

S3D - Witzenmann Export/Import

Export from SmartPlant 3D to Witzenmanns
FLEXPORTE and back to SmartPlant 3D

User Documentation

April 2016 - Version 1.0.0



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1 Introduction

“S3DWitzenmann.dll” is a SmartPlant 3D custom command for exporting FIN files from S3D designed supports. These files can be read in from Witzenmann’s FLEXPORTE, the support can be configured and STK-File can be created. The S3DWitzenmann.dll will then import the STK-files into S3D to create the appropriate parts for the designed supports.

1.1 Format of the FIN/STK file

The FIN- and STK-file have the extension .fin respectively .stk. Both have the same proprietary format used by Witzenmann’s FLEXPORTE program.

1.2 Function of the custom command

The custom command will:

- For Export:
 - Create a fin file for each selected S3D designed support
- For Import:
 - Read a list of .fin file,
 - Determine the S3D designed support mentioned in the file
 - Create all parts listed in the fin file at the correct positions.

1.3 History

2016/04/04 1.0.00 Created.

2 Installation

There are 2 files delivered with this tool:

- **S3DWitzenman.dll** the custom command for exporting and importing FIN files.
- **SP3DWitzenmann.pdf** is this documentation file

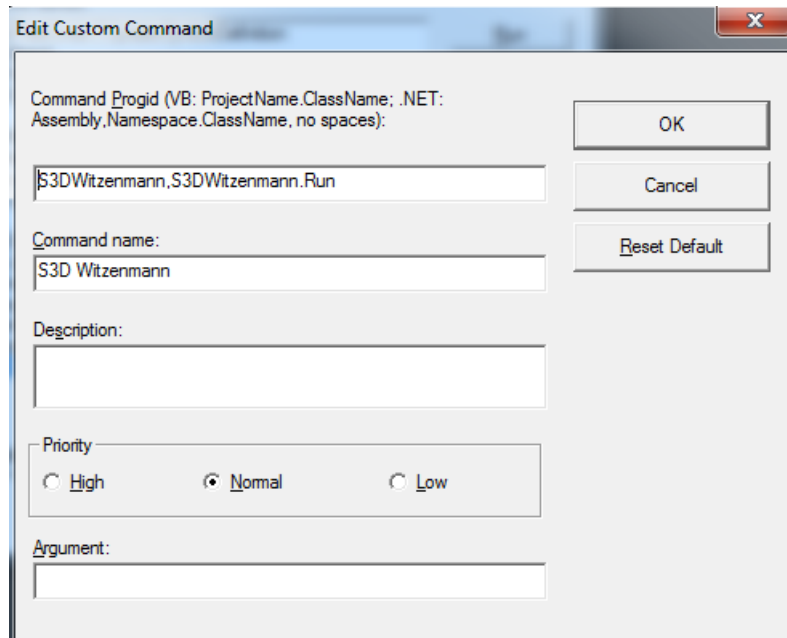
Both files should be placed into the directory:

<SmartPlant3D Symbolshare>\CustomCommands

3 Starting the Witzenmann command

In SmartPlant3D use “Tools/Custom commands...”. Select “Add” and enter as command Progid:

“S3DWitzenmann,S3DWitzenmann.Run”



Command Progid (VB: ProjectName.ClassName; .NET: Assembly.Namespace.ClassName, no spaces):

S3DWitzenmann,S3DWitzenmann.Run

Command name:

S3D Witzenmann

Description:

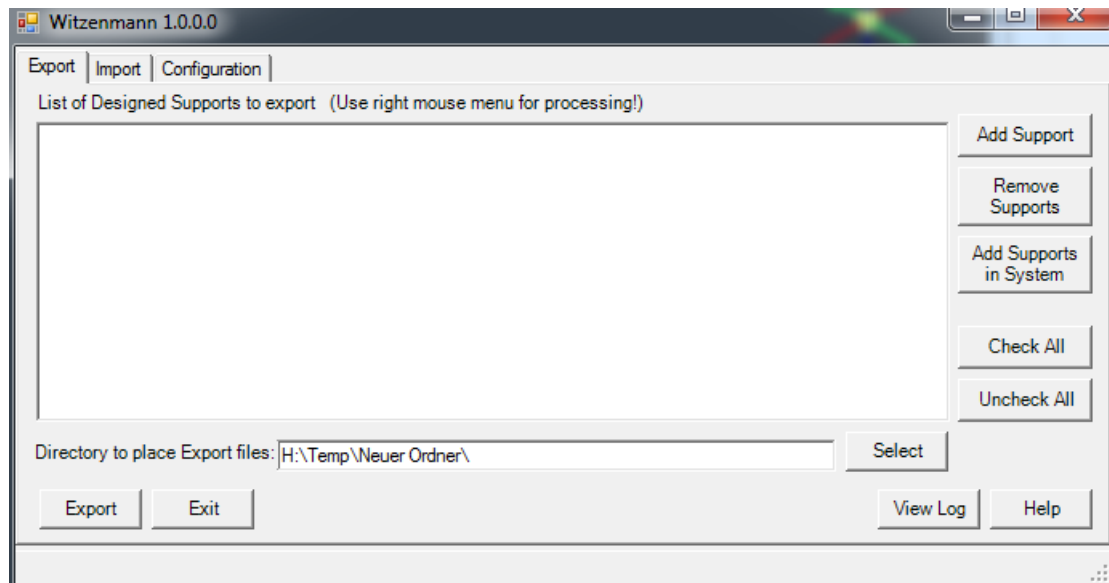
Priority

☐ High ☒ Normal ☐ Low

Argument:

OK Cancel Reset Default

When pressing the “Run” button the following form will appear:



Witzenmann 1.0.0.0

Export | Import | Configuration

List of Designed Supports to export (Use right mouse menu for processing!)

Add Support Remove Supports Add Supports in System Check All Uncheck All

Directory to place Export files: H:\Temp\Neuer Ordner\ Select

Export Exit View Log Help

If the form does not appear, copy the Witzenman.dll to a local drive and try to enter the full file path in the “Edit Custom command form”, e.g.
“C:\Temp\S3DWitzenman,S3DWitzenman.Run”

4 Export Menu

4.1 Adding and Removing designed supports

When designed supports are selected before the command is started, these supports will be immediately listed in the form.

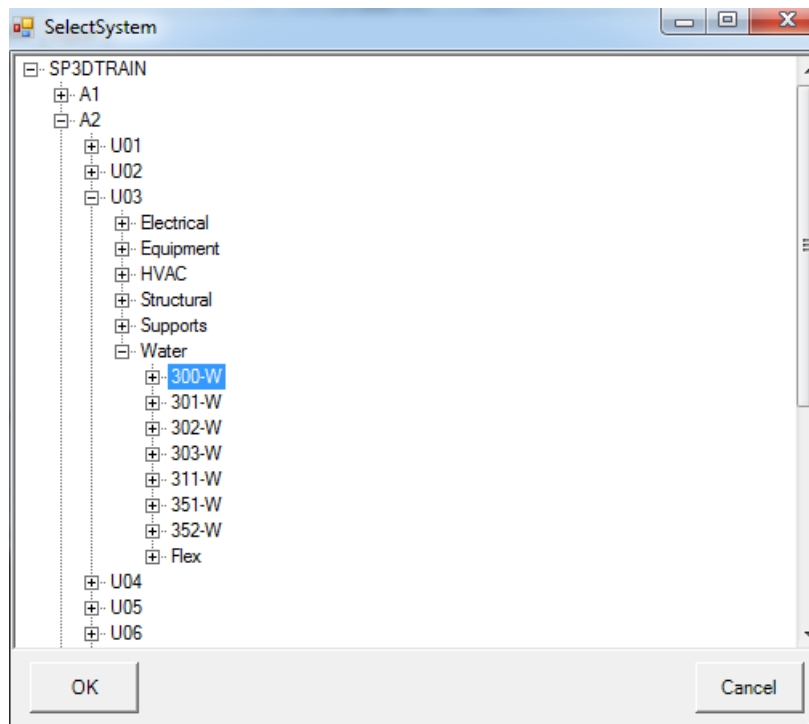
Additional supports can be added with the buttons “Add Support” and “Add Supports in System”.

When selecting “Add Support”, the form will be hidden, and the user can select a support.

When a support is selected, the form will be shown again.

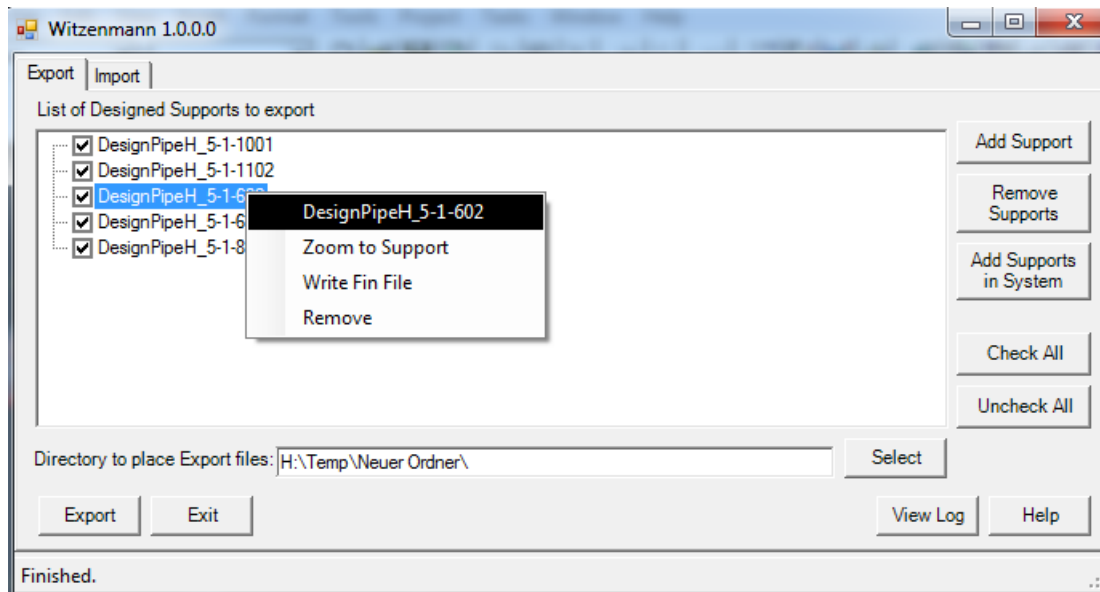
To return to the form without selecting a support, click the right mouse button.

With the button “Add Supports in System”, a form will show all available system in the S3D model. Select one system and press OK: All supports below this system will be added to the list.



Now the form will contain the list of the supports in the selected system.

To process one support, use the right mouse button:



With “Zoom to Support”, the selected support will be highlighted and the actual view will zoom to the support.

“Write Fin File” will write a FIN File as explained in the next chapter.

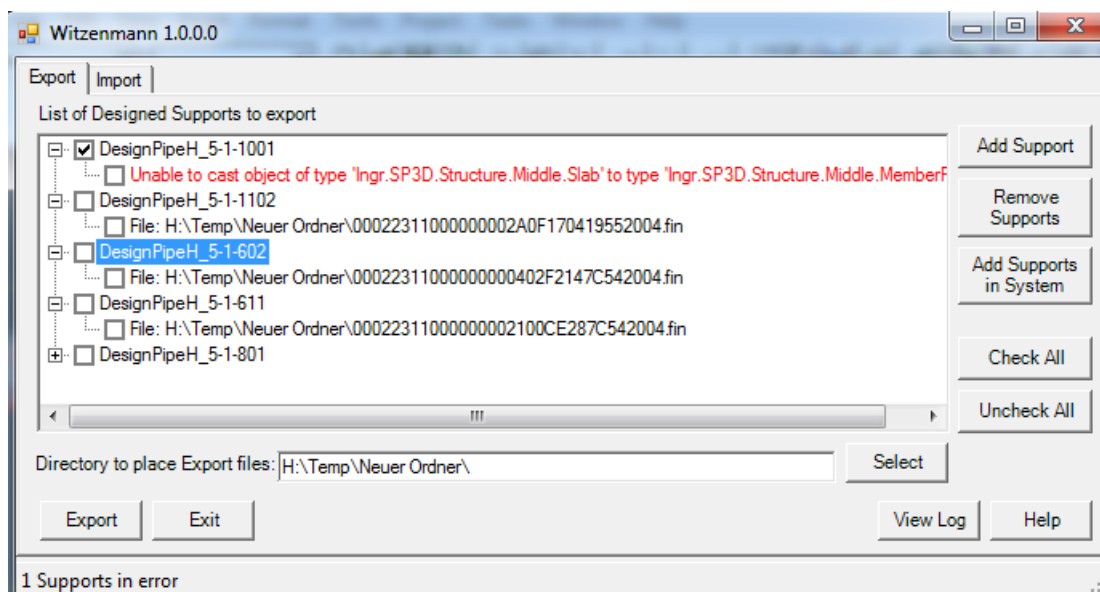
“Remove” will remove this support from the list.

4.2 Creating FIN files

The created Fin files will be in the directory specified via the textbox “Directory to place Export files”. The filenames are created from the Object Id of the supports.

When selecting the button “Export”, for all checked supports, a fin file will be written.

The form will show the result:



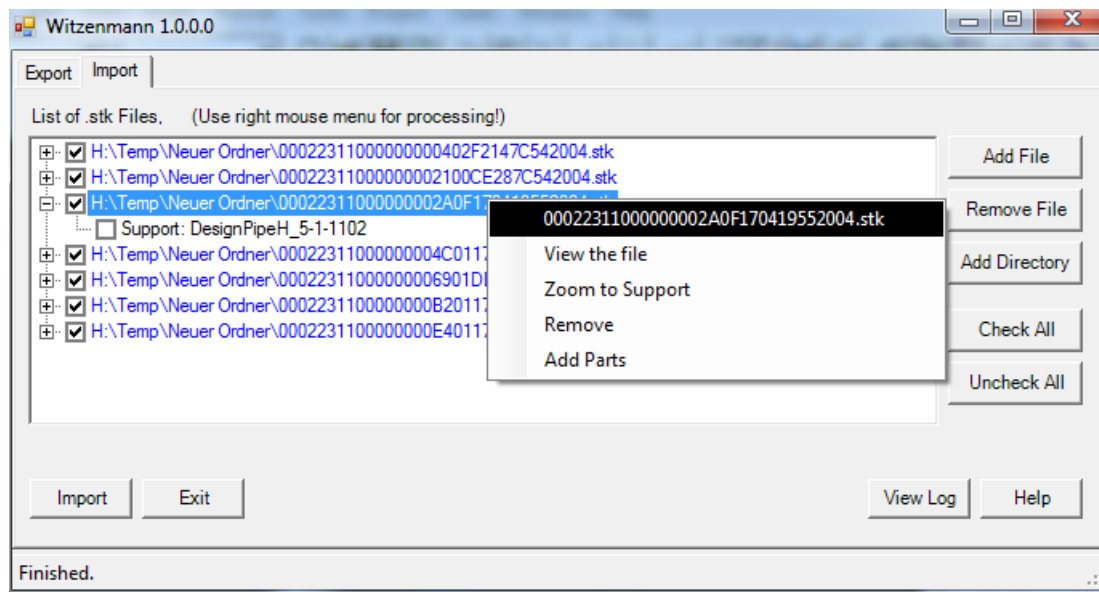
5 Import Menu

5.1 Adding and Removing files

The buttons “Add File” and “Add Directory” can be used to add .stk Files to the list of files. When selecting a directory all .stk files below this directory are added to the list.

There is also the possibility to add files to the list using drag/drop.

Whenever a file is added, the system checks, if it is a correct .stk file and if a designed support is given in the file. If a support is found, it is listed below the filename:



A filename in **red** indicates an error.

A filename in **dark blue** indicates, that a designed support was found.

A filename in **green** indicates, that the parts were successfully added to the designed support.

A filename in **dark red** indicates, that adding the parts were not successful.

If there are errors, they can be found below the line containing the filename, they can also be viewed using the “View Log” button.

5.2 Right mouse context menu

When selecting a file and using the right mouse button a context menu appears with the actions described in the following subsections. Some of the actions may not appear, depending on the status of the file.

5.2.1 View File

This will show the selected file in an editor (default: notepad).

5.2.2 Zoom to Support

When pressed, the active view will be fit to the selected support and the support will be highlighted.

5.2.3 Remove

The file will be removed from the list

5.2.4 Create Parts

The parts mentioned in the .stk file will be created for the designed support.

5.3 Button: Import

When pressed, all checked .stk files, which have a designed support attached, will be processed: The parts from the .stk file will be created and attached to the support. If successful, the line of the .stk file will be displayed in green.

5.4 Button: Help

The Help button will show a short explanation of the command. A button on the help menu allows to show this documentation pdf file.

5.5 Button: View Log

Most error information is shown below the .fin files in the list. Additionally a logfile is created. This logfile can also be viewed with a double click with the left mouse to the statusbar. If there are no logfile entries, the message "no messages" is displayed in the statusbar.

6 Configuration Menu

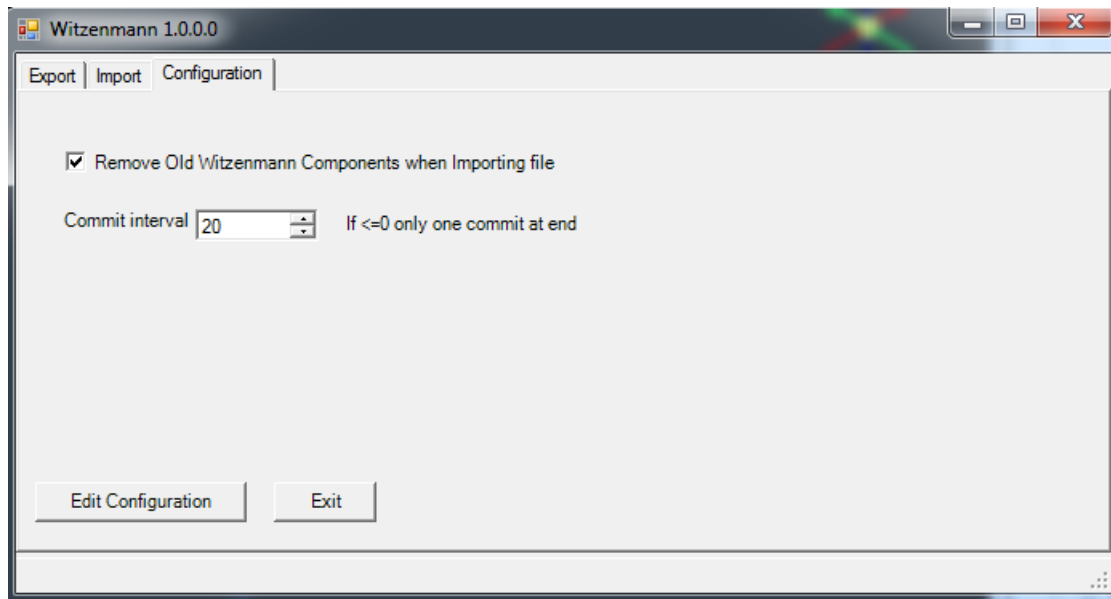
6.1 Configuration file

A configuration file named "WitzenmannConfig.xml" is automatically created and placed in the directory of the S3DWitzenmann.dll.

The configuration file will store the last values entered in the form.

6.2 Tab Configuration

The Tab “Configuration” will show the following options:



When “Remove Old Witzenmann Components when importing file” is checked, then it is possible to import updated versions of an import file to the same support. Parts created during the first import, will be automatically deleted when doing a second import to the same support. This will not affect parts, which are added manually to the support.

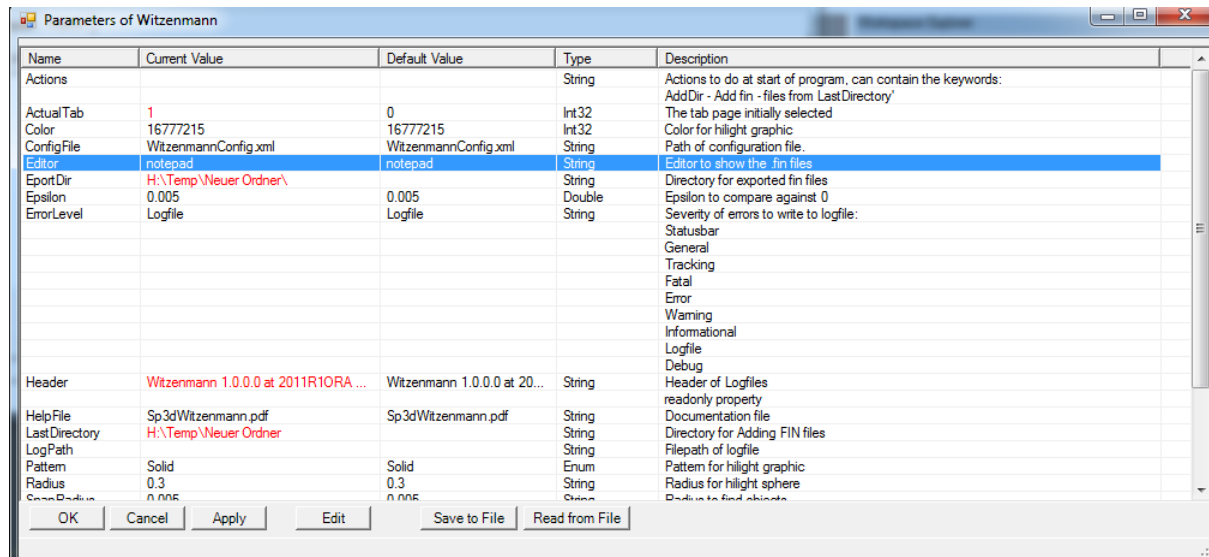
“Commit Intervall” specifies after how many parts created a commit into the database should be performed. A commit will only be performed after all parts for a support are imported. When specifying a values of “0”, only one commit is done, after all checked files are imported. A value of about 20 – 50 is recommended.

The first time, the “Commit interval” is reached, the user is asked, if the commit should be performed. If the answer is “No”, no changes are done, and processing is stopped.

If the answer is “Yes”, the created parts will be made permanent. Further commits are done without asking the user. The process can still be aborted using the “Cancel” button.

The button “Edit configuration” shows the following menu, allowing to edit all configuration parameters:

This configuration menu can also be viewed with a double click with the right mouse button to the statusbar. A form like the following will appear:

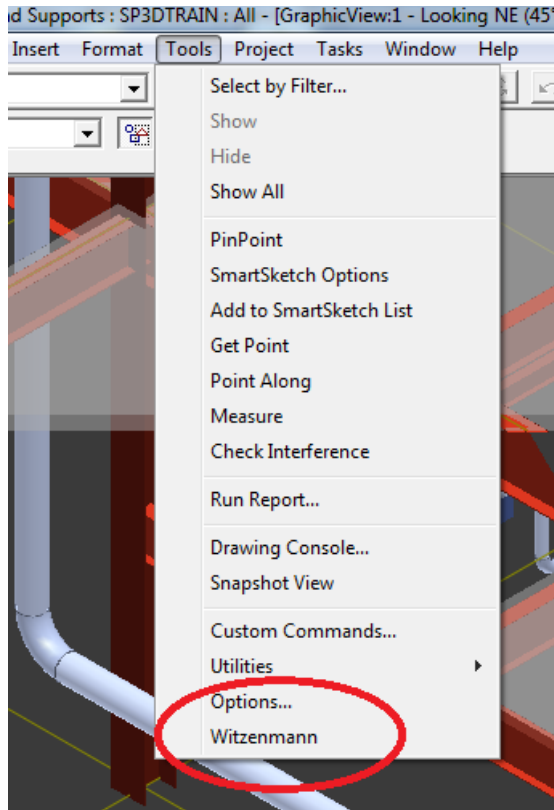


When selecting a line with a double click (or using the 'Edit' button) the parameter can be changed.

7 Additional configuration options

7.1 Calling the custom command from the pull down menus

Instead of using “Tools/Custom Commands”, it is also possible to add an entry to the pull down menus:



This can be done by adding the red line into the file

<Smart3DInstallation\ HangersAndSupports\Environment\XML\ HangersAndSupports.xml

```
<Menu caption="&Tools" id="mnuTools">
  <IncludeXML href="$CommonApp\Include\MenuTools.xml" />
  <MenuItem caption="&Weight & CG" id="mnuToolsWeightCG" action="mnuToolsWeightCG" Product="SM3D/MHE"/>
  <MenuItem caption="Witzenmann" action="StartAssemblyCmdNormal" arg1="S3DWitzenmann,S3DWitzenmann.Run"/>
</Menu>
```

7.2 Using a user specific configuration file

The default configuration file (WitzenmannConfig.xml) is placed in the directory of the Witzenmann.dll. All SP3D users will use the same configuration file, which is normally not the intention.

It is possible, that each user has its own configuration will. This can be achieved, by filling the “Argument” line in the “Edit custom command” form with the text:

ConfigFile="%TEMP%\WitzenmannConfig.xml"

The same can be achieved, by adding the corresponding value in the pull down menus:

```
<MenuItem caption="Witzenmann" action="StartAssemblyCmdNormal" arg1="S3DWitzenmann,S3DWitzenmann.Run"
arg2='ConfigFile="%TEMP%\WitzenmannConfig.xml"' />
```