Agile
Version e6.0

ORACLE

Oracle Agile Engineering Data Management

Oracle Agile Engineering Data Management - MCAD Connector for SolidEdge Version 3.4.0.0 User Manual

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Preface

The Oracle documentation set includes Adobe® Acrobat™ PDF files. The Oracle Technology Network (OTN) Web site (http://www.oracle.com/technology/documentation/agile.html) contains the latest versions of the Oracle Agile EDM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Oracle Documentation folder available on your network from which you can access the documentation (PDF) files.

Note	To read the PDF files, you must use the free Adobe Acrobat Reader™ version 7.0 or later. This program can be downloaded from the Adobe Web site (http://www.adobe.com).

Note	Before calling Agile Support about a problem with an Oracle Agile EDM manual, please have the full part number, which is located on the title page.

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Readme

Any last-minute information about Oracle Agile EDM can be found in the Release Notes file on the Oracle Technology Network (OTN) Web site (http://www.oracle.com/technology/documentation/agile.html)

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Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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Introduction

Documentation

This documentation is intended to be sufficient to use the integration. It does not give in-depth information on the concepts and usage of Agile e6 or the CAD system.

For more information on that refer to the respective documentation.

Note   The information in this document is based on a standard installation.

Constraints

▫   Modification of the CAD structure and objects (e.g. create, move, delete, copy, etc.) is done in the CAD system. It represents the "Engineering Master".

▫   Agile e6 is the "Organizational Master" for managing CAD objects/structures with independent objects in the construction and release process of a company (e.g. single parts, drawings, 3D models) but not for individual CAD base elements (e.g. lines, surfaces, bodies, etc.).

Agile SolidEdge Integration

This integration facilitates the management of SolidEdge parts, components and drawings and metadata information in Agile e6. Files created in SolidEdge will be checked into Agile e6 file vault and managed with additional meta information.

The main features of the ECP Connectors are:

▫   Save – Saves native CAD data from the current session into Agile

▫   Load – Loads native CAD data from Agile into the current CAD session

▫   Create item – Creates an item of a SolidWorks model

▫   Creating BOM – Creates a BOM structure of a SolidWorks assembly

Overview of the Basic Processes
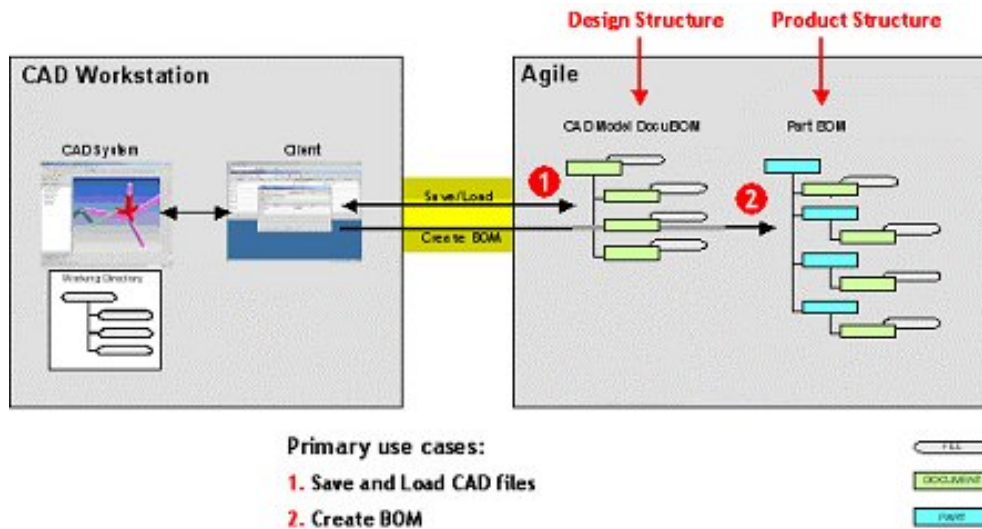
Save and Load CAD Files

CAD designs (i.e. 3D objects and 2D drawings for as well parts as assemblies) are created within the CAD system environment, with files in a working directory (which may be local or network attached). The designer saves into Agile e6, which creates a design structure that mimics the structure of the CAD assembly. The native CAD files are attached to this design structure, which is used as the basis for loading and re-saving the CAD designs. Since Agile e6 manage a centralized repository (or alternatively Distributed File Management), all CAD designers in the enterprise have access to these files, subjected to the control of Agile e6 roles and privileges. Individual designers can set checkout reservations in Agile e6 when they load files into their CAD session. Additional files such as viewables (PDF, TIFF, etc.) can be attached to the Agile e6 document.

Create a BOM

Provided there exist the data for the particular involved items the designer may use the Create BOM command to create or update the Agile e6 BOM, representing the Product Structure either for all substructures or flat (i.e. only at the first level).

To avoid tedious manual entries of the BOM it is possible to merge items of Standard parts and items of Auxilliary parts as well.

This function is used when an item representing the Design Structure already exists.

Usually creating and updating of the BOM is running in the background. The BOM can also be updated with interaction. This enables to modify the appropriate information in Agile e6.

Key Features

Menu

The Agile e6 SolidEdge integration (CCH) is an add-on module to the standard Agile e6 system and represents an enhancement to SolidEdge. The integration functions are provided with additional and expanded menus in Agile e6 and SolidEdge. A main menu has been added for Agile e6 to the standard SolidEdge menu. This allows accessing the features of the integration. It is available within all modules of SolidEdge.

Functions of the Main Menu

The main menu functions are context-sensitive, i.e. they differ depending if a 3D model, or a drawing is loaded.

Note   It is recommended to create the Agile menu bar for every context (see the Installation and Administration manual).

Part Menu

Assembly Menu

🔲	Start Client
🔲	Close Client
💾	Save with Update
💾	Save all
💾	Save options
📁	Load Model from Agile PLM
📁	Load Drawing from Agile PLM
📁	Load UG Model
📄	Insert from Agile PLM
📄	Create Item
📄	Create Item structure
📄	Assign from Agile PLM
🔍	Display Metadata
ℹ️	Info

2D Drawing Menu

🔲	Start Client
🔲	Close Client
💾	Save with Update
💾	Save all
💾	Save options
📁	Load Model from Agile PLM
📁	Load Drawing from Agile PLM
📁	Load UG Model
📄	Fill TitleBox
📄	Config TitleBox
📄	Assign from Agile PLM
🔍	Display Metadata
ℹ️	Info

Context Menu of CAX/OLE Icon
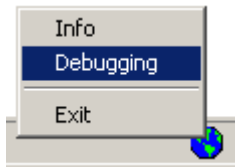
Menu	Description
Info	Display the version information of the integration software inclusive the CAX-Ole-server
Debugging	To get detailed information on all actions of the integration software, it is possible to switch on/off a trace file. This file will be written into the directory, defined in 3DCADMapping.ini in section [LogFileDir].
Exit	If it is necessary to shut down the CAX-OLE-server software (i.e. after severe computer problems) this menu entry may be used.

Save and Load CAD Files

The PLM system establishes Agile objects (parts/documents) for each CAD object. Its content derives from the object type (3D model, 2D drawing, item). Such Agile objects have a reference to at least one CAD file that can be stored in a dedicated vault or locally in the network.

Start and Stop the Agile e6 Client

Solid Edge and **Agile e6** can be started individually, or a batch file may be used to start both programs simultaneously.

1. Select Applications > Add-Ins > Agile e6 > Start Client.

    The Solid Edge program automatically runs the interface.

    The Cax-Ole-server is starting and the **Agile e6** client cooperats with SolidEdge.

2. Select Application > Add-Ins > Agile e6 > Close Client

Note   Before exiting the session, all edited objects should be saved in the local directory or in Agile e6 vault. It is recommended to remove any outstanding reservations!

When closing SolidEdge the user can select whether the temporary directory should be cleaned:
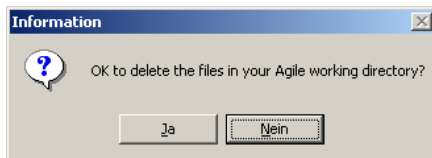
Load Object

Three features are available for loading.

□   Load Model

□   Load Drawing

□   Load UG Model

Load Model

This allows opening a 3D model in the current program session. If it is an assembly, its complete structure is opened.

1. Select Applications > Add-Ins > Agile e6 > Load Model

Agile e6 is opened and displays an empty 3D Model list.

2. Search for the specific model.
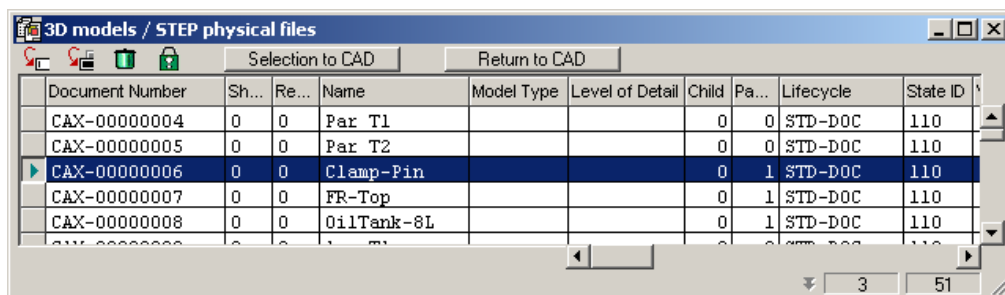
The buttons Selection to CAD and Return to CAD are visible after selecting a component or part.

Selection to CAD = enables the check-out a file copy from the **Agile e6** vault into SolidEdge. If an assembly is selected, copies of all involved 3D models are checked out automatically.

Return to CAD = returns to SolidEdge without checking out a copy.

Note More than one object can be selected, however, only the last selected object will be loaded to the CAD session. If no object should be opened, select any found object and choose the button "Return to CAD" to cancel the operation!

Load Drawing

This allows opening a copy of a drawing and its corresponding 3D model(s) in the active CAD session.

1. Select Applications > Add-Ins > Agile e6 > Load Drawing.

Agile e6 is opened and displays an empty 3D Drawing list.

2. Search for the specific drawing.

3. Use the menu button or select the menu from the context menu to load a selected drawing into SolidEdge.

The corresponding 3D model (and its complete structure) is identified and checked out automatically.

The title box is filled with all values defined in the mapping file 3DCADMapping.ini to be transferred from Agile e6 to Solid Edge.

Note More than one object can be selected, however, only the last selected object will be loaded to the CAD session. If no object should be opened, select any found object and choose the button "Return to CAD" to cancel the operation!

Load UG Model

This allows opening a 3D model which was created using the CAD-system Unigraphics in the

current program session.

1. Select Applications > Add-Ins > Agile e6 > Load UG Model.

Insert from Agile PLM

This allows inserting an existing Agile e6 CAD object into the active assembly or drawing. This object will be positioned at the origin.

1. Select Applications > Add-Ins > Agile e6 > Insert from Agile PLM.

    Agile e6 is opened, displaying a list of models or drawings.

2. Search for a specific model or drawing.

    The corresponding object file will be identified and checked out automatically.

Note   More than one object can be selected, however, only the last selected object will be loaded to the CAD session. If no object should be opened, select any found object and choose the button "Return to CAD" to cancel the operation!
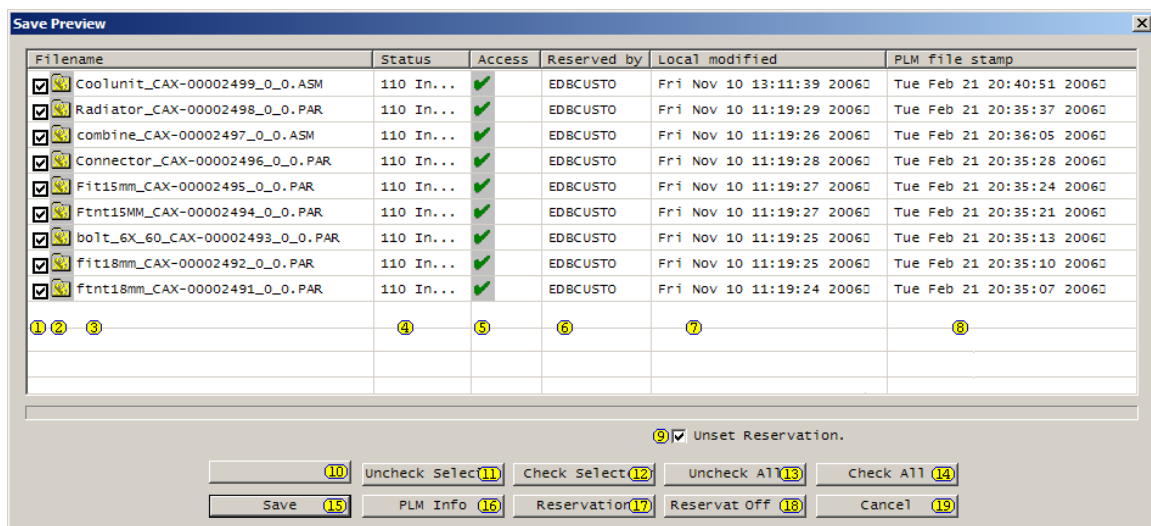
Save a CAD Object

Two features are available for saving new or updated SolidEdge objects in Agile e6:
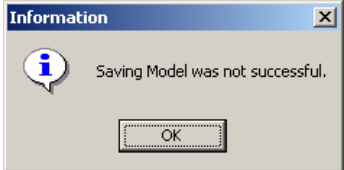
▫   Save with Update

▫   Save all

Save with Update

1. Select Applications > Add-Ins > Agile e6 > Save with Update

    All open objects that have been changed in the session will be saved in Agile e6.

	Description
1	Check box Activated = Intended for saving in PLM Highlighted = No effect It is also the select criteria when using button 12 or 13.
2	Icon for the respective file type (is the same for .PAR and .ASM)
3	File name incl. extension.
4	Workflow status of the model.
5	Check result for sufficient access rights enabling a successful saving.
6	Clicking button 12 = Displays username Clicking button 13 = Cancels displaying user name
7	Date of the last file modification in the local user work directory.
8	Date of the last modification of the latest file version that was checked in to PLM.
9	Selected = After a successful saving the reservation of the objects will be cancelled. Unselected = After a successful saving the reservation of the objects will not be cancelled.
10	Not used.
11	Deselects the checkboxes in the first column of those lines that have been selected if, e.g. button 14 has been used before.
12	Deselects the checkboxes in the first column of those lines that are not selected if, e.g. button 14 has been used before.
13	All selections from the checkboxes in the first column are removed.
14	All checkboxes in the first column are selected.
15	For the selected lines the process starts saving the SolidEdge files in the PLM vault and simultaneous updating of the metadata in the corresponding PLM-document data set
16	For all marked objects the corresponding metadata in the PLM-document data sets will be read out.

	Description
17	Enables a temporary access reservation during saving the entire assembly. This avoids an access conflict situation when an unintended load order for an involved document comes from another user.\n\nThe reservation is not permanently in PLM.
18	Disables a temporary access reservation during saving the entire assembly.
19	Cancels the planned saving in PLM; a message in SolidEdge is displayed.

Objects that are already known in Agile e6 will be saved in the background. A progress indicator keeps you informed about the status of this operation. The structure of the objects in Agile e6 will be updated based on the structure of the assembly in the current SolidEdge session. A message window is displayed to inform that the save operation was successful.

The Agile e6 file of an object will only be updated if changes were made since the last update, thus avoiding unnecessary file transfer!

2. If an object is saved the first time, a type-specific form is opened in Agile e6.

3. In Agile e6 fill out the metadata for the specific object.

    Depending on how the integration is configured, the SolidEdge Save As form may appear first.

4. Confirm this mask with the Save button.

Note   The name specified will be the default name for the object in Agile e6 (T_DOC_DAT.DOC_NAME). It is also possible to use a number generator which distributes names based on a number series.

After confirming the data entry, Agile e6 will be placed in the background and SolidEdge is active again.

Note   Newly specified object names cannot be assigned while Solid Edge is running. Therefore, new names will only be effective once Agile e6 has been restarted or the object is loaded again.

Save all

This option is similar to "Save with update". However, all structures and documents will be created or updated once again.

Note   Use this menu option in case of transfer problems during a save operation (network error, program crash, etc.) for security reasons.

Setting Save Options

When saving, several save options are available for saving a SolidEdge object to PLM (as an attachment to an Agile e6 document). You can select between the following action types Standard, Batch or Interactive.
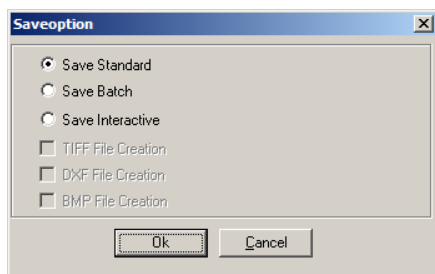
Save Option	Description
Save Standard	If an object is saved the first time, it runs in interactive mode . Updates are saved in Batch mode.
Save Batch	Save is run in the background and the metadata set is updated.
Save Interactive	Allows to change entries manually in the updated metadata form. For each object that is saved, a form containing the respective metadata is displayed in Agile e6.
TIFF File Creation	Saves file additionally in TIFF format and checks it in when active object is a drawing.
DXF File Creation	Saves file additionally in DXF format and checks it in when active object is a drawing.
BMP File Creation	Saves file additionally in BMP format and checks it in when active object is a model.

Note   The default save option can be defined in the mapping file 3DCADMapping.ini in section [DefaultSave].
Possible values are:
0 = The standard dialog appears for the user to enter a name;
1 = Name is given automatically by an internal number generator.

Assign from Agile e6

Assigns the metadata of an existing in Agile e6 object to the currently active object in Solid Edge.

1.   Select Applications > Add-Ins > Agile e6 > Assign from Agile e6

     Agile e6 is opened.

2. Search for the respective metadata set.

The metadata will be associated with the actual Solid Edge object.

Note   Models can only be assigned to an 3D-document and a drawings to an 2D-document.

Display Metadata

This allows displaying the metadata of the current object if the object is already known in Agile e6. The client window shows the related form filled with the respective metadata.
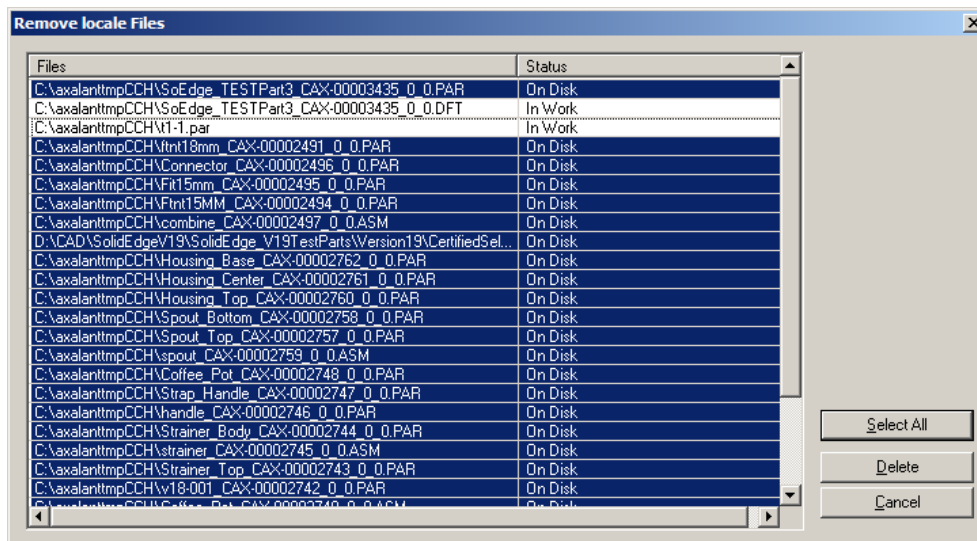
1. Select Applications > Add-Ins > Agile e6 > Display Metadata

Delete Local Files

This allows removing files from the local disc. The files will be physically removed and cannot be recovered again.

1. Select Applications > Add-Ins > Agile e6 > Delete Local Files

The Remove locale files list is displayed containing the names of all files which have been checked-out.

2. Select the required file(s).

The status field gives information about the usage of each file.

Note   Files which are marked as "In work" cannot be removed.

3. Click Delete.

Note   At the end of a Solid Edge session you will be always asked whether the local directory should be cleaned.

Create BOM

If a CAD object is known in PLM than it is possible to create a PLM data set describing an associated item. Of course this does not work with generic objects but with each member of the family table that represents a physical part.

Create / Update an Item

This allows generating an item data set for an object.

1. Select a SolidEdge object and select Applications > Add-Ins > Agile e6 > Create Item.

    This opens the item mask in edit mode in Agile e6.

    If such an items is already present in the database, an update of the data set runs in the background. A progress indicator will keep the user informed about the status of a save operation.
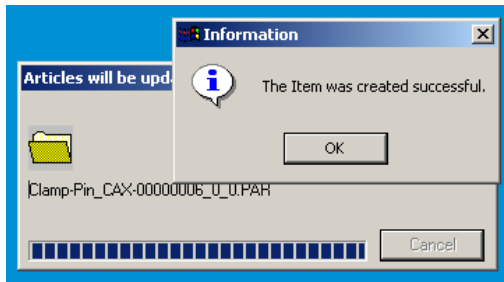
Note   In a standard, out of the box installation, the item number is the same as the document number.

Create BOM

The menu entry "Create Item structure" in the assembly-context Agile-menu allows generating an item structure for the items belonging to an assembly.

This function induces **Agile e6** to create the Bill of Material (BOM) for the corresponding items of an assembly. Additional entries to the Bill of Material can be added in **Agile e6** by creating the appropriate items. This is the case for helpparts (e.g solvents and lubricants) that are usually not modeled as part in Solid Edge.

This function will update any existing Bill of Material. Items that are manually added to a BOM will not be deleted in this process.

Several options for the Bill of Material are possible depending on your Solid Edge configuration.

Title Box

Fill TitleBox

If the actual CAD object is a drawing known in Agile e6, this function transfers the needed title box information from the Agile e6 metadata set.

1. Select Applications > Add-Ins > Agile e6 > Fill TitleBox.

Note   The titlebox is always updated when loading the file from the Agile e6 vault.

At a standard installation it is possible to share information regarding the following Agile e6 objects:

*   Document
*   Document history (for the drawing)
*   Item

Configure TitleBox

For the current drawing template, this function will configure the mapping file to fill in the title box information (if applicable) with information from Agile e6. The existence of an appropriate textbox is a precondition. For more information on how to customize the Titlebox refer to the SolidEdge documentation.

1. Select Applications > Add-Ins > Agile e6 > Config TitleBox.

The Configuration of TitleBox window is opened.
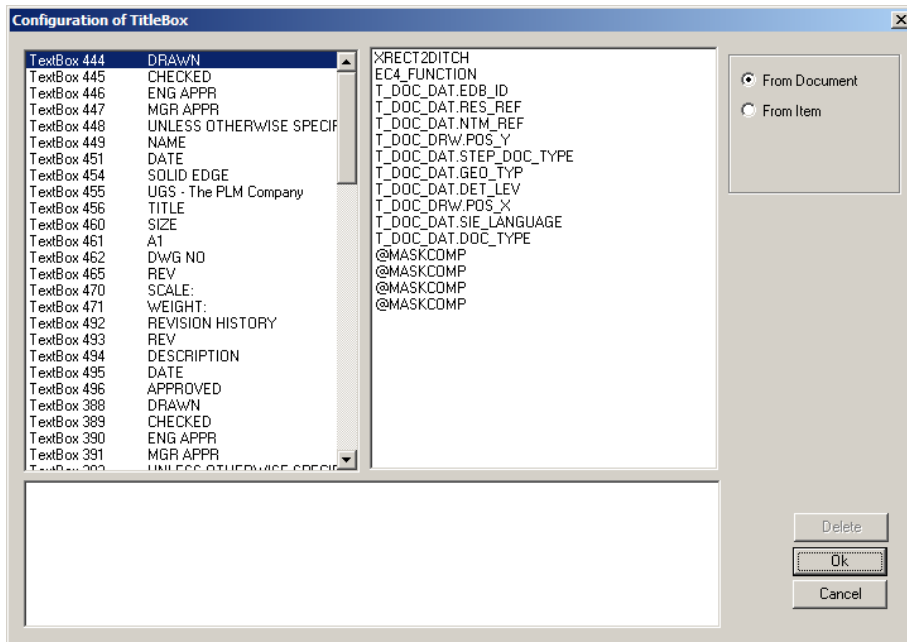
2. Select from the left window the desired line (e.b. TextBox 720).

3. Select from the right window the respective PLM field name (e.g. T_DOC_DAT.DOC_TYPE).

4. Click OK.

   In the directory ...\Server\Scripts a new file (CAX-OLE-A4h.dft.ini). It contains the necessary section that has to be included in the file 3DCADMapping.ini to realize the intended enhancement of the title box.

```
;
[FillAttrDocCAX-OLE-A4h.dft]
;
ENT:Entity_name            = EDB-DOCUMENT
TYP:Entity_type         = DRAWING
MAS:Name_of_mask            = EDB-DOC-DRW-TFR
SYS:System_fields        = off
WDG:Widget_type            = form
RES:Reservation_flag       = off
SEL:T_DOC_DAT.C_ID          = CID
ENT:Entity_name            = EDB-DOCUMENT
RET:TextBox 720       = T_DOC_DAT.DOC_TYPE
;
```

5. Copy this text into the 3DCADMapping.ini.

   Avoid the generation of blank lines.

6. To show the changes in the title box, restart SolidEdge.