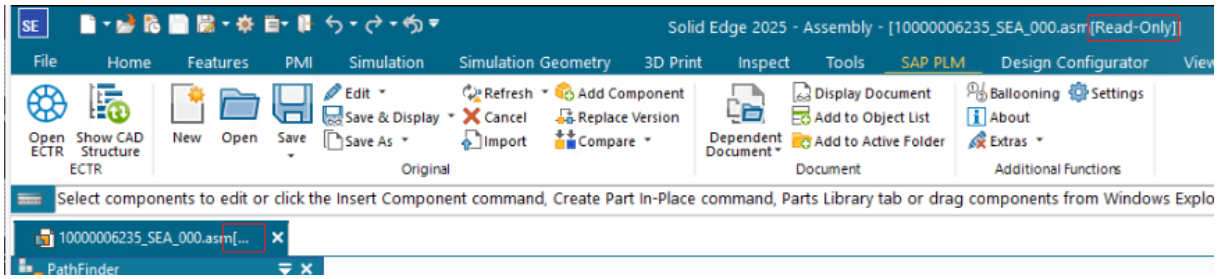
Edit

To edit a document stored in SAP PLM (checked in), it must be taken into editing (check out). Since all SAP Engineering Control Center document files stored in SAP PLM (symbol) are documented with write protection. When you open such a document in Solid Edge you will see the "Read-Only Assistant" to inform that a write access is not possible for the document to be opened and that it can only be opened for read access:



Solid Edge "Read-Only Assistent" dialog

A document opened with write protection will be marked in Solid Edge with the suffix "[Read-Only]" after the file name at the top of the window:

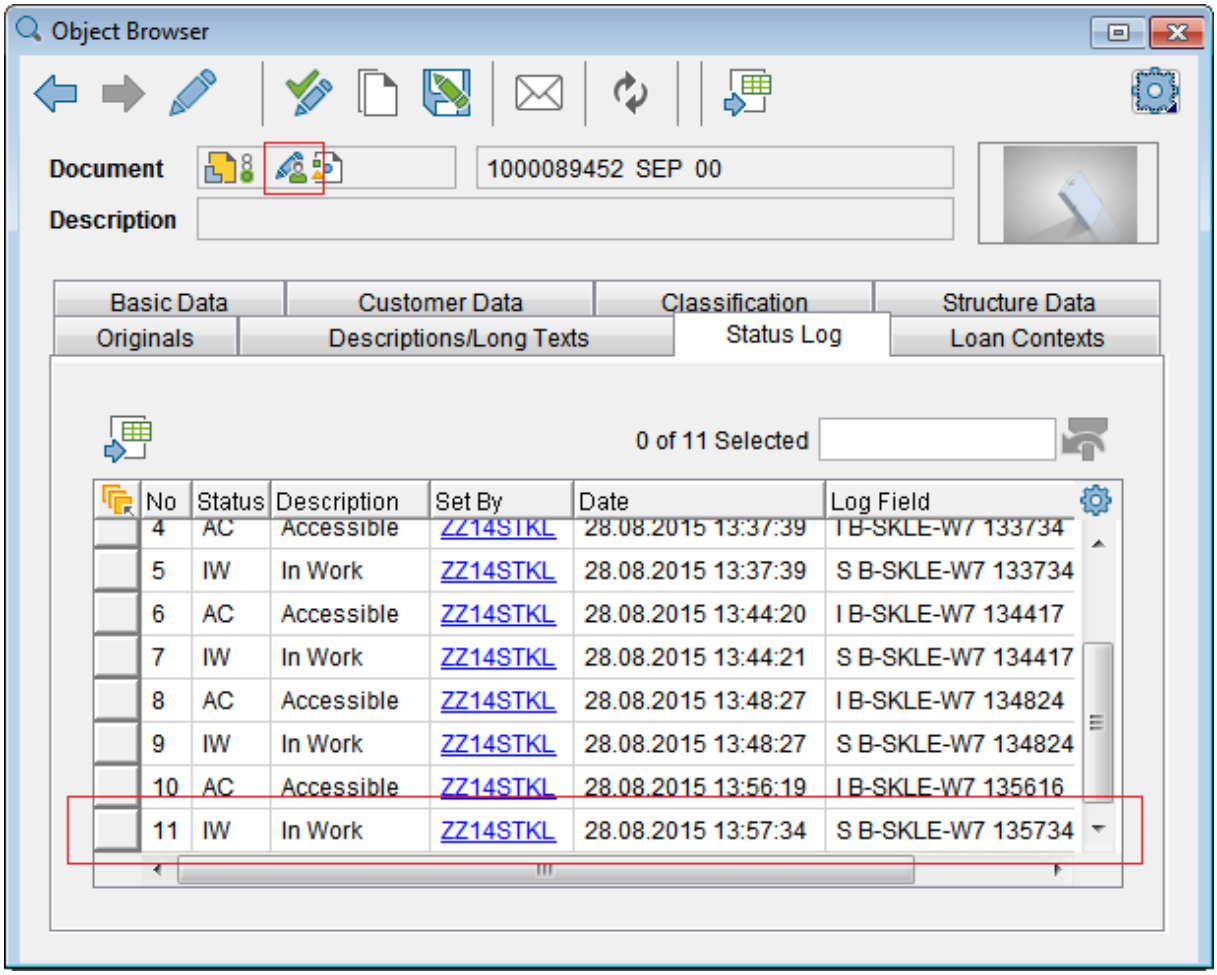


Read-only flag in Solid Edge

The write protection thus functions in this context as an indication that the document has been saved in SAP PLM (checked in).

The presence of write protection **does not mean** that the open document cannot be edited and changed. However, to be edited, it must be saved under a new name in a new file. It is thus an altered copy of the existing document that is stored.

To take in (check out) a stored in SAP PLM document for processing, the SAP Engineering Control Center Interface to Solid Edge uses the "Edit " function. This ensures that the document for the editing user for editing is thus checked out and the write protection for the original file in the current working directory is removed. This is indicated by the symbol for the required document in SAP Engineering Control Center, whose status is set to "IW". (See red markers in the figure).



ECTR "Object Browser" view after executing "Edit" function

Now it is possible to perform editing work, to open the model document in Solid Edge and make changes.
If the work is terminated, either the intermediate state can be saved and stored in SAP PLM (see Save) to be able to continue working immediately, or the document can be saved and stored permanently in SAP PLM (checked in) (see Save and Display).

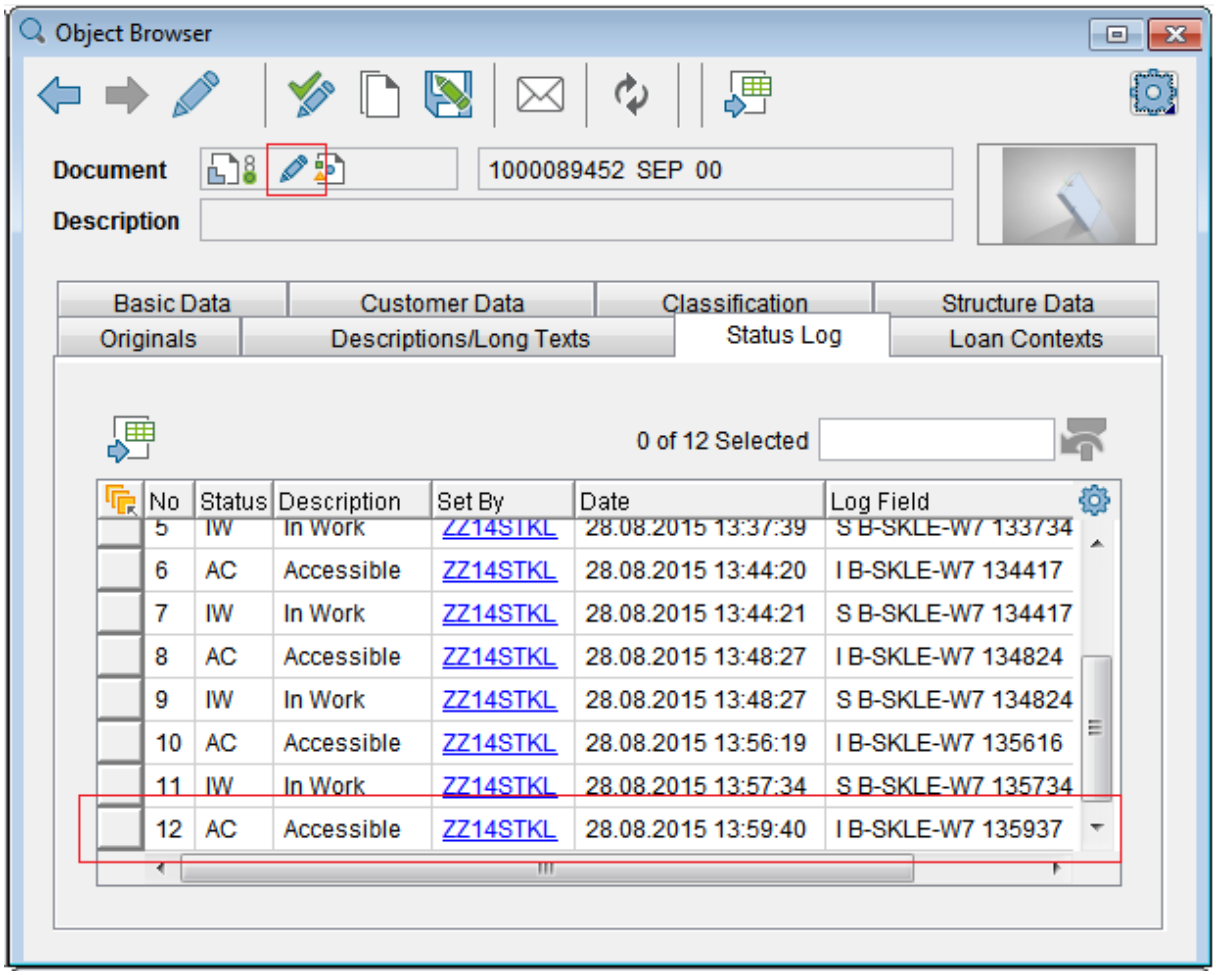
Save and Display

If a document has a document info record (DIR) has been taken into work (checked out) and is opened and edited in Solid Edge, it must after completion of the work on this document again be stored in SAP PLM (checked in).
This takes care of the "Save and Display " of the SAP Engineering Control Center, which can easily be accessed from Solid Edge via the SAP Engineering Control Center Interface to Solid Edge.

The following steps are implemented in this way:

1. The document is stored locally on the hard disk or in the currently active working directory. As a result, the created document file is updated.
2. The document is then stored (checked in) in SAP PLM and the document info record updated.

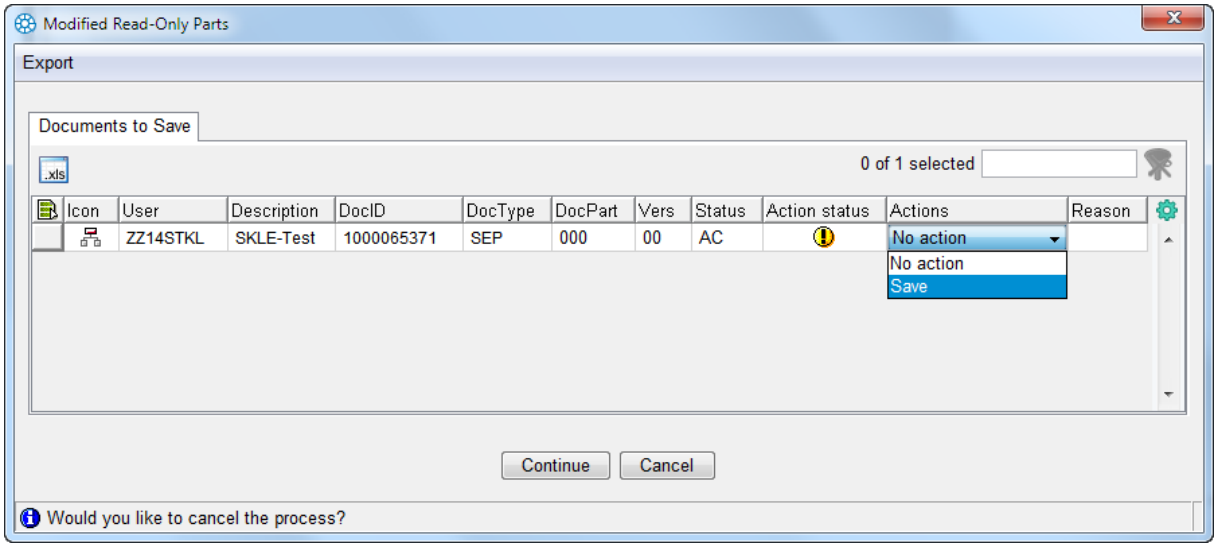
The effect of this function in SAP Engineering Control Center can be recognized by the symbol for the document in question as well as the new status "AC – Accessible" (in the status log of the stored document in the Object Browser of the ECTR, see red marks in figure).



ECTR "Object Browser" view after executing "Save & Display"

In addition, the write-protect of the document file is set so that in the file name in Solid Edge the words "[Read-Only]" appear and editing without further action is no longer possible.

A document which is stored in SAP PLM (checked in) and write protected can be opened and edited in Solid Edge - and it can be checked in. In this case, the dialog "Modified read-only parts" appears in the SAP Engineering Control Center (see figure below).



ECTR dialog "Modified write protected parts"

If here in the list box "Save" is selected, the following actions are triggered:

1. Document will be checked out.
2. Document file will be saved.
3. Document will be stored in SAP (checked in).

If, instead of the list box selected "no action" and then the button "Continue" is pressed or closed the dialogue on "Cancel" or the Close button, the procedure is completely canceled and returned control back to Solid Edge.

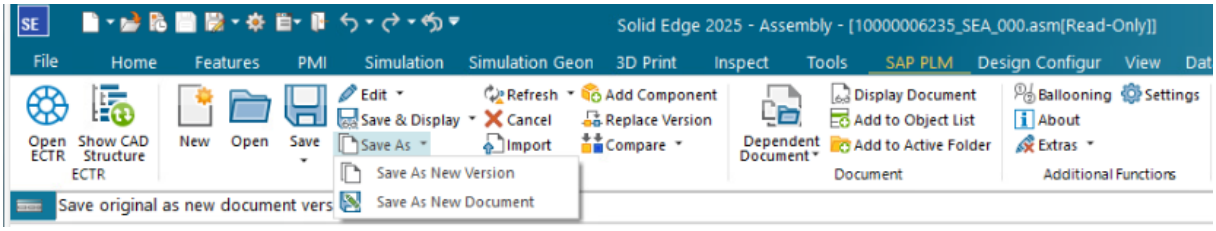
It should be avoided in any case, to make changes to a stored in SAP PLM and therefore read-only document in Solid Edge! Instead, a document should check out via the function Edit prior to processing.

Save As

In addition to saving and depositing a processed (checked out) document in SAP PLM, which is the most commonly used method to store documents in SAP PLM and which is used for the function "Save & Display ", there are other methods to store documents in SAP PLM:

- A document can be saved as a new version
- A document can be saved as a new document

The submenu "Save As " is found in the SAP PLM main menu. It contains the functions "Save as New Version " and "Save as New Document ". These offer the above-mentioned functionality.

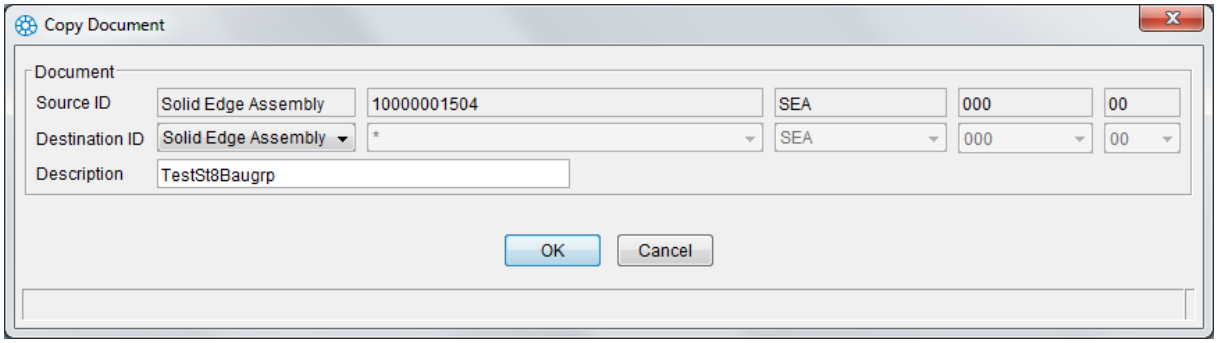


Submenu "Save As" in SAP PLM-Toolbar

Save As New Document

The function "Save as New Document" creates a copy of the current document opened in Solid Edge, and saves it under a new name. Finally, this new document will be saved in SAP PLM.

If this function is applied to a document open in Solid Edge, the ECTR dialog "*Copy Document*" will appear, and in this dialog, the target and description of the document copy can be chosen or changed. Finally, the action must be confirmed with the "OK" button.



ECTR "Copy Document" dialog

If instead, the process is cancelled with the "Cancel" button or the close button, the control will be returned again to Solid Edge.

If the function was completed successfully, the originally opened document which was being processed will now be closed in Solid Edge. The new document will be saved in SAP PLM and opened in Solid Edge. The newly saved document appears in the ECTR view "*Desktop*".

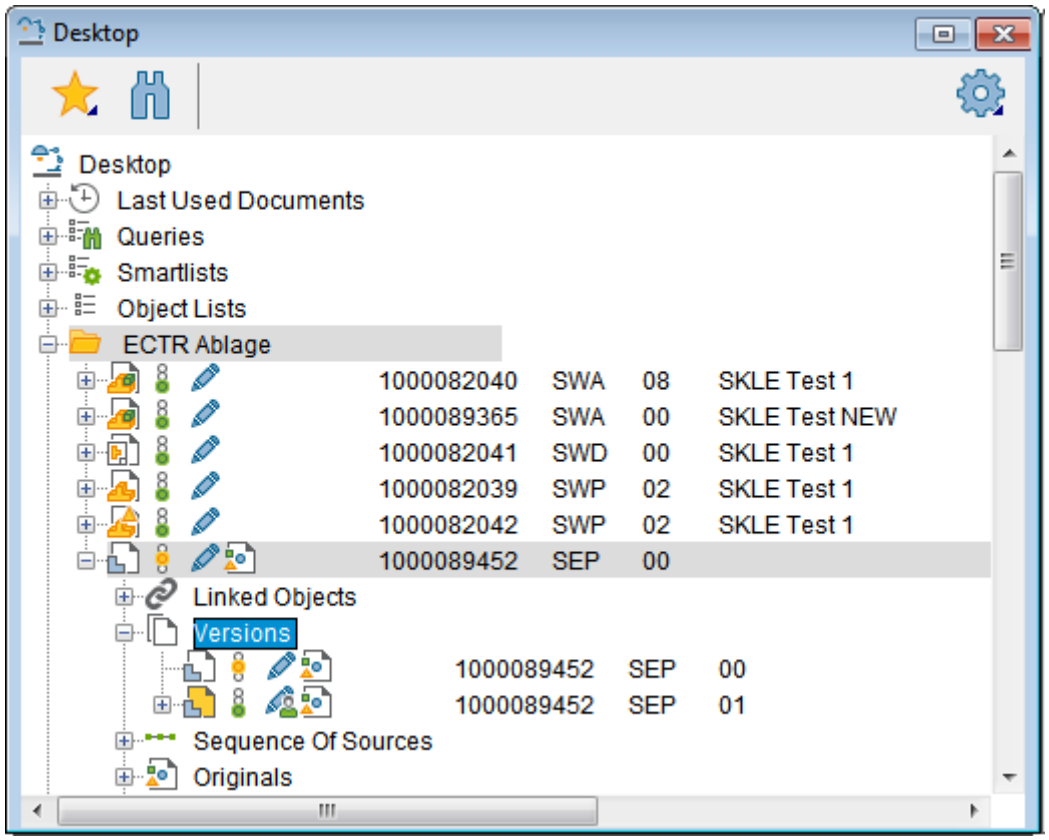
If the function "Save as New Document" is run on a document which does not yet have a document information record (DIR), an error message appears and the action will be cancelled.

ATTENTION:
If this function is applied to a document that contains documents that have not yet been managed within its structure, that is, does not have a DIR, a copy of the DIR is created in the SAP **but is not yet saved with the CAD original!**
Any new sub-documents can then applied to the copy of the assembly in SAP by executing the "**Import**" function.

Save As New Version

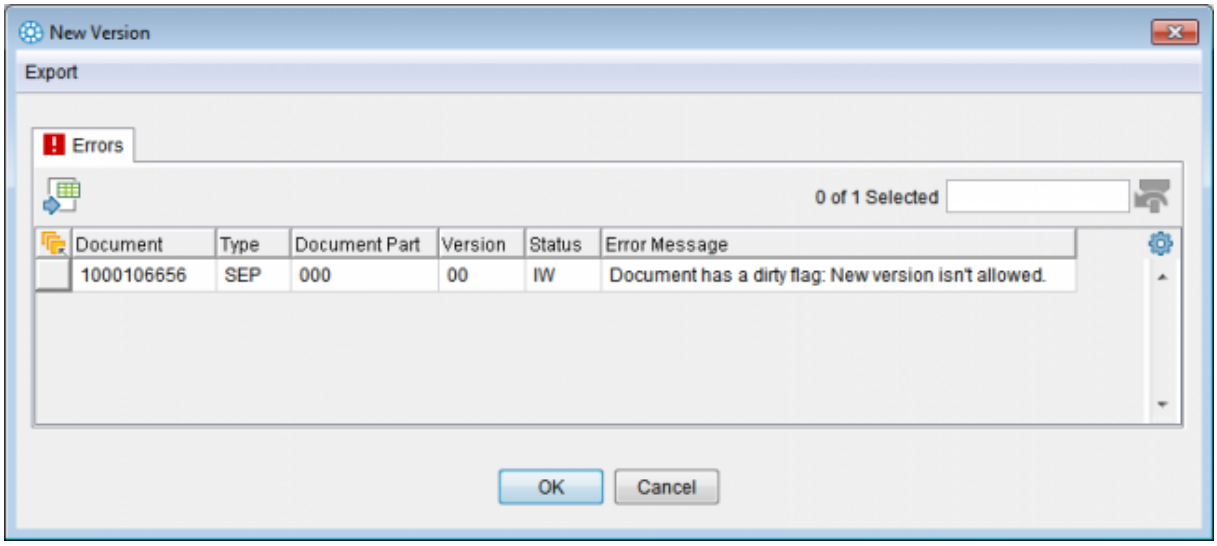
A document can exist in different versions. Different versions of a document are distinguished in SAP PLM with a version number.

When saving a document using the function "Save as New Version" the version number of the SAP Engineering Control Center is incremented. How this is done can be configured on the ECTR side.
If a new version is created for a document associated with other documents (a master document), all linked documents (non-master documents) are also automatically versioned, which means that will be created and saved with this new versions. The versions of a document appear in the ECTR view "Desktop" in the tree below the node "Versions".



ECTR view "Desktop" with versions

When a new version has been created successfully, the most recent changes are incorporated into this version, i.e., there is now a new document with the new version number, which contains these changes. This is now stored in SAP PLM.
If there is an error during the process or a condition is violated, perhaps because the status of the previously applied version or the original document does not allow versioning, a dialog will appear which shows this and explains the detailed reasons for the failure.



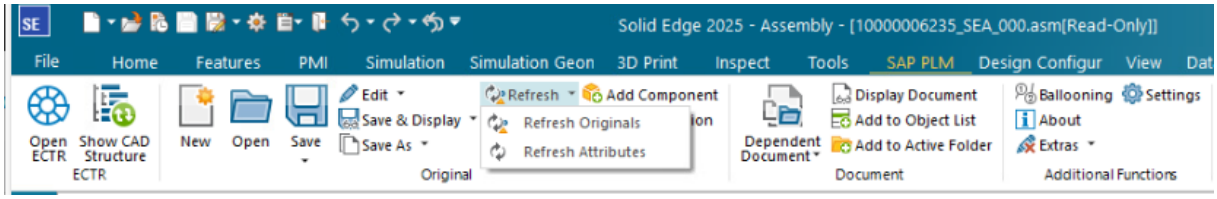
ECTR "Create New Version" error message

If the versioning was successful, the status of the originally open document which was being processed is now returned (the saving will be reversed). This is similar to the process described for the function Cancel . The new version appears in the ECTR view "Desktop" under the node "Versions".

Refresh

The functions to update the open documents in Solid Edge with current information from SAP PLM can be found in the submenu "*Refresh* ".

The submenu "*Refresh* ", which can be found in the SAP PLM main menu, contains two functions for this purpose: "*Refresh Originals* " and "*Refresh Attributes* ", which offer these options.



Submenu "Refresh" in the SAP PLM Toolbar

Refresh Originals

The function "Refresh Originals " updates the current file that is open in Solid Edge and all of its linked components and their documents to the current SAP PLM status if the current SAP PLM status of this document is newer as the document in the working directory. If this happens, the current files will be replaced in the working directory with the version from SAP. Otherwise, the function will be ignored.

Caution!
Due to the overwriting of all documents in the working directory with the SAP versions, all changes will be lost!

Refresh Attributes

Documents that have already been checked-in to SAP - and therefore have a document info record (DIR) - already have various information, including the DIR itself. This can be for example the document description, the material information or the content of the title block of a drawing. The DIR itself contains diverse meta-data (for example document status) which describe the document and are necessary for the maintenance in SAP.

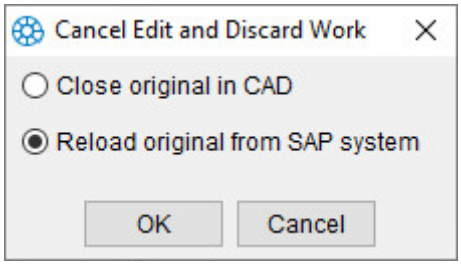
This information and the attributes of a document are refreshed automatically via the SAP-PLM functions of the SAP Engineering Control Center Interface to Solid Edge.
But it can also happen that an attribute of a currently in Solid Edge opened document has been changed in SAP PLM without the user using a function in the SAP Engineering Control Center Interface to Solid Edge. Please user the "Refresh Attributes " function to make sure all opened documents have the same information as SAP.

Cancel

If a document was opened for processing (checked out), e.g. via the "Edit" function of SAP Engineering Control Center Interface to Solid Edge (see Edit) and edited, it can be saved using the function "Save and Display" and stored in SAP PLM (checked in) (see Save and Display).

There may be situations where it is useful to return the document being processed (checked out) to the prior state and to discard all changes made since then.
The function "Cancel " is provided for this case. In this case, the current document is returned to the prior state before processing (checkout) and all changes are discarded. Thus, this procedure represents a rollback.

After executing this function, the state of the document in SAP PLM is back in the state that it was before processing (checkout), and the document is closed in Solid Edge.



"Cancel Edit and Discard Work" dialog

The message does not appear when the "Cancel " function has been called for the top component or directly in the Application Structure view of the ECTR!

The status in SAP PLM is changed from "IW – In Work" ( ) to "AC – Accessible" ( ).

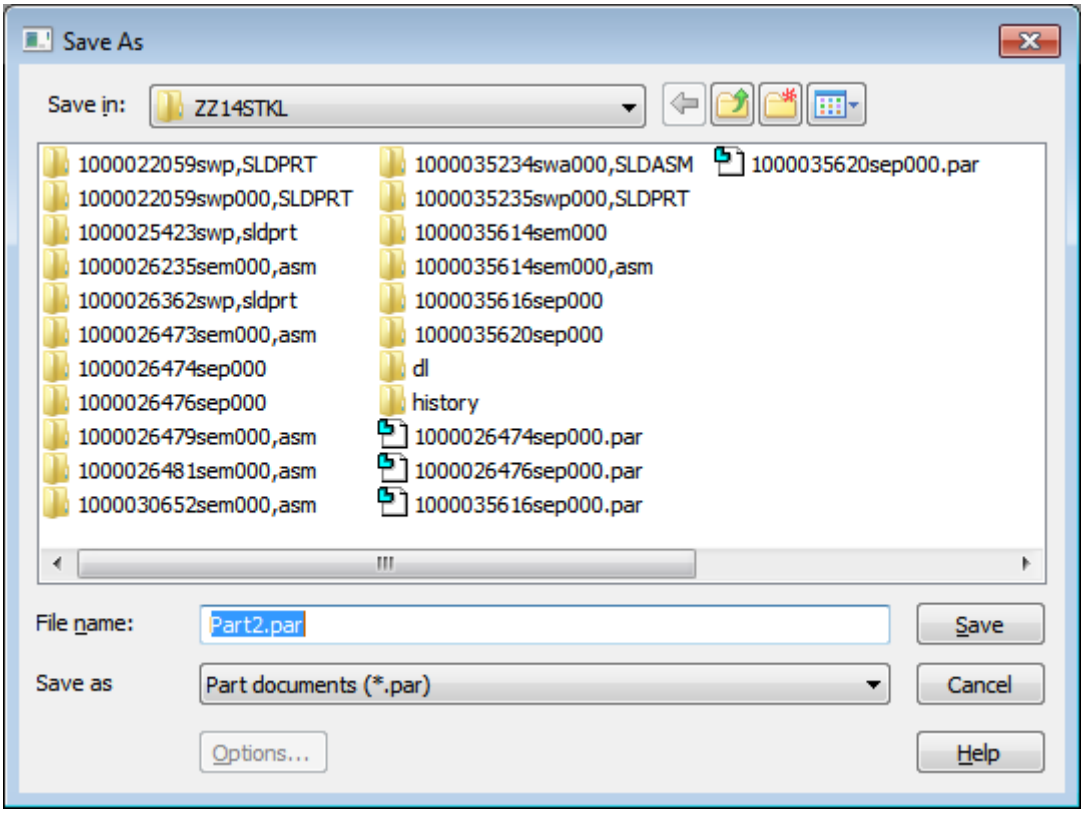
ATTENTION!
This function should be used with extreme caution, since all changes to the document since the last opening for processing (checkout) will be undone and thus irretrievably lost! **This process cannot be undone and there is no backup copy of the discarded changes!**

Import

Use the command "Import " to create one or more documents and import the associated originals from Solid Edge to SAP.

With the "New" function, a new blank document is produced and a document info record (DIR) is created in SAP PLM for it. This also applies to single existing documents (see New). However, in order to create a document info record for all structures such as assemblies and drawings which consist of several sub-documents, the "Import" function should be used because it can process any number of documents in one go.

If the master document is not saved, i.e. there is no document file on the disk, you are prompted to save it first, and a Solid Edge "*Save As*" dialog opens.



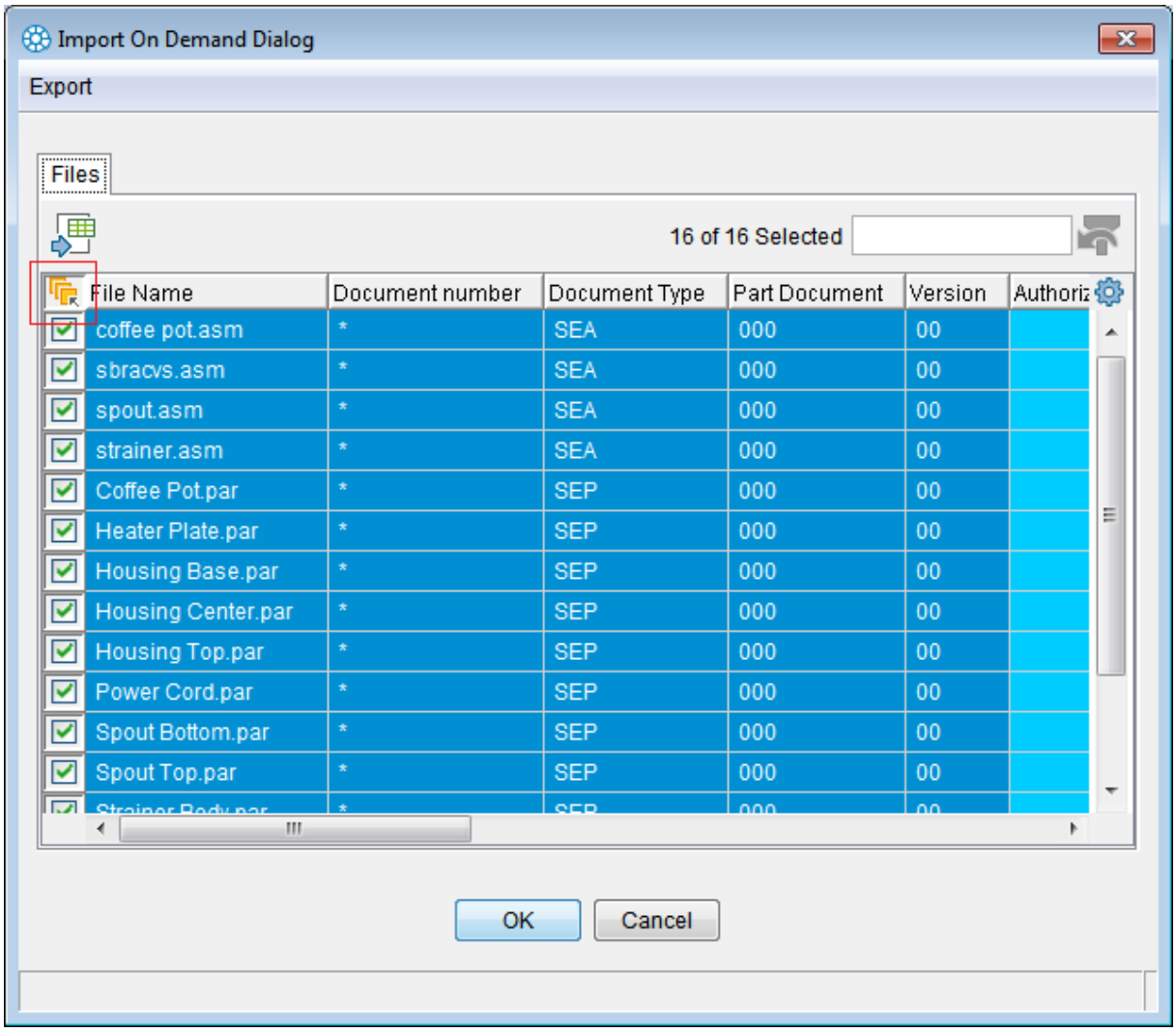
Solid Edge "Save As" dialog

If this dialog is ended with "Cancel", the whole process will be terminated and control will be returned to Solid Edge.

If the document is saved, the SAP Engineering Control Center will display a table of all documents which are to be saved in a document info record (DIR). The documents to be imported should be marked in this table with the checkboxes!

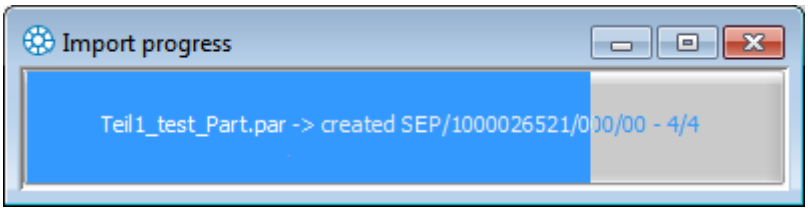
IMPORTANT!
It is essential to ensure that **all** documents listed in the table in the dialog "Import On Demand Dialog" are marked, especially when it comes to assemblies or drawings, since all listed documents belong to the assembly or drawing. **If even one of the documents is not checked, the master document will become inconsistent in SAP PLM!**

The safest way is to mark all table entries using the button shown (marked in red in figure).



ECTR "Import On Demand Dialog" dialog

If this dialog is closed with "Cancel", the whole process is cancelled and control will be returned to Solid Edge. If you click "OK" after marking all documents to import, a progress bar appears to show that the import is being conducted.

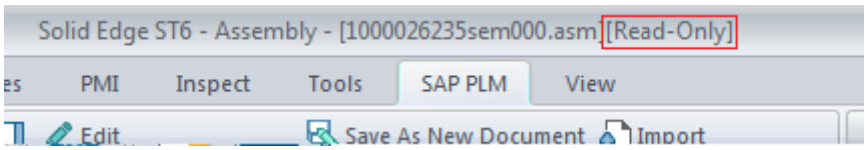


ECTR progress display "Import progress"

At this point, all important documents have a document information record (DIR), are saved in SAP PLM, and are marked with the status "SW – Start Working."

Internal references must be adjusted for imported assemblies and drawings, with the result that the master document open in Solid Edge must be changed, and thus becomes "Dirty"! The dirty flag is therefore set for this file, even though the document was set during the import process from the SAP Engineering Control Center to "Read-Only" (see figure, marked in red).
Therefore, a rebuild must now definitely be carried out!

Finally, the function Save and Display must be running in order for the master document to be saved with the changed references and stored in SAP PLM!

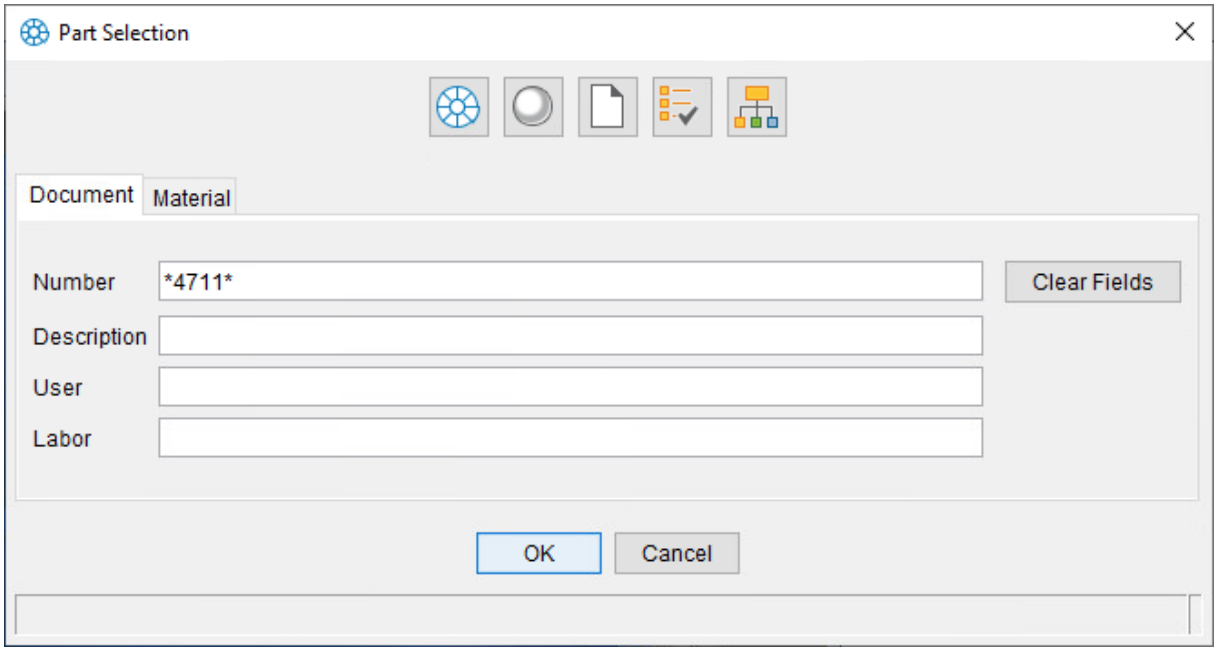


Read-Only flag in Solid Edge

IMPORTANT!
■ A top-document has to be checked out before an import of a new part can be processed. If not, the import will be aborted! Furthermore neither of the involved components must read-only!
■ Note that the function "Import" in the SAP ECTR ribbon in the CAD system allows only a simple upload of CAD files into the SAP system. When you use this function, a Document Info Record is created and the CAD files are attached as original. Do not use this function to handle offline collaboration scenarios (send/receive CAD files to/from externals) or initial data imports during migration projects.

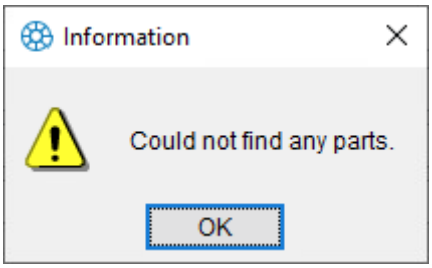
Add Component

Components can be inserted into an open assembly or drawing in Solid Edge in several ways. If you intend to insert a component that is not already open in Solid Edge, the SAP Engineering Control Center Interface to Solid Edge provides the ability to select a component in the SAP PLM and paste it into the currently opened document. The "Add Component" function opens the dialog "*Part Selection*" of the SAP Engineering Control Center that offers the possibility to select a document.



ECTR "Part Selection" dialog

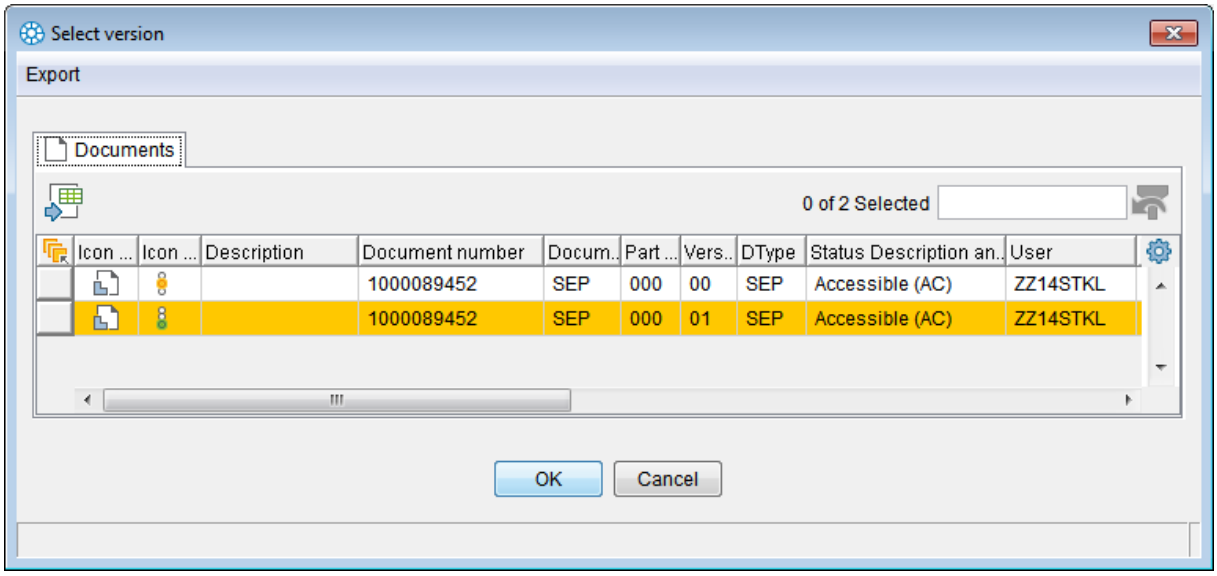
If the selected component is found in the SAP PLM, it will be inserted into the actually opened model. If the specified component in the SAP PLM cannot be found, an error message is displayed and the entire process is aborted.



ECTR "Could not find part" error message

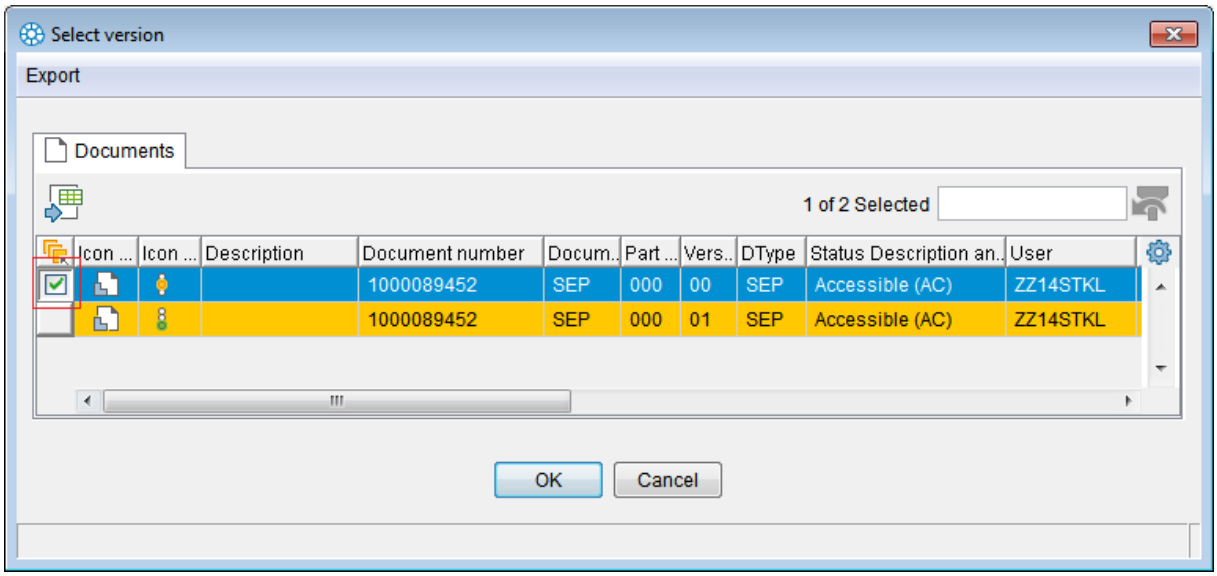
Replace Version

The "Replace Version " function enables the user to replace a document - which is currently open in Solid Edge - in the working directory with a different version, as long multiple versions are available in SAP PLM.
For this, the ECTR dialog "*Select version*" will appear, and a version can be chosen. The actual version is marked yellow:



ECTR dialog "Select version"

Choose a version by clicking the box on the left margin to mark your choice (see the red mark in figure).



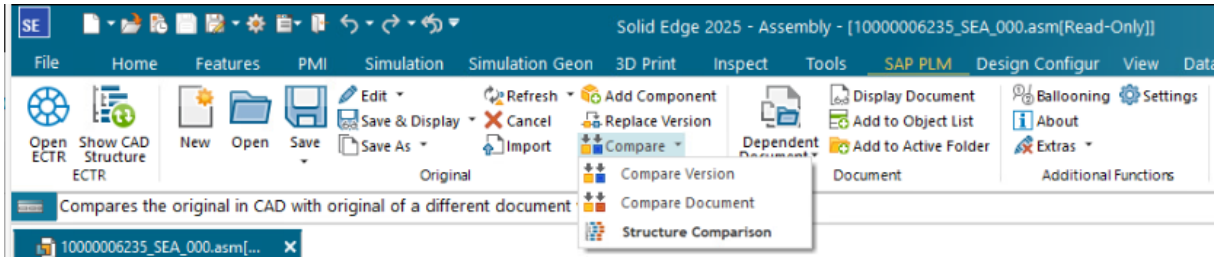
New version chosen in ECTR dialog "Select version"

The actually opened version now will be replaced by the chosen one.

The document can't be in-work! If the document is in-work and error message will be displayed.

Compare

For comparison of documents, the submenu "Compare" is available in the toolbar:



Submenu "Compare"

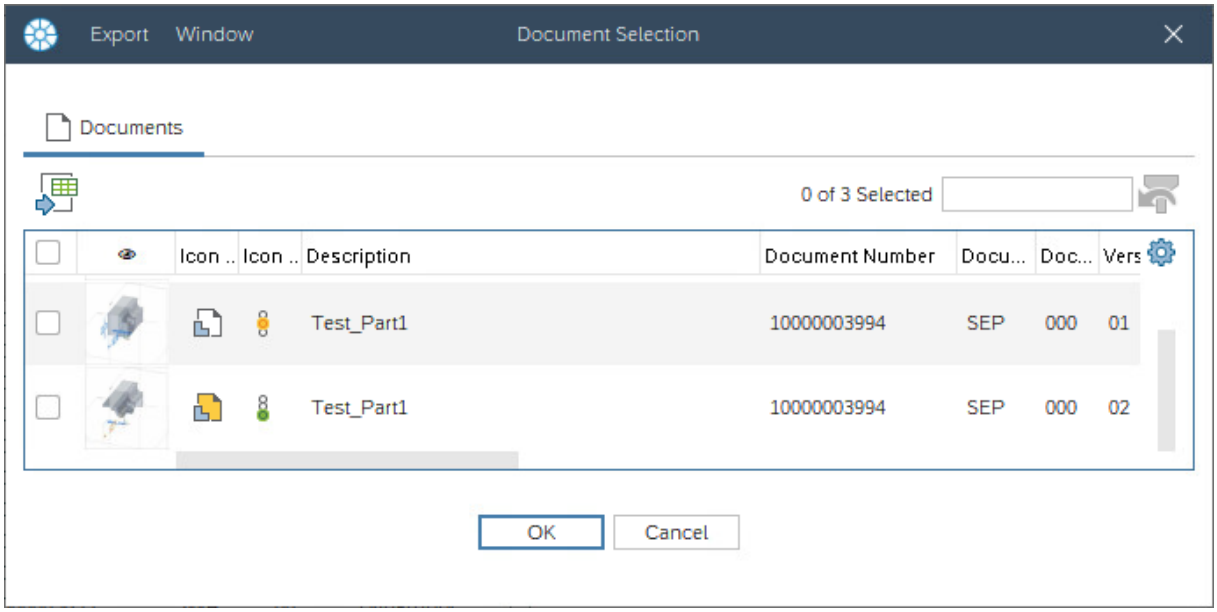
It offers three functions:

- Compare Version
- Compare Document
- Structure Comparison

The function "Compare Version" can be used to compare different versions of a document, the function "Compare Document" is used to compare different documents, the "Structure Comparison" function allows entire structures to be compared.

Compare Version

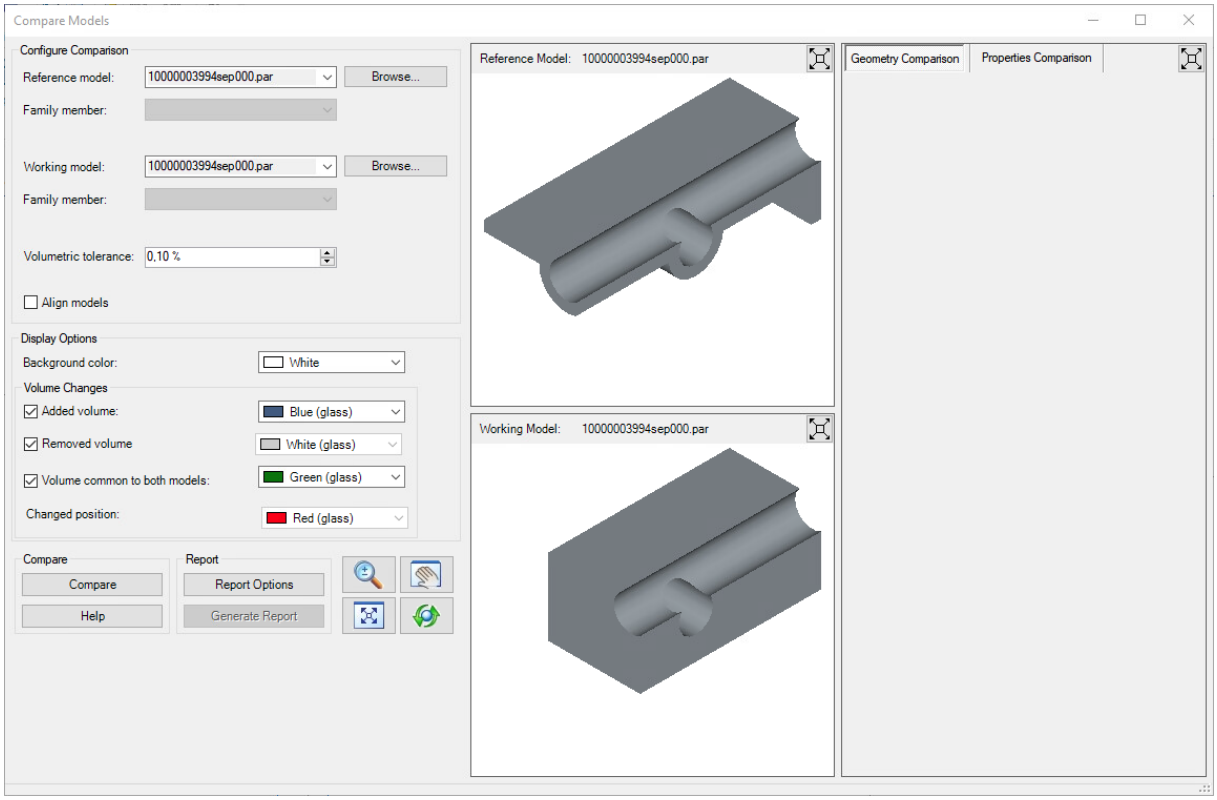
With the function "Compare Version" different versions of the document currently loaded in Solid Edge can be compared with each other. For this purpose, the ECTR dialog "*Document Selection*" opens, which lists the versions of the document. Here, the version is selected which is to be compared with the currently loaded version:



ECTR dialog "Document Selection"

NOTES:
- Only **one** entry can be selected for comparison!
- Models but **no drawings** can be selected for comparison!

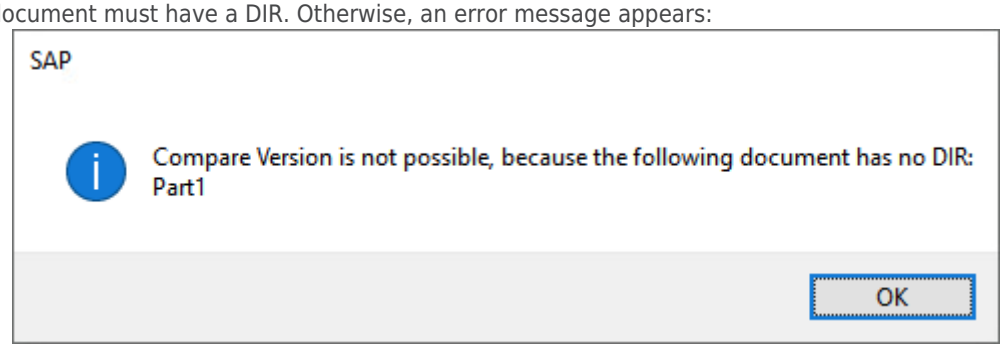
After confirming with the "OK" button, the model selected for comparison is temporarily downloaded from SAP if necessary and opened in Solid Edge, its file name is prefixed with "*CADCOMPARE_*". Afterward, the document comparison is opened by Solid Edge:



Document comparison of Solid Edge

For a version comparison to be performed, the following requirements must be met:

- The currently opened document must be saved.
- At least two versions of the document must exist.
- The document to be compared must **not be a drawing**.
- The document must have a DIR. Otherwise, an error message appears:

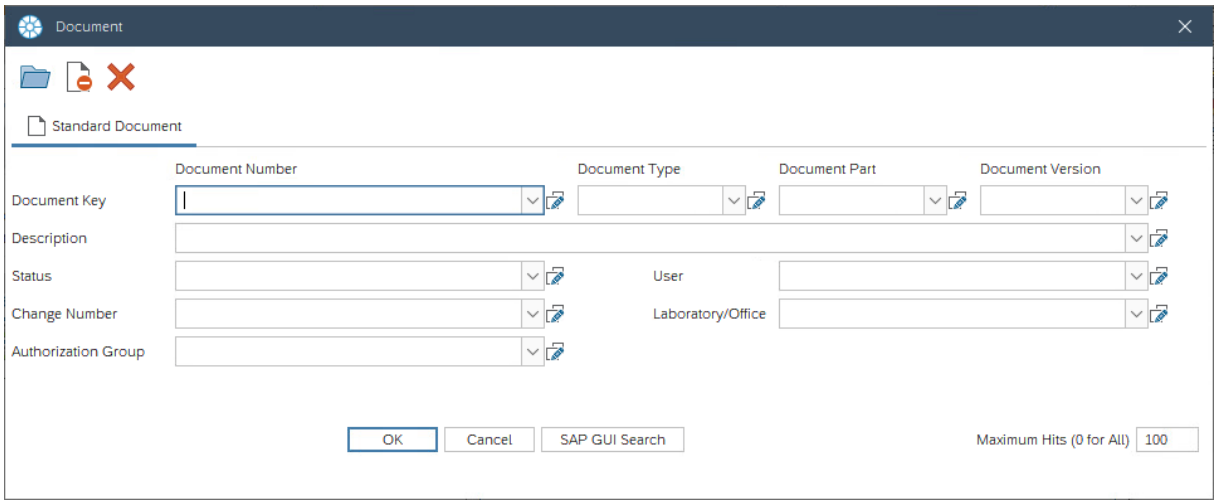


Error message in case of missing DIR

After closing the document comparison, the document temporarily opened for the comparison remains open in Solid Edge. It should be closed manually!

Compare Document

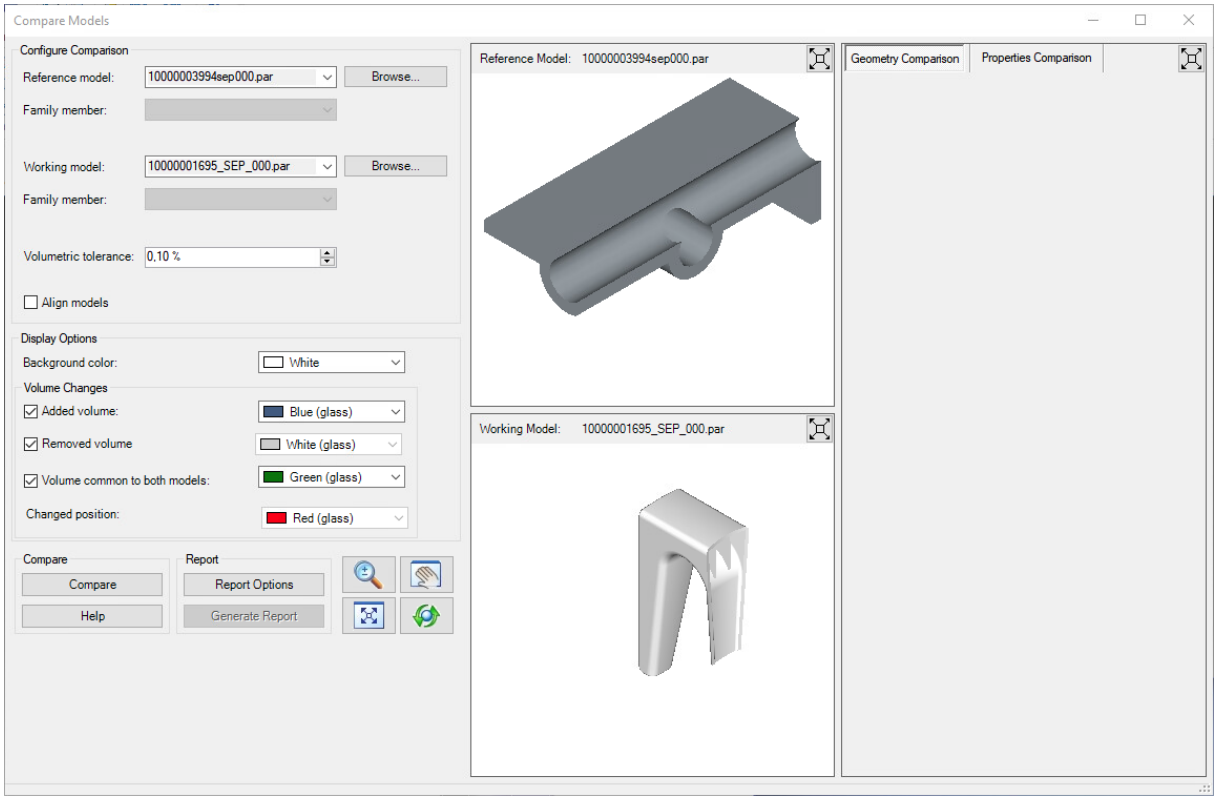
With the function "Compare Document" the document currently loaded in Solid Edge can be compared with another document available in SAP. For this purpose, the ECTR dialog "*Document*" opens. The document to be compared is selected here:



ECTR Dialog "Document"

NOTES:
- Only **one** entry can be selected for comparison!
- Models but **no drawings** can be selected for comparison!

After confirming with the "OK" button, the model selected for comparison is temporarily downloaded from SAP if necessary and opened in Solid Edge, its file name is prefixed with "CADCOMPARE_". Afterward, the document comparison is opened by Solid Edge:



Document comparison of Solid Edge

For a version comparison to be performed, the following requirements must be met:

- The currently opened document must be saved.
- The documents to be compared must not be drawings.

After closing the document comparison, the document temporarily opened for the comparison remains open in Solid Edge. It should be closed manually!

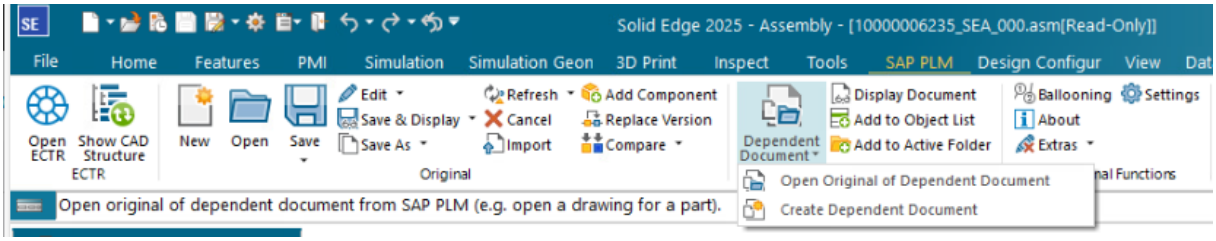
Structure Comparison

The "Structure Comparison " function can be used to compare a selected component of an original opened in Solid Edge with the document structure in SAPPLM. To do this, the corresponding function in the CAD structure view of ECTR will be called.

ATTENTION:
The “Structure Comparison” function requires ECTR version 1.3 or higher!

Dependent Document

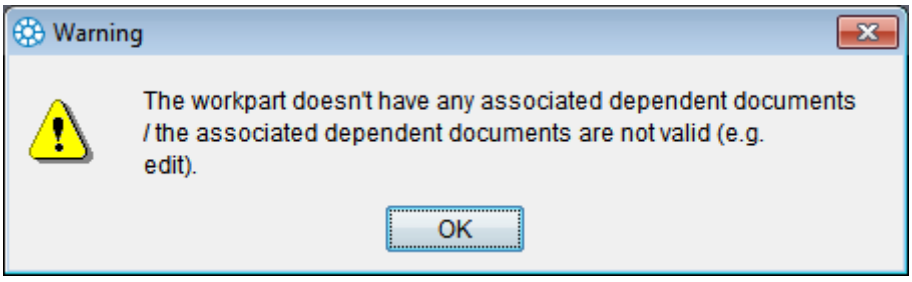
Dependent documents of a master document can be created or, if already existing, opened with functions which can be found in the submenu "Dependent Document ".



Submenu "Dependent Document"

Open Original of Dependent Document

If the in Solid Edge opened document has a dependent document, then its original document can be opened in Solid Edge via the function "Open Original of Dependent Document". If the in Solid Edge opened document does not have a dependent document, then an error message will be displayed and the function will be canceled.



ECTR error message if no depending document was found

Create Dependent Document

If a Master-Document is currently opened in Solid Edge, then a dependent document (non-master document) can be created with the function "Create Dependent Document".

Required, that it is configured in the DType definition of this document that the creation of a dependent document is allowed. Also, keep in mind that the master document has to allow the dependent documents DType definition and that Solid Edge has to be defined as primary application.

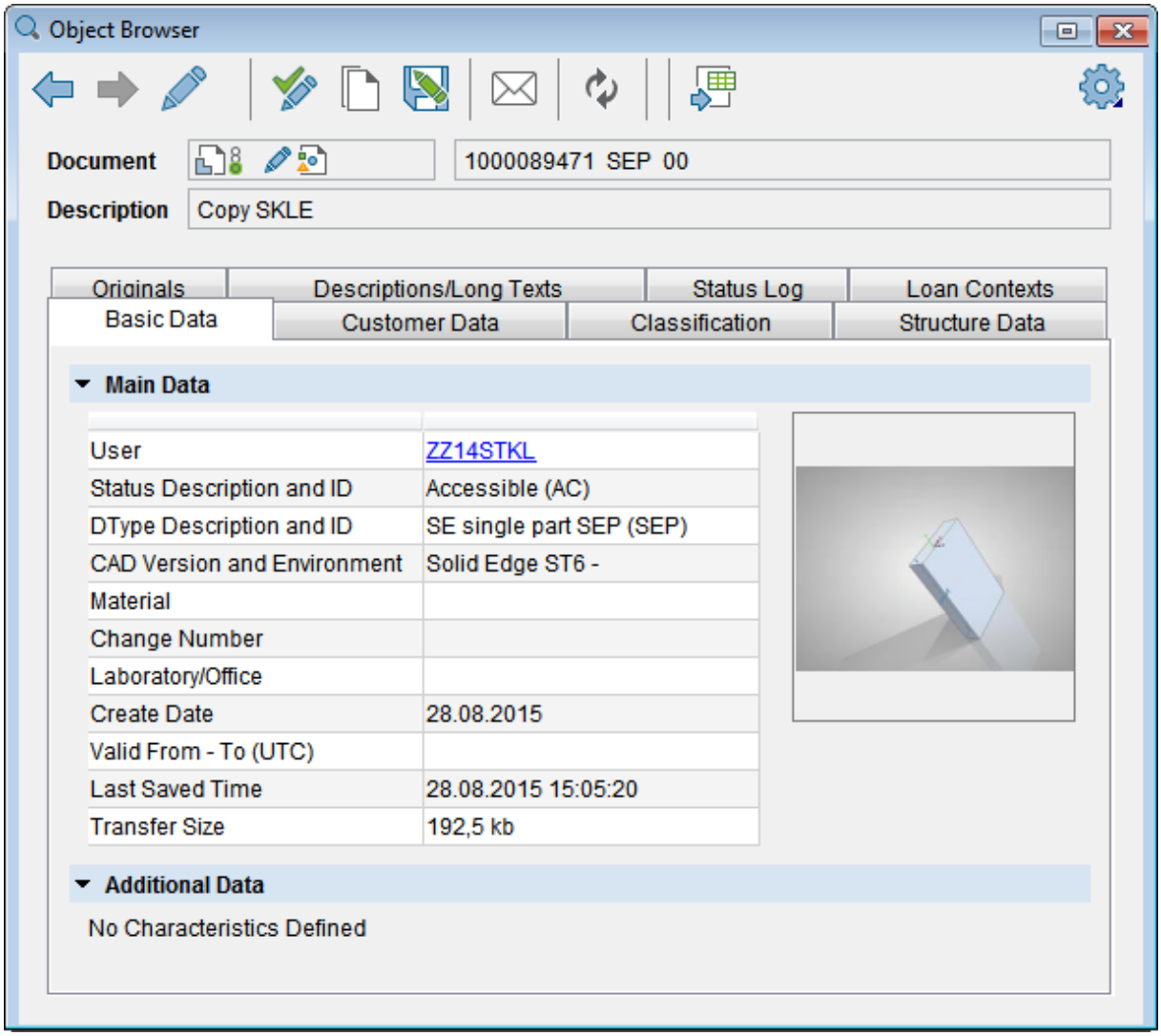
The newly created document will automatically be opened for editing and also loaded in Solid Edge for additional processing.

Whether master document dependent documents can be created or not, is defined in the DType definition of the document type dependent master document. A dependent document can only be created in the SAP Engineering Control Center if assigned to a master document. Otherwise, an error message will appear, and the creation will be canceled.

Display Document

The SAP Engineering Control Center offers the "Object Browser" function to view the linked documents of a document that has been stored in SAP PLM and its information (metadata). Here the user can view and edit all management data (document data) such as the processing status, classification, description etc. Documents which have been linked to the document can also be viewed in the preview window and opened in Solid Edge via a double click.

The function "Display Document" brings the SAP Engineering Control Center to the foreground and causes all information and data of the currently opened document to be displayed in the Object Browser.

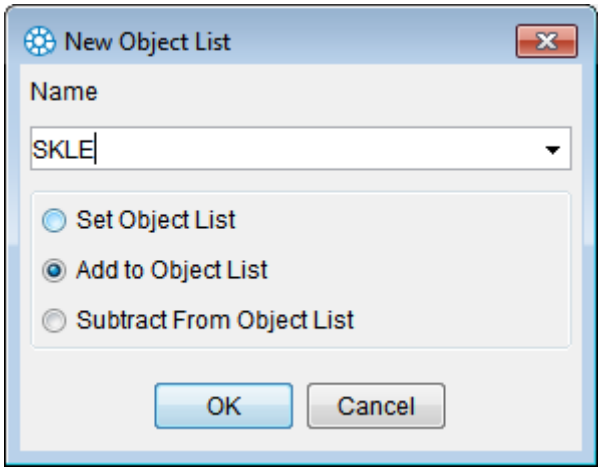


ECTR Object Browser

This function is only available for a currently in Solid Edge opened and focused on Document. This feature is grayed out if no document is open in Solid Edge or is not available in SAP PLM (does not have a DIR).

Add to Object List

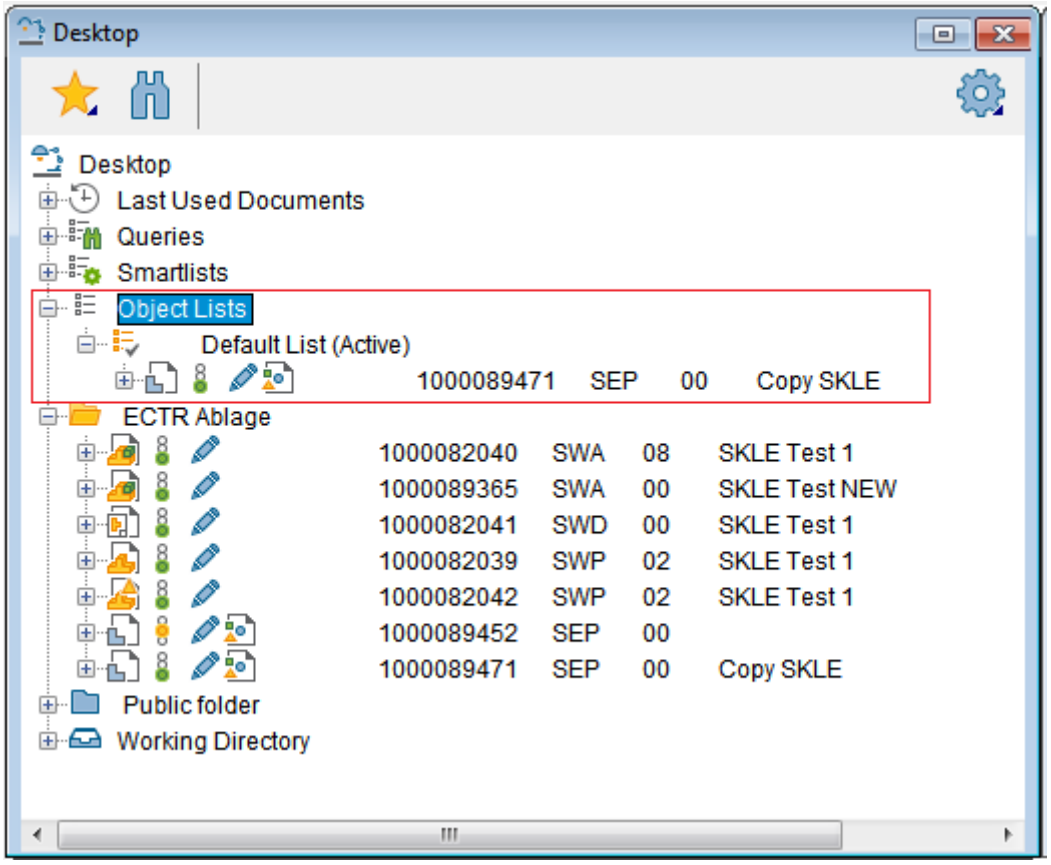
The currently open document in Solid Edge can be added to an object list in the SAP Engineering Control Center via the function "Add to Object List". Subordinate components need to be selected in the PathFinder of Solid Edge if only one or some subordinate components should be added to the Object List.
A dialog will appear in which the target object list and the operation has to be selected if the function "Add to Object List" is chosen.



ECTR dialog "New Object List"

IMPORTANT:
- If no object list with the stated name exists, then a new object list will be created.
- If no name is filled out, then the name **"null"** will automatically be used.

After the adding, the component will be visible in the corresponding object list and will be displayed in the desktop view of the SAP Engineering Control Center (see the red mark in the figure).



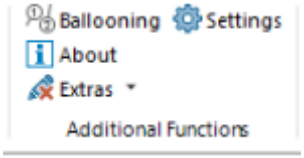
Object list in the Engineering Control Center Desktop-View

Add to Active Folder

The function "Add to Active Folder " allows you to add a document opened in Solid Edge to the active folder in ECTR. This requires that the document has a Document Info Record (DIR), otherwise an error message is displayed and the process is canceled.

Additional Functions

Special functions are located in the main menu section "Additional Functions" which are not used often and functions providing special features for Solid Edge.



Main menu section "Additional Functions"

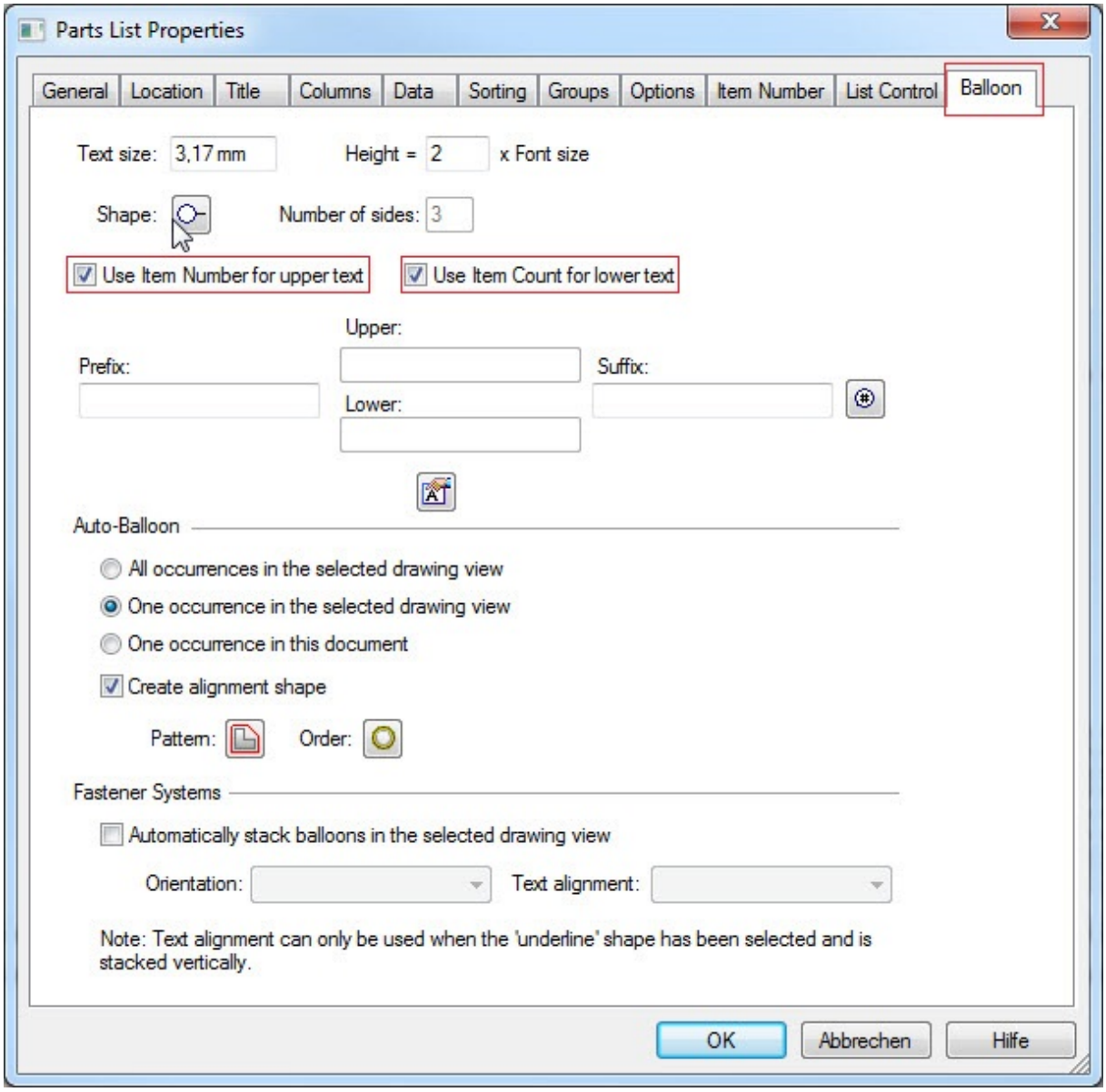
Ballooning

The function "Ballooning " enables you to maintain the information in balloons of a drawing according to the SAP material BOM. These can be item numbers, as well as (with patch 12 of the interface) material numbers or item texts of the interface.

After selection of the function in the Solid Edge menu, the position numbers of the elements in Solid Edge will be matched to the position numbers in the SAP Bill of Material.

As of patch 12 of the SAP Engineering Control Center Interface to Solid Edge, it is possible to configure the content of balloons, which are maintained via the function "Ballooning ". The following configuration parameters are included in the file "*default.txt*":
- "plm.options.BOMTable.Column.SLE.Material"
- "plm.options.BOMTable.Column.SLE.Postext1"
- "plm.options.BOMTable.Column.SLE.Postext2"
- "plm.options.BOMTable.Column.SLE.OtherColumn"

The position of the SAP data in the balloons is determined by the settings in the Solid Edge dialog "*Parts List Properties*" in its "*Balloon*" tab:



Solid Edge dialog for setting balloon properties

Various settings for the options "Use Item Number for upper text" and "Use Item Count for lower text" (shown in red in the figure above) have the following effects on the display of SAP data in the balloons:

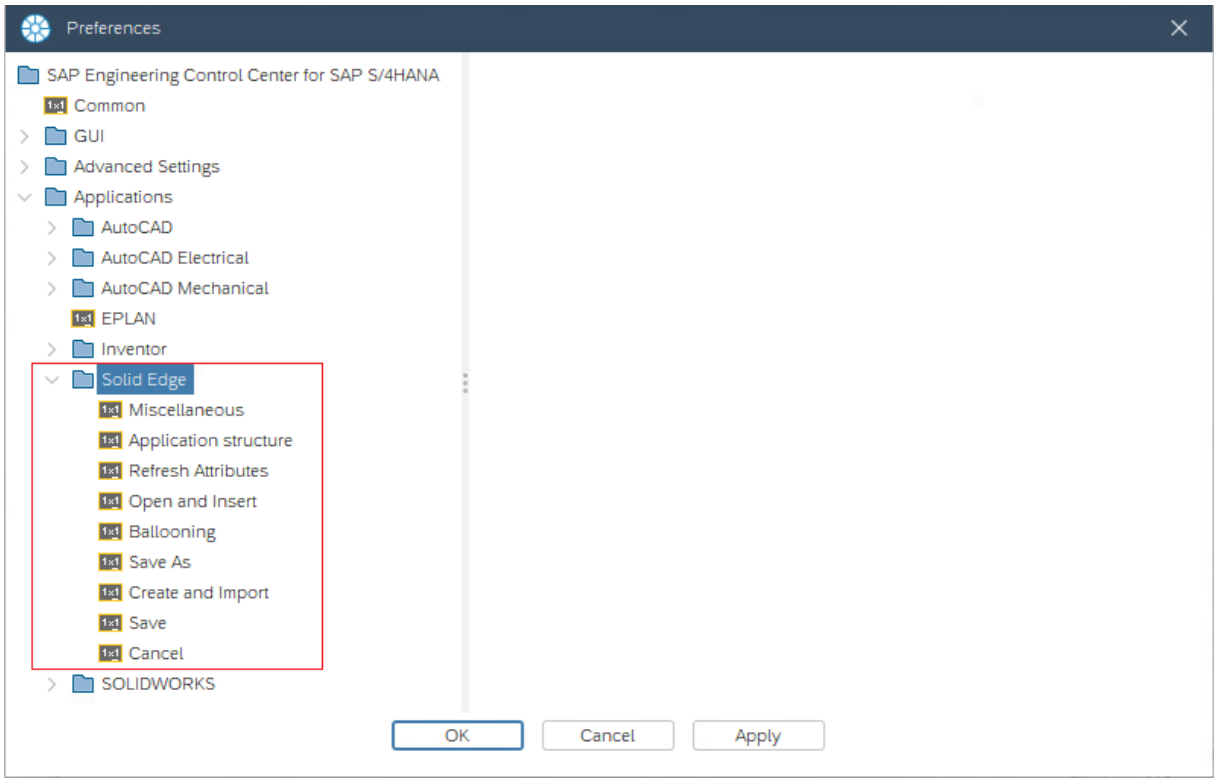
- If **both** options are selected, the SAP data appears in the lower part of the balloons.
- If the "Use Item Count for lower text" option is **not** selected, the SAP data also appears in the lower part of the balloons.
- If the option "Use Item Number for upper text" is **not** selected, the SAP data appears in the upper part of the balloons.
- If **both** options are **not** selected, the SAP Ballooning data appears in the upper part of the balloon.

Settings

The user can configure the behavior of the SAP Engineering Control Center Interface to Solid Edge in line with

his or her needs. Consequently, the interface offers a number of possible settings (preferences). These can be accessed via the "*Settings*  " function.

The view that now opens represents a tree view with the setting categories. This contains a node "*Applications*" which in turn contains the subcategory "*Solid Edge*". This contains the various configuration dialogs:

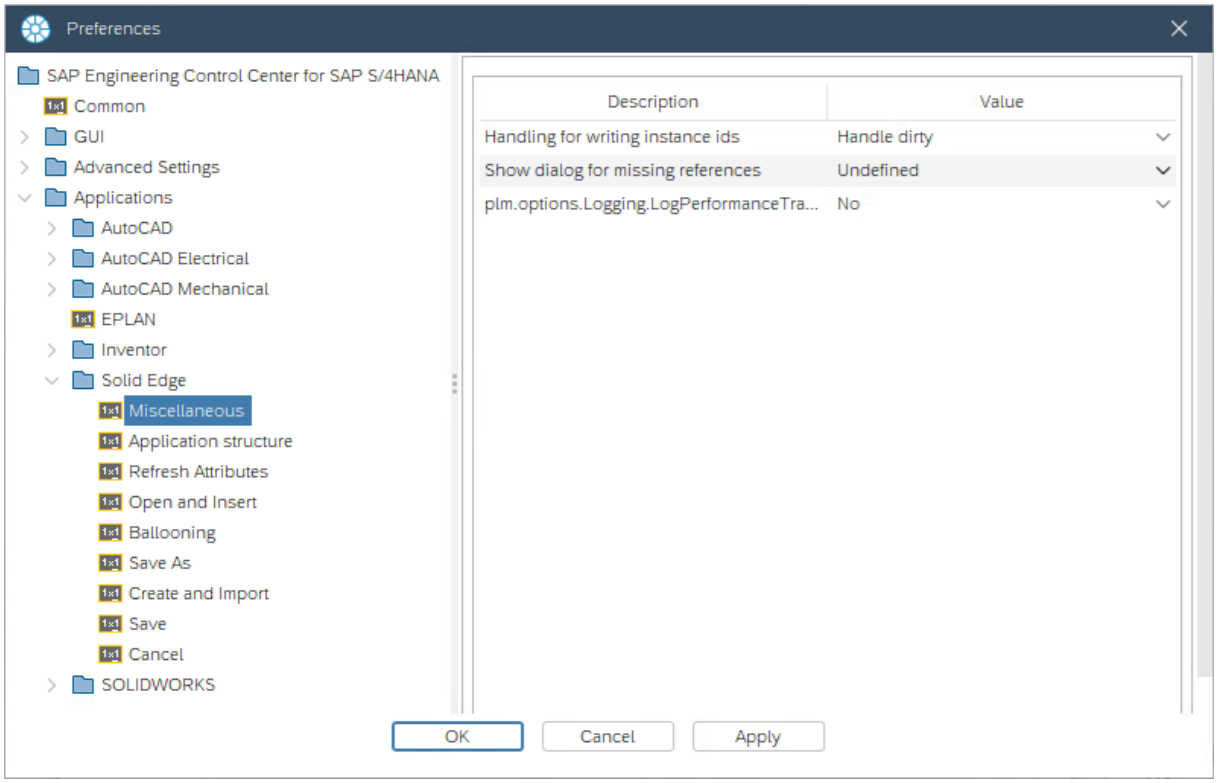


Preferences for Solid Edge

The structure and contents of the preference dialogs are defined by the configuration file "*options.xml*" of the SAP Engineering Control Center Interface to Solid Edge. For more information, see the "*options.xml*" section of the configuration manual!

Settings "Miscellaneous"

In the "Miscellaneous" section, settings for the SAP Engineering Control Center Interface to Solid Edge are made up of several areas:



Solid Edge settings "Miscellaneous"

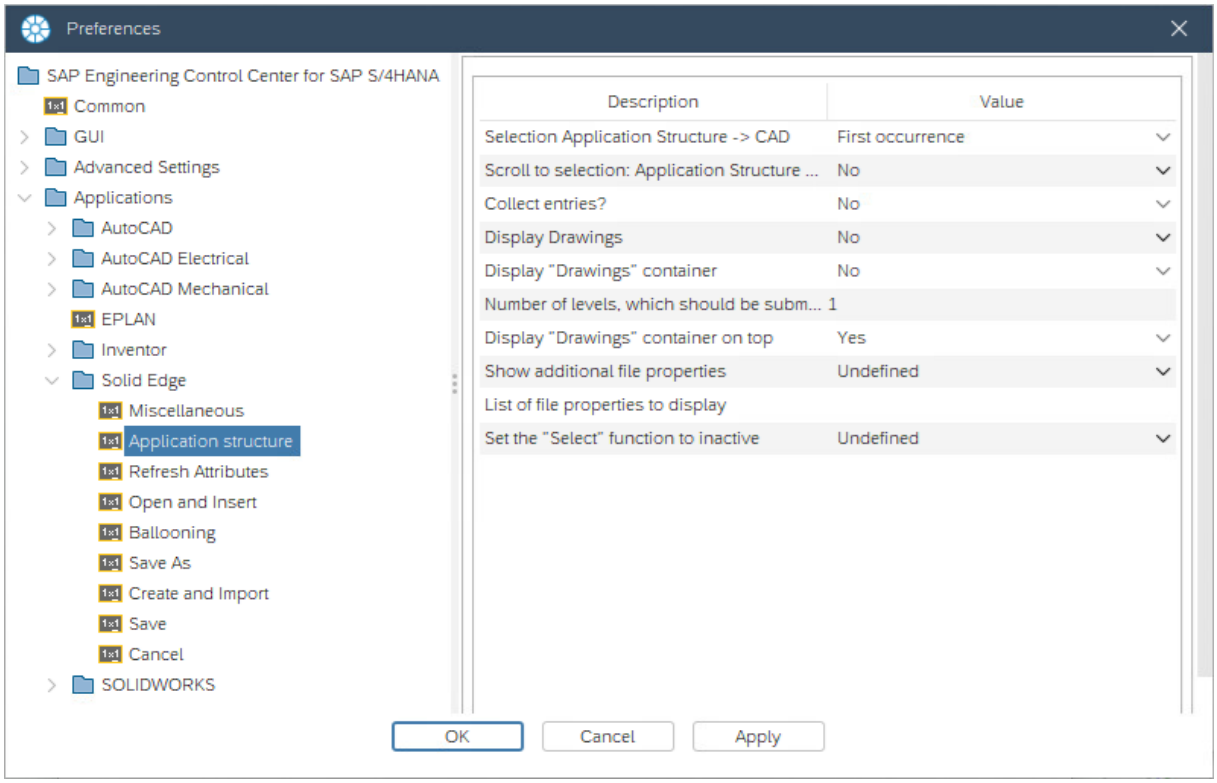
The following options are available:

Options under "Miscellaneous"

Option	Value	Description
Handling for writing instance ids	Handle dirty, Ignore dirty	Decides whether instance IDs should be written for read-only (dirty) documents or not. Default: "Handle dirty"
Show dialog for missing references	Yes, No	If a model contains references to missing components, a dialog can be displayed to indicate this (value = Yes).
plm.options.Logging.LogPerformanceTrace.SLE	Yes, No	Decides whether a log file with performance traces is created in the ECTR log directory for the interface (value = Yes). Default = No.

Settings "Application structure"

Section "*Application structure*" provides a number of settings that can be used to control the display of Solid Edge models in view "*Application structure*" of the SAP Engineering Control Center.



Solid Edge settings "Application structure"

The following options are available:

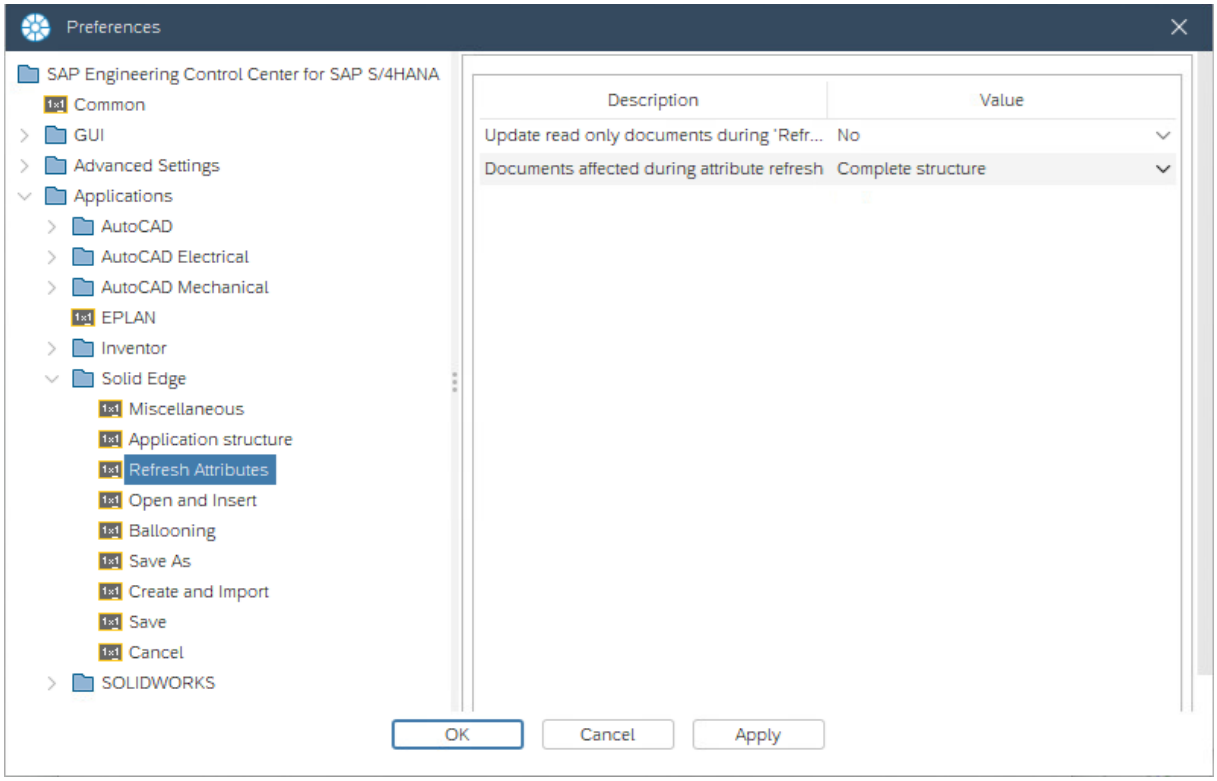
Options under "Application structure"

Option	Value	Description
Selection Application Structure -> CAD	First occurrence, All	Using the context menu function "*Select*" in the application structure view for a component, it may select the first occurrence or all instances of the component in the structure tree of Solid Edge.
Scroll to selection: Application Structure -> CAD	Yes, No	Using the context menu function "Select" in the application structure view for a component, it is possible to scroll to the selected node of the component in the structure tree of Solid Edge.
Collect Entries?	No, Yes (All)	There is an option to summarize structure entries of multiple built-in components to achieve better clarity.
Display Drawings	Yes, No	If an assembly or a part has a drawing, and it exists in the local working directory as a file, it can be displayed in the Application structure.
Display "Drawings" container	Yes, No	Determines whether the container "Drawings" should be displayed in the application structure (value = Yes).

Option	Value	Description
Number of levels which should be submitted to application structure	*<Number>*, all, -1	A number indicates how many substructure levels of a model are initially transferred to the display. At first, the substructures are displayed as a folded branch in the tree. If the value = "1", the next level of the loading process will be triggered during the expansion. The larger the number the more levels are transferred at the same time, if the value = "all" or "-1" all levels will be transferred initially. ATTENTION! This option affects the performance because the simultaneous transfer of multiple layers requires even more time!
Display "Drawings" container on top	Yes, No	Legt fest, ob der Container "Zeichnungen" in der Applikationsstruktur oben angezeigt werden soll.
Show additional file properties	Yes, No	Bestimmt, ob zusätzliche Dateieigenschaften angezeigt werden sollen.
List of file properties to display	List of properties	A list of file properties, separated by commas, which should be displayed when the parameter “Show additional file properties” = “Yes.”
Set the "Select" function to inactive	Yes, No	Disables the “Select” function (value = Yes).

Settings "Refresh Attributes"

The section "*Refresh Attributes*" contains settings for the attribute update (property update) for the SAP Engineering Control Center Interface to Solid Edge:



Solid Edge settings "Refresh Attributes"

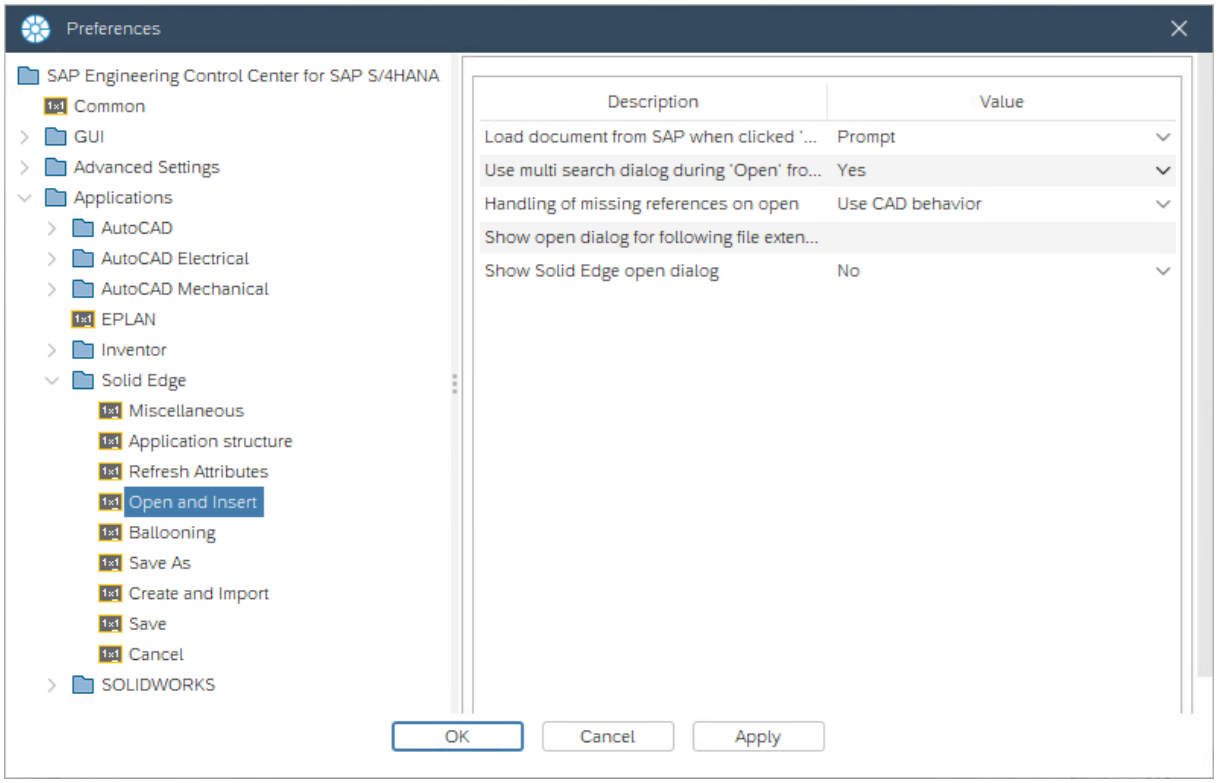
The following options are available:

"Refresh Attributes" options

Option	Values	Description
Update read-only documents during 'Refresh attributes'	Yes, No	Read-only documents can also be updated when executing "*Refresh Attributes*".
Documents affected during attribute refresh	Complete structure, Only the selected / top document, Prompt	Decides which documents are considered for the attribute update. If value = "Prompt", a selection dialog box is displayed.

Settings "Open and Insert"

The section "*Open and Insert*" summarizes settings for the SAP Engineering Control Center Interface to Solid Edge to control the behavior when opening documents and inserting them into documents:



Solid Edge settings "Open and Insert"

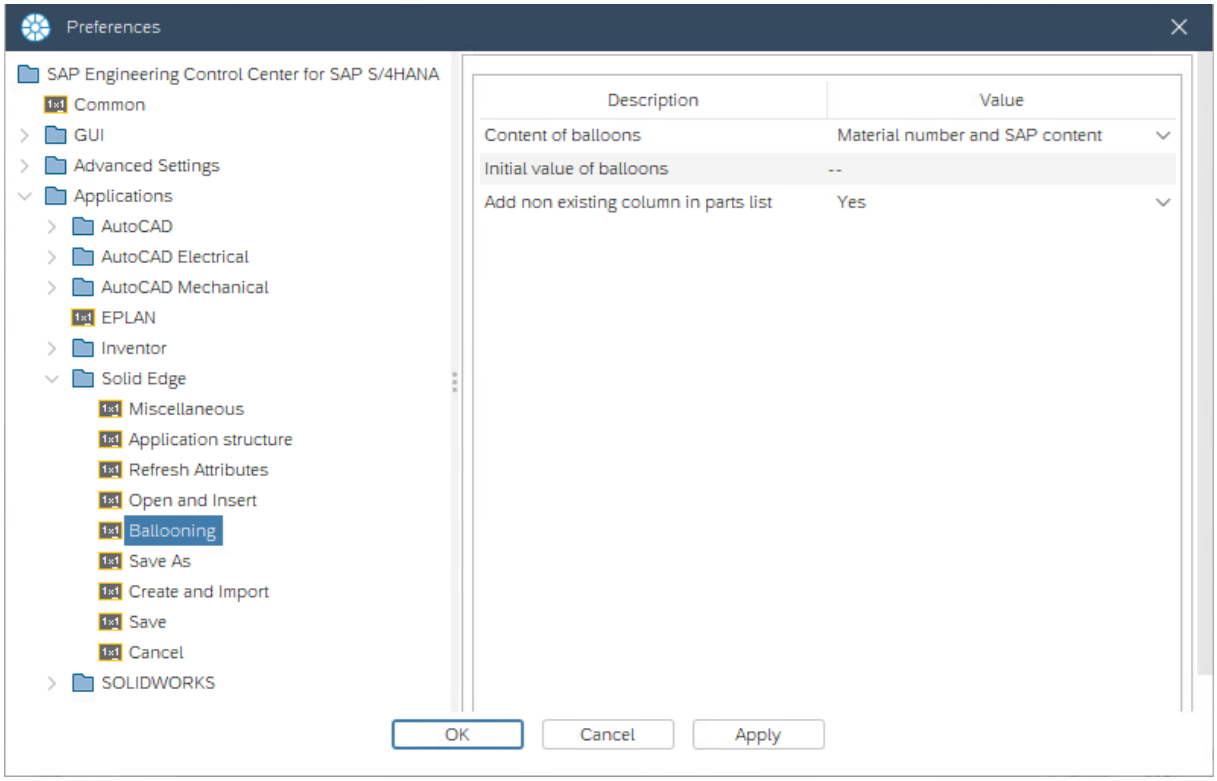
The following options are available:

Options under "Open and Insert"

Option	Values	Description
Load document from SAP when clicked 'Open'	No, Yes, Prompt	If the Solid Edge function "*Open...*" is used, the document to be opened can be loaded automatically from SAP PLM. If value = "Prompt" a selection dialog is displayed.
Use mult search dialog during 'Open' from SAP	Yes, No	Determines whether the dialog for multiple searches from SAP should be used for "*Open*" (value = Yes).
Handling of missing references on open	Use CAD behavior, Load from SAP automatically, Prompt	Controls the behavior of the interface when opening with missing references (missing components).
Show open dialog for following file extensions	*<List of file extensions>*	Semicolon-separated list of file extensions for which the "*Open*" dialog should be allowed.
Show Solid Edge open dialog	Yes, No	Determines whether the Solid Edge dialog for opening files should appear when opening or inserting documents from the ECTR (value = Yes)

Settings "Ballooning"

The "*Ballooning*" section contains settings for the SAP Engineering Control Center Interface to Solid Edge relating to ballooning:



Solid Edge settings "Ballooning"

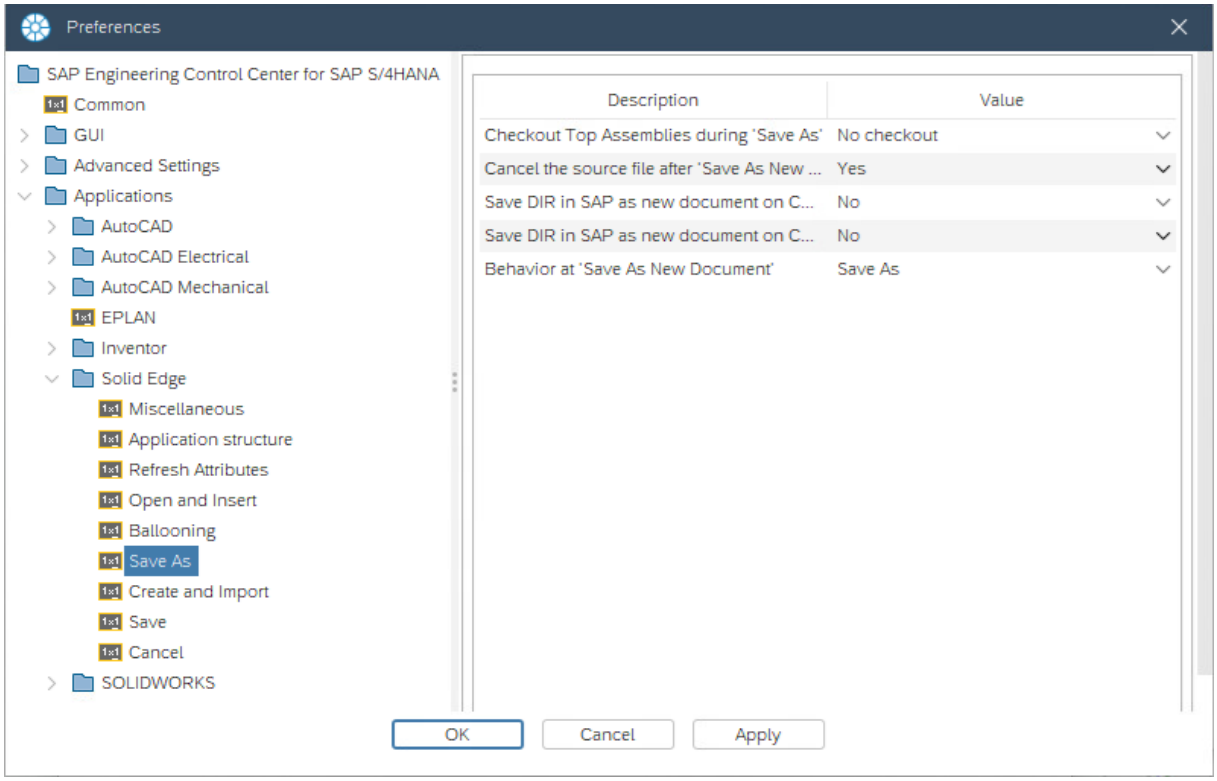
The following options are available:

Options under "Ballooning"

Option	Values	Description
Content of balloons	Material number and SAP content, Material number, SAP position number, SAP content	Defines the content of the balloons (default value = "SAP content").
Initial value of balloons	*<Initialization string>*	Defines a string with which newly created balloons are initialized. The default value is "--".
Add non existing column in parts list	Yes, No	If balloons contain values from columns in the SAP BOM not present in the CAD BOM (parts list), these columns can be added there (value = Yes).

Settings "Save As"

The section "*Save As*" contains settings for the SAP Engineering Control Center Interface to Solid Edge, which control the behavior when the "*Save As*" function is executed:



Solid Edge settings"Save As"

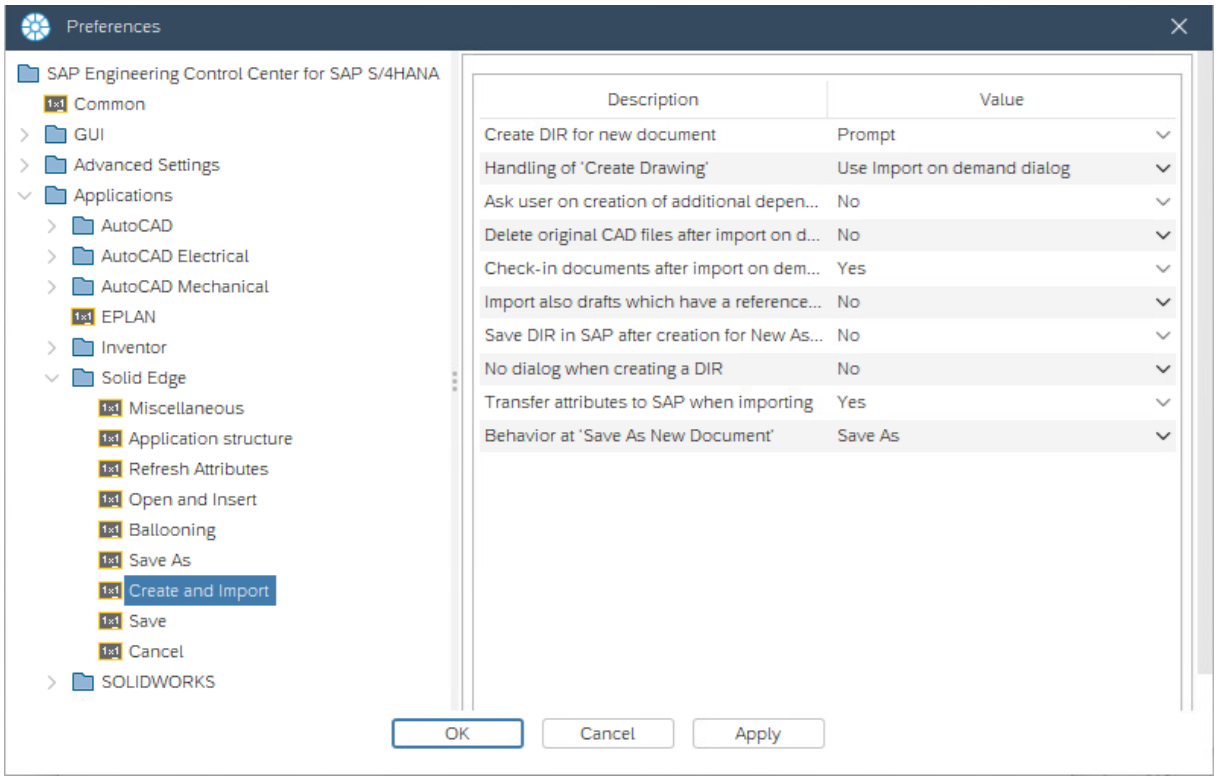
The following options are available:

Options under "Save As"

Option	Values	Description
Checkout Top Assemblies during 'Save As'	No checkout Checkout (default), Checkout and save (intermediate)	Determines whether and how superior assemblies should be checked out when "*Save as*" one of their components is saved. Checkout = Check out, No checkout = leave checked in (not recommended!), Checkout and save (intermediate) = Check out simultaneously
Cancel the source file after 'Save As New Document'	Yes, No	Determines whether the check-out of the source document should be automatically undone after "*Save as new document*" (value = Yes).
Save DIR in SAP as new document on CAD 'Save As'	No, Yes, Prompt	If a document is saved as new document with "*Save as*", a DIS can be created automatically for this new document (value = Yes) or a selection dialog appears, which lets the user decide (value = Prompt).
Save DIR in SAP as new document on CAD 'Save Copy As'	No, Yes, Prompt	If a document is saved as a copy with "*Save copy as*", a DIS can be created automatically for this new document (value = Yes) or a selection dialog appears, which lets the user decide (value = Prompt).
Behavior at 'Save As New Document'	Save As, Save Copy As	Determines the behavior when executing the “Save As New Document” function: “Save As”: The document is saved in the specified path. “Save Copy As”: A copy of the document is saved in the specified path.

Settings "Create and Import"

The section "*Create and Import*" contains settings for the SAP Engineering Control Center Interface to Solid Edge, which determine the behavior when creating and importing documents:



Solid Edge settings "Create and Import"

The following options are available:

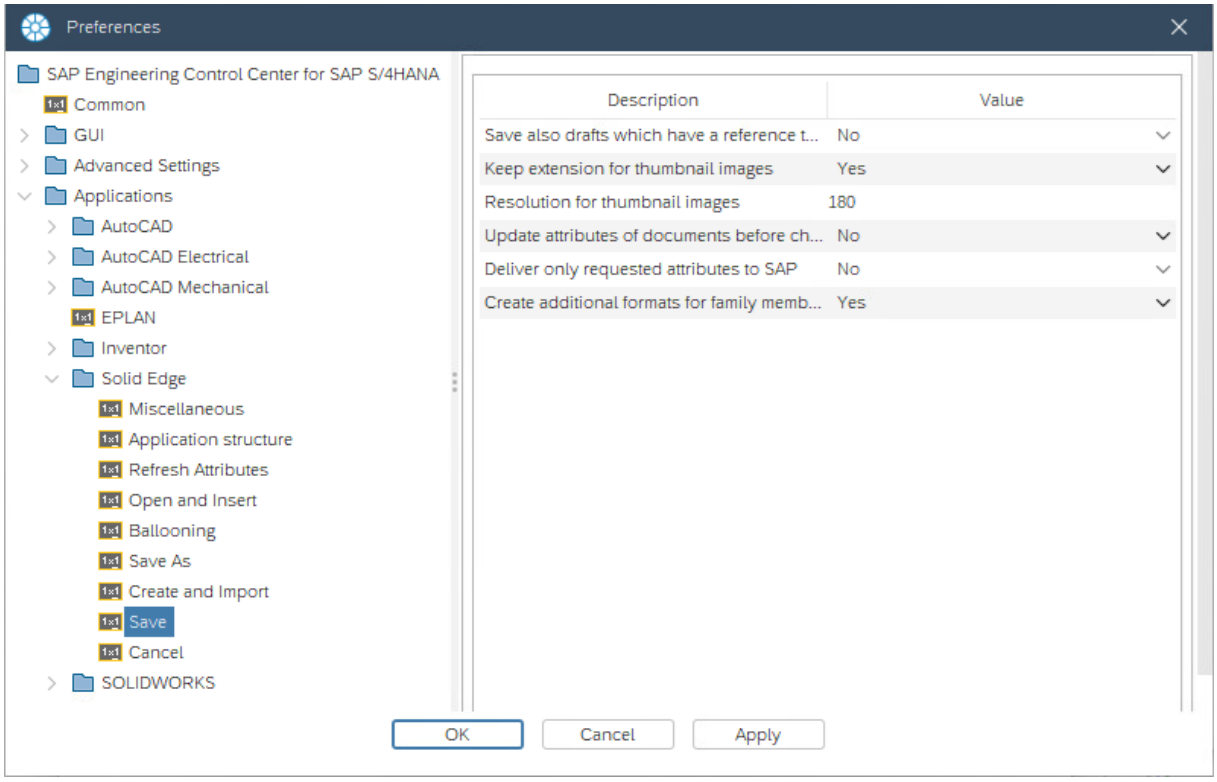
Options under "Create and Import"

Option	Values	Description
Create DIR for new document	No, Yes, Prompt	If the Solid Edge function "*New*" is used, a DIR can be created automatically. With value = "Prompt" a selection dialog is displayed.
Handling of 'Create Drawing'	Create master document, Create dependent document	Determines whether the "*Create Drawing*" function creates the drawing as a master document or as a dependent document. Default = "Create master document"
Ask user on creation of additional dependent documents	Yes, No	Determines whether the user should be asked to create additional documents (value = Yes).
Delete original CAD files after import on demand	Yes, No	CAD originals can be deleted after the import (value = Yes).
Check-in documents after import on demand	Yes, No	Documents can be checked in after import (value = Yes).

Option	Values	Description
Import also drafts which have a reference to imported models	Yes, No	If a drawing contains a reference to the model to be imported, it can also be imported automatically (value = Yes). ATTENTION: This can reduce the performance!
Save DIR in SAP after creation for New Assembly of Active Model and New Drawing of Active Model	Yes, No	Defines whether documents should be saved in SAP when an assembly or drawing with DIR is created from an active model.
No dialog when creating a DIR	Yes, No	Determines whether a DIS should be created dark (value = Yes) or with dialog (value = No).
Transfer attributes to SAP when importing	Yes, No	Determines whether the attributes of an imported document should be transferred to SAP (value = Yes).
Behavior at 'Save As New Document'	SaveAs, SaveCopyAs	Defines the default behavior for the action "*Save as new document*": Save under new name (value = SaveAs) or Save as copy (value = SaveCopyAs).

Settings "Save"

The section "*Save*" summarizes settings for the SAP Engineering Control Center Interface to Solid Edge for the topic "Save":



Solid Edge settings "Save"

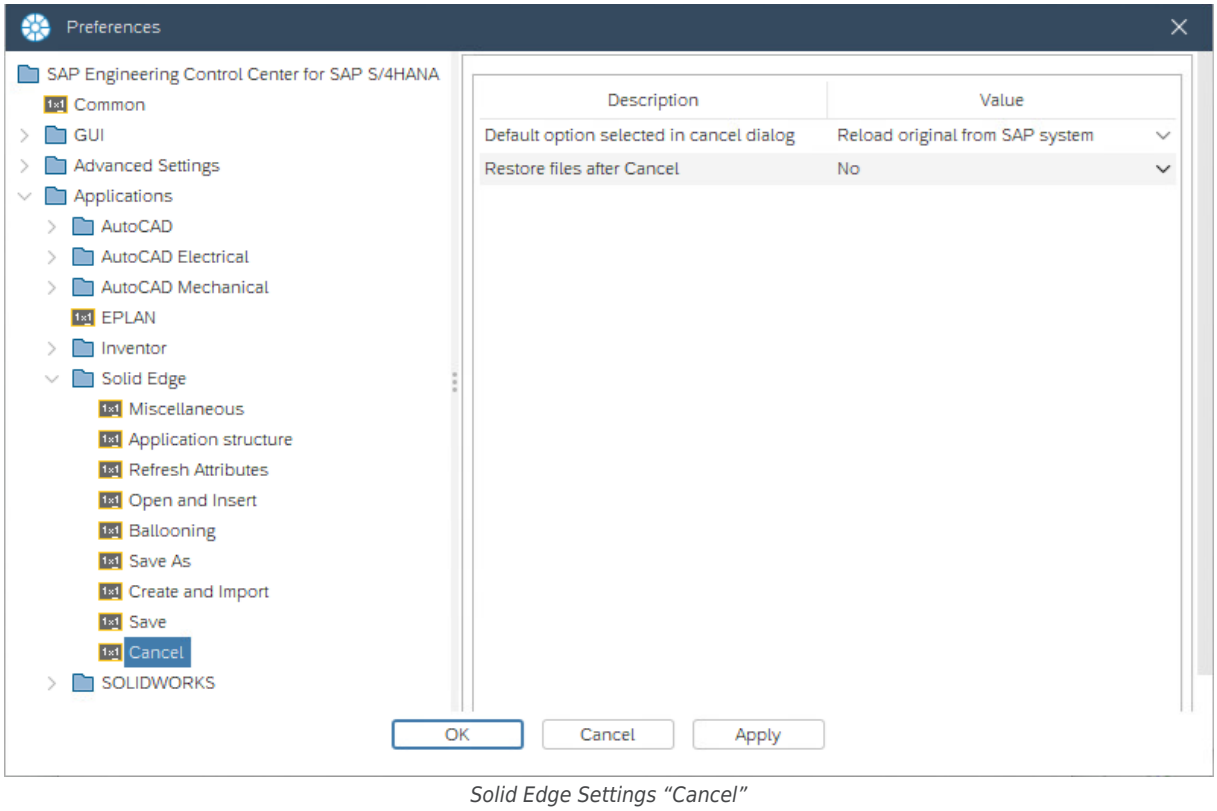
The following options are available:

Options under "Save"

Option	Values	Description
Save also drafts which have a reference to saved models	Yes, No	If a drawing contains a reference to the model to be saved, it can also be saved automatically.
Keep extension for thumbnail images	Yes, No	Determines whether the file extension for preview images should be retained (value = Yes) or changed.
Resolution for thumbnail images	*<Resolution>*	Specifies the resolution of thumbnails. Default = "180".
Update attributes of documents before check-in	Yes, No	Determines whether the attributes of documents should be updated before check-in (value = Yes).
Deliver only requested attributes to SAP	Yes, No	Decides whether only configured attributes (value = Yes) or all attributes should be transferred to SAP.
Create additional formats for family members	Yes, No	Additional formats can also be created for part families (value = Yes).

Settings "Cancel"

The “Cancel” section summarizes settings for the SAP Engineering Control Center Interface to Solid Edge relating to “Cancel”:



Solid Edge Settings “Cancel”

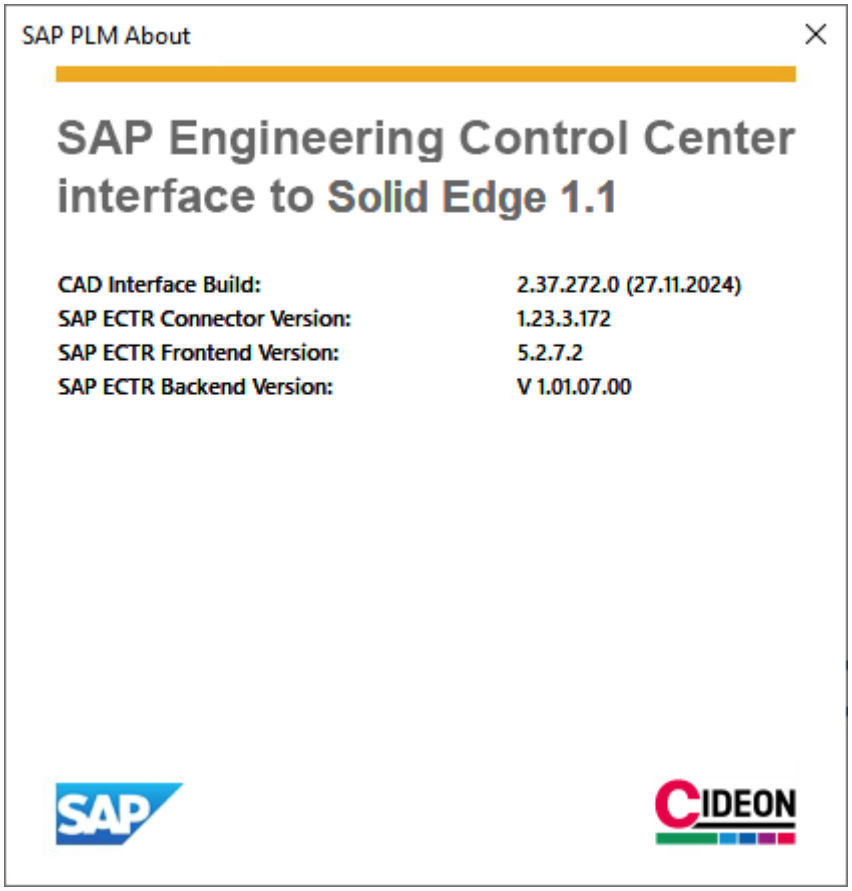
The following options are available:

Options under “Cancel”

Option	Values	Description
Default option selected in cancel dialog	Reload original from SAP system, Close original in CAD	This determines which option is preselected in the “Cancel” dialog.
Restore files after Cancel	Yes, No	Determines whether modified files should be restored to their original state after an action is canceled (value = Yes) or whether the changes should be retained.

About

The "About " function open a dialog which contains information about the current version of SAP Engineering Control Center Interface to Solid Edge. This information is particularly useful for product questions.

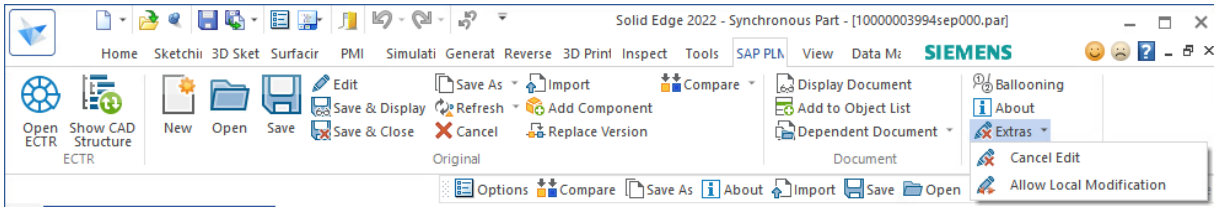


"SAP PLM About" dialog

The version information for ECTR connector, frontend and backend will only be displayed when the SAP Engineering Control Center has already been launched and logged on to SAP.

Extras

Special functions are located in the submenu "Extras" which are not used often.



Submenu "Extras"

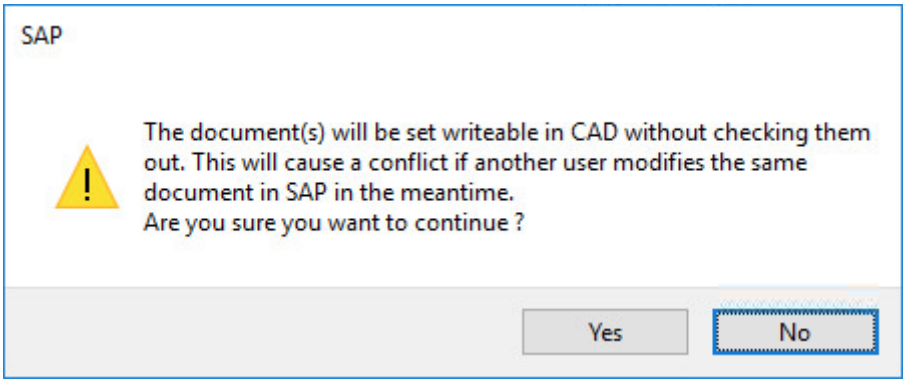
Cancel Edit

The function "Cancel Edit" changes the status of an opened document from "In Work" (checked-out) back to "Checked-In". But will leave documents locally saved in the working directory untouched.

Be **very cautious** when using this function! Errors can occur when using this function. It is saver to use the function "Cancel", although this will replace the version in the working directory with the version in SAP. **To avoid changes to be overwritten, simply save changes under a different document name!**

Allow Local Modification

The function "Allow Local Modifications" allows the editing of a checked-in and therefore read-only model. If the function is applied to a model currently opened in Solid Edge, which is checked in to SAP and is therefore write-protected, a warning dialog box appears, informing you of the risks associated with its use:



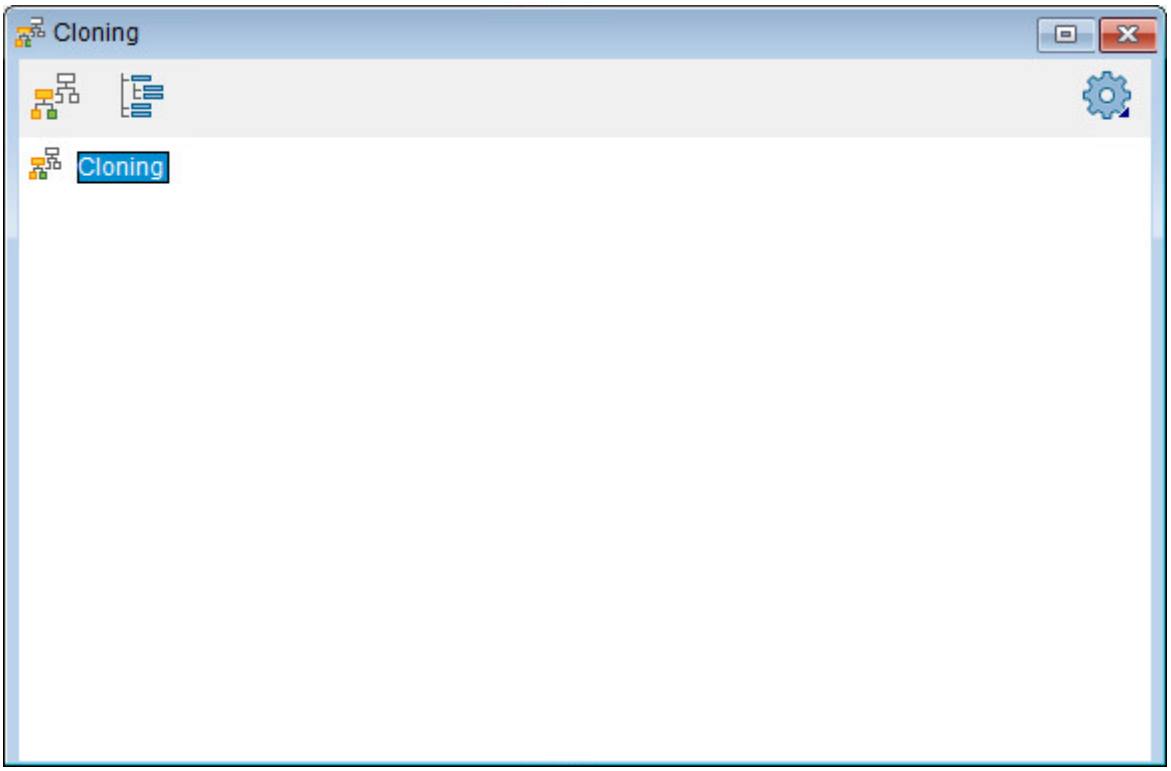
Warning dialog for "Allow local modifications"

If the "Yes" button is selected, the write protection for the model is removed. The "No" button cancels the entire action.

ATTENTION!
This function **should be used with extreme caution**, as conflicts may occur if another user has already changed the document! **It is generally not recommended using this function!**

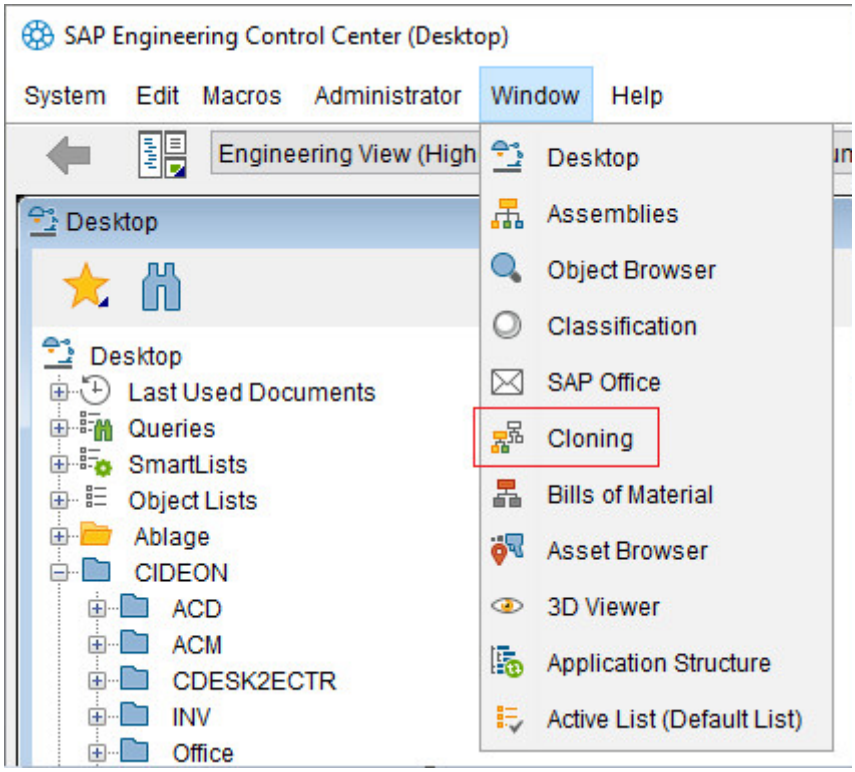
Cloning

The SAP Engineering Control Center provides a "Cloning" function. This has its own "*Cloning*" window, where individual components as well as large assemblies and drawings can be reproduced. A DIS is also created for a cloned component. In the case of assemblies and drawings, this applies also to their sub-assemblies and components.

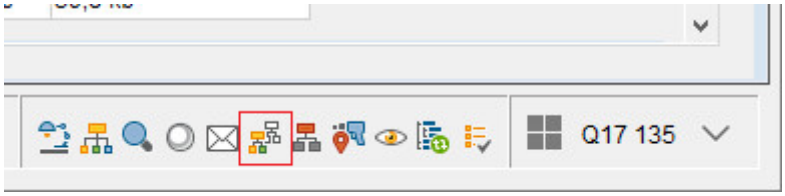


ECTR window "Cloning"

The "*Cloning*" view can be opened by clicking on the icon in the menu "*Window*" and in the symbol area of the ECTR (see red marks):

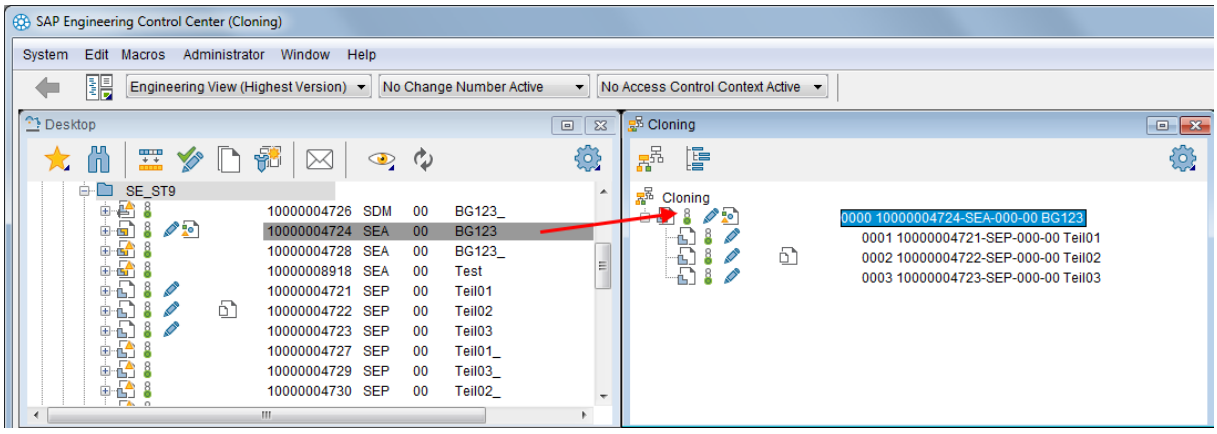


ECTR menu "Window"



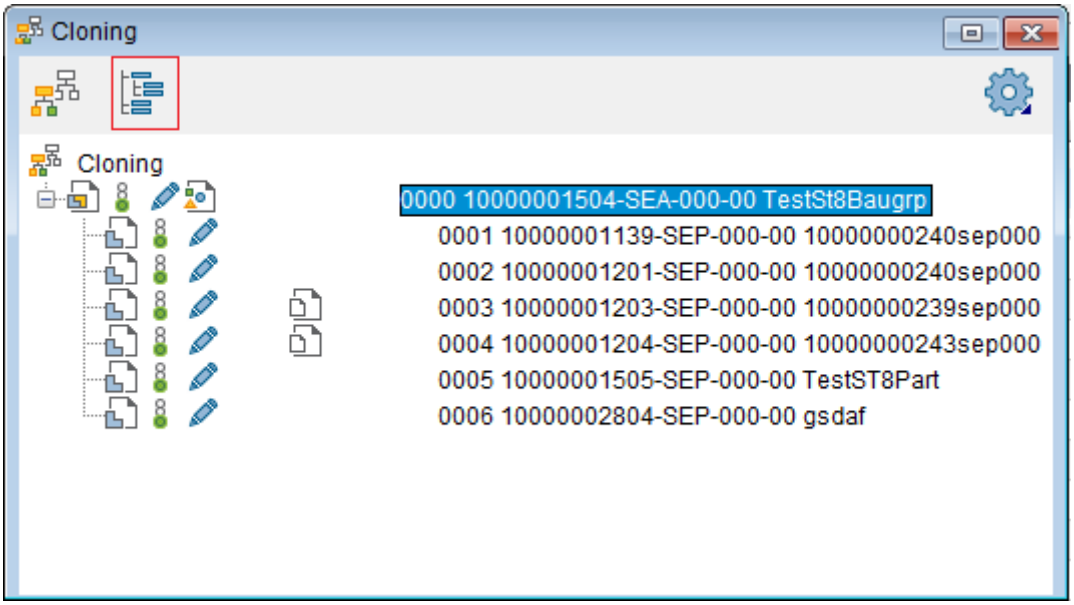
Icon area of the ECTR

To clone a model, drag it from the desktop view into the "Cloning" window:



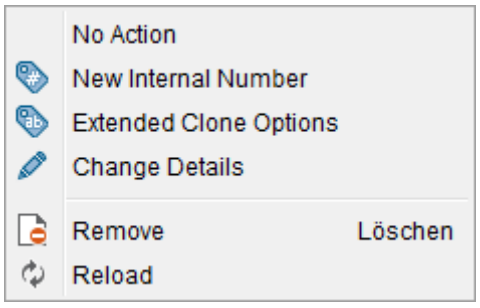
Drag the model into the "Cloning" window

The "Tree Manager" button can be used to expand or collapse the structure of the model to be cloned:

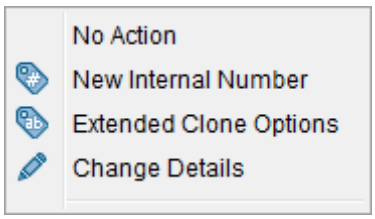


Expanded structure in the "Cloning" window

Individual components can be selected within the structure. A context menu is available via the right mouse button, which offers various options for controlling the cloning process as well as further functions for the selected component. The number of functions offered here depends on whether it is a stand-alone component or the top-level assembly of a structure, or a component subordinate to the structure:



Context menu of a top assembly



Context menu of a subordinate component

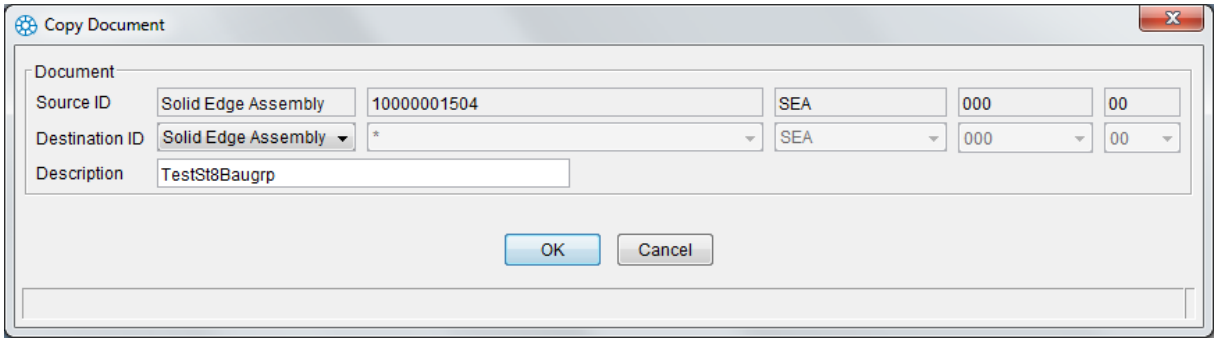
The following options are available:

New Internal Number

Copies and replaces the selected document in the structure. If this option is set, the icon appears in the structure tree.

Extended Clone Options

With this option, it is possible to change the description of the selected component before assigning a new internal/external number. The ECTR dialog "*Copy Document*" appears, in which the description can be changed:



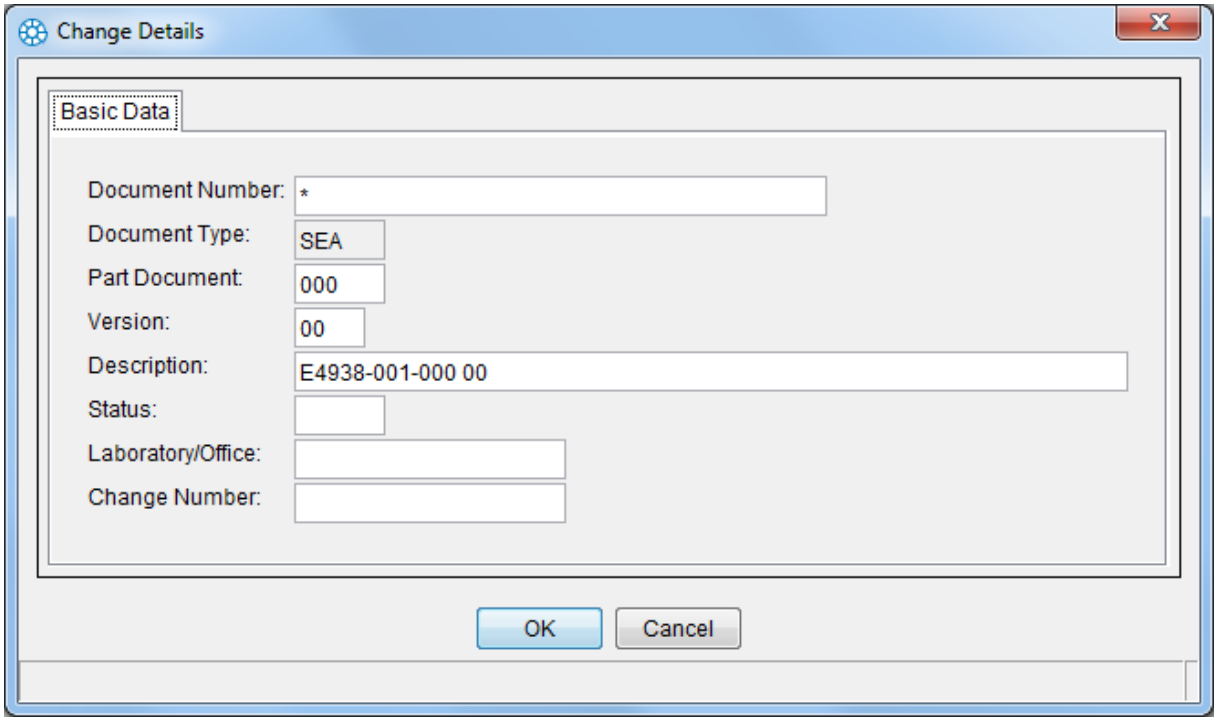
ECTR dialog "Copy Document"

If this option is set, the icon appears in the structure tree.

The function "Save As New Document" of the SAP Engineering Control Center Interface to Solid Edge corresponds to the cloning with extended cloning options and can be used alternatively.

Change Details

If a document is cloned with a new internal/external number, you can use this option to adjust the document's basic data. The ECTR dialog "*Change details*" appears:



ECTR dialog "Chance Details"

No Action

The selected clone options will be reset to their initial state.

Remove

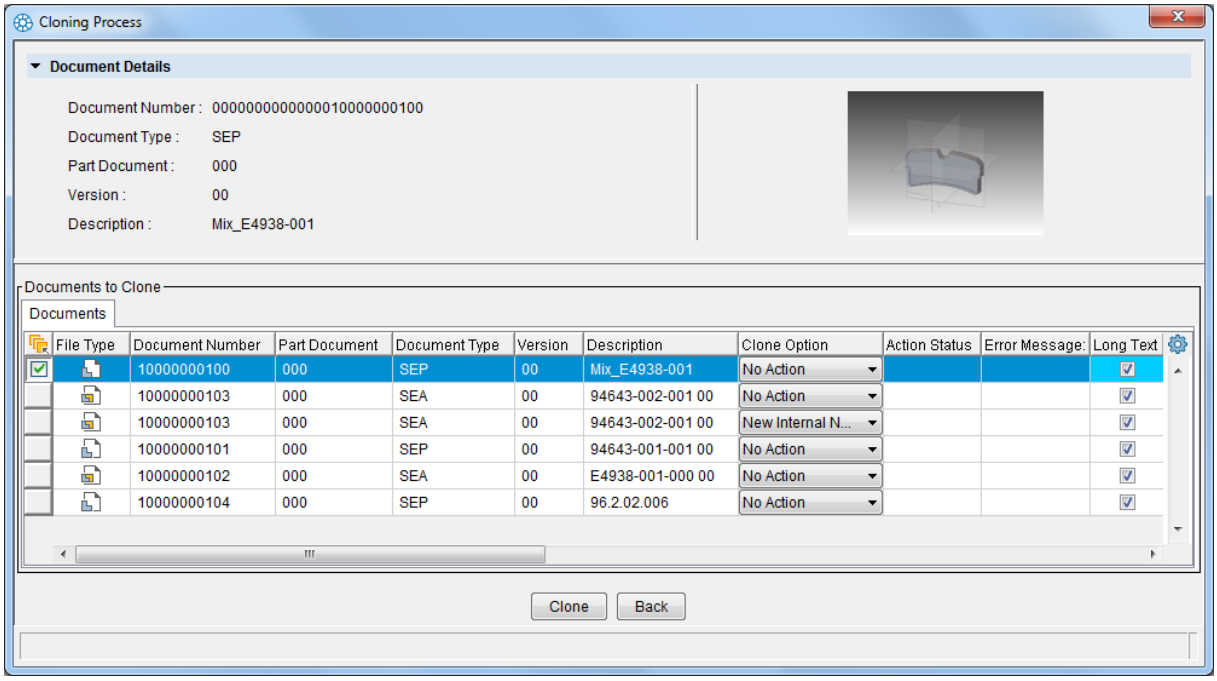
Removes the component or structure from the "Cloning" window, but does not delete any data other than the settings made here to control the cloning process.

Reload

Updates the structure of the model and reloads possible changes to subcomponents.

Starting the cloning process

Once all settings have been made, the actual cloning process can be started by pressing the "Clone" button in the upper-left corner of the "Clone" window. Now the ECTR dialog "*Cloning Process*" appears:



ECTR dialog "Cloning Process"

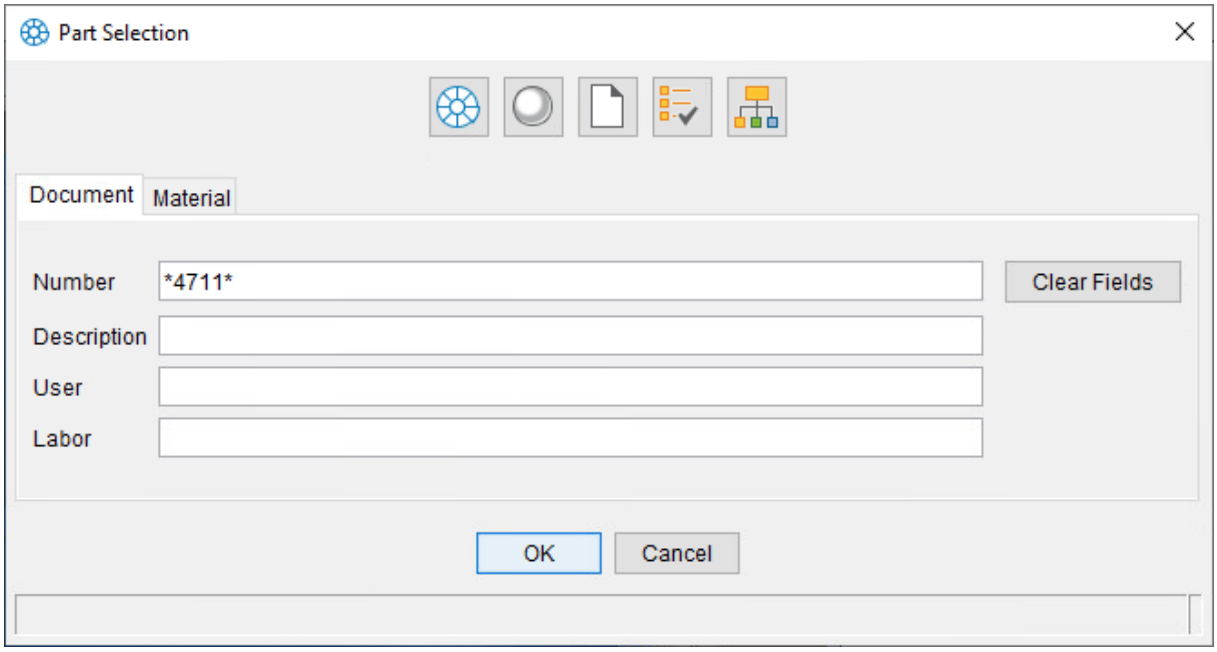
Here, you can additionally define whether dependent documents and other information should be cloned. **Since no structures are displayed in this table, the cloning process should be configured in the normal cloning window!**

The following restrictions should be noted when cloning:
■ When cloning dependent (nonmaster-) drawings or assemblies with dependent drawings, it should be noted that cloning drawings that contain **drawing views of several different models is not supported!** This means a dependent (nonmaster-) drawing may always only show precisely one model, however it can contain multiple views and sheets. This limitation doesn't exist if independent (master-) drawings will be cloned.
■ Cloning of **standard parts** is not supported!

Replace Component

The function "Replace Component" is only offered in the context menu of a selected component on the first level, and only if a Family Of Assembly (FOA) is open. The function is not offered for installed family elements of a FOA!

For this purpose, the "*Part selection*" dialog opens, in which a component can be selected to replace the original component:

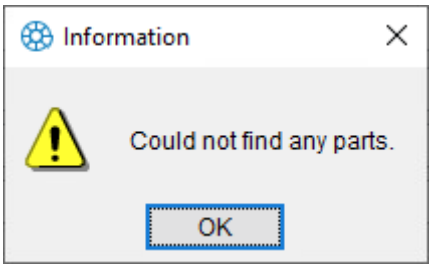


ECTR "Part selection" dialog

If the selected component was found in SAP PLM, all instances of the existing component on the first level of the FOA in all family elements are exchanged for the selected component.

ATTENTION:
There is no check which files are exchanged. **This is the responsibility of the user!**

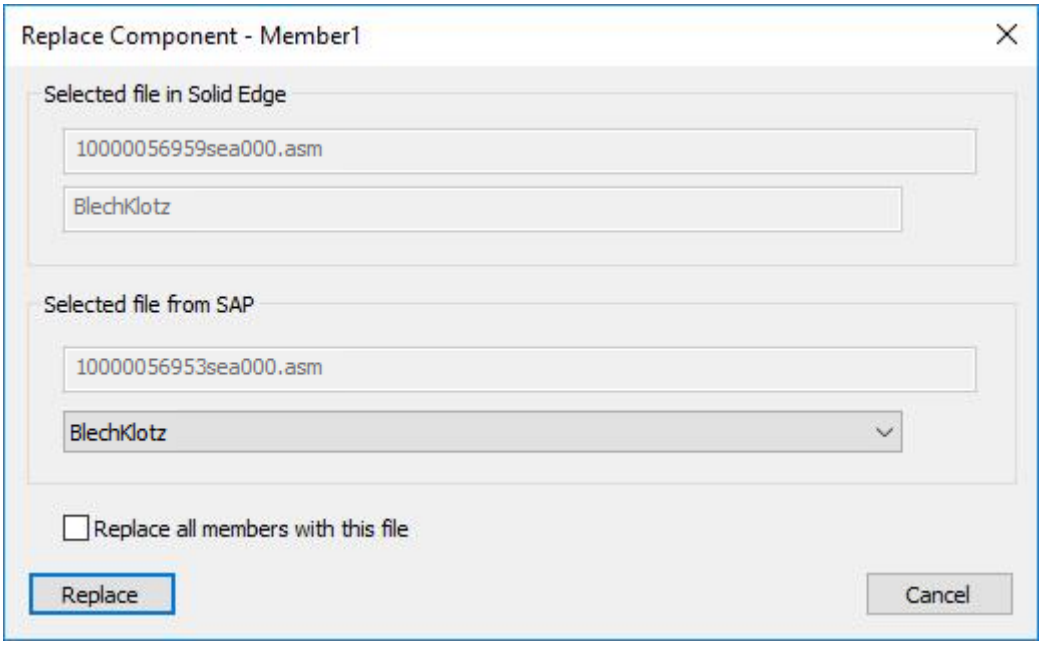
If the specified component could not be found, an error message is displayed and the process is aborted:



ECTR error message "No parts found."

Special case of installed members in a FOA

If an installed member in an assembly file is to be replaced, the following dialog opens, in which the member of the selected file must be selected from SAP:



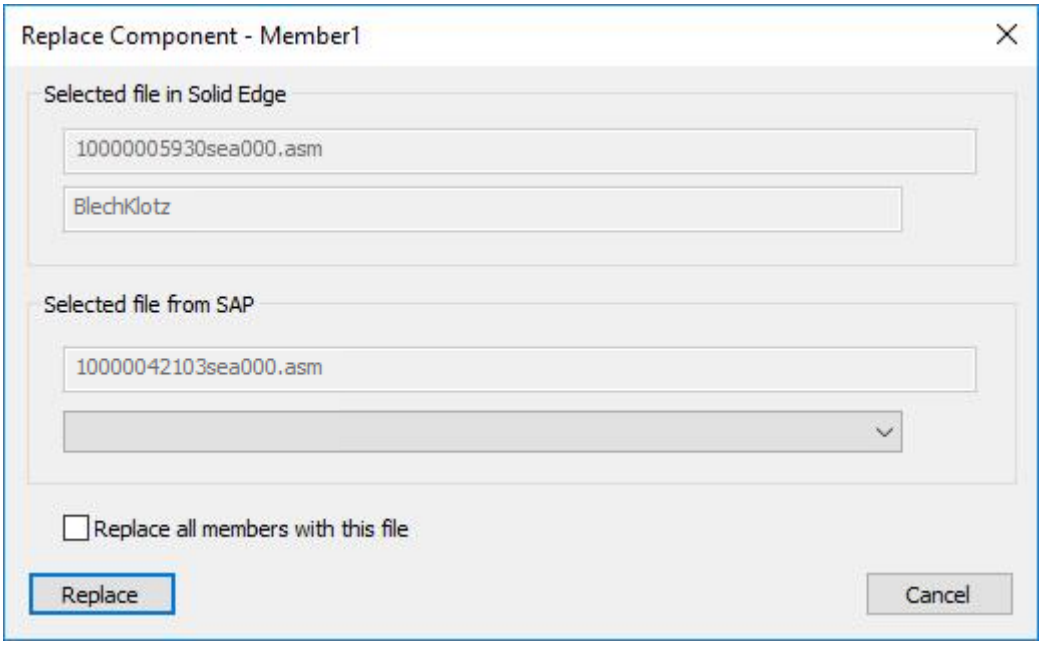
Dialog "Replace Component" - 1

In the upper part of the dialog, the file selected in Solid Edge is displayed with an installed member ("BlechKlotz"). In the lower part of the dialog, the selected file from SAP is displayed. A suitable member can be selected in the expandable list below. If the selected file from SAP contains the same member as the selected file in Solid Edge, it will be preselected.

The member assignment is saved with the checkbox "Replace all members with this file". If the member is installed several times in the FOA, the replacement is automatically carried out based on the saved member assignment.

However, the assignment must be selected at least once for each installed member!

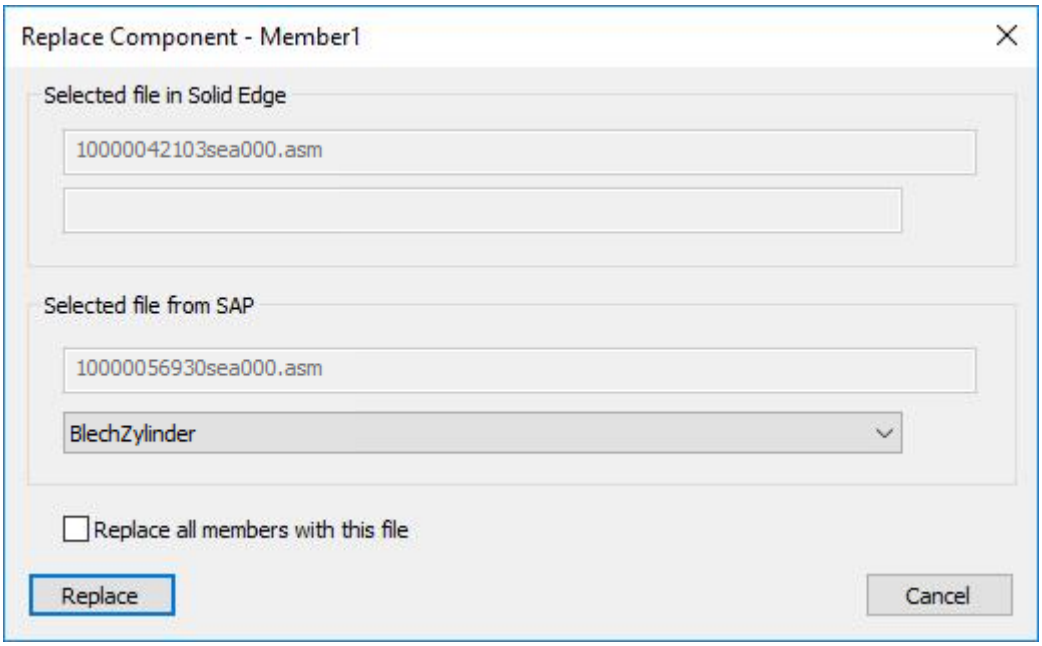
If no FOA is selected in SAP, the dialog looks as follows:



Dialog "Replace Component" - 2

In the drop-down list below, no members are offered for selection.
The checkbox "Replace all members with this file" automatically replaces all installed members with the file from SAP. If this option is not selected, the dialog is displayed again for each shoring.

If no used member is selected in Solid Edge, the dialog looks like this:



Dialog "Replace Component" - 3

The checkbox "Replace all members with this file" replaces all instances of the file selected in Solid Edge with the member of the file from SAP.

Replacements are not performed if

- a non-Solid Edge file was selected,
- a drawing was chosen,
- a generic file was selected.

If one or more replacements are not performed, the reason is written to the log file.

Save & Close

If a document with a document info record (DIR) has been checked out, opened and edited in Solid Edge, it must be checked back in to SAP PLM after the work on this document has been completed. The document can then be closed.

This is done automatically by the "Save & Close  " function of the SAP Engineering Control Center, which can be easily accessed from Solid Edge via the SAP Engineering Control Center Interface to Solid Edge. The document is stored (checked in) in SAP in the same way as with the "Save & Display  " function, but the document is closed immediately after successful storage.

Handling Family Of Parts (FOP)

Families Of Parts (FOP)

Families Of Parts (FOP) are parameterized parts. Part families make it possible to provide different variants of the same part without having to create a new CAD model. When using part families, all elements of the family must be created in Solid Edge and then stored via the part family table or saved in local files. The icon in the status bar indicates whether an element has been saved in its own file or is obsolete and would have to be stored again.

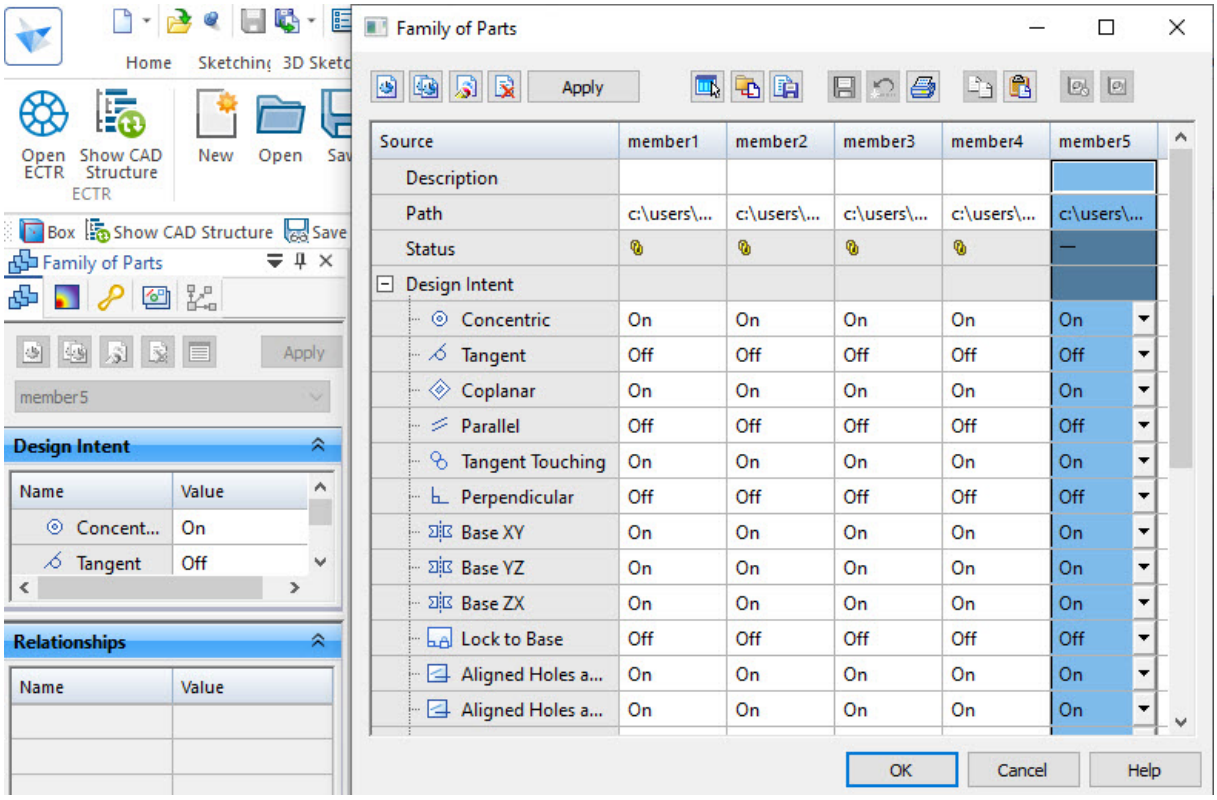
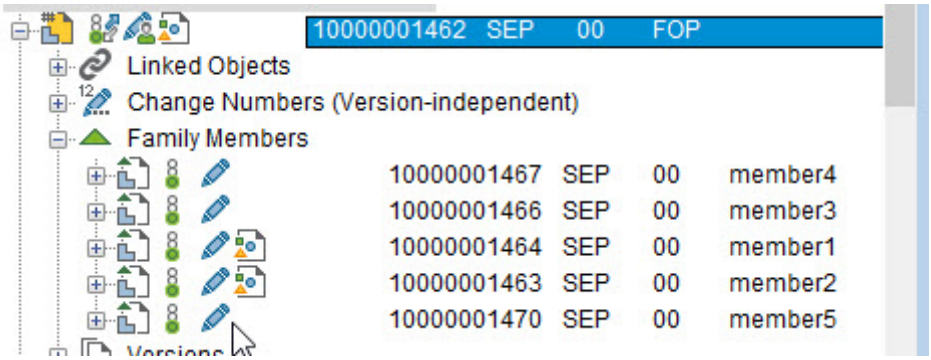


Table of the parts family

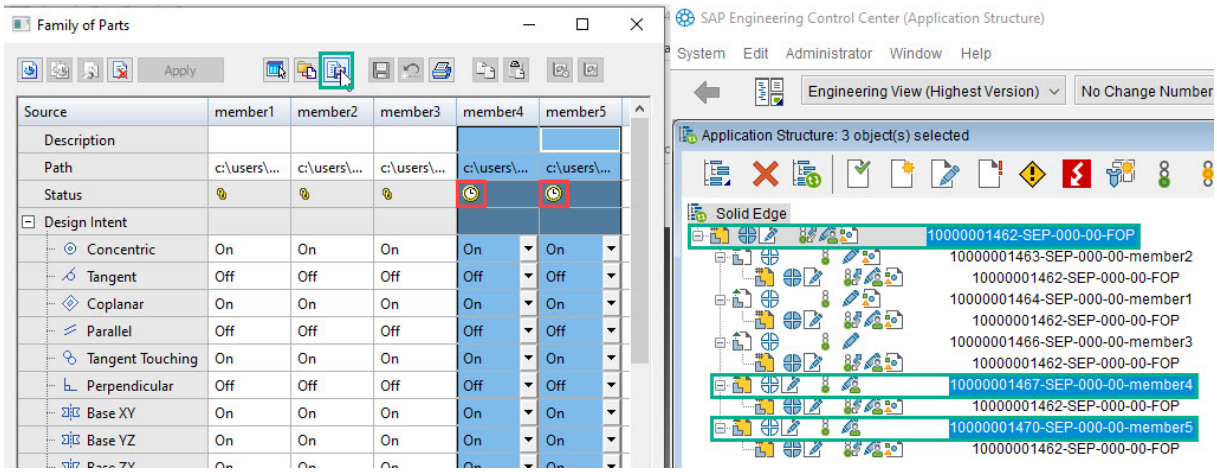
When all elements have been stored correctly, the part family can be saved in SAP. When saving in SAP, an "Import on demand" action is always performed for the new elements when saving or importing the master part. A part family that has been completely created in SAP is marked as such in the ECTR and contains all correctly stored elements.



Family of Parts in the application structure display of the ECTR

Editing part families

Editing of part families can only be done in the master part. Once all parameters have been set and all adjustments have been completed, the modified elements must first be marked out in Solid Edge before they can be stored in SAP. In order for the corresponding elements to be pronounced correctly, they must first be checked out separately.



State when saving changes to elements of a part family

Once all changes have been correctly applied and checked in to SAP, no further manual actions are subsequently required for the part family elements to open in Solid Edge in their current state.

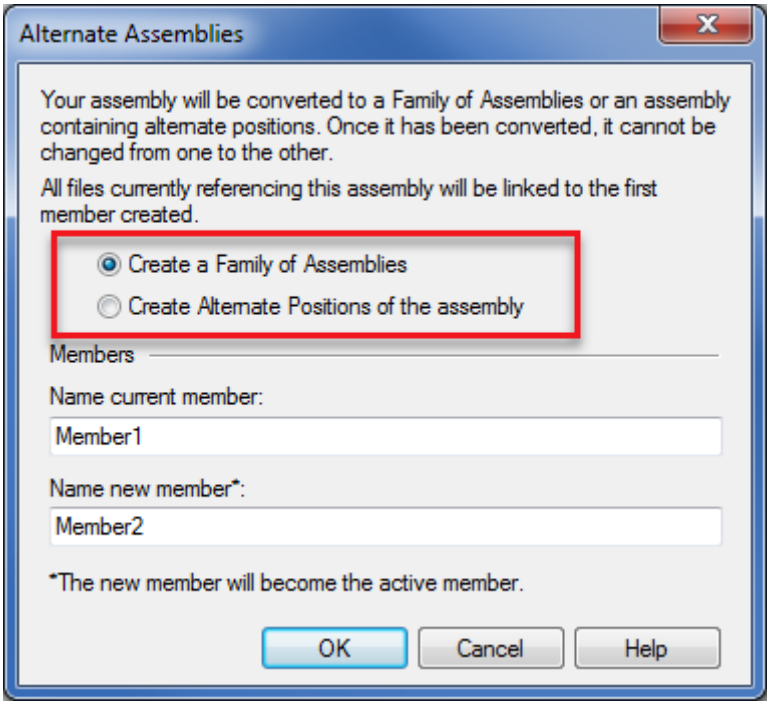
NOTES:
■ A part family is always considered as one structure, and individual elements of the structure cannot be edited separately from the master part!
■ All elements of a part family, including the master part, are also checked in momentarily when a single element is checked in, since this structure can only be processed as a whole.

Handling of Alternate Assemblies

Alternate Assemblies

There are two types of alternate assemblies in Solid Edge:

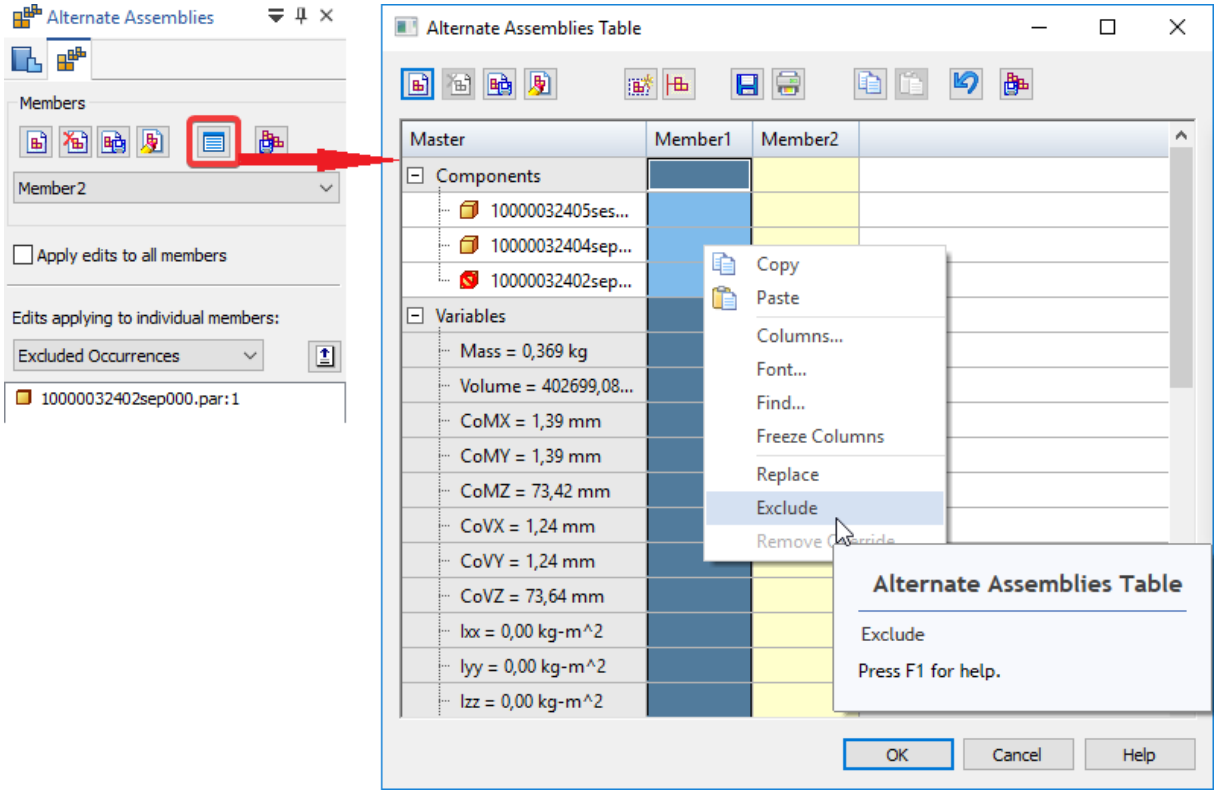
- Family Of Assemblies (FOA),
- Alternate Positions of the assembly.



Alternate Assemblies in Solid Edge

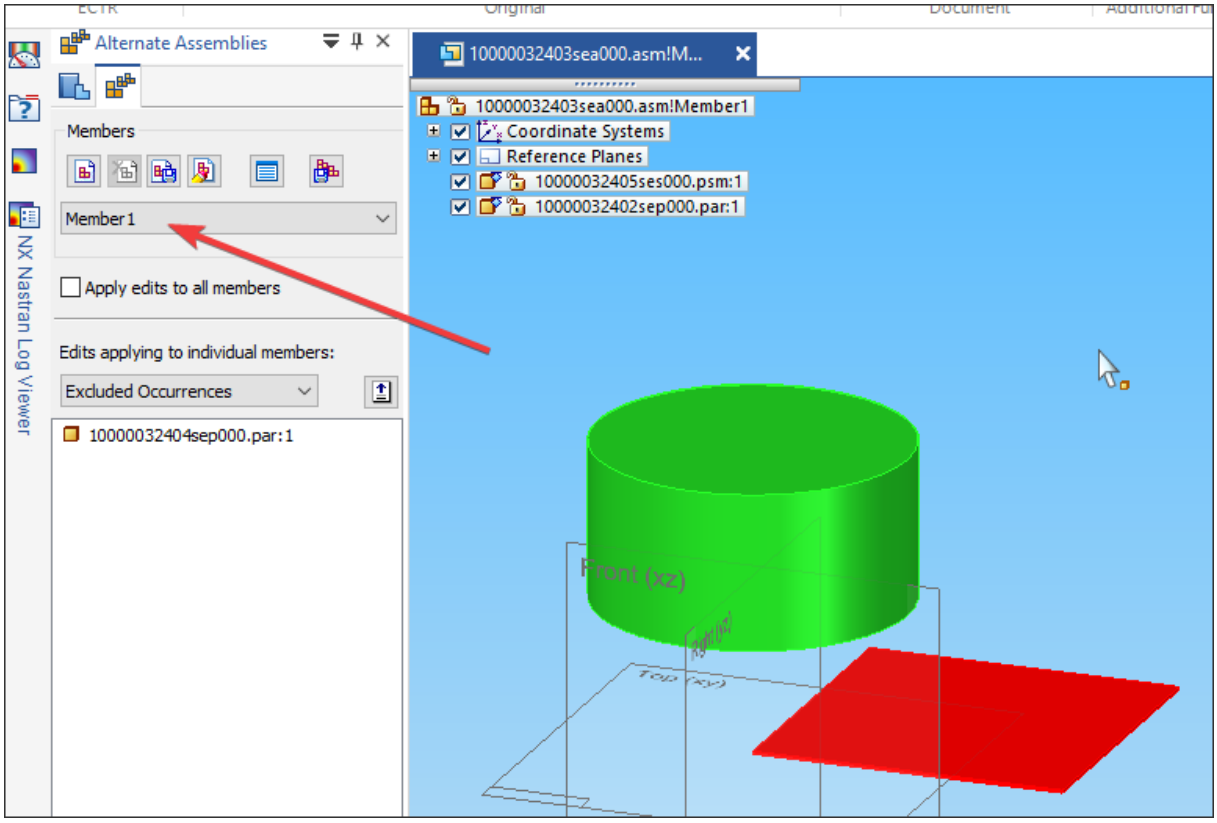
Family Of Assemblies (FOA)

Family Of Assemblies are defined as follows:
"*Family Of Assemblies (FOA) are assembly variants in which MOST parts are identical, but some parts and sub-assemblies are different between the individual assemblies. This type of assembly can have different components, mounting types, accessories and so on. In Solid Edge, these types of assemblies form a Family Of Assemblies.*"

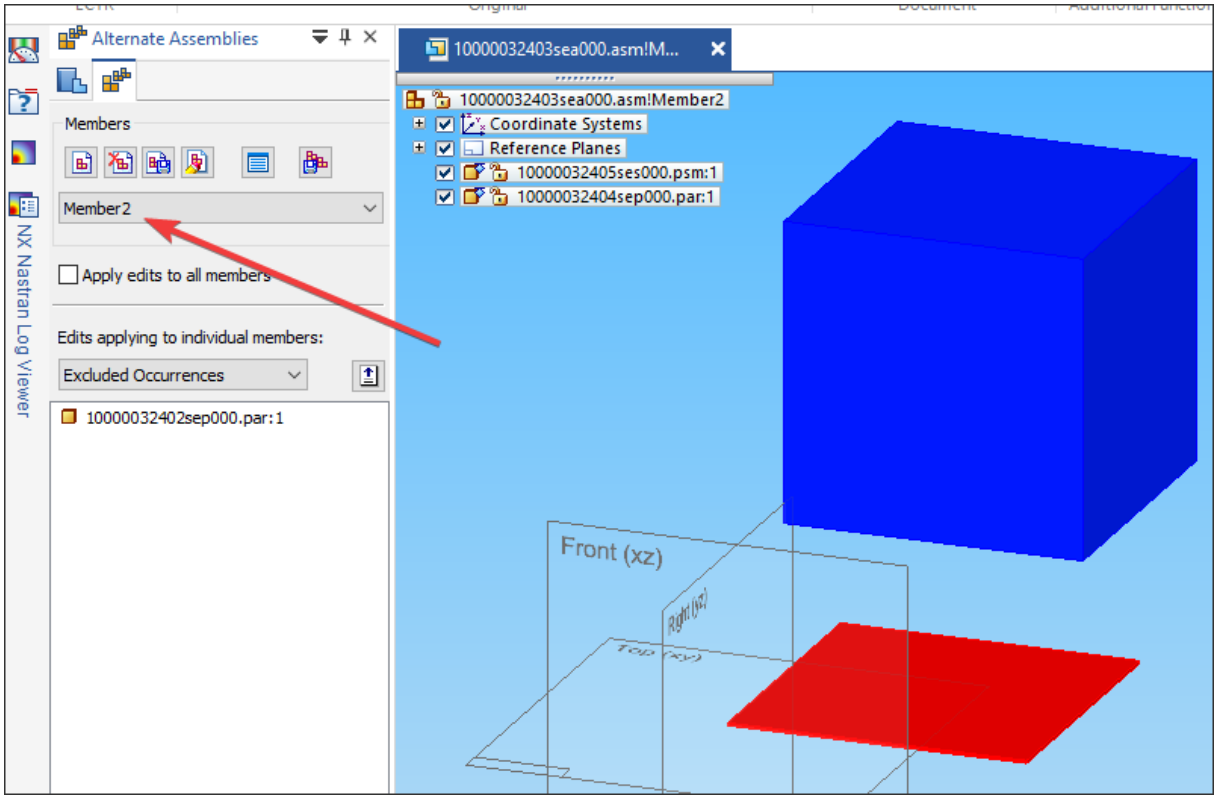


Alternate Assemblies Table

After creating the first elements of the new Family Of Assemblies, you can decide which parts are to be included in which element. This is easy to do by using the Alternate Assemblies Table and right-clicking on the cells for each part to exclude them or add them to the context menu. Now you can review your FOA members by selecting them from the drop-down menu:

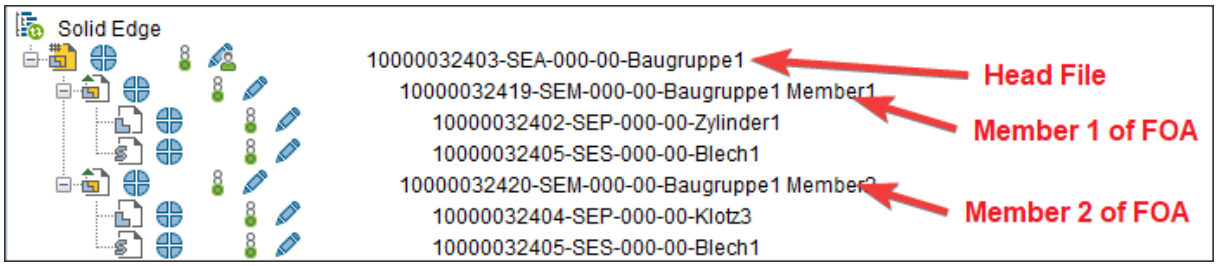

Alternate Assemblies
Members
Member1
Apply edits to all members
Edits applying to individual members:
Excluded Occurrences
10000032404sep000.par:1
NX Nastran Log Viewer
10000032403sea000.asm!M...
10000032403sea000.asm!Member1
Coordinate Systems
Reference Planes
10000032405ses000.psm:1
10000032402sep000.par:1
Front (xz)
Top (xy)

FOA Member 1



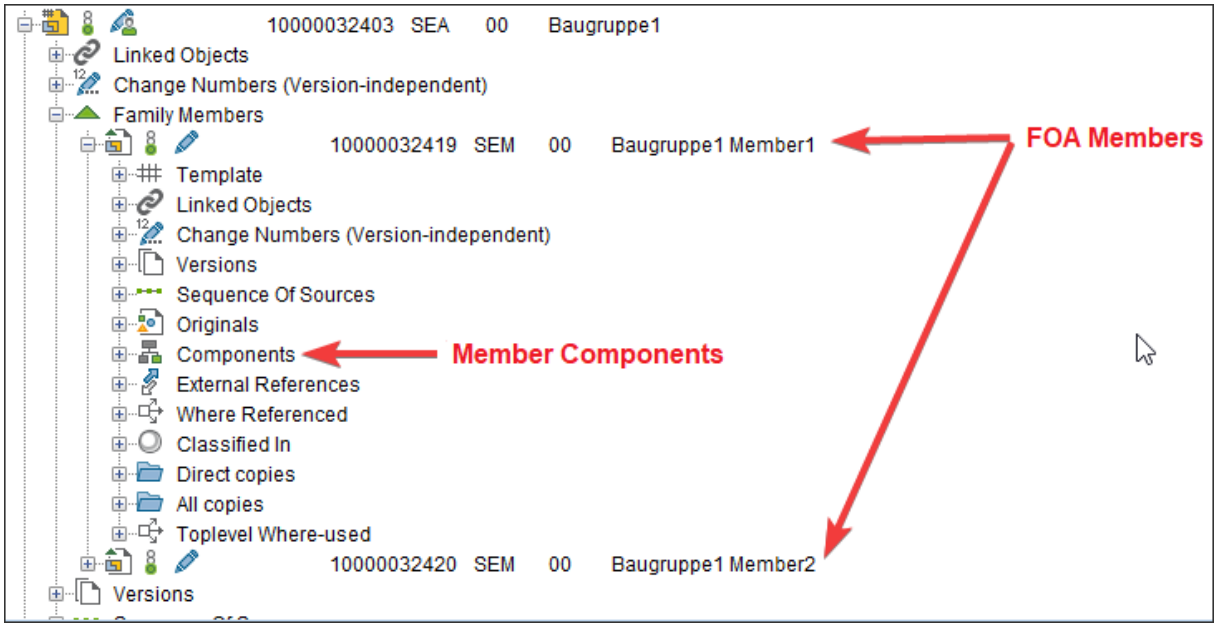
FOA Member 2

Family Of Assemblies supports the exclusion of events for a particular member so that each member has a different document list in SAP:



CAD Application structure

The CAD Application Structure shows that within the head file, two member files are created containing the parts that make up the specific FOA member. The member files are stored on the Family Members register tab of the head file that was used to create the new FOA. The components needed to create a member are stored on the Family Member Components register tab:

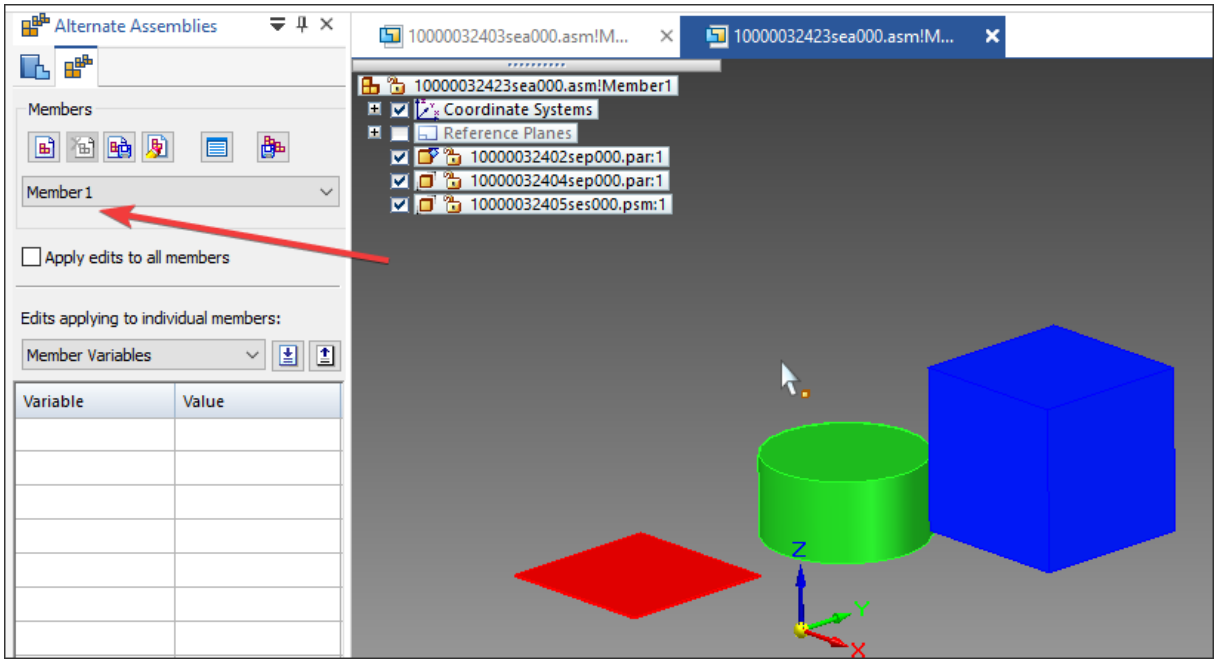


SAP view of the FOA

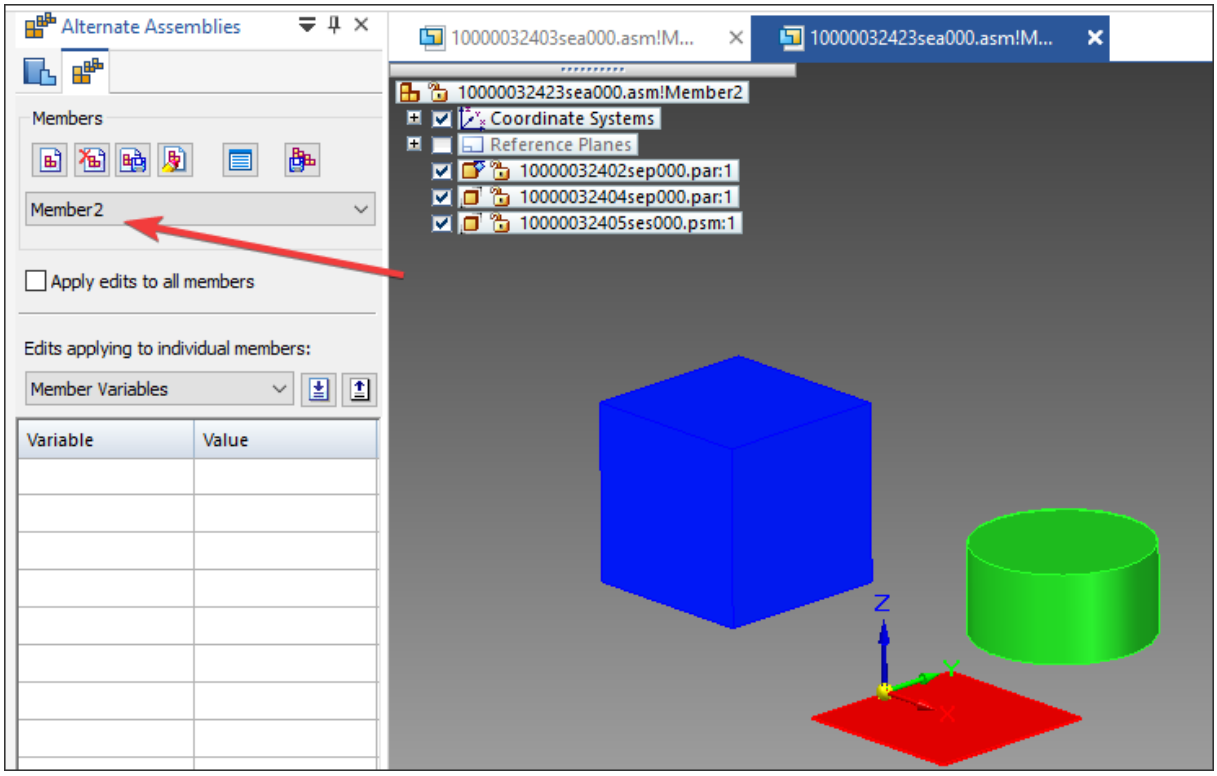
Alternate Positions

"*Assembly variants in which ALL parts are identical, but some part positions change during physical operation of the assembly. These types of assemblies contain mechanisms, links, actuators, and so on. In Solid Edge, these types of assemblies are considered Alternate Position Assemblies.*"

Alternate Position Assemblies require all parts to be the same for all members so that it is not necessary to create different bills of material in SAP.
To achieve this, the components only have to be rearranged after the first elements have been created. The changes must be made individually for each element.



Member 1 with the first arrangement of the components



Member 2 with the second arrangement of the components

The only differences between the members are in the arrangement of the components. This means that no new document info records (DIS) have to be created:

Head file in the CAD Application structure

The CAD Application Structure shows only the header file with its parts. The document list remains unchanged.

BOM derivation (Advanced BOM) for Family Of Assemblies (FOA)

Bills of material can also be derived from alternative assemblies. To accomplish this, however, you must customize the explosion scenarios in SAP using transaction "CDESK_CUS" (for R/3 Systems) or "CAD_SRV_CUS" (for S/4HANA Systems).

For more information, refer to the chapter "Bill of material derivation for Family Of Assemblies (FOA)" in the configuration manual of the SAP Engineering Control Center Interface to Solid Edge!

Handling of assembly copies

When using assembly copies, the following must be considered:

1. An assembly inserted as an assembly copy is excluded with its subelements from the material BOM.
2. If sub-assemblies are mirrored in an assembly, then the mirror assembly contains an assembly copy. This assembly copy is also handled as described in point 1!

ATTENTION:
A correct handling of assembly copies is only possible from Solid Edge version 2020!

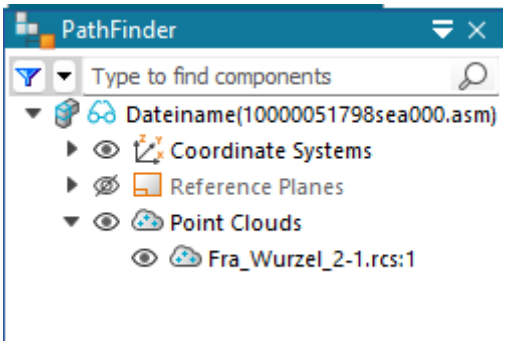
Handling point clouds (ReferencePointCloud)

Certain Solid Edge licenses (e.g., "Designcenter Premium" or "Advanced") can work with reference point clouds (ReferencePointCloud). The following parameter exists for this purpose in the configuration file "*default.txt*":

plm.document.save.IncludeReferencePointClouds.SLE

If its value is "true", the point cloud is displayed as a component in the assembly and stored as such in the ECTR.

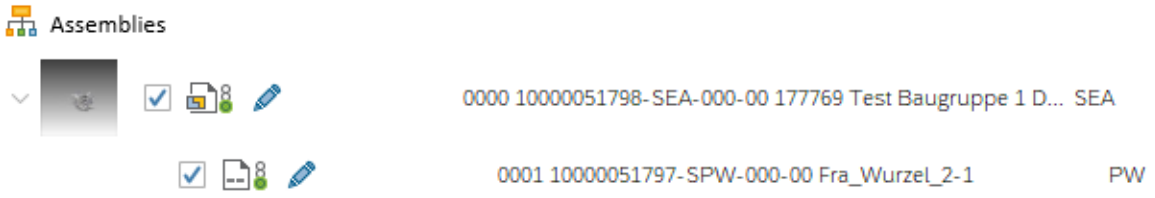
An assembly has a point cloud as a component in Solid Edge and is checked out:



Point cloud in PathFinder

IMPORTANT:
The point cloud must already be available in ECTR and a DIR for the point cloud must already have been created in the local working directory!

Now the "Save" or "Save & Display" function is executed.
In the application structure in ECTR, the document structure of the assembly now shows the point cloud as a component:



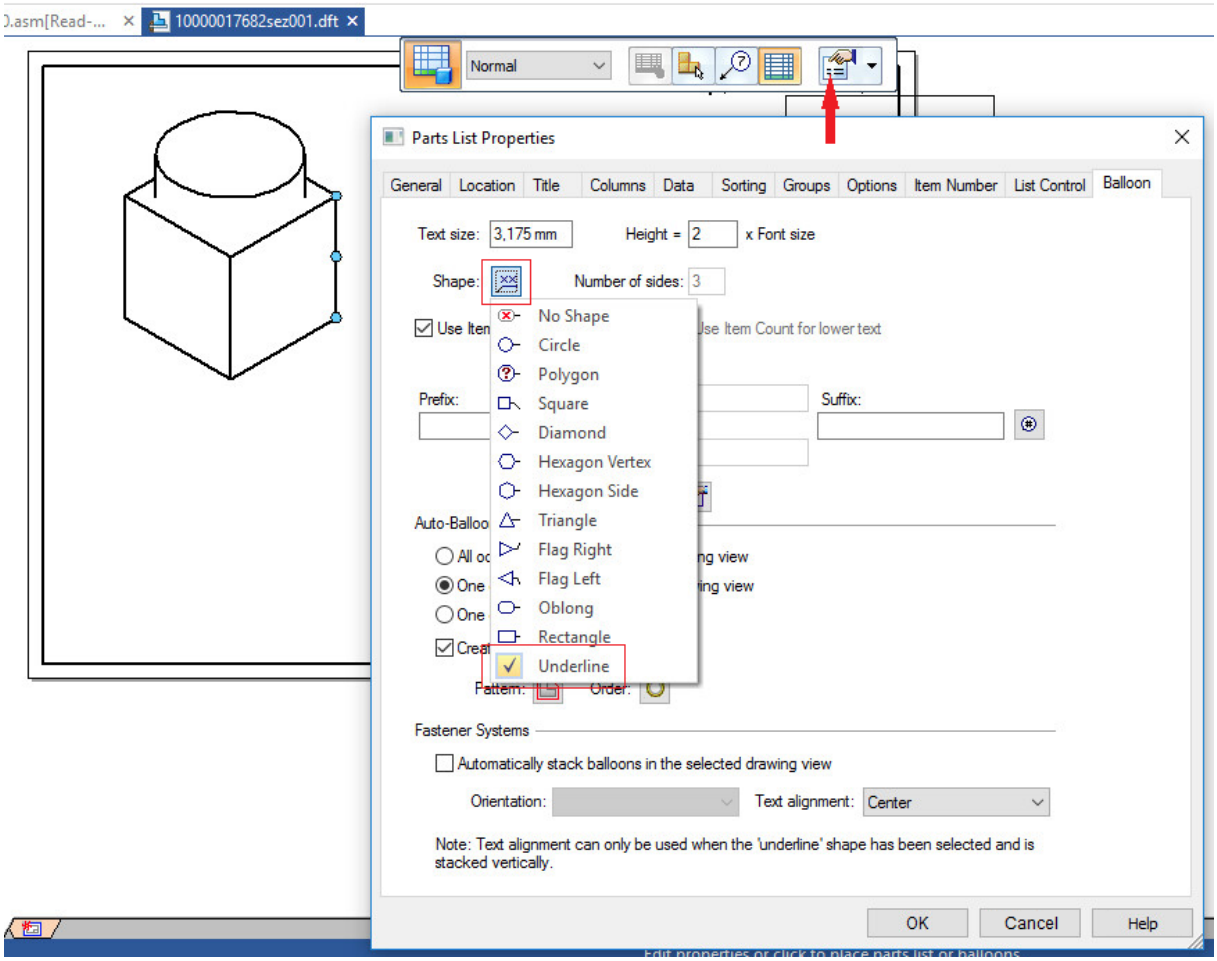
Point cloud in the application structure

Troubleshooting

The following may help to solve some problems during the usage of the SAP Engineering Control Center Interface to Solid Edge.

Display problems with ballooning with underline

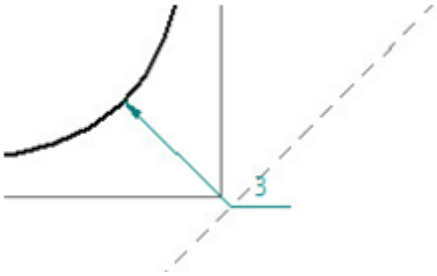
If you use the "Ballooning" functionality of the SAP Engineering Control Center Interface to Solid Edge display problems may occur when you select "Underline" as a balloon form in the ballooning settings of Solid Edge:



Solid Edge Balloon settings with underline

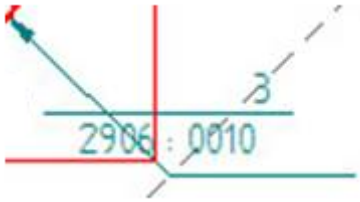
If you select the balloon display with underline, the item number cannot be displayed correctly with additional SAP data.

The display of a balloon without SAP data:



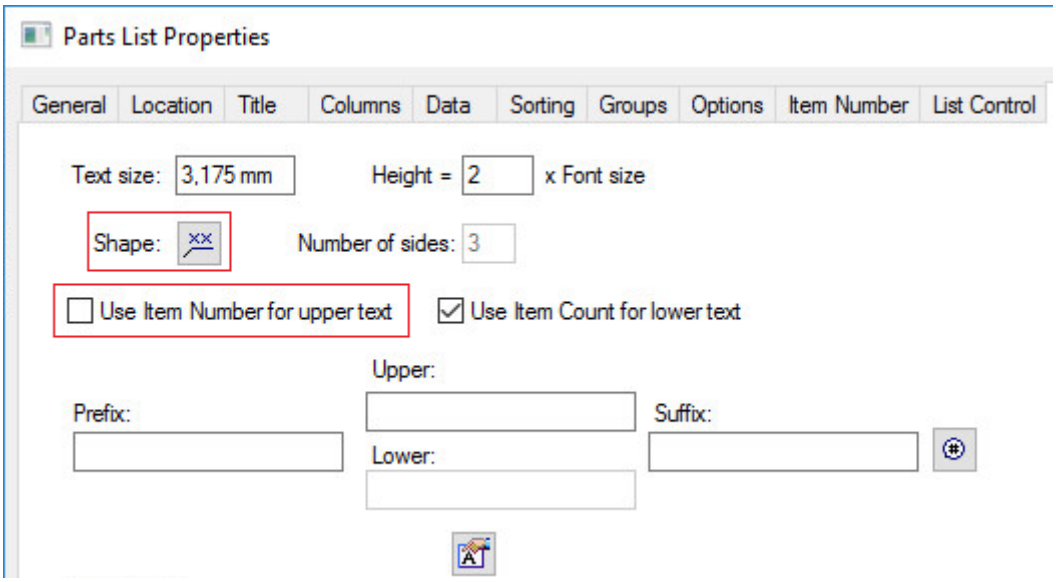
Balloon with underline without SAP data

The display of a balloon with SAP data:



Balloon with underline with SAP data

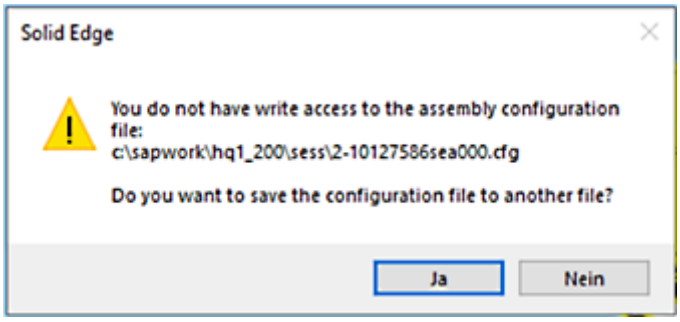
To prevent this, the item number must be hidden in the underline display so that the SAP data is displayed correctly. To do this, deactivate the option "Use item number for upper text":



Option "Use item number for upper text" deactivated

Error message when using the function "Replace part with copy" in PathFinder

If the function "Replace part with copy" is executed on a read-only document via the PathFinder of Solid Edge, the following error message may appear:



Solid Edge error message

This only occurs if the file has been modified (the file is "dirty"). This error message is Solid Edge behavior and must be ignored here by closing the dialog with the "No" button. **No subsequent problem occurs hereby!**

Error when uploading to the content server

The ECTR version R/3 5.2.6.0 or S/4 1.1.6.0 or higher is used.
A new document is to be created with the function "*New*" or a document is to be checked in via the interface function "*Save*", "*Save and Display*", "*Save As*" or "*Replace Version*".
This causes an error when uploading the file to the content server:

```
E02090 = Error while checking-in the original file(s):
E07778 = Could not upload file: ...
```

The process is then canceled.

The cause may be a change in the ECTR as of version R/3 5.2.6.0 or S/4 1.1.6.0: The upload request to the content server was changed from PUT to POST. This leads to problems with different content server implementations. No documents can be uploaded.

If this is the case, the problem can be solved by setting the following preference to false in the ECTR configuration file "*default.txt*":

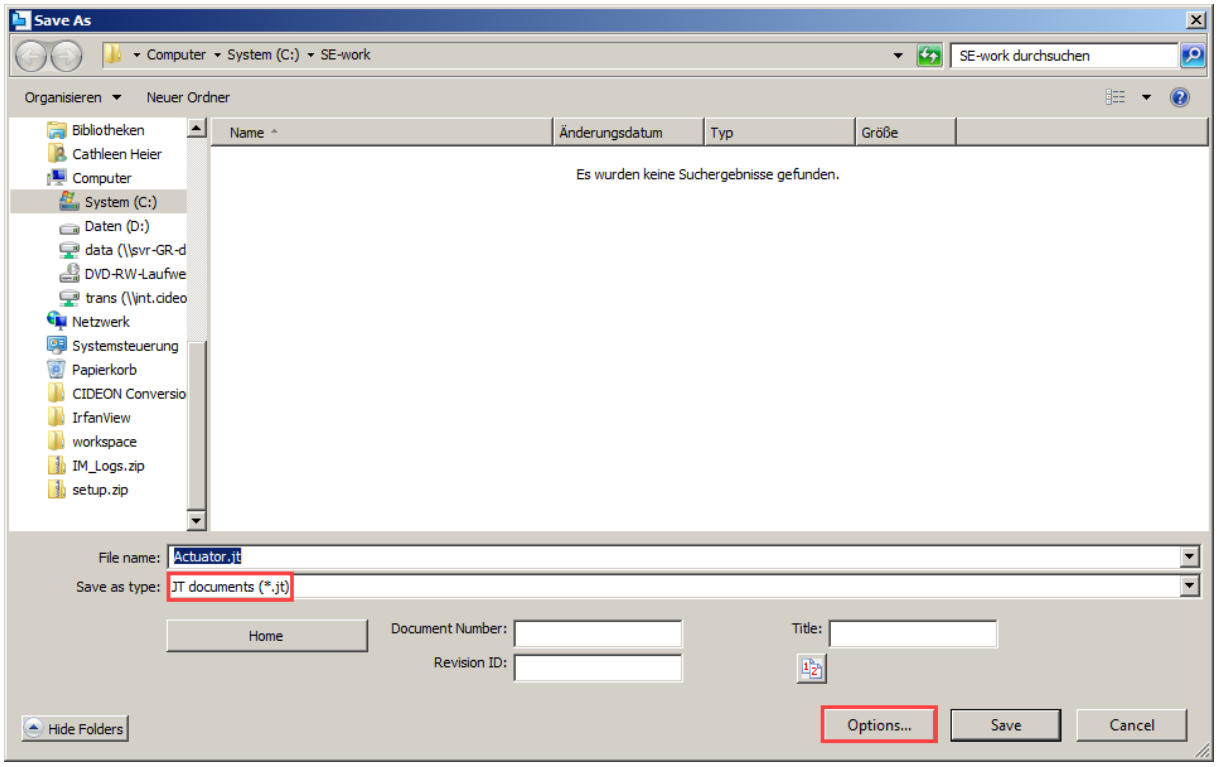
```
plm.http.upload.usePostMethod = false
```

Detailed information about this problem can be found in the SAP Wiki entry "5.2.6.0 / 1.1.6.0: Upload of files to content server fails"!

Problems during the display of JT documents in the SAP 3D Visual Enterprise Viewer

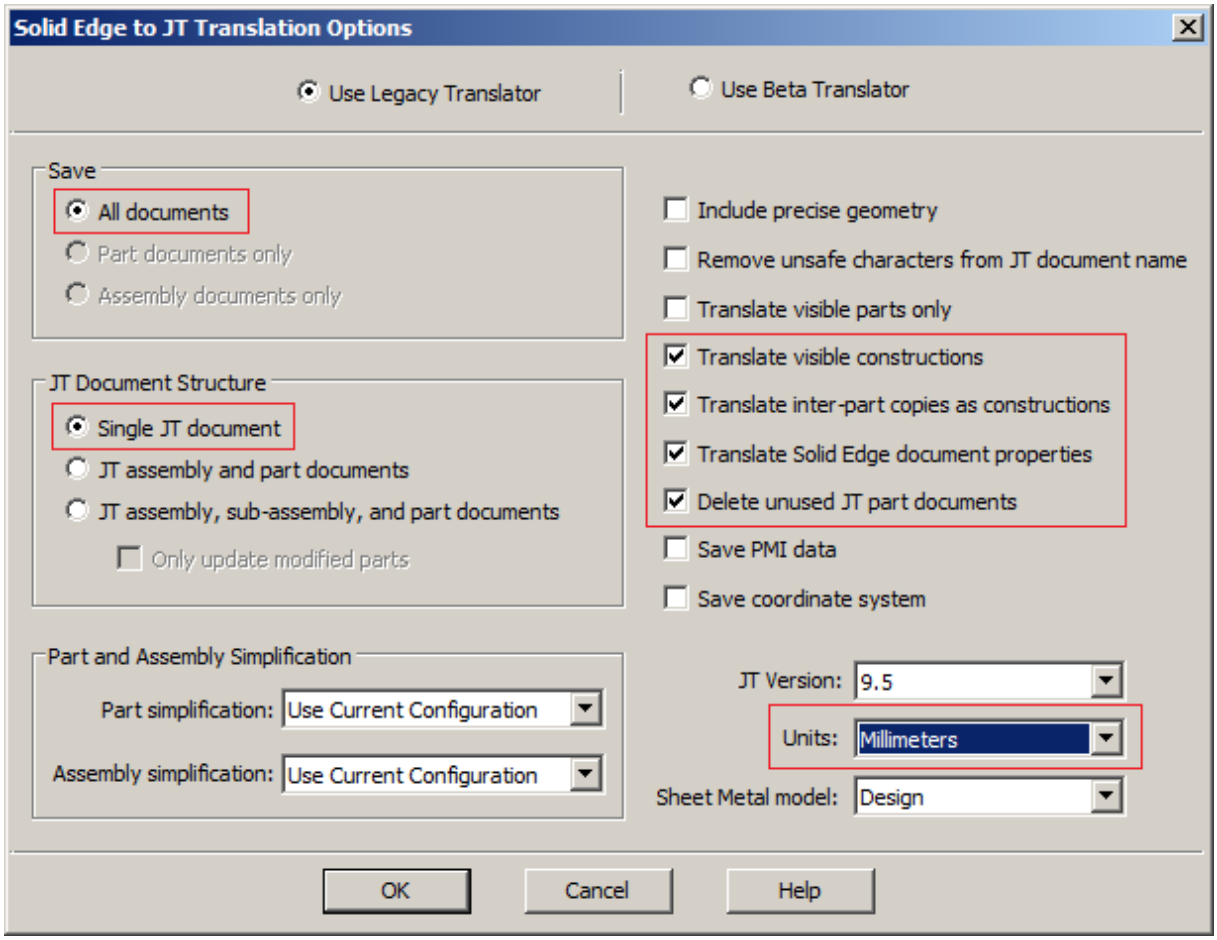
For the display of JT documents in the SAP 3D Visual Enterprise Viewer, problems can occur if the Solid Edge options for the JT conversion are not set accordingly. This shows up in the fact that the VE-viewer is indeed opened but remains empty. In order to solve this problem, the appropriate settings for the JT conversion in Solid Edge must be undertaken.

One reaches the dialog for setting the options for the JT conversion by opening an assembly (*.asm) in Solid Edge and invoking via Solid Edge's "application button" the dialog "*Save As*". In doing this, the "JT-Documents (*.jt)" data type must be selected as the one to be used for saving.



Solid Edge Dialog "Save As"

Now the button "Options..." is enabled. Clicking this button, the dialog "*Solid Edge to JT Translation Options*" is opened:



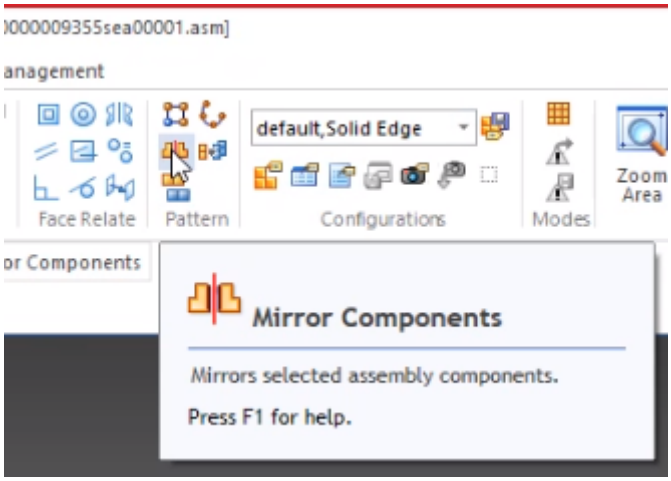
Solid Edge Dialog "Solid Edge to JT Translation Options"

The options marked in red must be set **exactly as shown in the figure**; in particular, the parameter "Units" must absolutely be set to "Millimeter"!

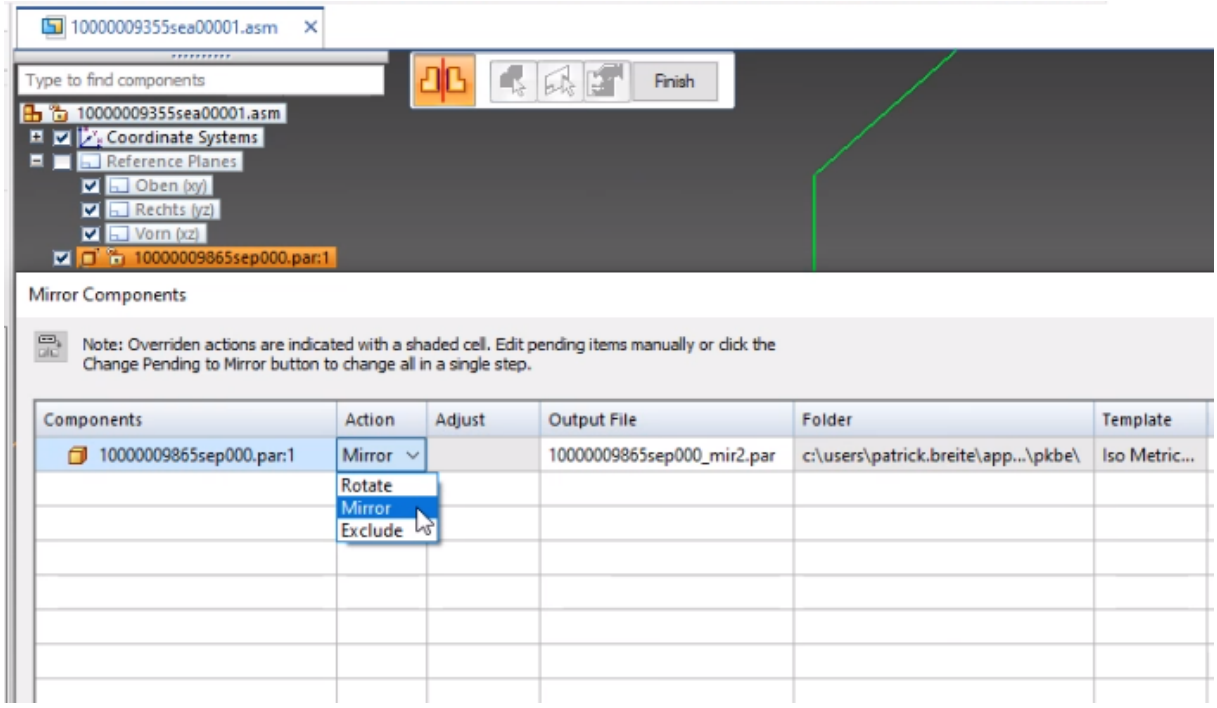
After accepting the settings with the "OK" button, the assembly should now be saved as a JT document. By doing so, the settings for the JT conversion are taken over permanently and now serve automatically for every additional JT conversion.

Problems with the creation of mirrored components

Solid Edge offers the "*Mirror Components*" feature, which can be applied to components within an open assembly or part:



Solid Edge function "Mirror components"



Create mirror component

If this function is applied to a component within an assembly or part that has a DIR, the entire assembly or top part must have been checked out beforehand!

Otherwise, no DIR is created for the newly created mirror component! In this case, this is not indicated by a message!

Silent installation fails

It is possible to perform a silent installation of the SAP Engineering Control Center Interface to Solid Edge. The executable installation file is called via the command line with the parameter "/silent", e.g.:

C:\Users\max.mustermann\Documents\ECTRSOLIDEDGE00P_19-80001332.EXE /silent

Under certain circumstances, however, this can cause an error which leads to the termination of the installation process.
As a result, a log entry is generated in the log file "*C:\Program Files (x86)\SAP\SapSetup\LOGs\NwSapSetup.log*", which has approximately the following wording:

Log message

```
14:34:22.651 NwSapsEngn 1E Commandline product 'ECTRS4SE' has failing
prerequisistes: <a style="COLOR:red">SAP Engineering Control Center
(S4) 1.1 or higher could not be found.</a><br/>
<a style="COLOR:green">SAP Engineering Control Center 5.1 or higher
available, SAP Engineering Control Center Interface to SolidEdge 1.1
can be installed.</a><br/>
14:34:22.651 NwSapsEngn 1E DM: Command Line in error
14:34:22.651 NwSapsEngn 1E Datamanager Load callback reported failure -
quitting on critical error!
```

To solve this problem, the installer must be called with the following two additional command line parameters: "*/IgnoreMissingProducts /TitleComponent:"ECTRSE+ECTRS4SE""*, e.g.:

C:\Users\max.mustermann\Documents\ECTRSOLIDEDGE00P_19-80001332.EXE /silent ***/IgnoreMissingProducts /TitleComponent:"ECTRSE+ECTRS4SE"***

The prerequisite for a successful installation of the SAP Engineering Control Center Interface to Solid Edge, however, is an already installed SAP Engineering Control Center, whose version and type must meet the requirements of the ECTR versions listed in the Product Matrix!

Start SAP logon failed

Symptom

A timeout error can occur when calling function modules directly in SAP or via the ECTR, e.g. material creation. After a waiting time, different messages may appear in the UI or in the log files, depending on the context:

Examples of error messages

```
Initialization of destination WITHGUI failed: Launching SAP GUI failed with error message:
Communication with SAPGUI timed out
Launching SAP GUI failed with error message: Communication with SAPGUI timed out
Error while changing the material: ERROR.
com.sap.conn.jco.JCoException: (136) JCO_ERROR_ILLEGAL_STATE: Launching SAP GUI failed with error message:
Communication with SAPGUI timed out (Remote shortdump: RFC_ATTACH_GUI_FAILED)
Initialization of destination WITHGUI failed: Launching SAP GUI failed with error message: Communication with SAPGUI
timed out
```

The problem occurs after updating the SAP GUI patch level.

Problem analysis

An SAP GUI connection is required for the action in SAP, but this could not be established. The registry key "StartSaplogon" is evaluated to establish the connection. This key can be stored in the following registry paths:

- HKEY_LOCAL_MACHINE\Software\SAP\SAPGUI
- HKEY_LOCAL_MACHINE\Software\Wow6432Node\SAP\SAPGUI
- HKEY_CURRENT_USER\Software\SAP\SAPGUI

If the key does not exist, has the value "0" or differs in value at the specified positions, the error described occurs.

If the SAP GUI patch level is updated, the registry key "StartSapLogon" may be deleted from the registry.

Troubleshooting

Observe the following SAP notes:

- 3391696 - SAP GUI startup fails with message that communication with SAP GUI has mistakenly timed out
- 844095 - Delegation of sapgui.exe to SAP Logon/SAP Logon Pad
- 3060851 - SAP Java Connector 3.1 Library - Hotfix installation [sapjco31P8HF_1-20009381.zip]

Check whether you can update the SAP GUI or the software used, which establishes a connection to SAP. Set the value "dword:00000001" for the registry key "StartSaplogon".

Final Remark

This manual is intended to facilitate handling of the product. Since this product is also constantly being further developed, only the release status at the time of going to press could be taken into account here. CIDEON Software & Services GmbH & Co KG is grateful for information and suggestions provided by users. Please enter a SAP ticket in the SAP Support Portal.

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