

BPA 3DSmartDocCreator >

- <TC9> <TS9> -

Installation Guide – V1.8

BPA Delivery 7 for V5R19 (V5.7)

Modification Tracking

Date	Done by	Modification
3.11.2008	TBZ	Version 1 document creation
9.2.2009	TBZ	Change of Trigram
17.2.2009	TBZ	Menu creation (Toolbar for Client)
24.2.2009	TZB	Checklist
5.3.2009	TBZ	Adding missing Interop DLLs
15.5.2009	TBZ	Changed \BIN Directory and Licensing
22.5.2009	TBZ	Added Composer Templates installation
29.5.2009	TBZ	Changes done through IBM Feedback
3.6.2009	TBZ	Including new Installer
8.6.2009	TBZ	Errors corrected

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1. Introduction

This document describes the installation procedure for the BPA 3DSmartDocCreator Server and Client

This document is divided into the following sections:

- 3DMartDocCreator Server installation
- Configuring 3DSmartDocCreator Server
- 3DSmartDocCreator Client Installation
- Configuring 3DSmartDocCreator Client

1. Related Documentation

Related Documentation for Configuring the 3DSmartDocCreator Server

- Activity_Functions.html
- Inline_Functions.html
- SmarTeam Administration Guide
- SmarTeam Installation Guide

Related Documentation for Configuring the 3DSmartDocCreator Client

- TC9 Delivery6 UserGuide.doc
- SmarTeam Administration Guide
- SmarTeam Installation Guide

2. Definitions


Variables

Proposed examples:

Name	Definition
HOME	The selected directory for BPA Server installation
<CATIA Install Directory>	The directory of CATIA installation
<OS_Root_directory>	The operating system root directory (typically C:\)
<BPA License Directory>	The installation directory for BPA license files
<Path>	Variable for search path

Table 1 - Variables

Pictograms

Symbol	Usage
	Step The step symbol signals that a sequence of work operations is given.




	Information The info symbol signals background information.
	Tip The lamp symbol signals a tip that offers you practical experience to make your work easier.
	Warning: The warning symbol signals critical moments to which you should pay attention in order to avoid problems in your work process.

Table 2 - Ideograms

3. Prerequisite for 3DSmartDocCreator Installation

Hardware requirements

- See SmarTeam Hardware requirements

Software requirements

Software requirements for 3DSmartDocCreator Server

- SmarTeam Client Installation
- 3DVIA Sync Installation
- 3DVIA Sync Integration Installation
- Operating System : Windows XP or Windows Server 2003

Software requirements for 3DSmartDocCreator Client

- SmarTeam Client Installation
- 3DVIA Composer
- Operating System : Windows XP

Required disk space

- See SmarTeam Hardware requirements

2. 3DMartDocCreator Server installation

1. Before Installing

- Be sure that you have sufficient rights on your PC to install new software.
- check for installation folder
- need for uninstalling manually an older version of the BPA (if upgrading of old versions is not automatically supported)
- Dot Net Framework 2.0 is installed

2. 3DSmartDocCreator Server package description

SetUp files

The package includes these files separated in the listed folders:

3DSmartDocCreatorServer

- \BIN
 - AutomationServer.exe
 - AutomationServer.ini
 - Displayfile.exe
 - JobServerApp.dll
 - JobServerCompPlugIn.dll
 - JobServerWatcher.exe
 - SmartDocCreator.lic
 - vbSendMail.dll
- \Operations
 - Convertschattered.xml
 - CREATECOMPOSERFILES.jod
 - createContent.xml
 - CREATECOMPOSERCONTENT.jod
 - createViewPictures.xml
 - CREATECOMPOSERDOCUMENTS.jod

3DSmartDocCreatorClient

- \BIN
 - SmartDocCreator.dll
 - SmartDocCreator.lic
 - SmartDocCreator.dll.config
 - SmartDocCreator.xml
 - SmartDocCreatorNLS.xml
 - AxInterop.DS3DVIAPlayerActiveXLib.dll
 - Interop.DS3DVIAPlayerActiveXLib.dll
 - Interop.Shell32.dll
 - SmarTeam.Std.Interop.SmarTeam.SmApplic.dll
 - SmarTeam.Std.Interop.SmarTeam.SmartFlow.dll
 - SmarTeam.Std.Interop.SmarTeam.SmartMessages.dll
 - SmarTeam.Std.Interop.SmarTeam.SmUISrv.dll
 - SmarTeam.Std.Interop.SmarTeam.SmIntegrationTools.dll
 - SmarTeam.Std.Interop.SmarTeam.SmRecList.dll
 - SmarTeam.Std.Interop.SmarTeam.SmUtil.dll
 - ComposerStarter.exe
 - Interop.DS3DVIAComposer.dll

- Interop.ISPLI0BPALUMLib.dll
- ISPHA0HelpAbout.dll
- ISPLI0BPALUM.dll

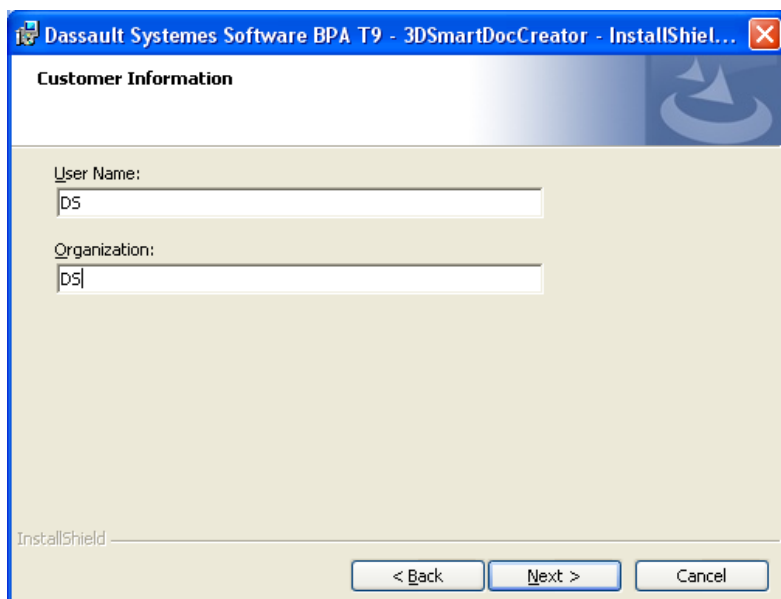
Possible other folders may contain: admin settings, demo data, additional tool folder for licensing, resources files etc...
Indicate the setup file format (ex: tar file, InstallShield setup file).

3. 3DSmartDocCreator Server and/or Client Installation

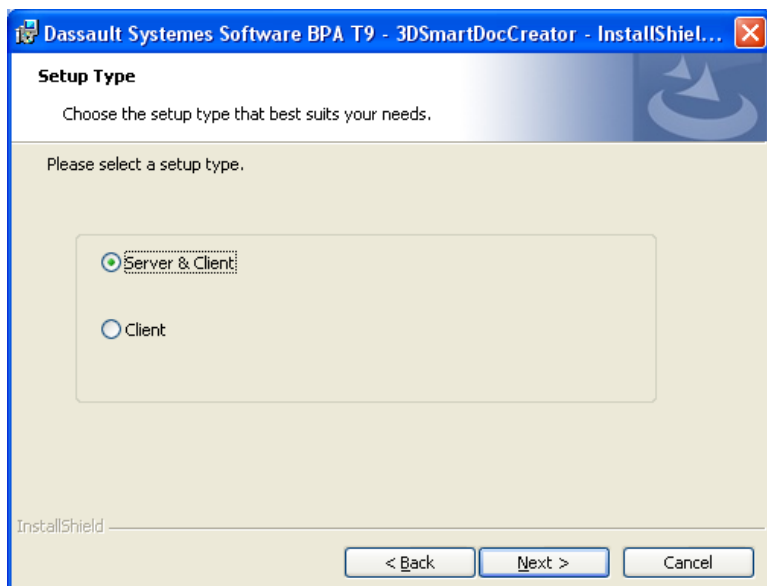
1.) The installation is done through installation software. Please execute the “setup.exe” from the delivered or existing media



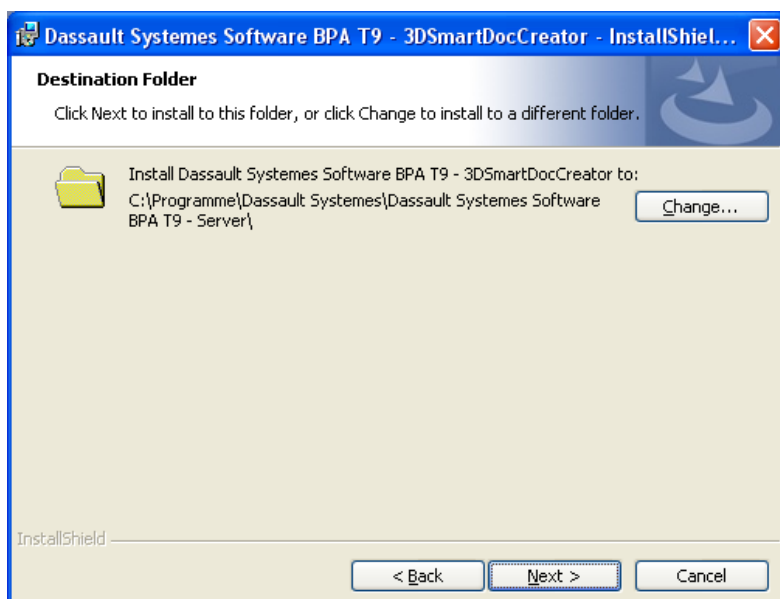
2.) Key in your preferred User Name and Organisation:



3.) Choose the installation type. The Server installation requires also a client installation. So if you choose this type both, Server and Client will be installed



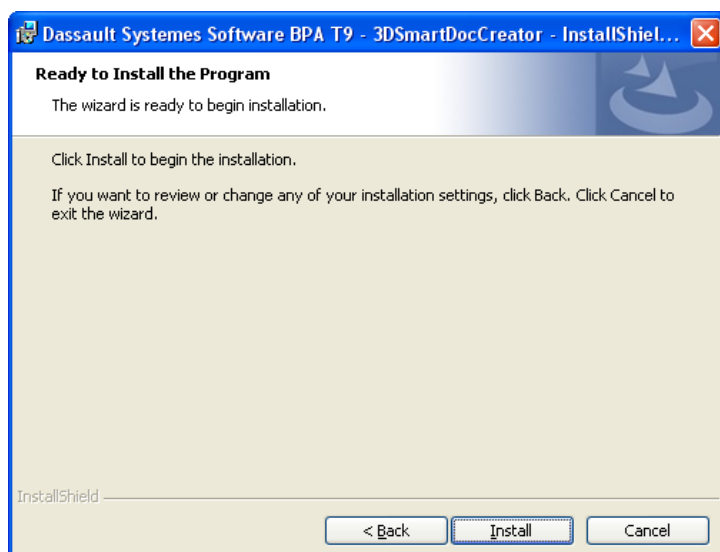
4.) Choose the Root Folder for the Server installation:



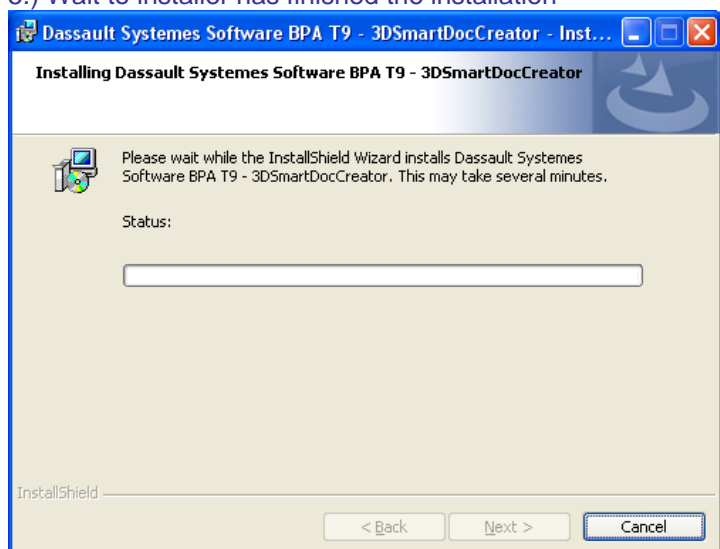
Under this root following folders are created through setup:

\Done	In this directory all done jobs are copied
\Pending	This is the shared directory were all jobs that has to be done are located
\Failed	In this directory all failed jobs are copied
\Files	This is a directory that is used as working directory for files
\Log	In this directory the log files are located
\Redo	On redo the job files are located here
\Trace	In this directory the trace files from the jobs are located
\Work	This is the work directory for the jobs

4.) Click [Install] to start the installation:



5.) Wait to installer has finished the installation



3. Configuring 3DSmartDocCreator Server

1. 3DSmartDocCreator Server Configuration

Directory Settings:

- Open the <Homedirectory>\bin\AutomationServer.ini with a Text Editor
- Change the [RootDir=c:\js] to your <Homedirectory>
- Open the CREATECOMPOSERFILES.jod File located in the <Homedirectory>\Operations directory
- Change the marked rows with proper Path information:

[CREATECOMPOSERFILES]

```
SetExitHandler      OnSuccess, OnError
New                 Smarteam, STJOB
New                 File, DoCopy
Set                 %Home%,C:\JS\

set                 %SyncExe%, "C:\Programme\Dassault
Systemes\3DVIAComposer\6.4\Bin\3dviaconverter.exe"
set                 %syncXML%, "c:\js\operations\convertshattered.xml"

SetLogMessage      1
STJOB.Run           PLM DB ST,X

SetLogMessage      2
STJOB.Login         admin

SetLogMessage      3
DoCopy.DoKill       "C:\js\files\*. *"
STJOB.SetObject     #Jobfile.Class_ID#, #Jobfile.Object_ID#

SetLogMessage      8
Define              %SYNC%, JobServerComPlugIn.CompAutomation

SetLogMessage      4
STJOB.EXECUTECOPYOPERATION %Home%\files,FALSE
Set                 %REFFILE%, #STJOB.CAD_REF_FILE_NAME#
Set                 %FILE%, #STJOB.FILE_NAME#
set                 %FILE%, %Home%\files\\%FILE%
set                 %REFFILE%, %Home%\files\\%REFFILE%

SetLogMessage      5
DoCopy.Copy         %FILE%,%REFFILE%

SetLogMessage      6
sleep               1000
```

<BPA name> – Business Process Accelerator

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```
callexternalfunction      %SYNC%,,callsync,%syncexe%,%reffile%,%syncxml%
DoCopy.WaitForProcess     "3DVIAConverter.exe",1000,900

SetLogMessage             9
callexternalfunction      %SYNC%,,callMapper,#Jobfile.Class_ID#, #Jobfile.Object_ID#, "CATIA"

SetLogMessage             10
sleep                    2000

SetLogMessage             11
```

- Database and Login Settings:

1. Change the Databasename and Login to your environment:

```
SetLogMessage             1
STJOB.Run                 PLM DB ST.X
```

```
SetLogMessage             2
STJOB.Login               admin
```

- Share the <Homedirectory>\pending folder. To allow the clients to create jobs on this server you must share the Pending directory to all users.



Attention: All Path data are given for a German operating system. You have to change to proper Paths fitting to your system. Do the same for the Operation file: CREATECOMPOSERDOCUMENTS.jod

2. Create a shared Directory on the SmarTeam Fileserver

Create a shared Directory for the converted Composer Files (smgXML and smgGeom). These files are created during through the AutomationServer

3. Change export values in XML Sync files

Changes that has to be done in the related XML file for the 3DVIA Sync:

- Open the convertshatterd.xml File located in the <Homedirectory>\Operations directory
- Change the rows with proper Path information:

```
<SeemageBatch Version="6.1.1.1335">
  <Properties>
    <Batch.IORefinement Value="0.5"/>
    <Batch.SaveInSameFolder Value="0"/>
    <Batch.SaveInXmlOnly Value="1"/>
    <Batch.SaveFolder Value="E:\composer\geomfiles"/> <-Shared Directory>
    <Batch.OverwriteChoice Value="0"/>
    <Batch.IORefinementAdapt Value="1"/>
    <Batch.Healing Value="0"/>
    <Batch.IOCheckOriginalFileChange Value="0"/>
```

<BPA name> – Business Process Accelerator

```

<Batch.IOMergeFileInOneActor Value="0"/>
<Batch.IOMergeFileInOneFile Value="0"/>
<Batch.IORecursivity Value="0"/>
<Batch.IOImportAsBodies Value="1"/>
<Batch.IOImportMassProperties Value="0"/>
<Batch.IOImportPoints Value="0"/>
<Batch.IOImportPMIs Value="1"/>
<Batch.IOImportCurves Value="0"/>
<Batch.IOImportFreeFaces Value="0"/>
<Batch.IOImportNoShow Value="0"/>
<Batch.IOImportNoPick Value="0"/>
<Batch.IOImportGraphicData Value="1"/>
<Batch.IOReduceAccuracy Value="0"/>
<Batch.IOReduceAccuracy.Value Value="0.1"/>
<Batch.IOWriteNormals Value="1"/>
<Batch.IOWriteSmgGeomsWhenSaveSmgXml Value="1"/>
<Batch.IOWriteSmgGeomsInSmgXmlDirectory Value="0"/>
<Batch.IOCompressionBits Value="16"/>
<Batch.IORefinementType Value="0"/>
<Batch.IORelativeRefinementFunction Value="0"/>
<Batch.IOSetChordalError Value="1"/>
<Batch.IOSetNormalDeviation Value="0"/>
<Batch.IOSetEdgeLength Value="0"/>
<Batch.IOChordalErrorValue Value="0.2"/>
<Batch.IONormalDeviationValue Value="20"/>
<Batch.IOEdgeLength Value="20"/>
<Batch.IOUseFlatMethod Value="4"/>
<Batch.IOU3dQualityOutput Value="0"/>
<Batch.IOIdentType Value="1"/>
<Batch.IOImportMetas Value="1"/>
<Batch.IONodeFeatureName Value="1"/>
<Batch.IONodeInstanceName Value="1"/>
<Batch.IOPDFTemplate Value="C:\Programme\Dassault
Systemes\3DVIAComposer\6.1\Pdf\TemplateU3D.pdf"/>
<Batch.IOPDFPublishType Value="0"/>
<Batch.PerformLogging Value="1"/>
<Batch.AppendToLog Value="0"/>
<Batch.LogFilePath Value="C:\Documents and Settings\tbz.DS\Application
Data\3DVIAComposer\User\seePub.xml"/>
<Batch.ShowProgress Value="0"/>
<Batch.UseTimeOut Value="0"/>

```

Do the same for the CreateViewPictures.xml that belongs to the CREATECOMPOSERDOCUMENTS.jod

4. *Install 3DSmartDocCreator Client*

1. *Before Installing*

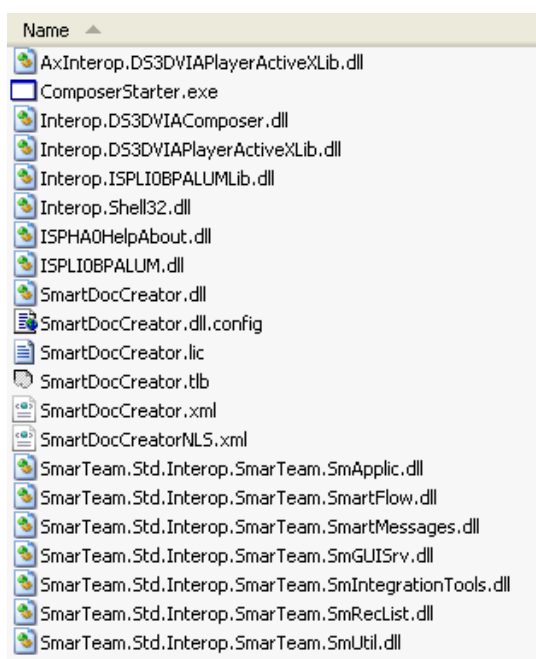
- Be sure that SmartTeam Editor is installed on your PC and you have the rights to copy files to your Scripts and Icons Directory of your SmartTeam Installation
- check for SmartTeam Scripts and Icons installation folder
- Dot Net Framework 2.0 is installed
- Be sure you are a SmartTeam Administrator to use the administration tools

2 *3DSmartDocCreator Client package description*

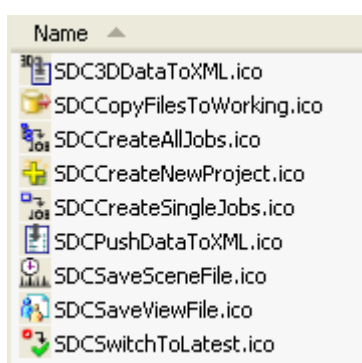
SetUp files

The Installation Media contains following files under the folder 3DSmartDocCreatorClient

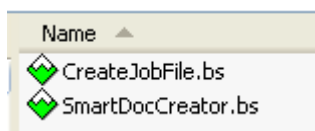
\BIN



\Icons



\Scripts



\Composer

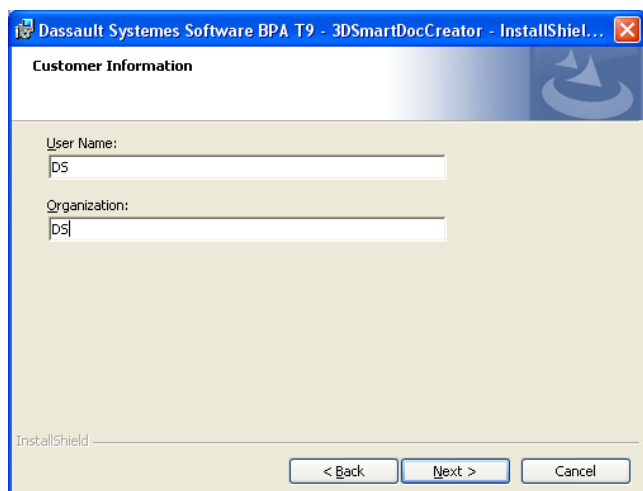
- Template.smgProj
- Template.smgSce
- Template.smgView
- Template.smgXml

3 3DSmartDocCreator Client Installation

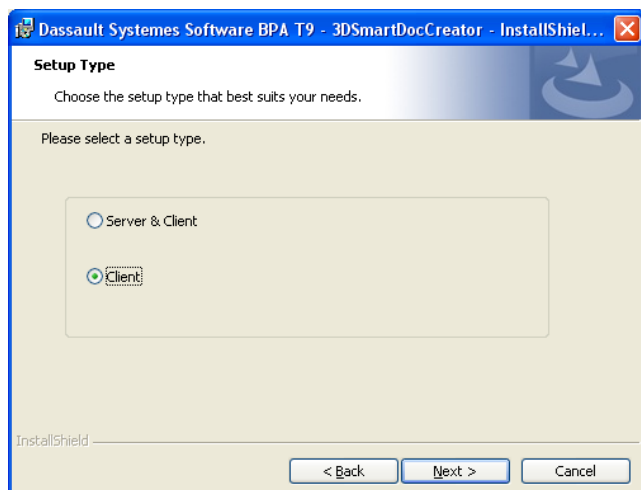
1.) The installation is done through installation software. Please execute the “setup.exe” from the delivered or existing media



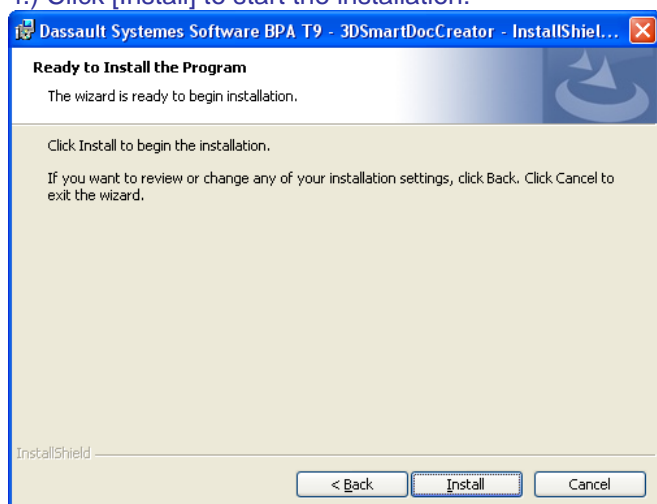
2.) Key in your preferred User Name and Organisation:



3.) Choose the installation type “Client”.



4.) Click [Install] to start the installation:



5. Configuring 3DSmartDocCreator Client

1. 3DSmartDocCreator Client Configuration

The Client Configuration contains these steps

- Modify existing Datamodel
 - Add Composer Classes
 - Add Admin Classes
 - Add Link Classes
- Create Profile Cards for Admin Classes
- Create Filetypes
- Create Admin Objects
- Implement Script Hooks
- Implement menu Commands

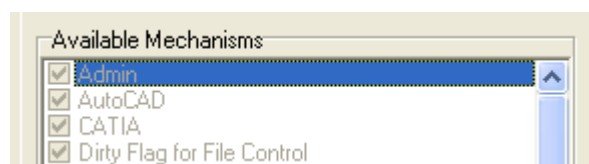
1. Modifying existing/used Database

a.) Add Composer Classes. You can add these classes on the structure level of your choice.

- Add a "Composer Project" Class to the Document Superclass
- Add a "Composer File" Class to the Document Superclass

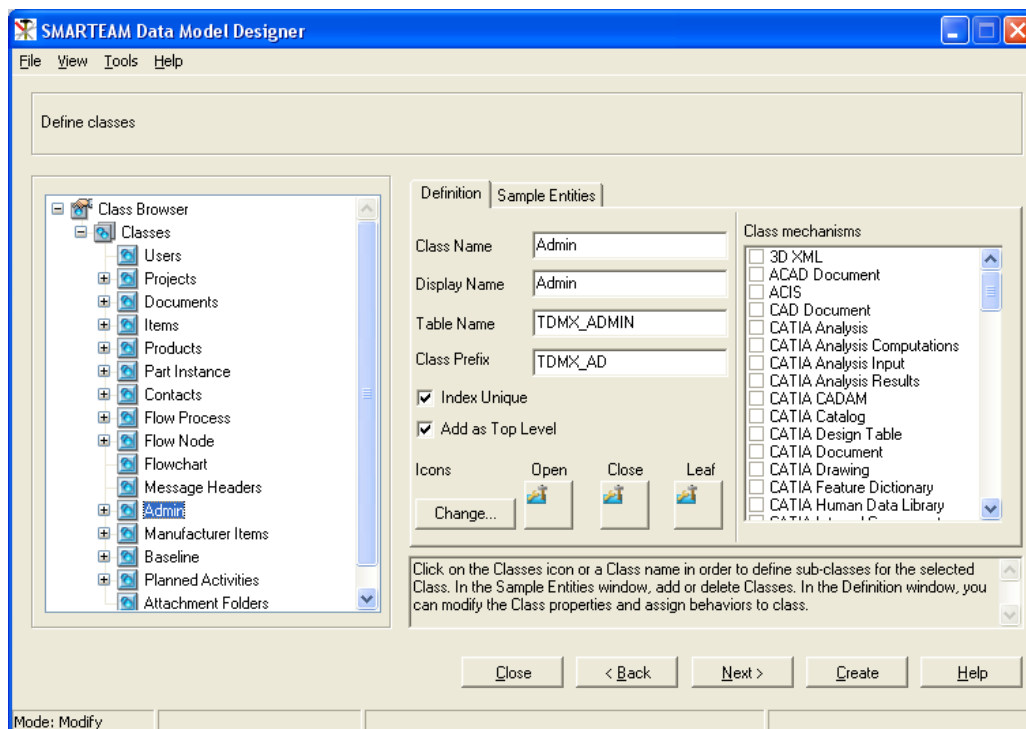
b.) Add Admin Classes

If you use SmarTeam R17 or higher you can select the Admin Database Mechanism to get the Admin Classes into your Datamodel.

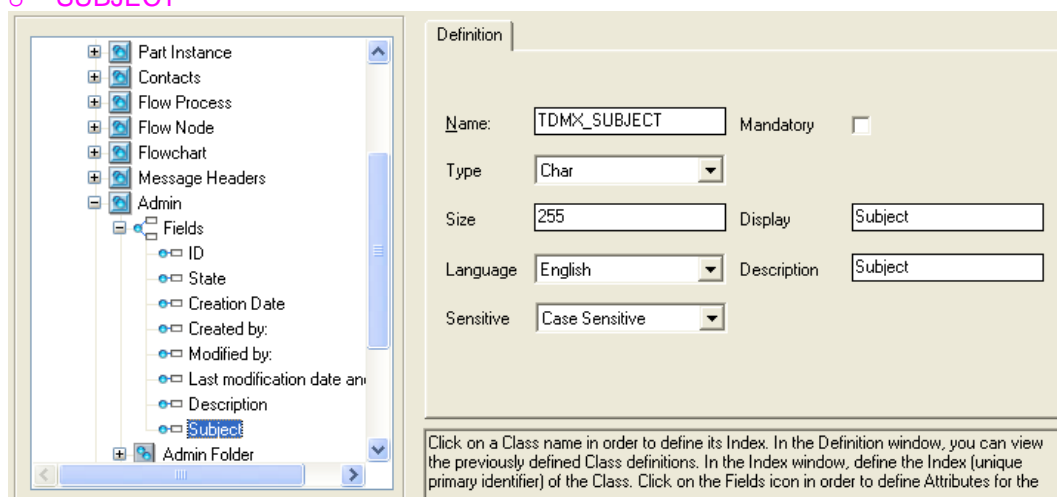


If you use SmarTeam R16 or a converted Database you have to add the Admin Classes manually.

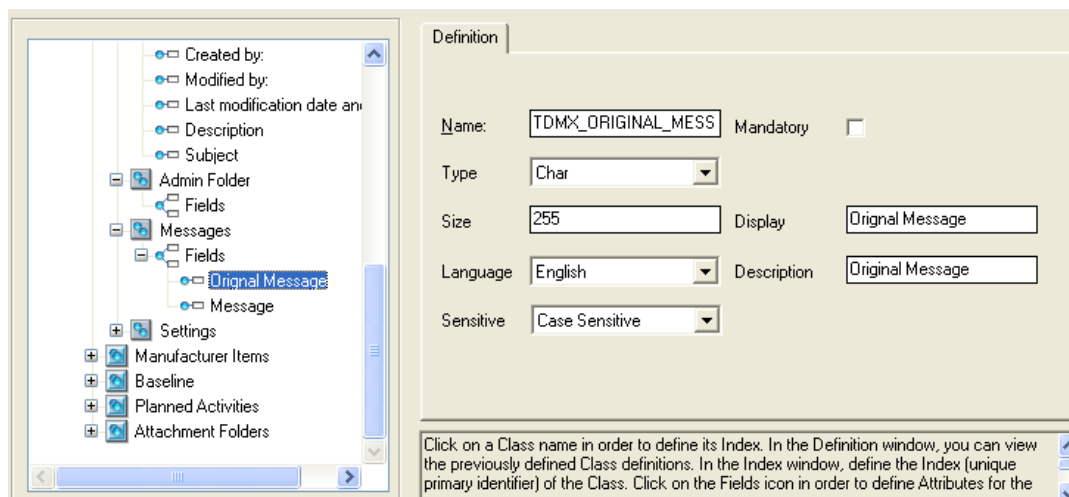
- Start the SmarTeam Data Model Designer and add the Superclass : Admin
Define Class as shown in the Picture:



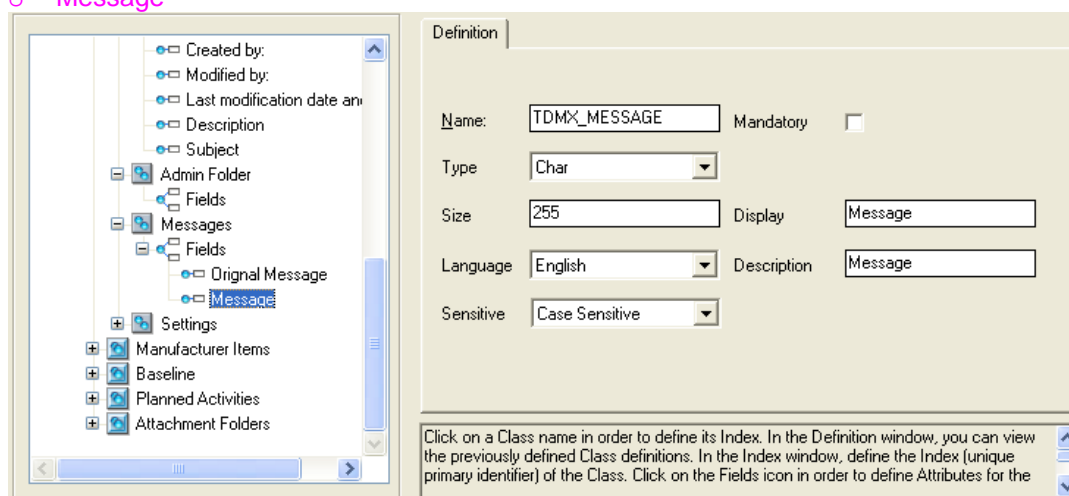
- Add Leafclasses:
 - Admin Folder
 - Messages
 - Settings
 - Admin Setting
 - User Setting
- Add Fields to the Admin Class
 - SUBJECT



- Add Fields to the Message Leaf Class
 - Original Message

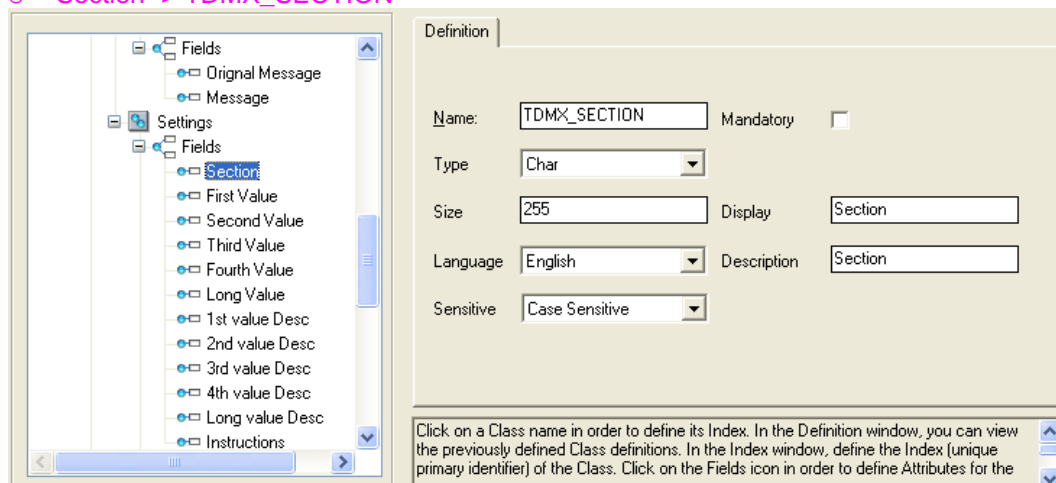


Message

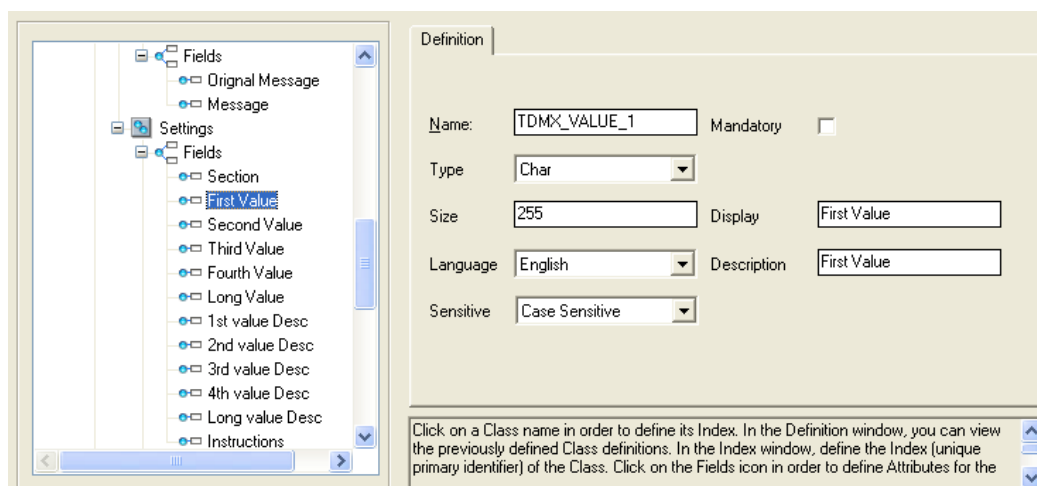


Add Fields to the Settings Leaf Class

Section -> TDMX_SECTION



First Value -> TDMX_VALUE_1



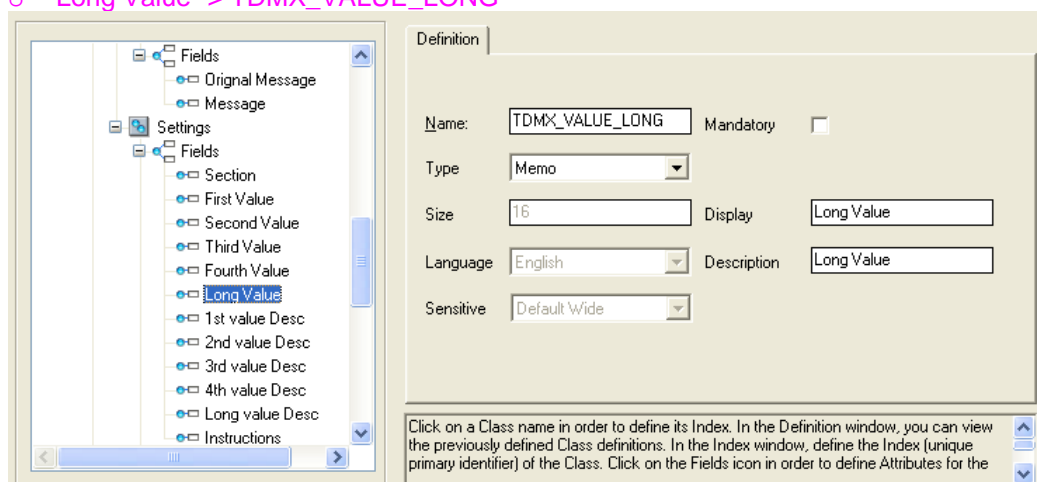
The screenshot shows the 'Definition' window for a class named 'TDMX_VALUE_1'. The left pane shows a tree view with 'Fields' expanded, and 'First Value' selected. The right pane contains the following fields:

Name:	TDMX_VALUE_1	Mandatory:	<input type="checkbox"/>
Type:	Char		
Size:	255	Display:	First Value
Language:	English	Description:	First Value
Sensitive:	Case Sensitive		

Click on a Class name in order to define its Index. In the Definition window, you can view the previously defined Class definitions. In the Index window, define the Index (unique primary identifier) of the Class. Click on the Fields icon in order to define Attributes for the

- Do the same values for
 - Second Value -> TDMX_VALUE_2
 - Third Value -> TDMX_VALUE_3
 - Fourth Value -> TDMX_VALUE_4

- Long Value -> TDMX_VALUE_LONG

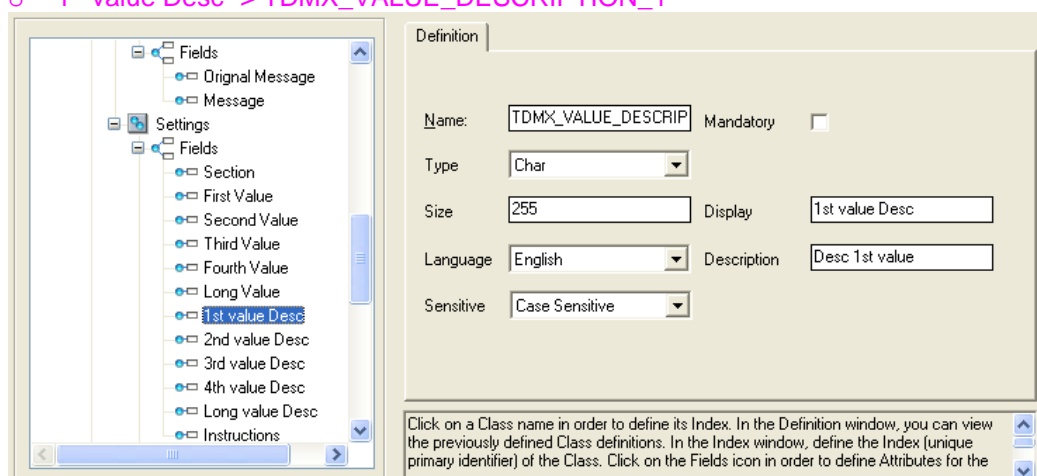


The screenshot shows the 'Definition' window for a class named 'TDMX_VALUE_LONG'. The left pane shows a tree view with 'Fields' expanded, and 'Long Value' selected. The right pane contains the following fields:

Name:	TDMX_VALUE_LONG	Mandatory:	<input type="checkbox"/>
Type:	Memo		
Size:	16	Display:	Long Value
Language:	English	Description:	Long Value
Sensitive:	Default Wide		

Click on a Class name in order to define its Index. In the Definition window, you can view the previously defined Class definitions. In the Index window, define the Index (unique primary identifier) of the Class. Click on the Fields icon in order to define Attributes for the

- 1st value Desc -> TDMX_VALUE_DESCRIPTION_1



The screenshot shows the 'Definition' window for a class named 'TDMX_VALUE_DESCRIPTION_1'. The left pane shows a tree view with 'Fields' expanded, and '1st value Desc' selected. The right pane contains the following fields:

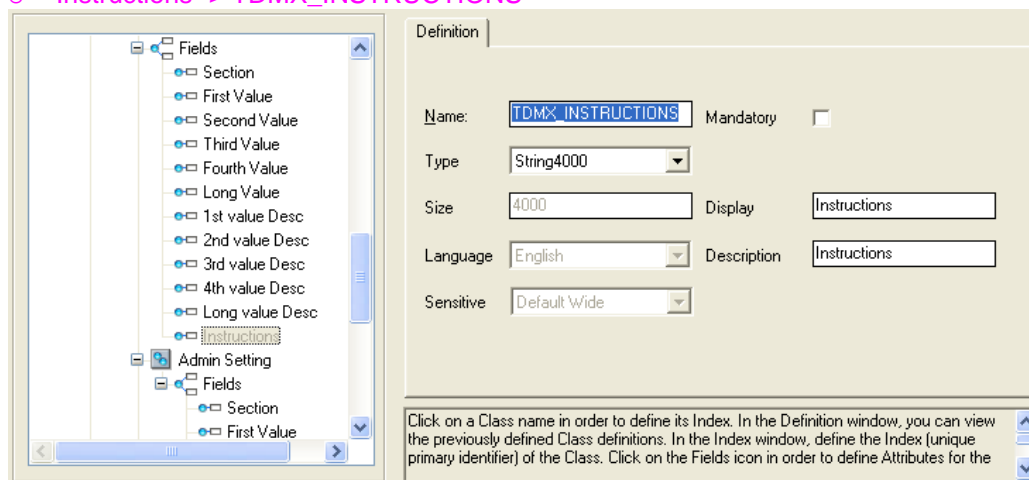
Name:	TDMX_VALUE_DESCRIP	Mandatory:	<input type="checkbox"/>
Type:	Char		
Size:	255	Display:	1st value Desc
Language:	English	Description:	Desc 1st value
Sensitive:	Case Sensitive		

Click on a Class name in order to define its Index. In the Definition window, you can view the previously defined Class definitions. In the Index window, define the Index (unique primary identifier) of the Class. Click on the Fields icon in order to define Attributes for the

- Do the same values for :
 - TDMX_VALUE_DESCRIPTION_2
 - TDMX_VALUE_DESCRIPTION_3

- TDMX_VALUE_DESCRIPTION_4
- TDMX_VALUE_DESCRIPTION_LONG

○ Instructions -> TDMX_INSTRUCTIONS



Definition

Name: Mandatory ☐

Type:

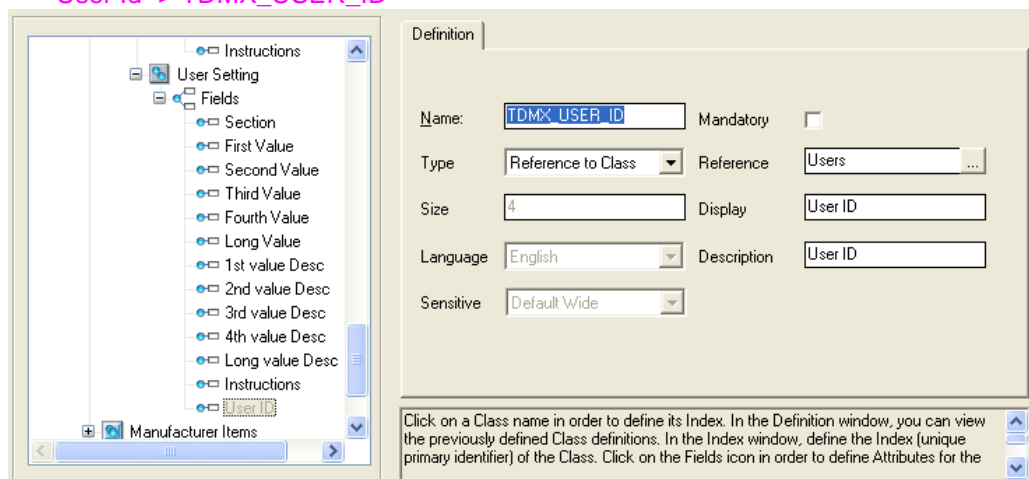
Size: Display:

Language: Description:

Sensitive:

Click on a Class name in order to define its Index. In the Definition window, you can view the previously defined Class definitions. In the Index window, define the Index (unique primary identifier) of the Class. Click on the Fields icon in order to define Attributes for the

▪ User Id -> TDMX_USER_ID



Definition

Name: Mandatory ☐

Type: Reference:

Size: Display:

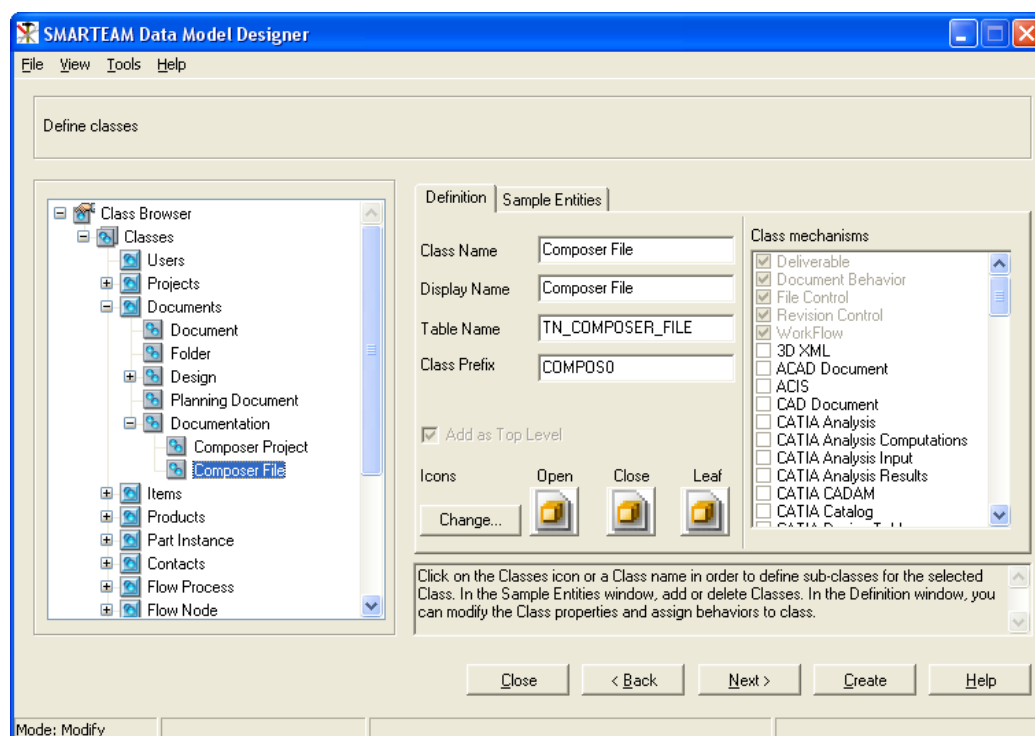
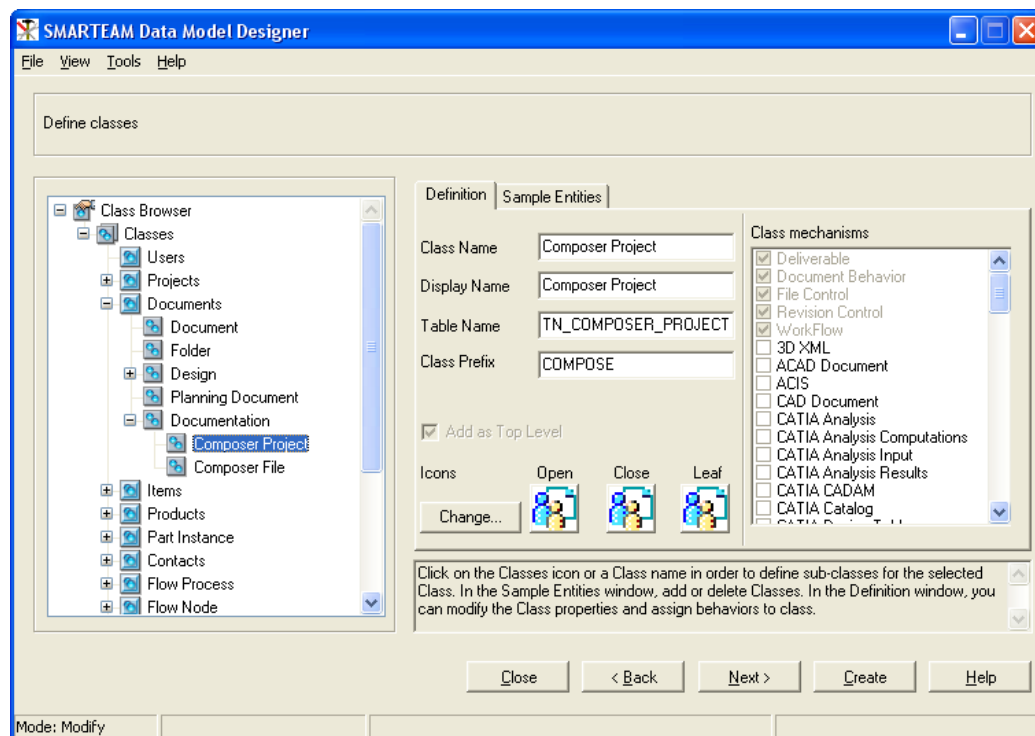
Language: Description:

Sensitive:

Click on a Class name in order to define its Index. In the Definition window, you can view the previously defined Class definitions. In the Index window, define the Index (unique primary identifier) of the Class. Click on the Fields icon in order to define Attributes for the

If useful, refer also to the BPA implementation guide.

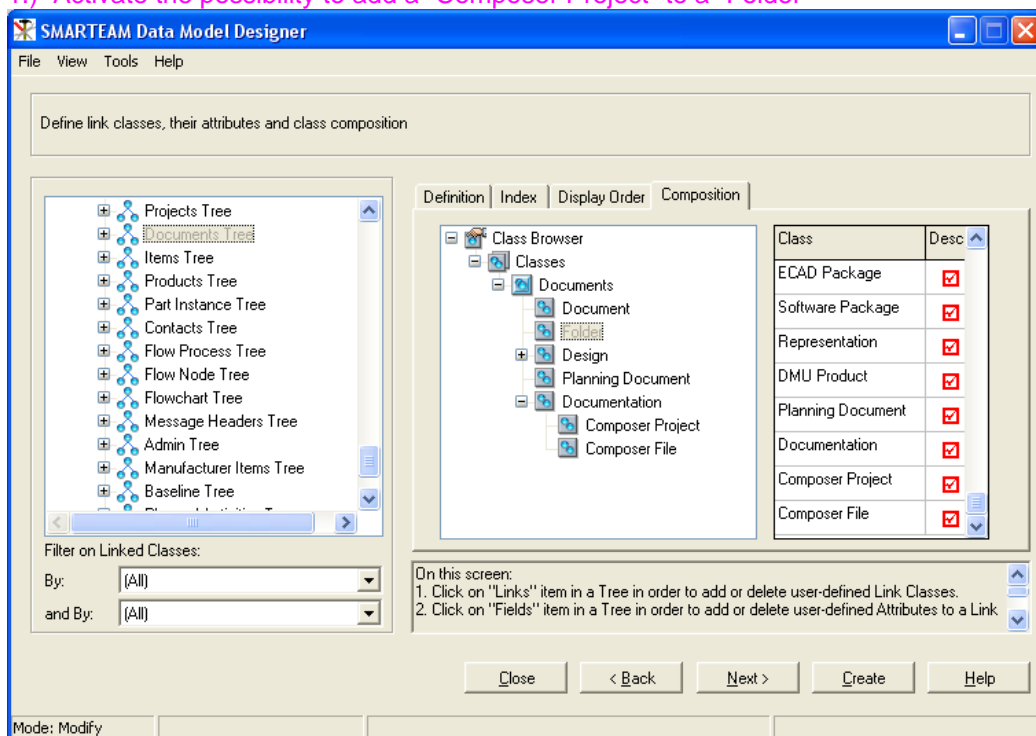
b.) Add “Composer Project” Class and “Composer File” Class to the Document Super Class described in the screenshot



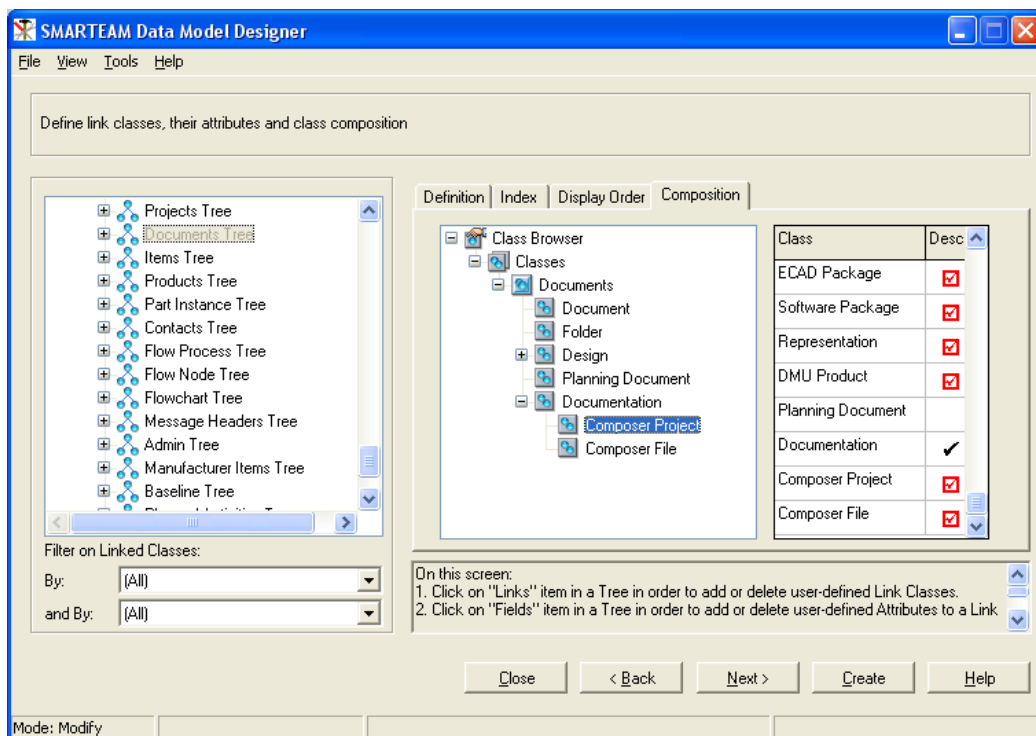
Add all additional Fields to this new classes you want to use. There are no special Fields required by the BPA.

c.) Add Composition Information to the “Document Tree Link Class”

1.) Activate the possibility to add a “Composer Project” to a “Folder”

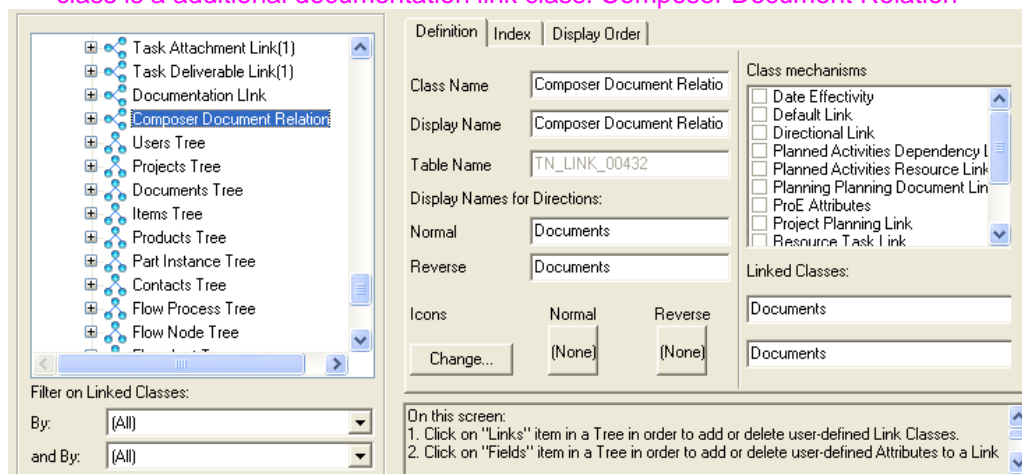


2.) Activate the possibility to add 3D Documents as children to the Composer Project:



d.) Add link Classes to the Database.

- Add the link class that links the used 3D Documents with the “Composer Project” Class. This link class is a additional documentation link class: Composer Document Relation



Definition | Index | Display Order

Class Name: Composer Document Relation

Display Name: Composer Document Relation

Table Name: TN_LINK_00432

Display Names for Directions:

Normal: Documents

Reverse: Documents

Icons: Normal (None), Reverse (None)

Class mechanisms:

- ☐ Date Effectivity
- ☐ Default Link
- ☐ Directional Link
- ☐ Planned Activities Dependency Link
- ☐ Planned Activities Resource Link
- ☐ Planning Planning Document Link
- ☐ ProE Attributes
- ☐ Project Planning Link
- ☐ Resource Task Link

Linked Classes:

Documents

Documents

On this screen:

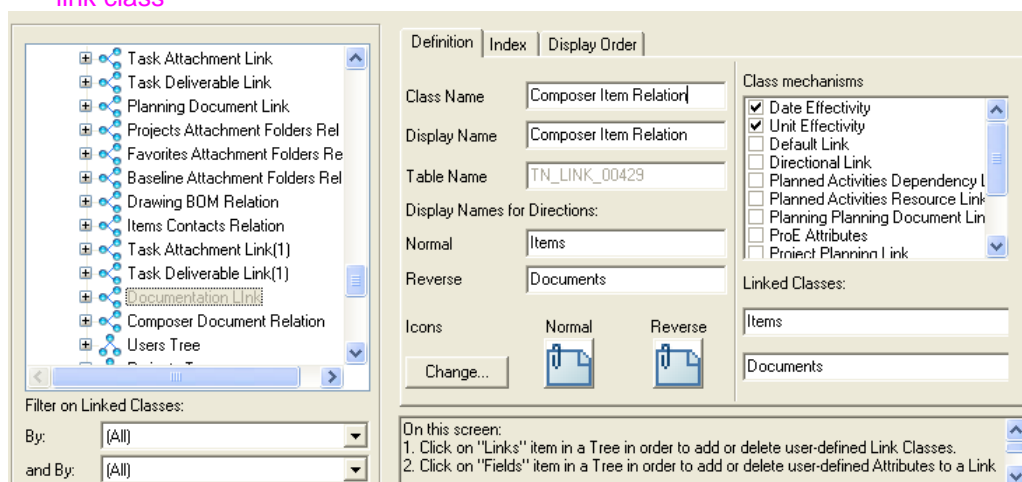
1. Click on "Links" item in a Tree in order to add or delete user-defined Link Classes.
2. Click on "Fields" item in a Tree in order to add or delete user-defined Attributes to a Link

This link class should be “Directional”

Name the normal Direction: Composer used 3D

Name the Reverse Direction: 3D used by Composer

- Add a link class that links the Composer and the Items. If you have not an Item Class don't create this link class



Definition | Index | Display Order

Class Name: Composer Item Relation

Display Name: Composer Item Relation

Table Name: TN_LINK_00429

Display Names for Directions:

Normal: Items

Reverse: Documents

Icons: Normal (Document icon), Reverse (Document icon)

Class mechanisms:

- ☒ Date Effectivity
- ☒ Unit Effectivity
- ☐ Default Link
- ☐ Directional Link
- ☐ Planned Activities Dependency Link
- ☐ Planned Activities Resource Link
- ☐ Planning Planning Document Link
- ☐ ProE Attributes
- ☐ Project Planning Link

Linked Classes:

Items

Documents

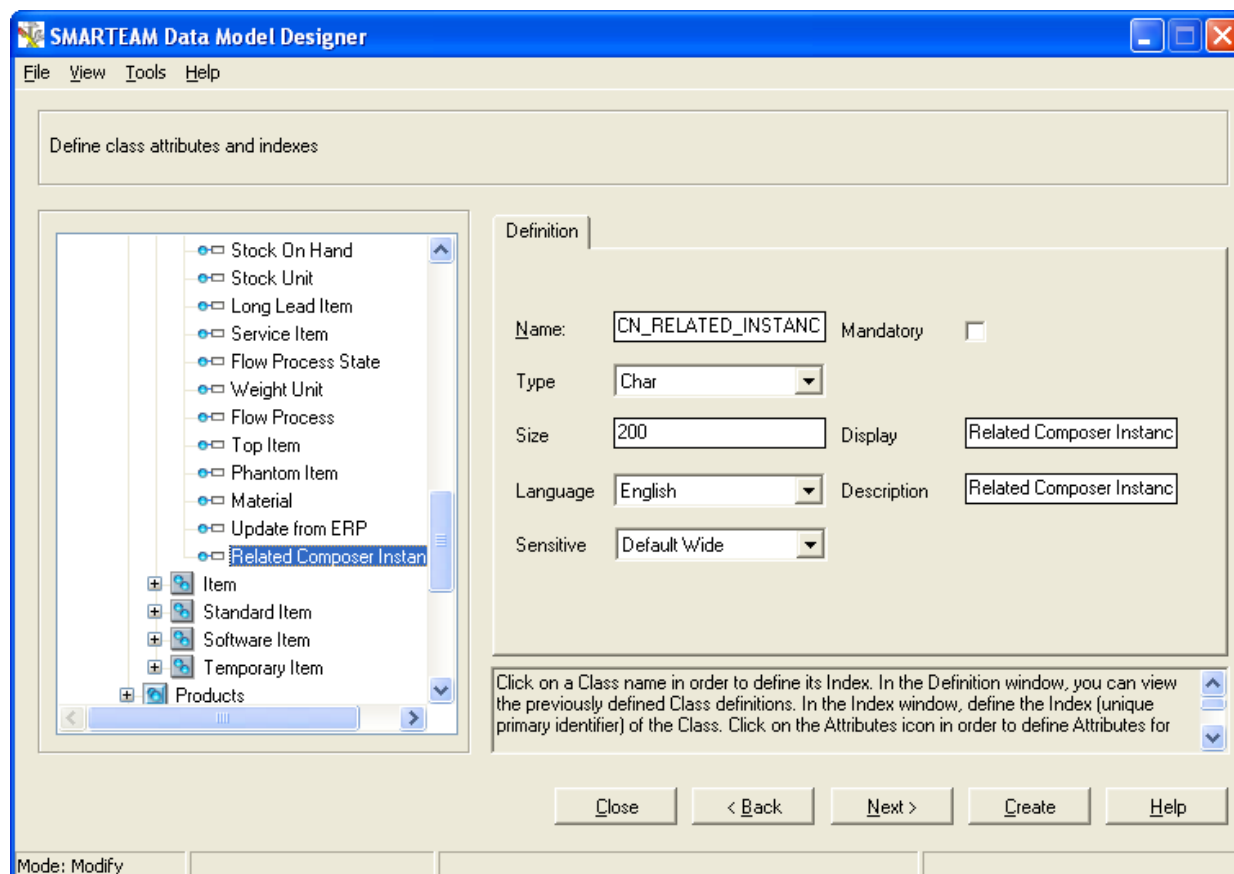
On this screen:

1. Click on "Links" item in a Tree in order to add or delete user-defined Link Classes.
2. Click on "Fields" item in a Tree in order to add or delete user-defined Attributes to a Link

e.)



If you want to map Item related data to your 3DVIA Composer files without saving the related 3D Cad documents you can add an additional identifier to the Item Superclass. Please add Attribute "CN_RELATED_INSTANCE" to the Item Superclass.

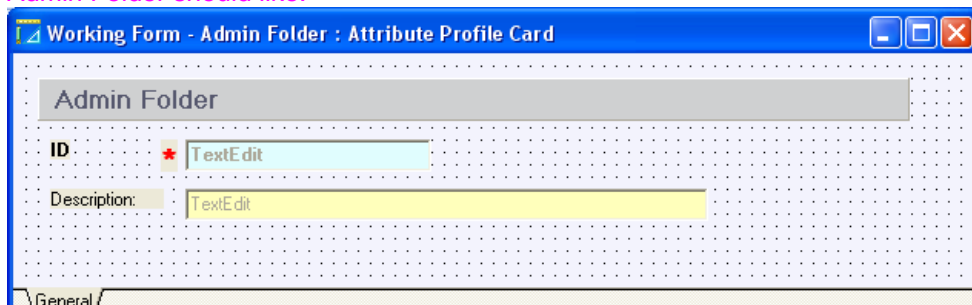


The screenshot shows the SMARTeam Data Model Designer interface. The title bar reads "SMARTeam Data Model Designer". The menu bar includes "File", "View", "Tools", and "Help". The main window is titled "Define class attributes and indexes". On the left, a tree view shows a hierarchy of classes: "Stock On Hand", "Stock Unit", "Long Lead Item", "Service Item", "Flow Process State", "Weight Unit", "Flow Process", "Top Item", "Phantom Item", "Material", "Update from ERP", "Related Composer Instance", "Item", "Standard Item", "Software Item", "Temporary Item", and "Products". The "Related Composer Instance" class is selected. The "Definition" tab is active, showing the following fields: "Name" (CN_RELATED_INSTANCE), "Mandatory" (checkbox), "Type" (Char), "Size" (200), "Display" (Related Composer Instance), "Language" (English), "Description" (Related Composer Instance), and "Sensitive" (Default Wide). At the bottom, there are buttons for "Close", "< Back", "Next >", "Create", and "Help". The status bar at the bottom left indicates "Mode: Modify".

3. Create Profile Cards for Admin Classes

Create Profile Cards for the newly created Admin Classes

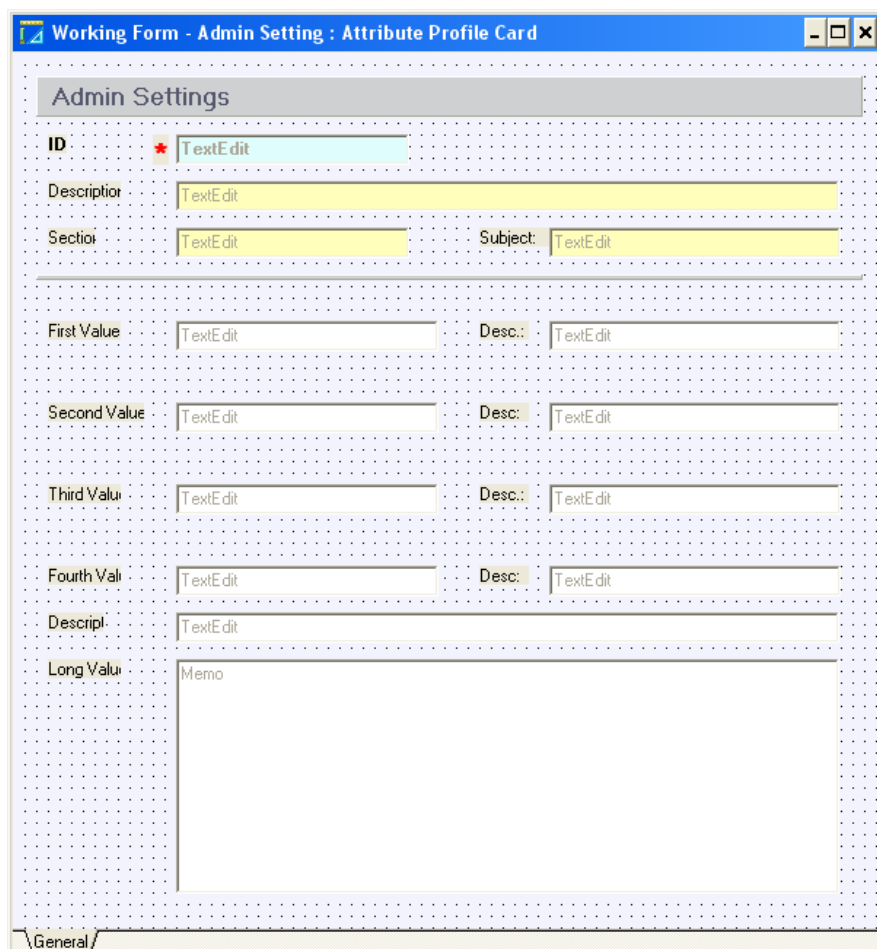
Admin Folder should like:



You should create a new Sequence to be used in the TDMX_ID Attribute like:



And use the new Sequence as Mask.
Create a Profile Card for: Admin Setting like:



Working Form - Admin Setting : Attribute Profile Card

Admin Settings

ID *

Description:

Section: Subject:

First Value: Desc.:

Second Value: Desc.:

Third Value: Desc.:

Fourth Value: Desc.:

Description:

Long Value:

General

And use the same Sequence for the Mask.

4. Create Profile Cards for Composer Project Class and Composer File Class

For the new classes you have to create the Profile Cards. Please open the Form Designer and define your Forms like:

Working Form - Composer Project : Attribute Profile Card

Composer Project

ID * **Revisor** *

State: **Phase:**

CAD Identifier:

Description

Detailed Description

Item Number

Design Configuration

Approval Date: **Approved By:**

Please don't forget to choose a proper Sequence for the ID Field. Do the same for the "Composer File" Class:

Working Form - Composer File : Attribute Profile Card

Composer File

ID * **Revisor** *

State: **Phase:**

Description

Detailed Description

Approval Date: **Approved By:**

5. Create Filetypes

Add relevant Filetypes to the SmarTeam environment:

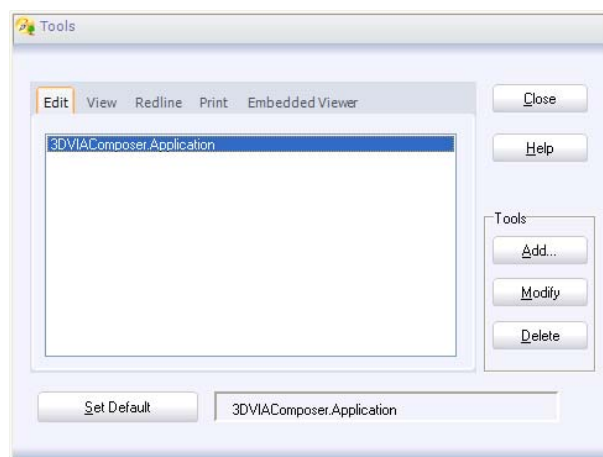
Use the Tool for change Lookup Tables and add following Filetypes to the Filetype Table:

- Composer Project
- Composer Geom
- Composer Meta File
- Composer View File
- Composer Scene File
- Composer Style

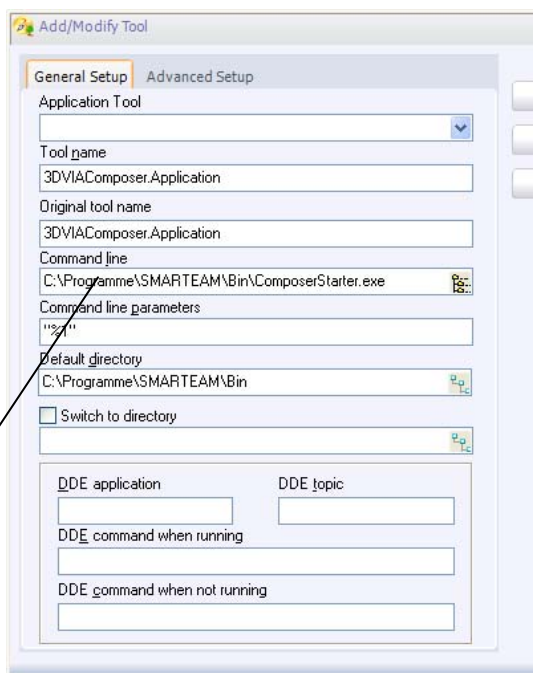
6. Add Application Informations

Add the Application Information to the Filetype :Composer Project.

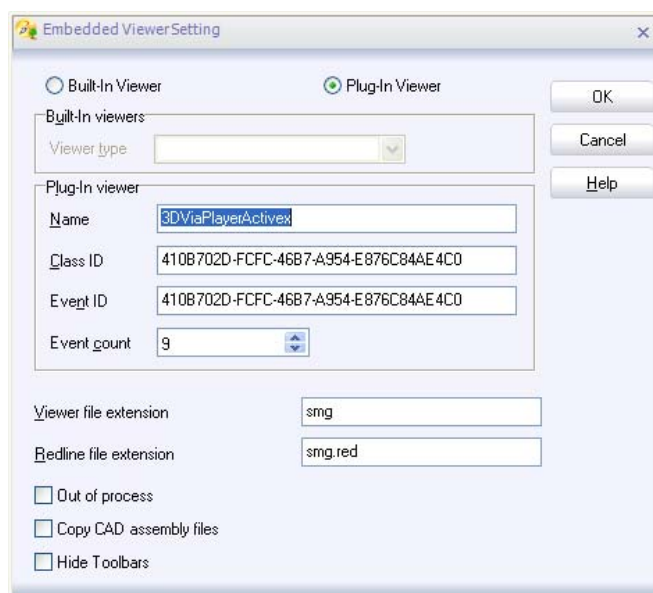
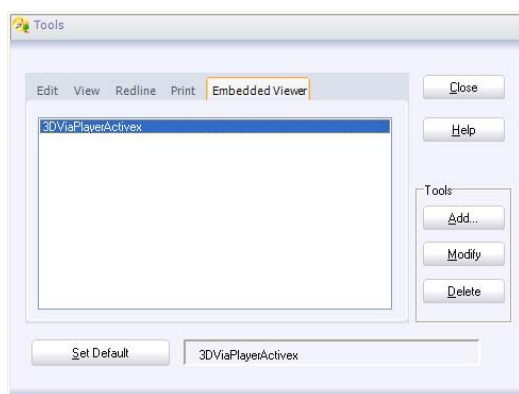
Use the Application Setup Tool from SmarTeam



Use the ComposerStarter Exe-file from your SmarTeam/Bin Directory



Add the 3DVIA Composer Viewer OCX into the SmarTeam Viewer Settings:



7. Editing the Script Hooks

Add the necessary Script Hooks to the SmarTeam Environment. Use the Script Maintenance for these actions.

a.) User defined Script Hooks:

Based on the Class “Composer Project” add these User defined Scripts:

Operation Name	Script File	Function Name in Script File
RefreshByLatest	SmartDocCreator.bs	RefreshToLatest
RefreshFiles	SmartDocCreator.bs	RefreshFileToWorking
SaveSceneFile	SmartDocCreator.bs	SaveSceneFile
SaveViewFile	SmartDocCreator.bs	SaveViewFile
UpdateMetaData	SmartDocCreator.bs	UpdateAllCompXMLFiles

Based on the Design Classes for Part and Assembly add these User defined Scripts:

Operation Name	Script File	Function Name in Script File
AddCompProject	SmartDocCreator.bs	AddComposerProject
CreateAllGeomFiles	CreateJobFile.bs	CreateGeomFiles
CreateGeomFile	CreateJobFile.bs	CreateGeomFile
Update Composer Metainformation	SmartDocCreator.bs	UpdateCompXMLFile
ReplaceSelectedVersion	SmartDocCreator.bs	ReplaceSelectedVersion

Based on the Item Super Class User defined Scripts:

Operation Name	Script File	Function Name in Script File
Update Composer Metainformation	SmartDocCreator.bs	UpdateCompXMLFile

c.) Operation driven hooks

Based on the Class “Composer Project” add these Operation hooked Scripts:

Operation/Hook	Script File	Function Name in Script File
Delete/Instead	SmartDocCreator.bs	DeleteComposerProject
CheckOut/After (only R16->R18)	SmartDocCreator.bs	LifeCycleComposerProject
CheckIn/Instead	SmartDocCreator.bs	LifeCycleComposerProject
Release/Instead	SmartDocCreator.bs	LifeCycleComposerProject
New Version/After (only R16->R18)	SmartDocCreator.bs	LifeCycleComposerProject
MakeObsolete/Instead	SmartDocCreator.bs	LifeCycleComposerProject
New/Before	SmartDocCreator.bs	BeforeAddComposerProject



If you use SmarTeam R19 and higher please add these Operation hooked scripts. This results through new LifeCycle behaviours in R19

Operation/Hook	Script File	Function Name in Script File
Lifecycle Stage 2 / After (has to be placed on SuperClass Level)	SmartDocCreator.bs	LFVaulttoLocal

Based on the Class "Part" and "Assembly" add these Operation hooked Scripts:

Operation/Hook	Script File	Function Name in Script File
CheckIn/After	CreateJobFile.bs	CreateGeomFile
Release/After	CreateJobFile.bs	CreateGeomFile

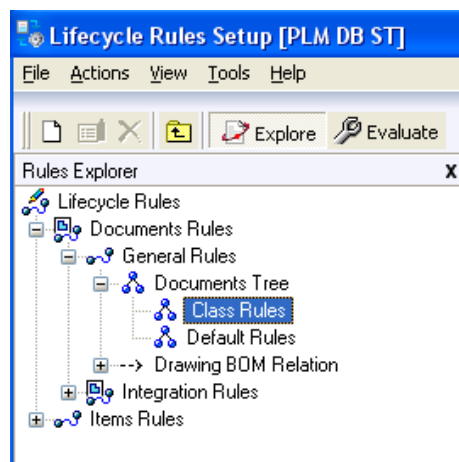
Based on the Tree-link Class "Documents"

Operation/Hook	Script File	Function Name in Script File
Add/After	SmartDocCreator.bs	AfterAddAssembly

8. Add LifeCycle Rules

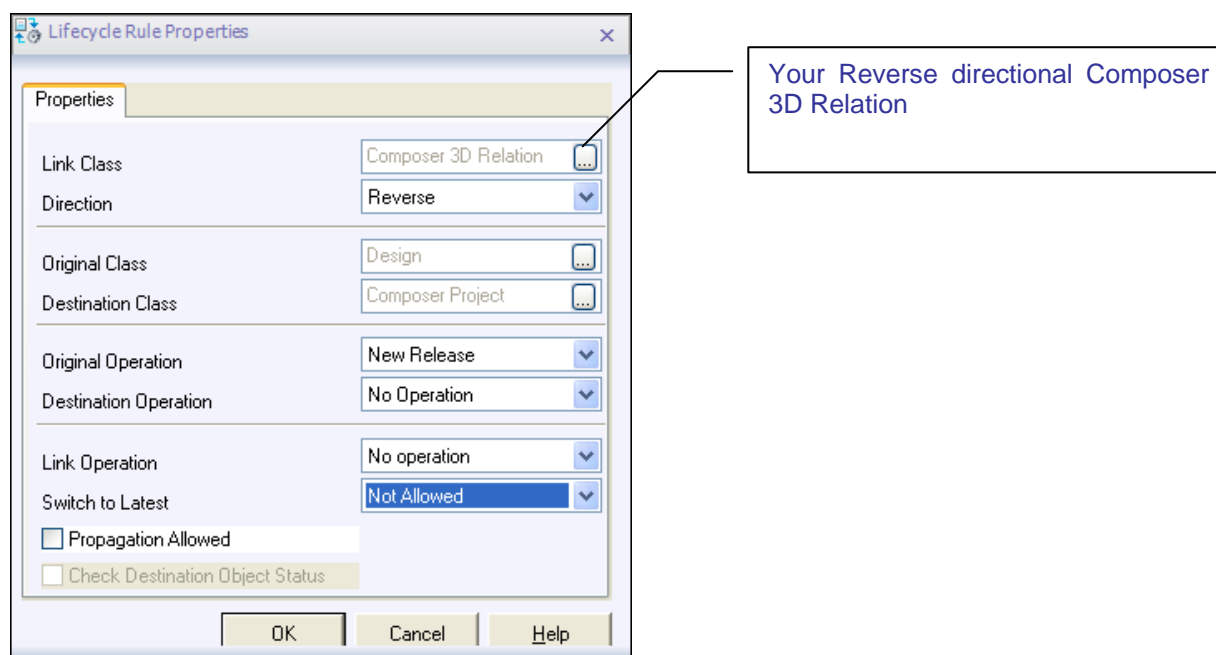
To prevent lifecycling of linked 3D Documents when Composer Project is lifecycled you have to add the following rules:

Please open the Lifecycle Rules Setup and switch to the Class Rules Area:



1.) "Check Out" and "New Release General Link Rules "Reverse Direction""

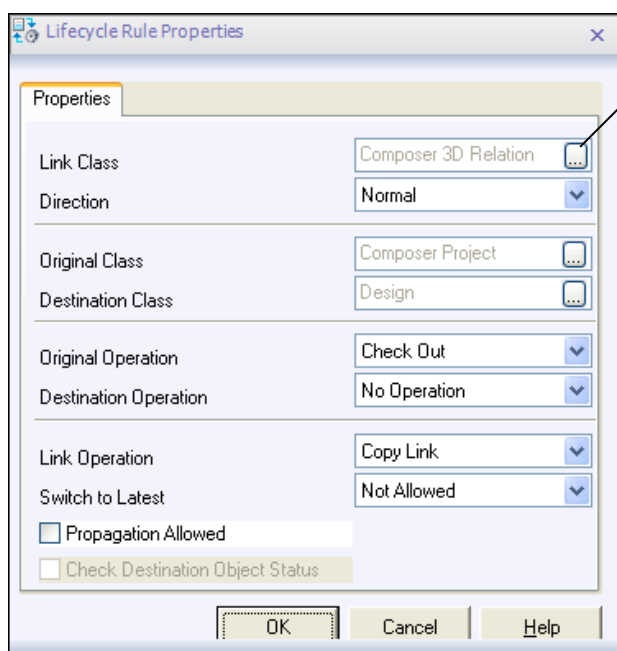
Add class rules for Composer Project to prevent automatic linking between 3D and Composer Projects:



Please do this for both commands: Check Out, New Release

2.) "Check Out" and "New Release General Link Rules "Normal Direction""

Add class rules for Composer Project to for automatic linking between 3D and Composer Projects during out of VAULT operations:

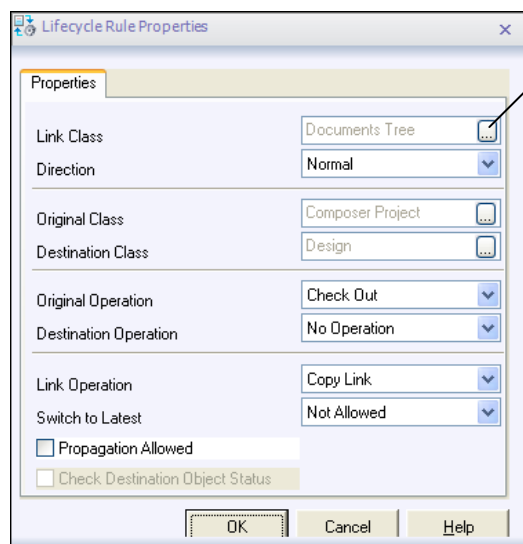


Your normal directional Composer 3D Relation

Please do this for both commands: Check Out, New Release

3.) "Check Out" and "New Release Tree Rules"

Add class rules for Composer Project to prevent automatic Copy of 3D Objects.

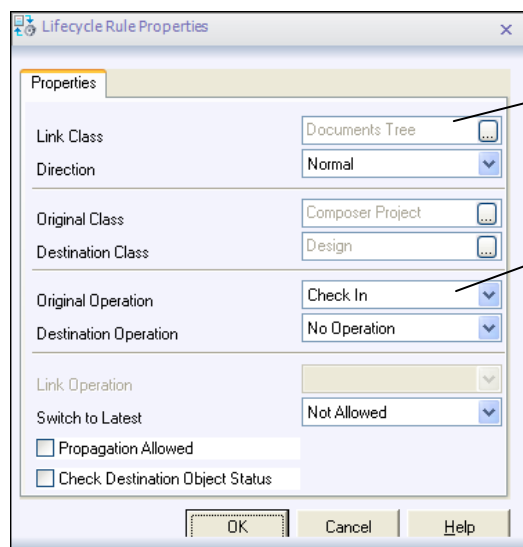


Your Document Superclass

Add the same Rule with the same Settings for the Original Operation "New Release"

4.) "Check In", "Release", "Obsolete"

Add class rules for Composer Project to prevent automatic Lifecycle of 3D



Your Document Superclass

Add another Rule also for
„Release” and “Make Obsolete”

Add the same Rule with the same Settings for the Original Operation “Release” and “Make Obsolete”

9. Setting the licensing mechanism for 3DSmartDocCreator Client

The License is based on the PC Name where the 3DSmartDocCreator is used. The License Code is stored in the SmartDocCreator.lic file that is located in the SmarTeam Editor Bin Directory. To get a valid License file send a Mail to one of the following persons and put the PC Name into the mail:

Thomas.Barth@3ds.com

Eva.Innreiter@3ds.com

Ulf.Landscheid.3ds.com

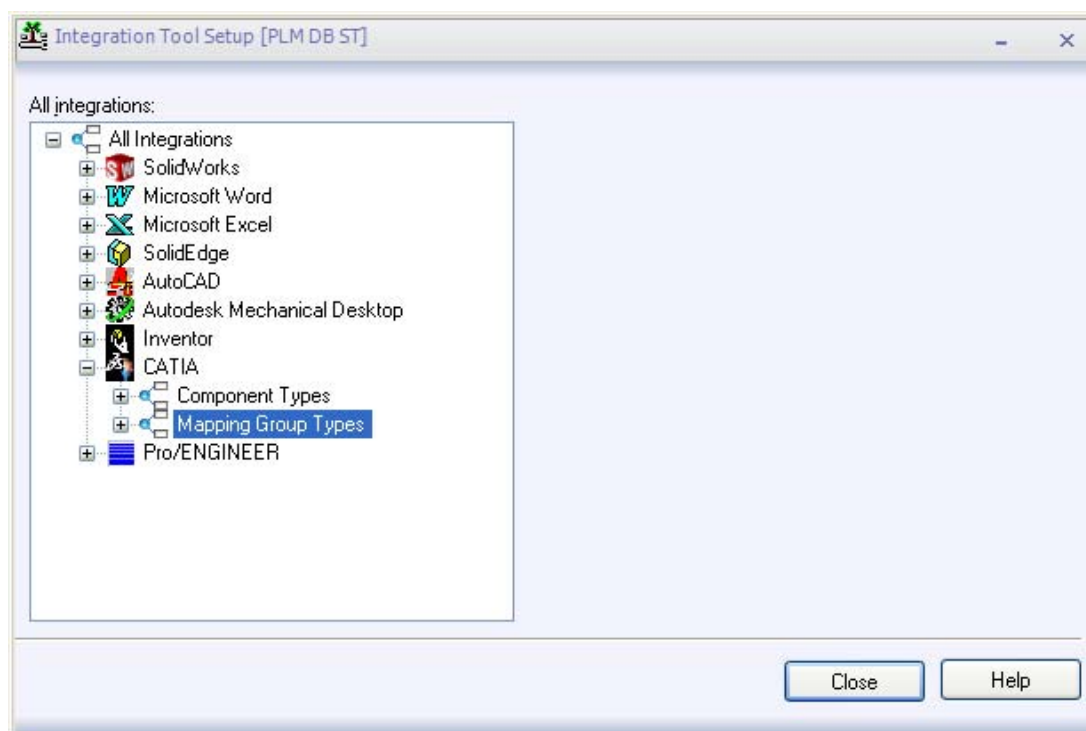
You will receive a valid License file that has to be copied into the SmarTeam Editor Bin Directory.
You can get a 90 day trial version at any time.

10. Create a Mapping Group type and a Mapping Group to store 3D Data into the Composer Meta XML Files

3DSmartDocCreator offers the possibility to store 3D Meta Data into the SmgXml files of the composer. Later on in the composer you can use this information to do “Call Outs” or “Annotations”.

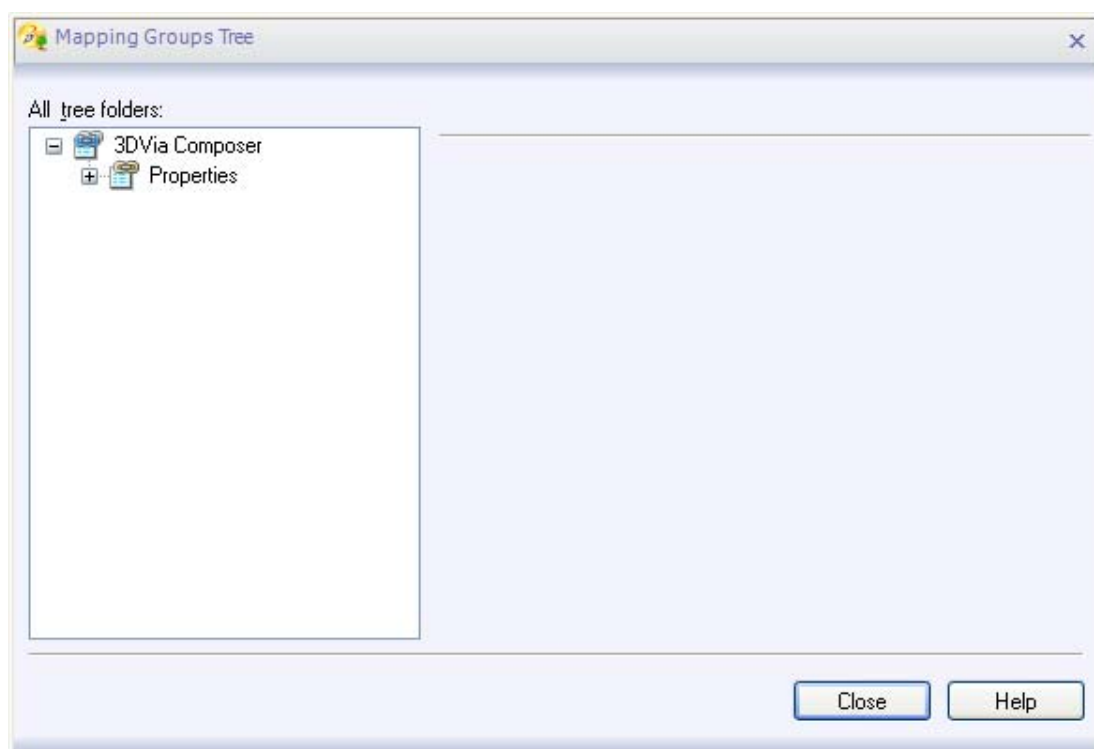
To use 3D Data you have to add a Group type and a Property Group the CATIA Integration Rules.

1.) Please open the CATIA Group with the Admin Tool: Integration Tool Setup:



2.) Add a new Mapping Group type: 3DVIA Composer

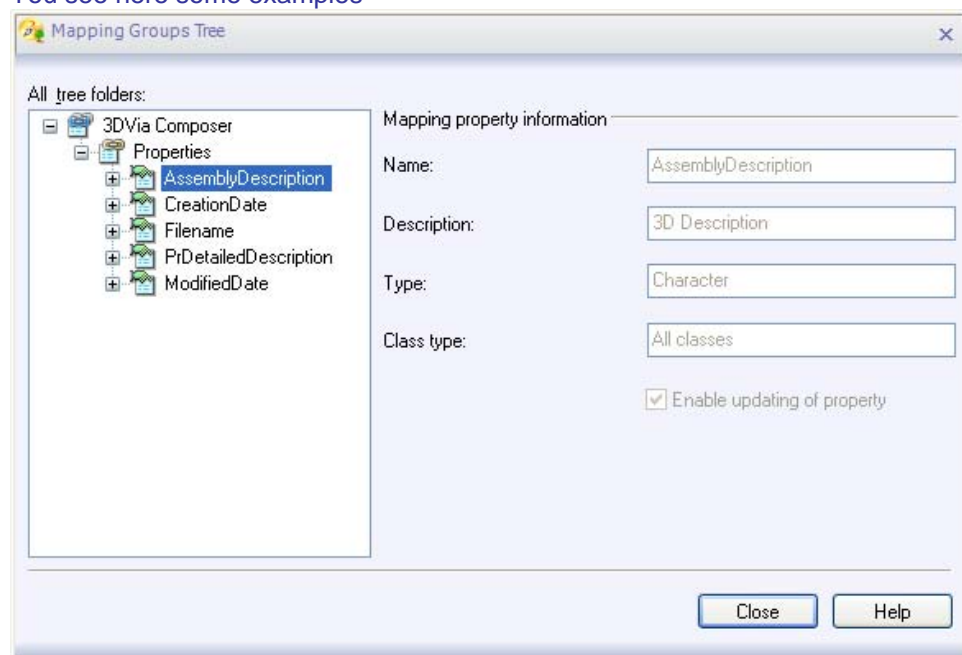
Open this new Group type:



3.) Add a new Mapping Group: Properties

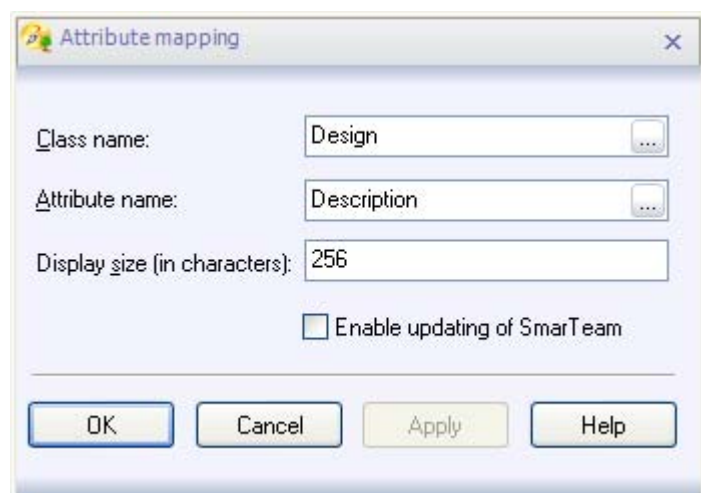
Now you can add Attributes that are exposed into the SmgXml File.

You see here some examples



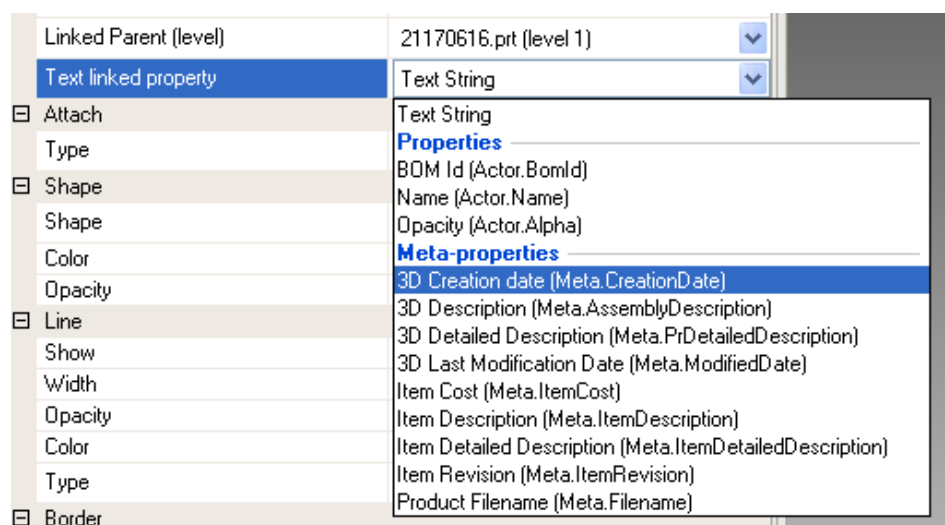
3DSmartDocCreator is following these mechanisms:

- 1.) The Property Name will be the Property Name in the 3DVIA SmgXml file
- 2.) The Property Description will be the Property Description in the 3DVIA SmgXml file



3.) The Attribute name is the value from SmarTeam from the selected Class that is exposed into the 3DVIA SmgXml

The result is like this inside the 3DVIA Composer:



11. Add all Administrator Settings to use 3DSmartDocCreator Server and Client



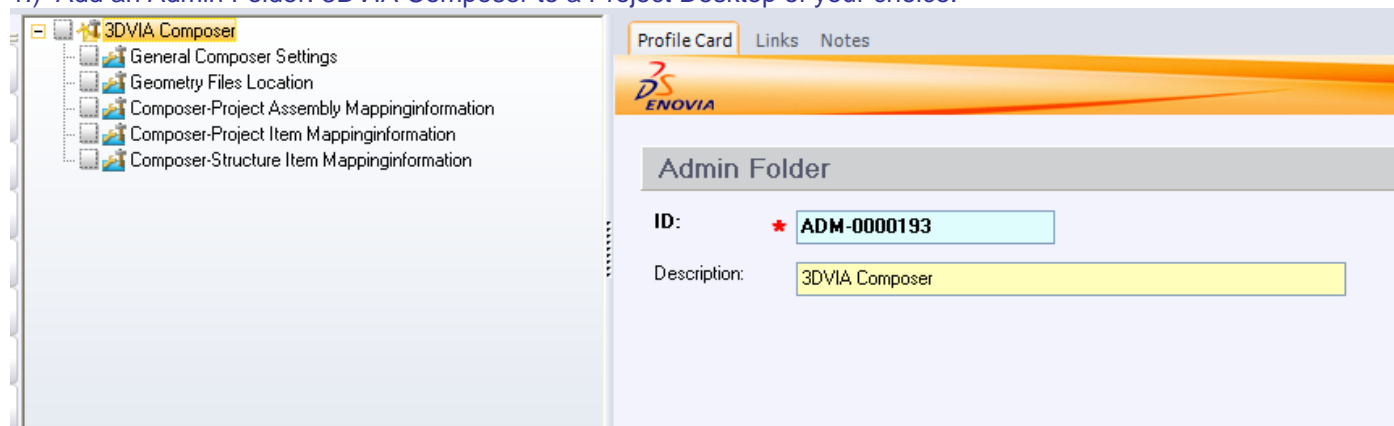
Tip

Be sure you have following Information's of you SmartTeam Environment:

- Class Id from the Document Super Class
- Class Id from the 3D Assembly Class
- Class Id from the Items Super Class
- Class Id from the Item Class
- Class Id from the Lookup Table : File type
- Class Id from the Link Class: Composer Document Relation
- Class Id from the Link Class : Composer Item Relation
- Fieldname of your Description in the Document Class
- Id Fieldname of your Identifier in the Document Super Class

Add all necessary Admin Objects to the database

1.) Add an Admin Folder: 3DVIA Composer to a Project Desktop of your choice:



2.) Add these Admin Settings to this folder:

Description	Section	Subject
General Composer Settings	SmartDocCreator	Composer
Geometry Files Location	GeomFiles	Composer
Composer-Project Assembly Mappinginformation	AssemblyMapping	Composer
Composer-Project Item Mappinginformation	ItemMapping	Composer
Composer-Structure Item Mappinginformation	StructureItemMapping	Composer

3.) Add the Admin values to the created Admin Settings:

General Composer Settings:

Admin Settings

ID:	*	ADM-0000194	
Description:	General Composer Settings		
Section:	SmartDocCreator	Subject:	Composer

First Value:	TDM_DESCRIPTION	Desc.:	Description Field Document Super Class
Second Value:	C:\Programme\SMARTTEAM\CAD T	Desc:	template prefix for project, sce, and view-
Third Value:	432	Desc.:	Linkclass Id for linking Assembly and Co
Fourth Value:	429	Desc:	Linkclass Id for linking Item and Compos
Description:	ID-Field-Documents;CLASS-ID File Type;Document SuperClassId;Item SuperClassId;AssemblyCl		
Long Value:	TDMX_ID;18;92;109;100;113		

First Value: Description Field that is used in Documentation Super Class

Second Value: Your composer template folder path including "\template" at the end

Example : c:\program files\smarteam\templates\composer\template. You have copied default templates to this directory during the installation.

Third value: Class Id of your "Composer Document Relation" link class

Fourth value: Class Id of your "Composer Item Relation" link class

Long Value: six values separated by a ";":

- ID Field in the Document Super Class, mostly "CN_ID", "TDM_ID" or "TDMX_ID"
- Class Id of the lookup Table "Filetype"
- Document Super Class Id
- Items Super Class id
- 3D Assembly Class Id
- Item Class Id

Geometry Files Location

Admin Settings	
ID:	* ADM-0000195
Description:	Geometry Files Location
Section:	GeomFiles
Subject:	Composer
First Value:	e:\composer\GeomFiles
Desc.:	Serverpath of actual Geomfiles

First Value: Shared Server Path where the converted Files (SmgXml and Geom) are placed
 Example: [\\Server1\ComposerFiles](#)

Composer Assembly Mapping Information

Admin Settings	
ID:	* ADM-0000196
Description:	Composer-Project Assembly Mappinginformation
Section:	AssemblyMapping
Subject:	Composer
First Value:	3DVia Composer
Desc.:	Group type
Second Value:	Properties
Desc.:	Mapping Group
Third Value:	
Desc.:	
Fourth Value:	
Desc.:	
Description:	Fieldname Assembly:Fieldname Composerproject;Fieldname Assembly:Fieldname Composerproj
Long Value:	TDMX_CAD_IDENTIFIER:TDMX_CAD_IDENTIFIER;TDM_DESCRIPTION:TDM_DESCRIPTION;TDMX_RELATED_ITEM_ID:TDMX_RELATED_ITEM_ID

First Value: The Mapping Group Type corresponding to the created Mapping Group Type in the Integration Tool Setup (Section CATIA)

Example: 3DVIA Composer

Second Value: The Property Group corresponding to the created Group Type in the Integration Tool Setup (Section CATIA)

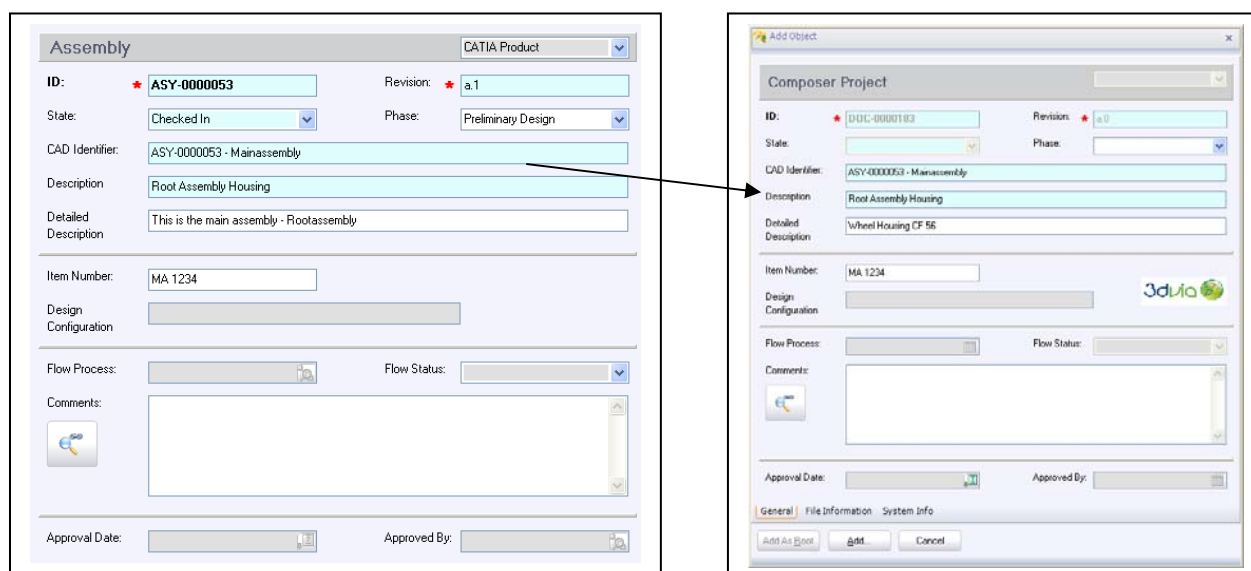
Example: Properties

Long Value: Here you can define which values from the “Starting 3D Assembly” should be copied to the “Composer Project” during the creation. Fieldname Assembly Class: Fieldname Composer Project Class

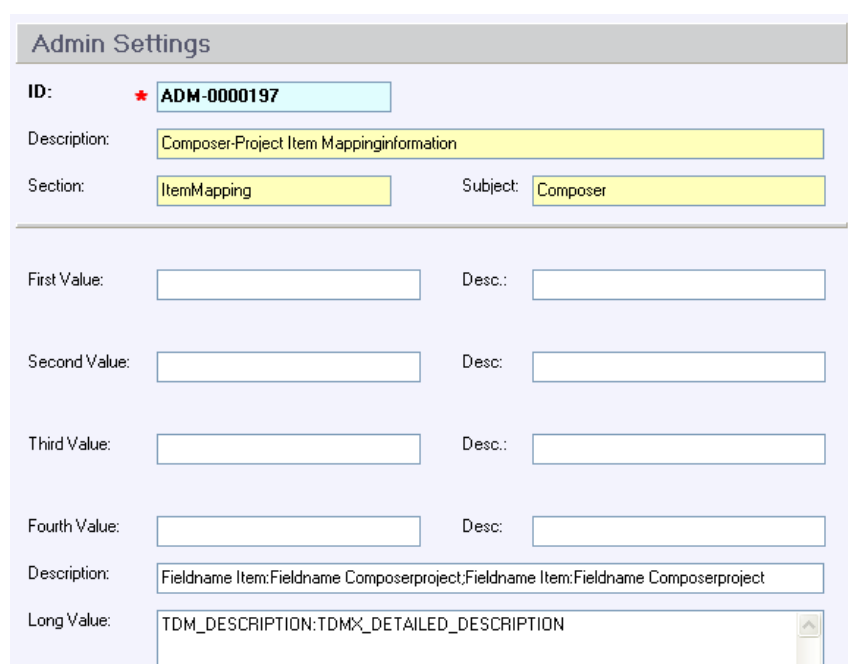
Separated by “,”

Example: TDM_DESCRIPTION:TDM_DESCRIPTION;TDMX_RELATED_ITEM_ID;ITEM_ID

Result:

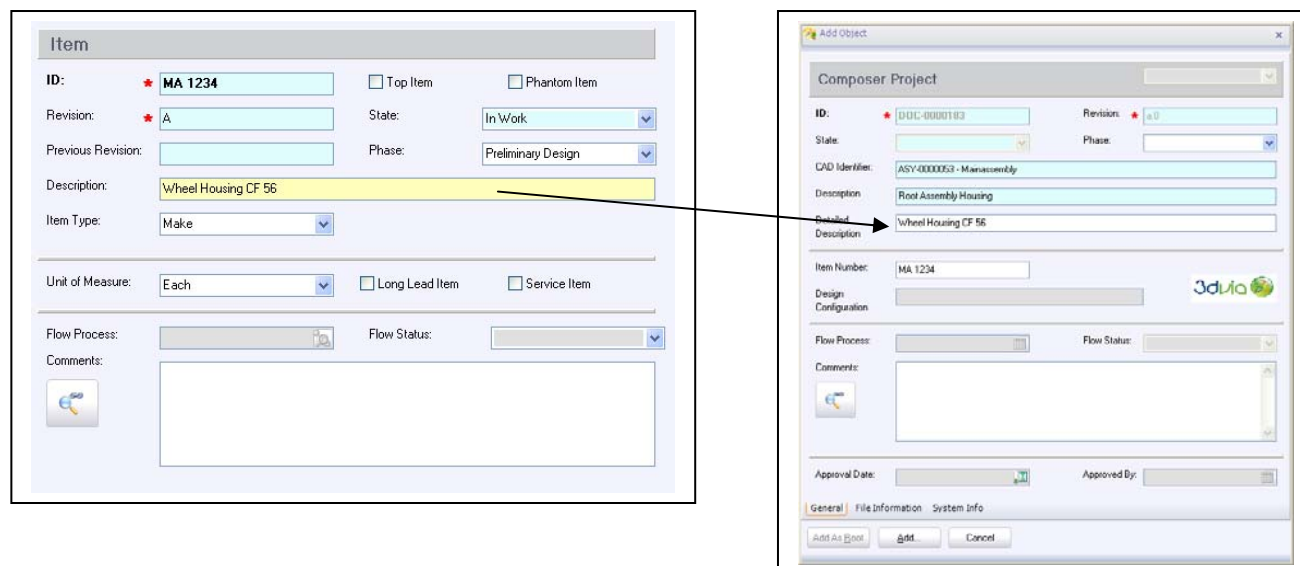


Composer Project Item Mapping Information

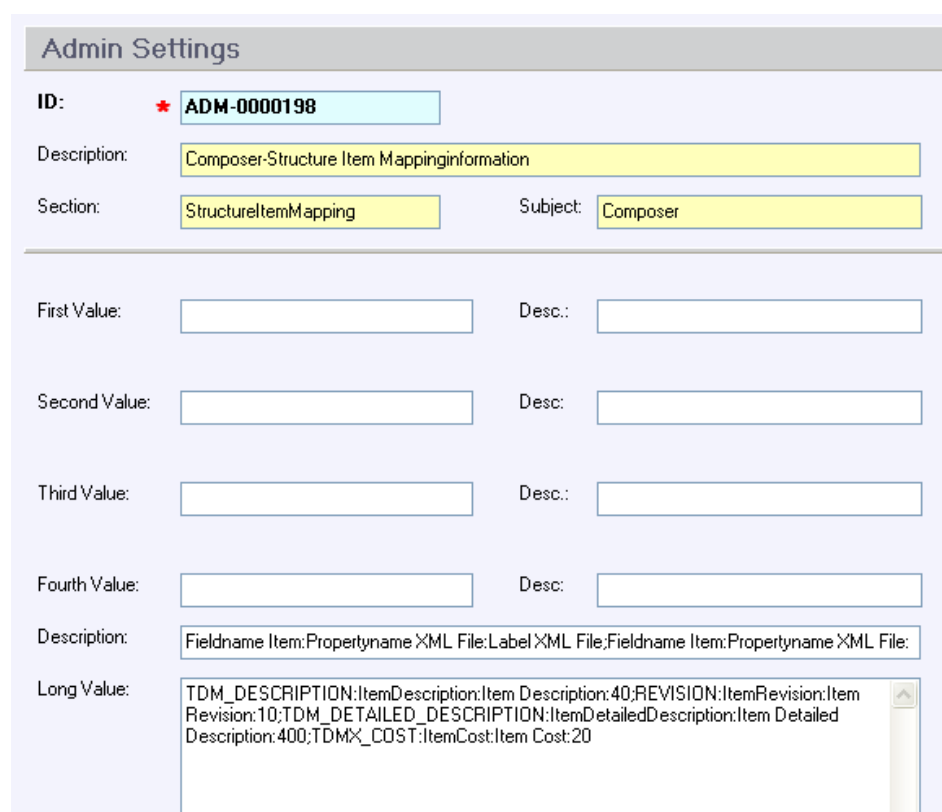


Long Value: Here you can define which values from the related Item of the “Starting 3D Assembly” should be copied to the “Composer Project” during the creation. Fieldname Item Class: Fieldname Composer Project Class
Separated by “,”
Example: TDM_DESCRIPTION:ItemDescription:Item Description:40;REVISION:ItemRevision:Item
Revision:10;TDM_DETAILED_DESCRIPTION:ItemDetailedDescription:Item Detailed
Description:400;TDMX_COST:ItemCost:Item Cost:20

Result



Composer Structure Item Mapping Information



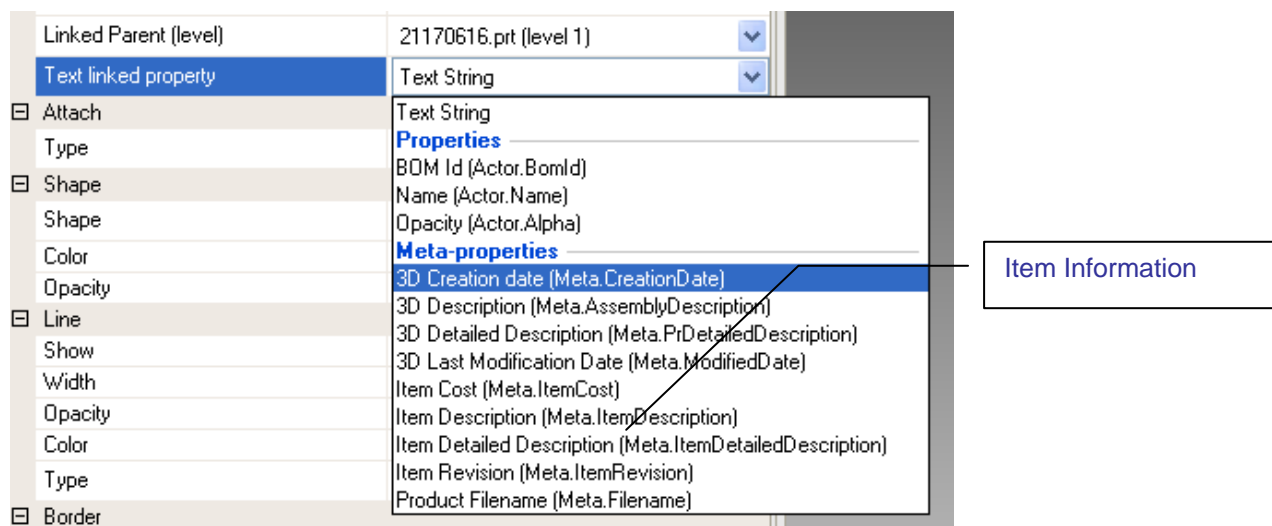
Long Value: Here you can define which values from the related Item of the used 3D Files should be exposed to the “Composer Project” SmgXml Files

The Syntax is separated with a “,” at the end and with a “:” between

- Fieldname Item Class that has to be evaluated
- Property Name in the SmgXml File of the 3DVIA Composer
- Property Description in the SmgXml File of the 3DVIA Composer
- Maximum length of the value

Example: TDM_DESCRIPTION:ItemDescription:Item Description:40

Result:



Linked Parent (level)	21170616.prt (level 1)
Text linked property	Text String
Attach	Text String
Type	Text String
Shape	Text String
Shape	Text String
Color	Text String
Opacity	Text String
Line	Text String
Show	Text String
Width	Text String
Opacity	Text String
Color	Text String
Type	Text String
Border	Text String

12. Create a Toolbar for the Client Functions



Tip

You can create any Toolbar in any area of "Group" Menus you want. In this documentation only a SmartTeam "Toolbar" is created as an example you can also create

- Popup Menus
- Main Menus

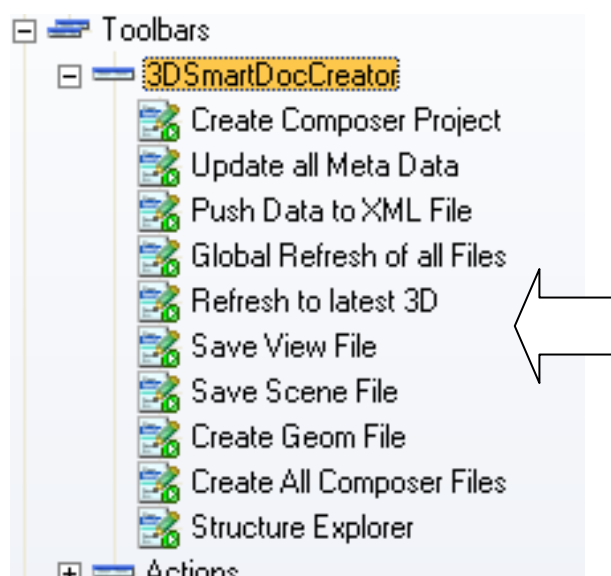
1.) Create the needed command:

Use the Menu-Editor from SmartTeam to do the work

a.) Add all commands as Used-defined Commands to the SmartTeam Menu Area

Command name	User defined Script name	Icon name
Create Composer Project	AddCompProject	SDCCreateNewProject.ico
CreateAssemblyGeomFiles	CreateAllGeomFiles	SDCCreateAllJobs.ico
CreateSingleConvertJob	CreateGeomFiles	SDCCreateSingleJobs.ico
RefreshToLatest	RefreshByLatest	SDCSwitchToLatest.ico
Refresh All Files	RefreshFiles	SDCCopyFilesToWorking.ico
ReplaceSelectedVersion	ReplaceSelectedVersion	Changes_Replace_16.ico
SaveSceneFile	SaveSceneFile	SDCSaveScenFile.ico
SaveViewFile	SaveViewFile	SDCSaveViewFile.ico
ShowStructure	ShowStructure	Browse Superclasses.ico
Update3DXMLFile	Update Composer Metainformation	SDC3DDatToXml.ico
UpdateAllMetaData	UpdateMetaData	SDCPushDataToXml.ico

b.) Create a Toolbar in any section where user should have access to



Command names

Create Composer Project
UpdateAllMetaData
Update3DXMLFile
Refresh All Files
ReplaceSelectedVersion
SaveSceneFile
SaveViewFile
CreateSingleConvertJob
CreateAssemblyGeomFiles
ShowStructure

C.) This is an example how the Toolbar should look like in SmarTeam

If a Composer Project is marked:

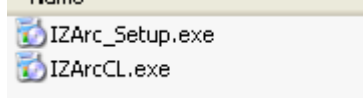


If a 3D Assembly is marked:



13. Install Product for zipping

From the Installation media install both files from the “zipping” folder:



- 1.) Install IZArc_Setup.exe
- 2.) Install IZArcCL.exe (Command line Tool)

Add the System Environment Variable to the PC: COMPOSERZIP
Value = Full Path of IZArc.exe

Example:



14. Installation Checklist

Please feel free to use this checklist during Installation.

BPA Server Installation:

Installation Step	Description	Done
Check Prerequisites	3DVIA Sync/Sync Integration / SmarTeam Client / Net 2.0	
Create Folder Structure	Create the needed folders and main folder for the BPA Server	
Copy Files	Copy all Files to the related folders	
Register DLLs	Register the named DLLs located in the \BIN (see 2.4)	
Copy Client files	Also the server needs the BPA Client DLLs	
Register BPA Client	Register "SmartDocCreator.dll" (see 2.6)	
Install LUM License	Install a LUM License nodelocked (TS9)	
Install Zipping Software	Install Zipping Software instead of use Windows ZIP See 5.14	

BPA Server Configuration

Configuration Step	Description	Done
Create Network Share	Share the "\Pending" Directory of the Automation Server	
Edit ".jod" files	Change the ".jod" files to your environment (Path information and 3DVIA information) Change the name of your SmarTeam database and the user - login	
Edit ".xml" files	Change the output path inside the named xml files for the SYNC-jobs	

BPA Client Installation:

Installation Step	Description	Done
Copy Binary files	Copy the \BIN files from media to SmarTeam \BIN Directory	
Copy Scripts	Copy the delivered scripts to the SmarTeam script directory	
Copy Icons	Copy the delivered Icons to the SmarTeam Icon directory	
Copy Composer Templates	Copy the delivered Composer template files to the SmarTeam Composer directory	
Register DLL	Register the SmartDocCreator.dll (see 4.4)	
Install Zipping Software	Install Zipping Software instead of use Windows ZIP See 5.14	

BPA Client Configuration

Database Steps	Description	Done
Add Admin Classes	Add manually Admin classes or add "Admin Behavior"	
Add Composer Class	Add "Composer Project" and "Composer File" leaf classes to the Document Superclass	
Add Document Link Class	Add a directional Link Class to link the "Composer Project" class with the "Design" abstract class	
Add Document Item Link Class	Add a normal link Class to link items and "Composer Project"	
Add Compositions	Add "Compositions" to the "Document Tree" link class to be able to link the "Design" Objects to the new "Composer Project" class. Add "Compositions" to the "Folder" class to be able to add a "Composer Project" to a "Folder"	
Modify Profile Cards	Create/Modify Profile Cards for the new Composer Classes and Admin Classes (Don't forget Sequences and default Values)	
Add new Filetypes	Add new filetypes (see 4.5)	
Add application Information	Add Application information for the new filetypes (see 4.6)	
Edit Script Hooks	Enter script functions to the described script hooks (see 4.7)	
Add Lifecycle Rules	Add additional Lifecycle rules to manage "Composer Project" Lifecycle	
Add License information	Install proper LUM Licenses for TC9	
Create Mapping Group Type	Create a mapping group type for mapping 3D Data into the Composer files	
Add all Admin values	Add all five Admin Objects and fill them with proper values	
Create a Menu	Create either a Context-Menu or/and a Toolbar to access the given Functions.	