GENIUS TOOLS®

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That's IT.

GENIUS TOOLS for Creo

11.0.0.0

News

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1 Important information

Updating GENIUS TOOLS Parameter & Library

An update of GENIUS TOOLS Parameter & Library does not update the resource folder *(gt_resource_folder)*. This must be updated manually. Consult the chapter *Update process* in the help document *GENIUS TOOLS Starter Installation.pdf*

License-dependent functions

The following functions are limited to subscription licenses for either GENIUS TOOL® Library, GENIUS TOOLS® Parameter or Startup TOOLS.

Please note: The sum of all extension modules for Creo Parametric, which comprise these products, are called GENIUS TOOLS for Creo.

Extension module	Description	Release
Load Save Converter	Converts Creo objects from previous Creo-, Wildfire- or Pro/ENGINEER versions to the currently used version.	7.0.0.0
Inspect Revision	Stores all versions of inspection symbols on a drawing. Easily creates an overview of a revision history.	7.0.0.0
Open Base Model	Opens geometric base models that are reference sources for features with one click in the context menu of a feature.	7.0.0.0
Extend Relations	Adds functions to model relations that define parameters for models and for bodies.	7.0.0.0 - 8.0.0.0
Select Surfaces By Color	Surfaces of the same color can be selected with one click and be colored or otherwise modified thereafter.	7.0.1.0
CS Assembler	Automatically adds a number of components to an assembly by deploying a coordinate system (CS).	7.0.1.0

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Extension module	Description	Release
Extended Dimension Functions	Model dimensions can be increased or decreased very quickly with the mouse in a defined increment in the graphics window.	7.0.2.0
Copy Component Parameter To Substitution Component Parameter	If a value has been assigned to a component parameter for a part in the master representation, this value can be copied to the component parameter for a simplified part.	7.0.2.0
Toggle Symbol Variants	If a grouped symbol has variants in the first level, you can switch between these variants more quickly.	7.0.2.0
Multibody to Assembly	Converts multiple bodies into assemblies (Creo Advanced Assembly Extension (AAX) is required.)	8.0.0.0
Work Dir Manager	Automatically collects all directories used during the work process and enables the current working directory to be changed quickly.	8.0.0.0
Full Backup	Quickly backs up the current model with all dependent data.	8.0.0.0
Command Control	With Command Control, Creo Parametric ribbon commands / commands can be hidden or deactivated.	8.0.1.0
Feature Regeneration Profiler	Regenerates models and displays regeneration times for each feature.	10.0.1.0

GENIUS TOOLS for Creo: End of support for Creo versions 7.0.0.0 and 7.0.1.0 (Version 10.0.1.0)

PTC Creo versions 7.0.0.0 and 7.0.1.0 are no longer supported.

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2 What's new in release 11

The GENIUS TOOLS add-on applications for Creo - included in the GENIUS TOOLS Library and GENIUS TOOLS Parameter products - support Creo Parametric version 11.

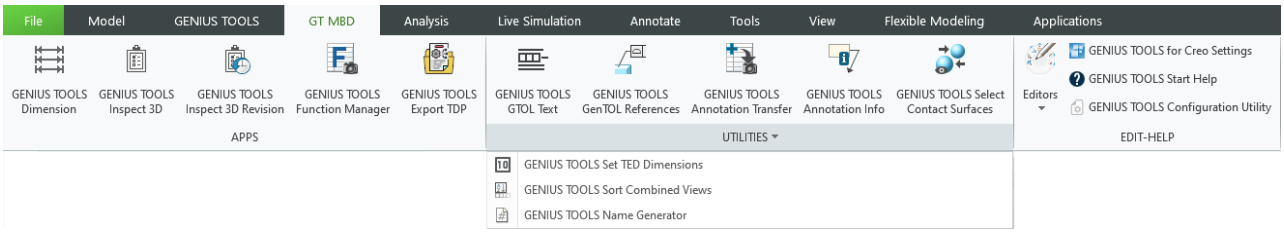
The product *GENIUS TOOLS MBD for ISO-GPS* was introduced with release 11.0.0.0. The associated modules support you with functional construction and specification in 3D.

GENIUS TOOLS for Creo: New product „GENIUS TOOLS MBD for ISO-GPS“ (11.0.0.0)

The new product *GENIUS TOOLS MBD for ISO-GPS* supports you in functional construction and specification in 3D. Our goal is to make it as easy as possible for you to implement the ISO GPS standards. *GENIUS TOOLS MBD for ISO-GPS* is available in the stand-alone ribbon menu *GT MBD* with established and new modules:

– GENIUS TOOLS Dimension:
  An established module from the ribbon menu *GENIUS TOOLS*, which is available with the same functions.
– GENIUS TOOLS Inspect 3D[8]
– GENIUS TOOLS Function Manager[6]
– GENIUS TOOLS GTOL Text[13]
– GENIUS TOOLS GenTOL References[13]
– GENIUS TOOLS Annotation Transfer[11]
– GENIUS TOOLS Annotation Info[11]
– GENIUS TOOLS Select Contact Surfaces[14] (in part mode) / GENIUS TOOLS Find Contact Surfaces[13] (in assembly mode)
– GENIUS TOOLS Export TDP[5]
– GENIUS TOOLS Set TED Dimensions[15]
– GENIUS TOOLS Sort Combined Views[15]
– GENIUS TOOLS Name Generator:
  An established module from the ribbon menu *GENIUS TOOLS*, which is available with the same functions.
– GENIUS TOOLS Quick Access:
  An established module from the ribbon menu *GENIUS TOOLS*, which is available with the same functions.

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Please note: *GENIUS TOOLS MBD for ISO-GPS* can be used with Creo Parametric version 10 or higher.

2.1 GENIUS TOOLS Assembly Report

Transferring sum as parameter to assembly (11.0.0.0)

You can further customize the display of the summary row in GENIUS TOOLS Assembly Report Editor.

If the check box *Add totals row* is selected, you can select another option: *Write mass_TOTAL in model parameter*. If you select this option, you can enter a new model parameter in the text field or overwrite an existing model parameter.



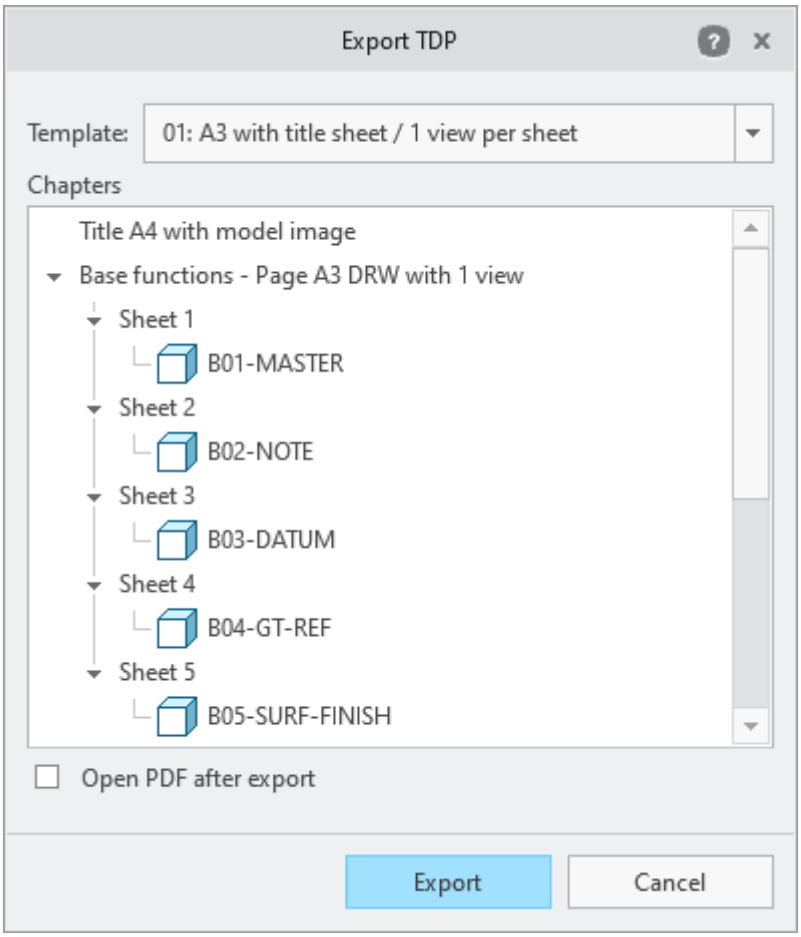
2.2 GENIUS TOOLS Export TDP

New module „Export TDP“ (11.0.0.0)

The new function *Export TDP* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

The module *Export TDP* allows you to export technical data packages for viewing 3D models as PDF files. These PDF files contain simplified representations of the MBD model that can be rotated, zoomed, and resized.

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The exported PDF files can be created in the following ways:

– Structuring PDF files by chapters

– Optional content: Title page, table of contents, chapters with one or more combined views

– Format: classic drawing format with drawing frame or book format without drawing frame

2.3 GENIUS TOOLS Function Manager

New module „Function Manager“ (11.0.0.0)

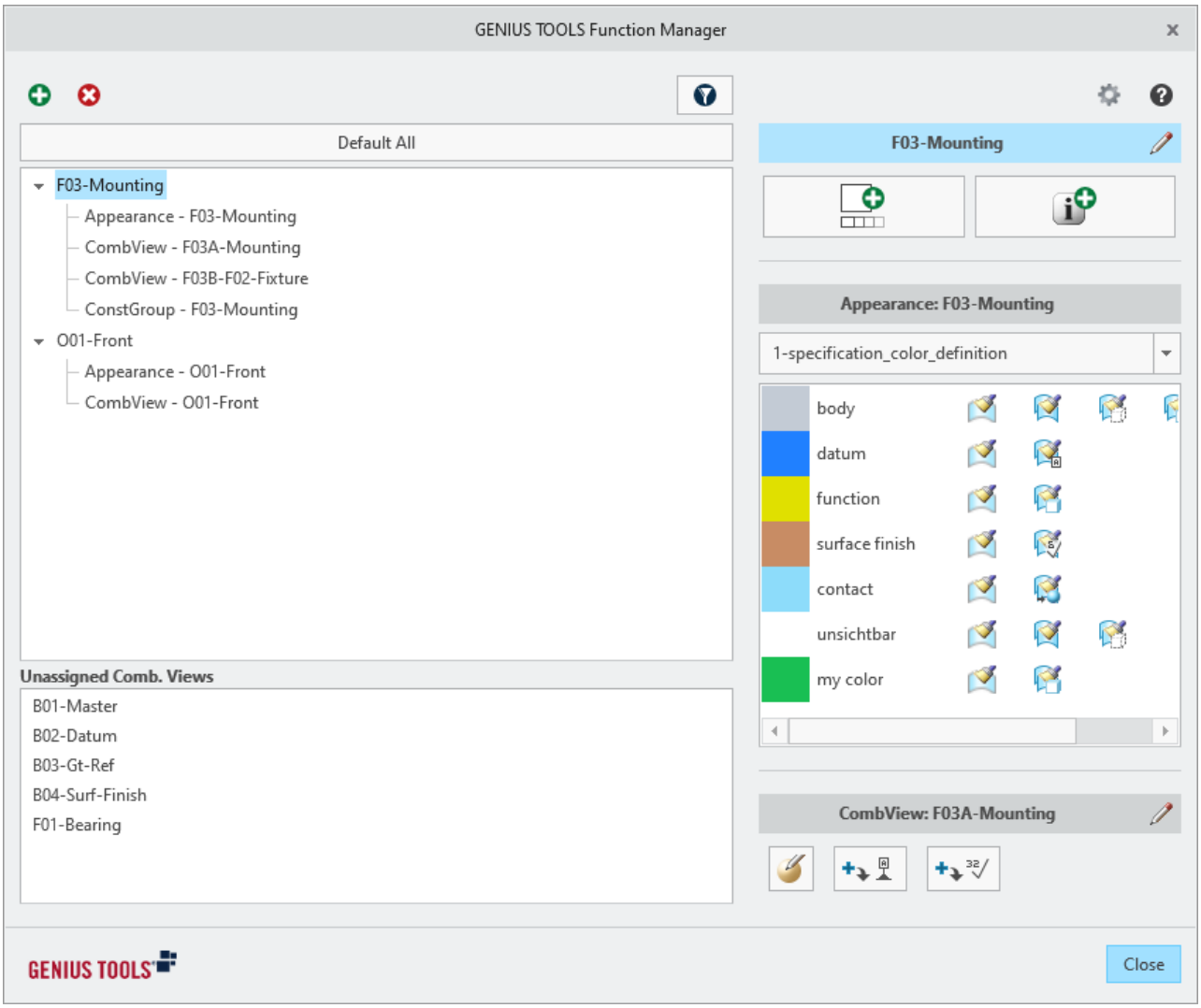
The new function *Function Manager* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

The module *Function Manager* allows you to create and manage functions and associated functional objects that you need for functional construction and specification in 3D. Templates for functions and functional objects can be read as XML files.

Function Manager is available in part mode and in assembly mode with the following features:

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1. Overview of existing functions and their functional objects (combined views, appearances, etc.)
2. Real-time editing of functions and functional objects: add, rename, extend, delete
3. Alphabetical creation of combined views without scrolling in the Creo Parametric main window
4. Switching between combined views without switching views
5. Editing, grouping and deleting combined views
6. Creating several combined views at the same time and displaying them in the model tree
7. Automatic naming of functions
8. Coloring of surfaces, features and parts
   – A predefined color scheme is provided and accessible via *View* > *Appearances* > *Library* > *startuptools*. This color scheme is ready to use and can also be customized.



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2.4 GENIUS TOOLS Inspect 3D

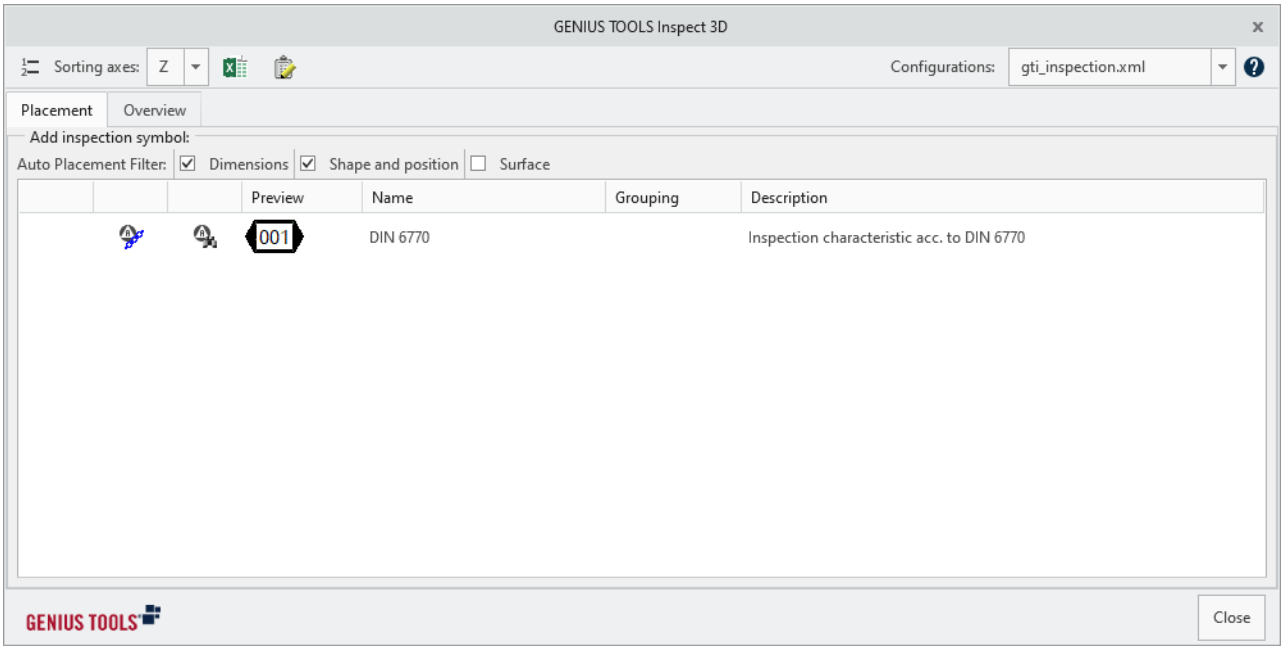
New module „Inspect 3D“ (11.0.0.0)

The new module *Inspect 3D* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

Use *Inspect 3D* to add inspection symbols to parts and assemblies in Creo Parametric.

Inspect 3D is available in part mode and assembly mode with the following features:

1. Placement of inspection symbols linked to
   - dimensions
   - shape and position tolerances
   - surface quality symbols
   - notes
   - symbols
2. Numbering of inspection symbols
   - by axes
   - by symbol type
   - similar to DIN 6770 (numbers are not assigned anew)
3. Data export to Excel



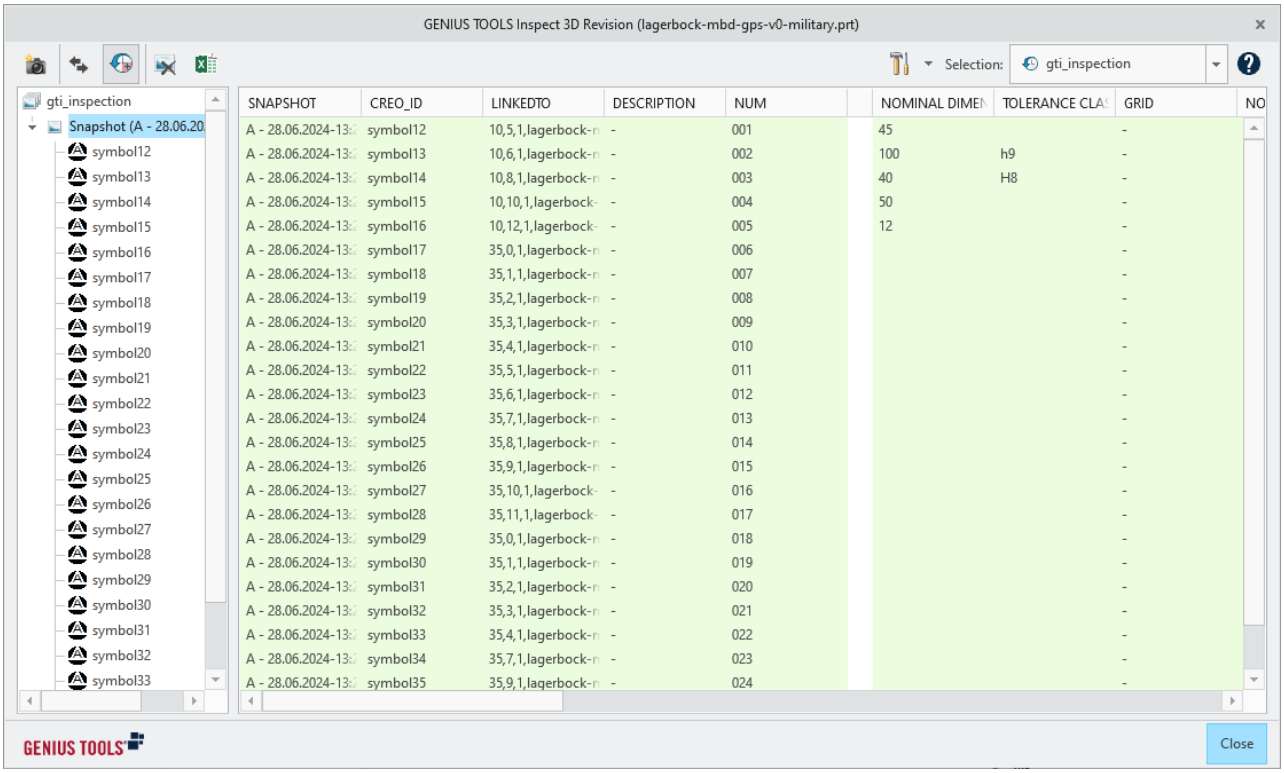
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Please note: *Inspect 3D* is configured in *Inspect Editor*. This Editor is available for *Inspect* and *Inspect 3D*. Some settings / configuration options can only be set for *Inspect* in drawing mode or only for *Inspect 3D* in part mode and assembly mode, e. g. Inspect Editor: Prefix for inspection charateristics in the annotation tree 10.

New module „Inspect 3D Revision“ (11.0.0.0)

The new module *Inspect 3D Revision* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

Use *Inspect 3D Revision* to create snapshots of all inspection symbols in a combined view of a part / an assembly at a given time. Using a revision parameter you can define the revision level and generate a history of all revisions. Revision histories can be exported to Excel.



Coloring symbols (11.0.0.0)

The setting options for inspection characteristics are expanded. Each created inspection characteristic can be colored. You can use the checkbox to set whether all inspection characteristics added from this point onwards are colored in this color.



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More columns available for Excel export (11.0.0.0)

Please note: Inspect is a module of the products Startup TOOLS, GENIUS TOOLS Parameter and GENIUS TOOLS Library. Inspect 3D is a module of the new product MBD for ISO-GPS.

New columns are available for Excel export. As usual, the text in the Excel comment for report parameters must consist of the component abbreviation *gti:* and a keyword.

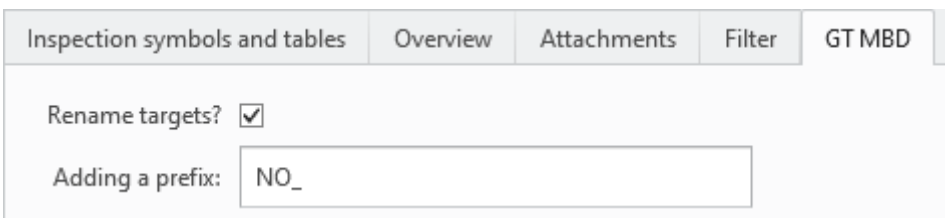
Comment text	Column name
gti:gtol_datum_references	Datum references
gti:gtol_left_text	Left text
gti:dim_value_text	Dimension text
gti:gtol_top_text	Top text
gti:gtol_right_text	Right Text
gti:gtol_value	Tolerance value
gti:gtol_bottom_text	Bottom text

Please note: These columns are supported as of Creo version 9 and higher.

Displaying prefixes for inspection characteristics in the annotation tree (11.0.0.0)

Inspect Editor was extended for the module *Inspect 3D* to include the tab *GT MBD*. In addition, exclusive settings can be made here for 3D models that are executed via *Inspect 3D*.

Inspection characteristics on parts and assemblies can be displayed in the annotation tree with an additional description. The inspection characteristics are displayed in the model as they were specified in the Editor. An additional prefix can be displayed in the annotation tree, e. g. `NO_`.



In drawing mode, the settings made here are not read and have no effect.

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2.5 GENIUS TOOLS Utilities

Utilities – New function „Annotation Info“ (11.0.0.0)

The new function *Annotation Info* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

The module *Annotation Info* is used to display information about all types of annotation elements in combined views. This module lists non-visible information to help you find errors and redundancies. Annotation elements can be displayed in parts, assemblies and in multi-body models. It is an information module only and cannot be used to edit annotations.

Annotation Info is available in part mode and assembly mode with these features:

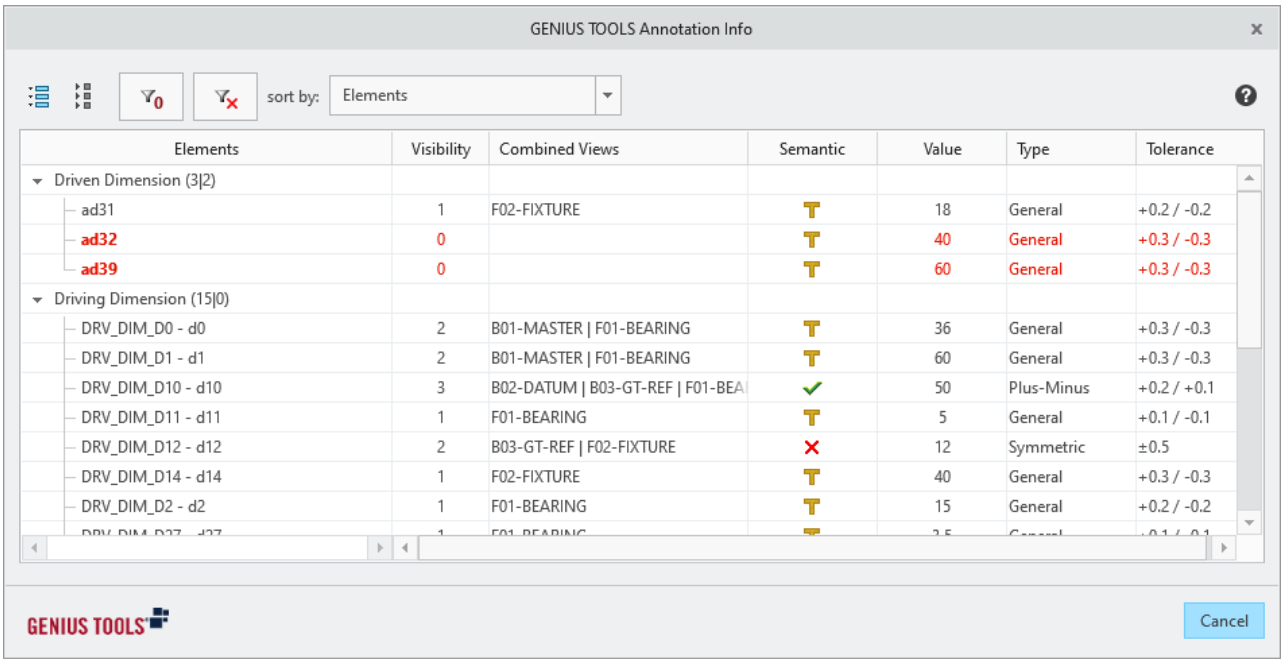
1. Viewing occurrence and frequency of annotations in a clear and concise table format
2. Finding annotations and thus dependencies that are not visible in any combined state

Use the following modules to further process the information obtained with *Annotation Info*:

– to manage combined views, see *Function Manager* 6

– to sort annotations alphabetically, see *Sort Combined Views* 15

– to transfer annotations, see *Annotation Transfer* 11



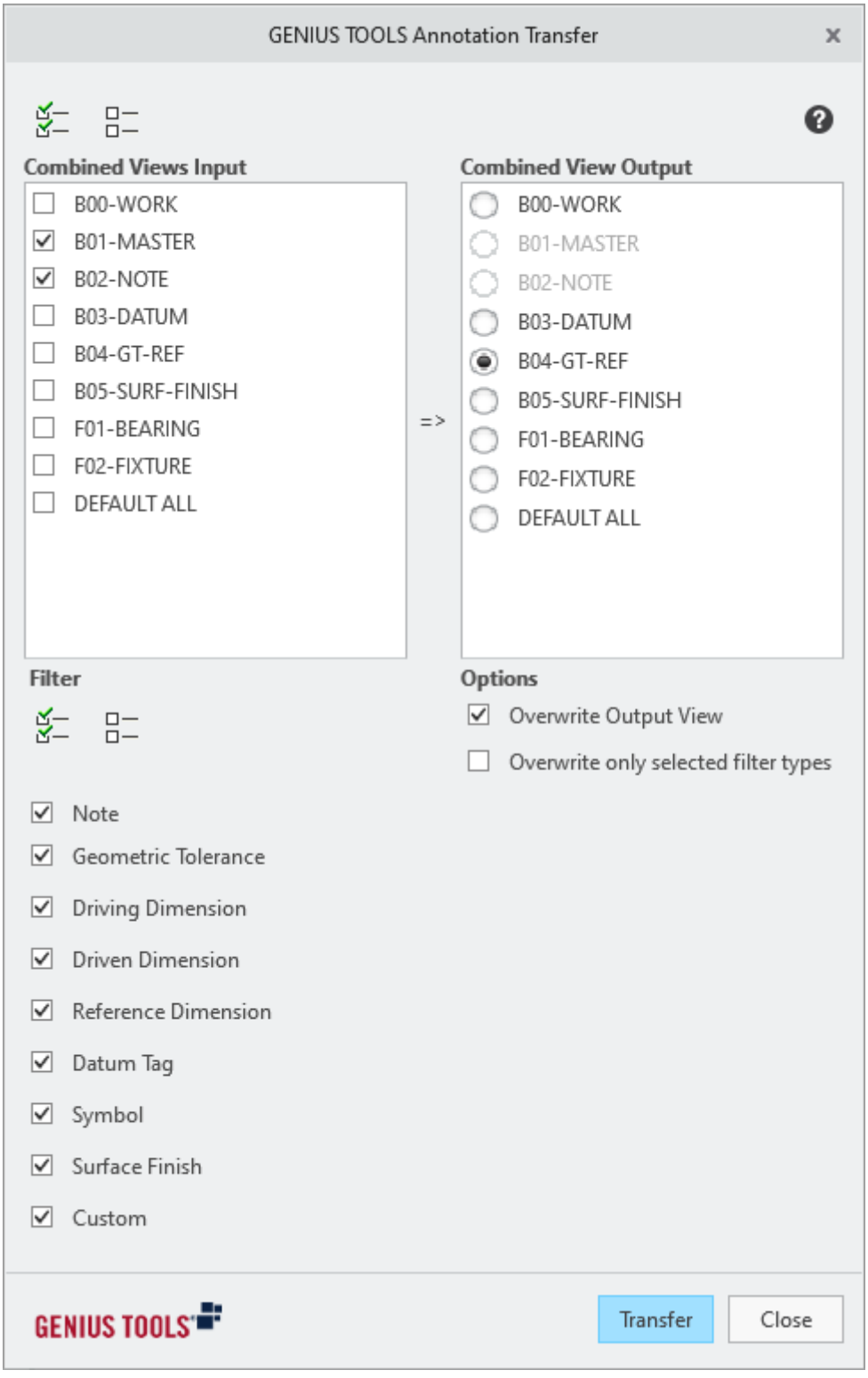
Utilities – New function „Annotation Transfer“ (11.0.0.0)

The new function *Annotation Transfer* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

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You can use the module *Annotation Transfer* to transfer annotations from one or more combined views to another combined view.

The user interface provides the following transfer options:

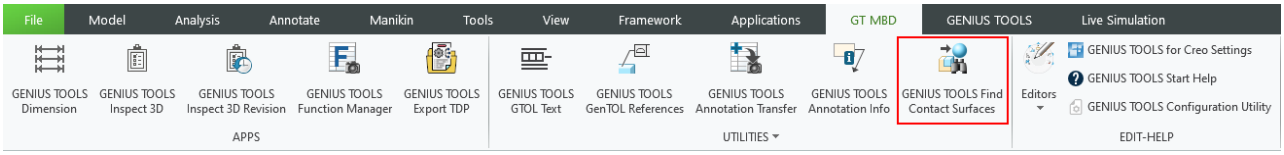


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Utilities – New function „Find Contact Surfaces“ (11.0.0.0)

The new function *Find Contact Surfaces* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

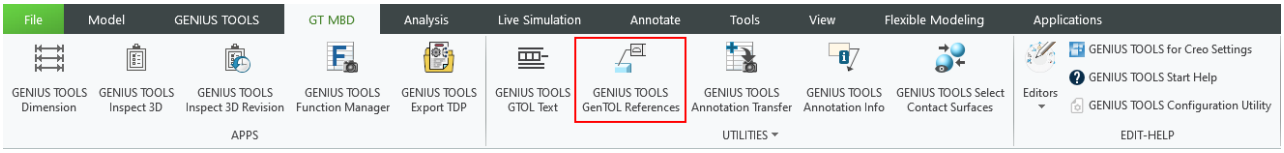
The function *Find Contact Surfaces* is a pure analysis tool that searches for the adjacent surfaces to a surface (= contact surfaces). These contact surfaces depend on the assembly in which the part is used. Open *Find Contact Surfaces* and then click on the surface you want to find the contact surfaces for. The function *Select Contact Surfaces*[14] is the equivalent to *Find Contact Surfaces* in part mode. Use *Select Contact Surfaces* to view the found contact surfaces and select and color them as desired.



Utilities – New function „General Tolerances References“ (Version 11.0.0.0)

The new function *General Tolerances References* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

The module *GenTol References [abbreviation for General Tolerances]* references all available surfaces to the general tolerance. The number of referenced surfaces is listed in the message log.



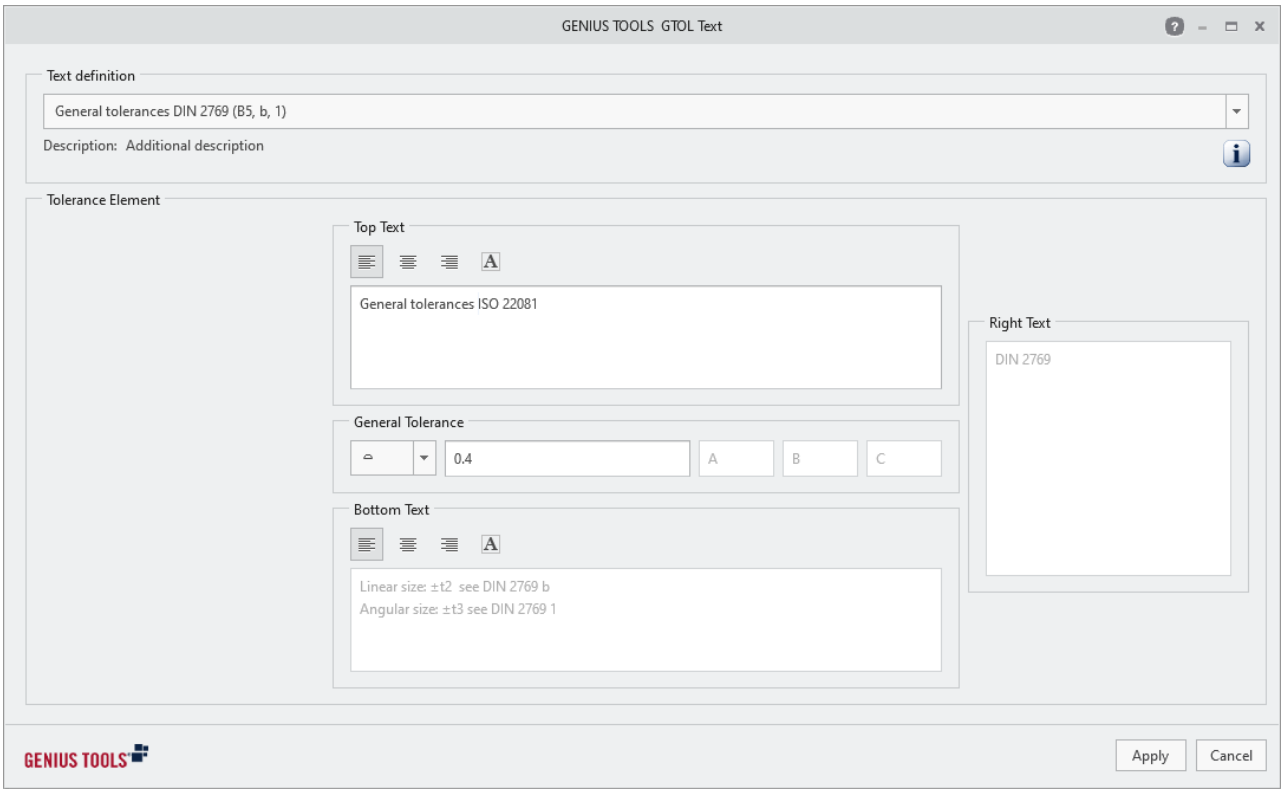
New module „GTOL Text“ (11.0.0.0)

The new function *GTOL Text* including *GTOL Text Editor* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

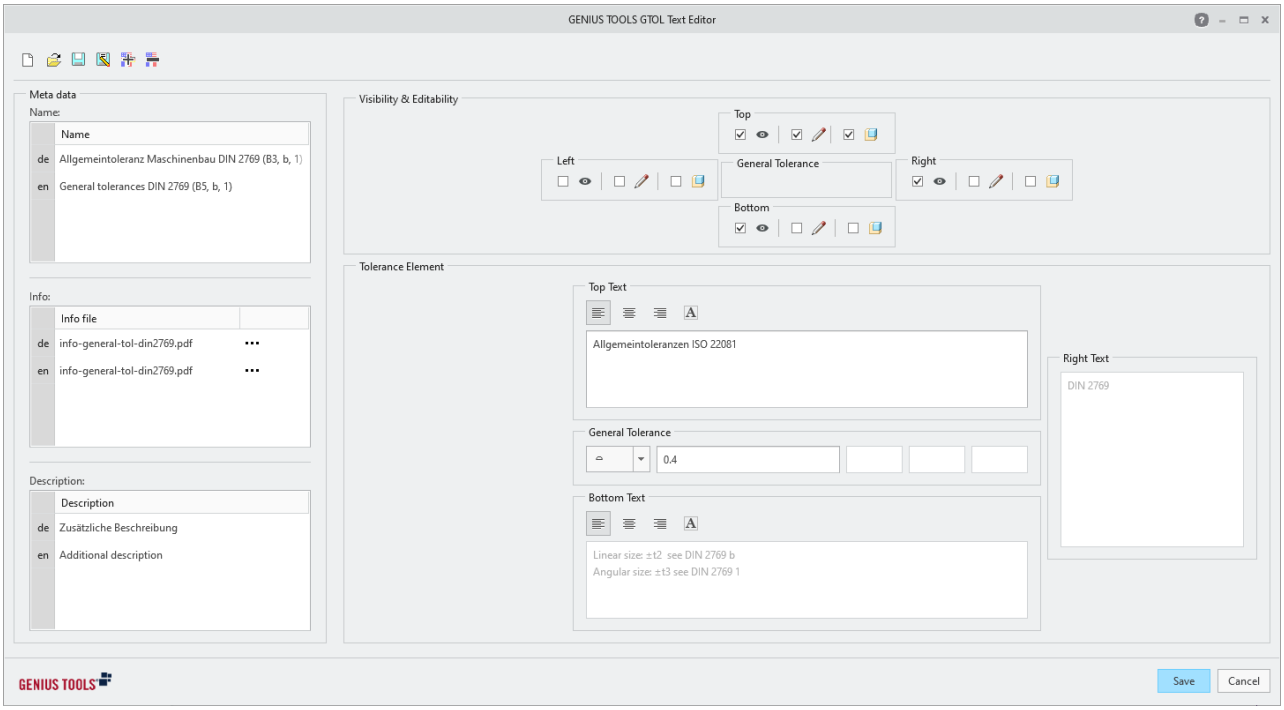
Use *GTOL Text* allows to edit texts of existing shape and position tolerance annotations. Set up templates for these texts and links to more information using the *GTOL Text Editor*.

The module *GTOL Text* is available with the following user interface:

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GTOL Text Editor also allows you to edit templates by language:

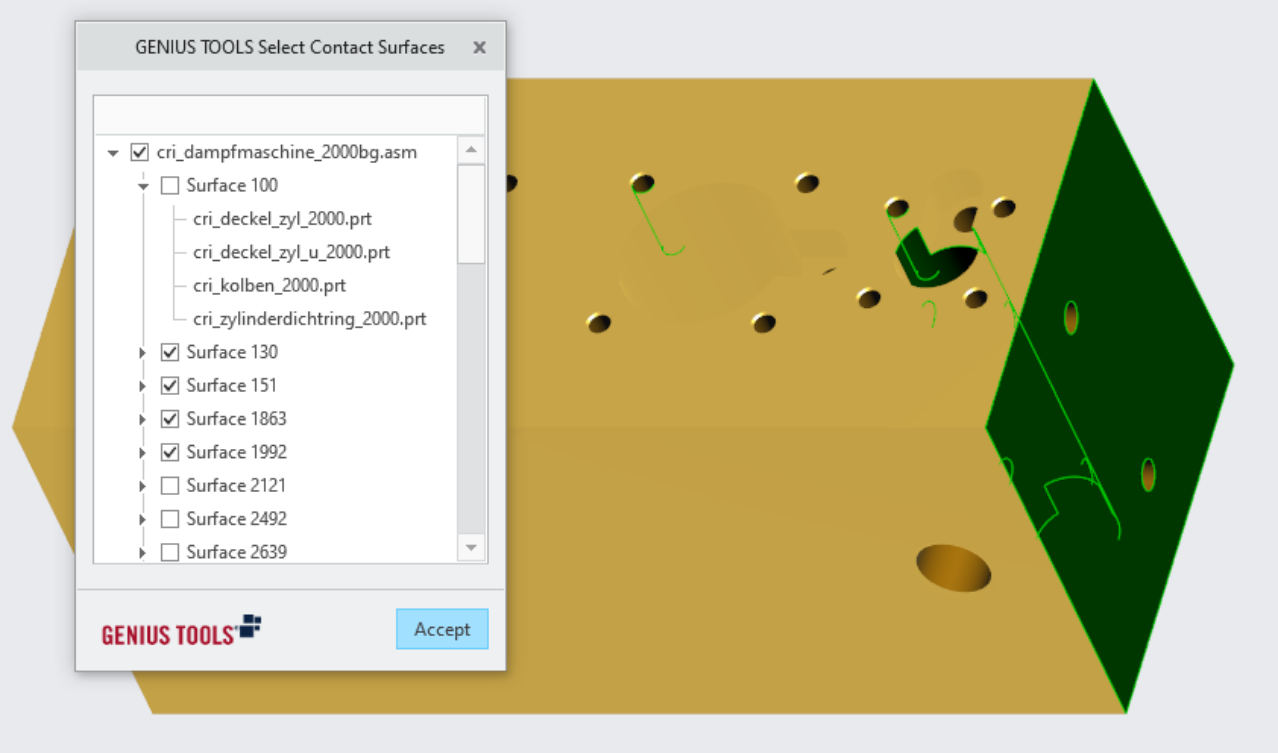


Utilities – New function „Select Contact Surfaces“ (11.0.0.0)

The new function *Select Contact Surfaces* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

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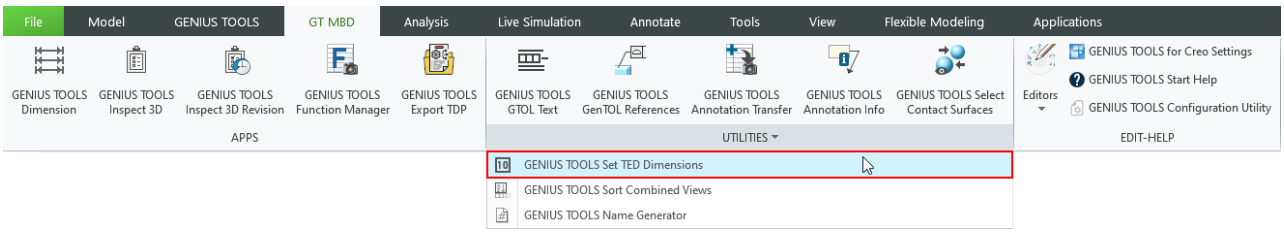
After *searching for a part's contact surfaces*[13], the identified contact surfaces can be viewed and selected with *Select contact surfaces* and colored with *Function Manager*[6] .



Utilities – New function „Set TED Dimensions“ (11.0.0.0)

The new function *Set TED Dimensions* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

Use *Set TED Dimensions* to set TEDs (Theoretically exact dimensions) in a part / an assembly.

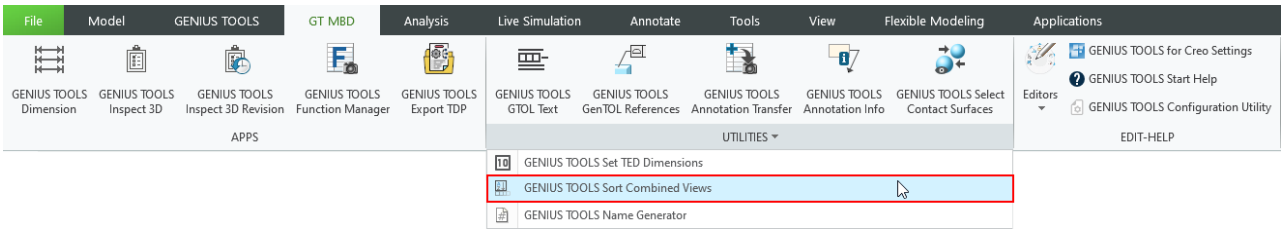


Utilities – New function „Sort Combined Views“ (11.0.0.0)

The new function *Sort Combined Views* is introduced with *GENIUS TOOLS MBD for ISO-GPS*.

Use *Sort Combined Views* to sort combined views alphabetically and automatically display them in the new order.

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Utilities – Extend Relations: Converting dot to comma (Version 11.0.0.0)

The function `GT_DoubleToString(Wert,"%[BREITE][.PRÄZISION][f]")` is expanded by a third, optional position to `GT_DoubleToString(Wert,"%[BREITE][.PRÄZISION][f]",",")`. If necessary, a comma can be entered in this location to display a comma instead of a point in the result.

Utilities – Export Table to Excel: New export modes (Version 11.0.0.0)

In *Export Table to Excel*, new selection options are available for the export mode:



New report (*.pdf) from template: This option fills a PDF template with the contents of a drawing table or a report table and saves the new PDF document.
New report (*csv) from from template: This option fills a CSV template with the contents of a drawing table or a report table and saves the new CSV document.

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3 Configuration options

The following configuration options have been added, changed or deleted since version 11.0.0.0.

3.1 New configuration options (11.0.0.0)

Export TDP: New configuration options

gttdp_component_folder
Defines the folder for the components. Default: %gt_resource%export_tdp\component\

gttdp_delete_template_folder
Defines whether the temporary folder that is created for each export will be deleted after the export. (0 - No, 1 - Yes) Default: 1

gttdp_file_name
Defines the proposed name for the export. Default: @mdln@

gttdp_imagemagick
Defines the installation site of an existing ImageMagick installation.
@unzip - Unpacks the included ImageMagick installation into the directory gttdp_tools_unzip_folder. Default: @unzip

gttdp_lang
Defines the display language of GENIUS TOOLS Export TDP. Default: de

gttdp_miktex
Defines the installation site of an existing MikTex installation.
@unzip - Unpacks the included MikTex installation into the directory gttdp_tools_unzip_folder. Default: @unzip

gttdp_model_folder
Defines the folder for the models. Default: %gt_resource_folder%export_tdp\model\

gttdp_open_after_export
Defines whether the check mark for opening after export is checked (1) or unchecked (0). Default: 0

gttdp_show_cmd_commands
Defines whether executed commands are displayed for reporting purposes (1) or not (0). Default: 1

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gttdp_template_folder
Defines the folder for the templates. Default: %gt_resource_folder%export_tdp\template\

gttdp_tools_unzip_folder
Defines the folder in which tools are to be unzipped with @unzip. Default: %appdata%\\INNEO\\GENIUS_TOOLS\\for_Creo\\

Function Manager: New configuration options

gtfm_add_cs_to_existing_function
Defines the template used for adding combined views later. Default: %gt_resource_folder%function_manager\AddCS.xml

gtfm_add_info_to_existing_function
Defines the template used for adding info objects later. Default: %gt_resource_folder%function_manager\AddInfo.xml

gtfm_color_folder
Defines the path to the color tables. Default: %gt_resource_folder%function_manager\color_templates

gtfm_init_templatenode_selection
Defines the template that will be selected when the "Add" dialog is opened. Default: Funtions\B01-Master.xml

gtfm_lang
Defines the display language of GENIUS TOOLS Function Manager. Default: en

gtfm_naming_scheme
Defines the preset naming scheme (1=Functional Design, 2=Military Standard). Default: 1

gtfm_template_folder
Defines the path to the templates for functions. Default: %gt_resource_folder%function_manager\function_templates\

Inspect 3D: New configuration options

The same configuration options are available for the new module *GENIUS TOOLS Inspect 3D* as for the already established module *GENIUS TOOLS Inspect* in drawing mode.

Utilities: New configuration options

New function „Annotation Info“

gtu_annotation_element_info_show_hole_notes
Displays automatically generated hole notes in Creo Parametric (0 - off, 1 - on). Default: 0

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gtu_start_annotation_info
Defines whether GENIUS TOOLS Annotation Info can be started by users. (0 - No, 1 - Yes). Default: 1

New function „Annotation Transfer“

gtu_start_annotation_transfer
Defines whether GENIUS TOOLS Annotation Transfer can be started by users. (0 - No, 1 - Yes). Default: 1

New function „GTOL Text“

gtu_gtol_text_folder
Defines the path where the GTol Text definitions are located. Default: %gt_resource_folder %\\utilities\\gtol_text\\

gtu_gtol_text_info_folder
Defines the path where the GTol Text info files are located. Default: %gt_resource_folder%\ \utilities\\gtol_text\\

gtu_start_gtol_text
Defines whether GENIUS TOOLS GTol Text can be started by users. (0 - No, 1 - Yes) Default: 1

gtu_start_gtol_text_editor
Defines whether GENIUS TOOLS GTol Text Editor can be started by users. (0 - No, 1 - Yes) Default: 1

New function „Find Contact Surfaces“

gtu_start_find_contact_surfaces
Defines whether GT Find Contact Surfaces can be started by users. (0 - No, 1 - Yes) Default: 1

New function „Select Contact Surfaces“

gtu_start_select_contact_surfaces
Defines whether GT Select Contact Surface can by started by users. (0 - No, 1 - Yes) Default: 1

New function „Sort Combined Views“

gtu_start_sort_combined_states
Defines whether the button GENIUS TOOLS Sort Combined Views is displayed. (0 - No, 1 - Yes) Default: 1

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