GENIUS TOOLS®

INNEO®
That's IT.

Startup TOOLS

11.0.0.0

Release Information

© 2024 INNEO Solutions GmbH

www.inneo.com

1 Important information 2

2 New features 3

3 License dependent funktions 4

4 Hardware and software requirements 5

5 GENIUS TOOLS Starter 8

5.1 Important information ... 8

5.2 New features in version 11 ... 13

6 GENIUS TOOLS for Creo 25

6.1 Important information ... 25

6.2 What's new in release 11 ... 27

6.2.1 GENIUS TOOLS Assembly Report ... 28

6.2.2 GENIUS TOOLS Export TDP ... 28

6.2.3 GENIUS TOOLS Function Manager ... 29

6.2.4 GENIUS TOOLS Inspect 3D ... 31

6.2.5 GENIUS TOOLS Utilities ... 34

6.3 Configuration options ... 39

6.3.1 New configuration options (11.0.0.0) ... 39

7 Contact details 43

8 Copyright 44

1 Important information

Update

An update of Startup TOOLS does not change any data in the data packages (<*operatingenvironment*>\<*application*>*data*\<*datapackage*>*)* or the resource folder (<*operatingenvironment*>*parametric**configuration**gt_resource_folder* within an operating environment. Data packages and resource directory are customized to company-specific needs, e. g. the drawing frames, and must therefore be updated manually.

Multi-CAD support changes folder structure

With Startup TOOLS 10.0.0.0 you can, in addition to Creo Parametric, also start projects in Creo Elements/Direct, Inventor and SolidWorks with GENIUS TOOLS Starter – the configuration component of Startup TOOLS. In order to include data for multiple CAD systems, the entire folder structure has been changed in version 9.0.0.0. These changes affect all areas, including the configuration, additional applications and the data needed within application.

Warning: Due to these new features in GENIUS TOOLS Starter, the folder structure and the software are no longer backward compatible, i. e. after updating an operating environment to version 9.0.0.0 or newer, you cannot revert to an older version.

The update is performed automatically with GENIUS TOOLS Environment Administrator.

Please also consult the chapters *Important informationen* in GENIUS TOOLS Starter and for Creo add-on applications in GENIUS TOOLS for Creo.

© 2024 INNEO Solutions GmbH

2 New features

You can find more information about new functions in the chapters GENIUS TOOLS Starter and for the Creo add-on applications in GENIUS TOOLS for Creo.

© 2024 INNEO Solutions GmbH

3 License dependent funktions

The product functionality depends on the type of license you are using. Find the list of functions that are limited to subscription licenses in the chapters *Important Information* in GENIUS TOOLS Starter and GENIUS TOOLS for Creo respectively.

© 2024 INNEO Solutions GmbH

4 Hardware and software requirements

Hardware and software requirements

GENIUS TOOLS Starter works on all computers that fulfill the requirements for Creo 7.0 to Creo 11.0.

The following requirements are the same for installation computers, installation computers and satellites.

	GENIUS TOOLS Starter				
Version	**7.0**	**8.0**	**9.0**	**10.0**	**11.0**
Operating system	64-bit only Windows 10 / 8.1 / 7		64-bit only Windows 11 / 10		
.NET Framework	4.8 Delivered with Windows 10 -1903 (+8.1; +7) (May have to be installed separately on WIN7/8.1)		4.8 Delivered with Windows 10 -1903		Installation computer: 4.8
.NET	-				8.0
Minimum screen resolution	X=1280 Y=1024				
Flexnet	INNEO Licence Manager 1.0 M050 (Flexnet) and later				
Caddepot directory (Central storage location with UNC access)	circa 1 to 5 GB for each operating environment				
Cadpool directory (Storage location on the application computer)	Sufficient storage space to set up at least one operating environment				

© 2024 INNEO Solutions GmbH

	GENIUS TOOLS Starter				
Version	**7.0**	**8.0**	**9.0**	**10.0**	**11.0**
Data synchronization using GENIUS TOOLS Starter Service	Windows computer, where the Caddepot directory is located and where a service can be installed.				
Operating satellites using GENIUS TOOLS Starter Service	Communication port for REST API on installation computer and satellites. Standard: 8092 Satellites need the same storage space as the installation computer.				

Supported desktop applications

1. Administrators can create projects with object data and predefined configuration settings for the following CAD applications:

- AutoCAD, AutoCAD Architecture, AutoCAD LT und AutoCAD Mechanical 2021 - 2024
- Creo Elements / Direct Modeling
- Creo Parametric 2.0 - 11.0
- Inventor 2021 - 2024
- SolidWorks 2020 - 2024

2. The following applications will be automatically detected if they are installed on the user computer (autostart). The latest version will be opened.

- Creo Elements / Direct Drafting
- Creo Illustrate
- Creo Schematics
- Creo View
- Geomagic Design X
- KeyShot
- Mathcad

Required access rights

Caddepot

Read access: All users need read access to the Caddepot for synchronization to work.

© 2024 INNEO Solutions GmbH

Write access: For some functions users need write access to individual directories of an operating environment in the Caddepot.

- GENIUS TOOLS Starter App feedback on the last synchronization
  …\ *serveronly**_SyncResults*\
- Central user configuration files
  …*userdata*
- Common databases for GENIUS TOOLS for Creo name generation (has to be configured manually)
  …*serveronly**gt_numgen*
  Warning: This functionality cannot be used offline.

Cadpool

Read / write access: The user needs full write access to the local Cadpool for synchronization to work.

Client computers

Write access: Write access needs to be granted to the following Creo installation directories

- if more than the standard key (e.g. *parametric.psf*) or the synchronization of the start key is to be used: to the directory that contains Creo startkeys,
- if the Creo configuration files *config.sup, config.pro, creo_parametric_admin_customization.ui* need to be adapted: to the directory .. *CommonFiles**text*

Please note: If Creo is installed into the Windows default program directory, you should not make any changes with GENIUS TOOLS Starter App. Install Creo into another directory, for example *C:**ptc*.

© 2024 INNEO Solutions GmbH

5 GENIUS TOOLS Starter

GENIUS TOOLS Starter is the configuration component of the Startup TOOLS for version 6.0 and later.

GENIUS TOOLS Starter is a separate software that can start local applications such as Creo Parametric using a central configuration, as well as synchronize data to the local computer.

All projects and data are managed within a operating environment. You can now use any number of operating environments in parallel, for example to have a test and production environment.

GENIUS TOOLS Starter package

– The GENIUS TOOLS Starter App is the interface for the user, who can start the projects configured by the administrator. The local GENIUS TOOLS Starter App will update automatically from the central Caddepot directory.

– GENIUS TOOLS Project Configurator is the tool for the administrator for configuring projects that the user can then start using the GENIUS TOOLS Starter App.

– GENIUS TOOLS Environment Administrator is the tool for the administrator to manage operating environments.

5.1 Important information

Starter: Rename environment variables (11.0.0.0)

Modified environment variables:

The environment variables for user and computer groups – **GTS_USER_GROUP** and **GTS_COMPUTER_GROUP** – are no longer supported. If these variables were used in a configuration block (config_*.pro file), they must be renamed to: **GTS_UNIT_DIR.**

See New features in Project Configurator: Groups become units.

The following new variables are supported by GENIUS TOOLS Starter:

GTS_CREO_INSTALL_DEFINITIONS_DIR
definitions directory under the install folder

GTS_CREO_INSTALL_DIAGNOSTIC
1 if *diagnostic tools* are activated, otherwise 0

© 2024 INNEO Solutions GmbH

GTS_CREO_INSTALL_FIREWALL
1 if *Write firewall entries* is activated, otherwise 0

GTS_CREO_INSTALL_HELP
1 if *Install help* is activated, otherwise 0

GTS_CREO_INSTALL_HELP_XML_DIR
XML directory for the help (install/definitions/<Unit or standard>/XML/help_Creo<MainVersion>)

GTS_CREO_INSTALL_MAIN_VERSION
Creo main version to be installed

GTS_CREO_INSTALL_TASKSKILL
1 if *taskkill is activated*, otherwise 0

GTS_CREO_INSTALL_UNIT_FOLDERS
List of the currently selected units (e. g.“Germany|Leipzig|Construction”)

GTS_CREO_INSTALL_UPGRADE
-upgrade if the installation type was set to upgrade, otherwise “”

GTS_CREO_INSTALL_VERSION
Creo version to be installed (e. g. 11.0.1.0)

GTS_CREO_INSTALL_VIEWER
1 if *Install Thumbnail Viewer* is activated, otherwise 0

GTS_CREO_INSTALL_XML_DIR
XML directory (install/definitions/<Unit or standard>/XML/Creo<MainVersion>)

GTS_SATELLITEONLY_DIR
Directory that only exists on the main server and the satellite

GTS_MAIN_SERVER_DIR
Server path of the main server

Different functionality depending on license type

Starting with version 6.0.1, perpetual licenses and subscription licenses come with different product functionality.

The following functions are available with a subscription license for GENIUS TOOLS Starter.

© 2024 INNEO Solutions GmbH

Subscription function	Description	Release
Dynamic access to Windows user management with LDAP/Active Directory (lightweight directory access protocol)	Creates access to Windows user management and enables live queries so that user assignment is always up-to-date. Users thus do not have to be created and maintained manually. ⇨ Less maintenance work	6.0.1.0
Configuring units	Adds a group element (“unit”) that can easily reflect complex configurations such as for company sites and units. ⇨ Easier configuration for companies with many sites and/ or units ⇨ Allows for a reduction of projects	6.0.1.0
Access to directory “users”	Adds a group element (“users”) that can easily reflect complex configurations for many users. ⇨ Less maintenance work	6.0.1.0
Selecting Creo startkey when starting a project	Provides a project with a choice from several Creo startkeys (start command that opens Creo with a defined license package). Users can start a project with a default startkey or select another one when opening a project in GENIUS TOOLS Starter App. ⇨ Allows the reduction of projects	7.0.0.0
Apps projects	Creates projects that run on any other program. Assigning a project directory and batch files is possible. ⇨ GENIUS TOOLS Starter App can be made the central access point for users.	7.0.0.0

© 2024 INNEO Solutions GmbH

Subscription function	Description	Release
Operating satellites in GENIUS TOOLS Starter Service	Enables the connection of synchronization servers to a main server and their automatic synchronization. ⇨ Faster connection of user computers to a synchronized satellite ⇨ Reducing queries from network to main server	7.0.1.0
Edit and compare configuration blocks	Release-dependent config.pro editor and graphic comparison tool ⇨ Quick overview, comparison and editing of project-related configuration blocks (config_*.pro files)	7.0.1.0
Company-specific project collections	Start projects can be put together in defined project groups by the administrator. ⇨ In many projects, these can be structured according to your own requirements.	7.0.2.0
Selectable project options	Projects can be started with multiple, individually defined configuration blocks, e. g.for license extensions or additional programs.	8.0.0.0
Reproducing organization structure with units and subunits	Subordinate units (subunits) can be created to provide additional configuration levels for project settings. ⇨ Better mapping for locations, subunits etc. and the resulting complex project configurations ⇨ Allows for further reduction of projects	8.0.1.0
Combined project options	Users can select a project option in GENIUS TOOLS Starter App, which activates multiple configuration options which are located in different directories and configuration levels, e. g. for license extensions and add-on applications. ⇨ Number of projects can be minimized	8.0.1.0

© 2024 INNEO Solutions GmbH

Subscription function	Description	Release
Edit config.pro files in GENIUS TOOLS Config Editor	Creo configuration options can be edited faster with auto-completion and color coding. ⇨ Easier comparison and editing of configuration options, also in batch mode.	8.0.2.0
Auto projects	Settings for auto projects (e. g. Keyshot) can be specified for the configuration levels standard, unit, project and user. ⇨ Company-specific configurations possible	9.0.0.0
Create and migrate Creo Elements/Direct Modeling projects	For Creo Elements/Direct Modeling projects, settings can be specified for the configuration levels standard, unit, project and user, and project settings and data packages can be added or migrated. ⇨ Integration of an additional CAD application	9.0.0.0
Create SolidWorks projects	Projects for SolidWorks can be configured in the layers standard, unit, project and user. Project settings can be specified and data packages added. ⇨ Integration of an additional CAD application	9.0.1.0
Create Inventor projects	Projects for Inventor can be configured in the layers standard, unit, project and user. Project settings can be specified and data packages added. ⇨ Integration of an additional CAD application	9.0.2.0
Create AutoCAD projects	For the applications AutoCAD, AutoCAD Architecture and AutoCAD Mechanical, projects can be created for a specific release and be assigned project and data directories. ⇨ Integration of an additional CAD application	9.0.2.0
Support of AutoCAD LT	Projects can be created for AutoCAD LT	10.0.1.0

© 2024 INNEO Solutions GmbH

Subscription function	Description	Release
Select alternative authentication	Users can authenticate against a system other than Windows. Windchill user data can be imported with GENIUS TOOLS Project Configurator. For other systems, e. g. SAP, a self-created file can be used. ⇨ Compatibility of Starter projects with other authorization systems, e. g. Windchill	10.0.1.0
Unit-specific visibility of projects	The visibility of projects in GENIUS TOOLS Starter App can be restricted to the selection of a specific unit for users who are assigned to several units. ⇨ Use of units for project access	11.0.0.0
Install Creo projects	Synchronize Creo Parametric setups to user computers, from which they can be started manually or automatically.	11.0.0.0

Warning: If you are using mixed licenses (perpetual and subscription) and configure functionality that is limited to subscription licenses, the projects in GENIUS TOOLS Starter App will no longer start if there is no subscription license available.

5.2 New features in version 11

Starter: Migration to .NET 8.0 (11.0.0.0)

GENIUS TOOLS Starter has been converted to .NET 8. There is no need to make any adjustments, as .NET 8.0 is delivered with the software.

.NET Framework 4.8 must still be installed on the installation computer.

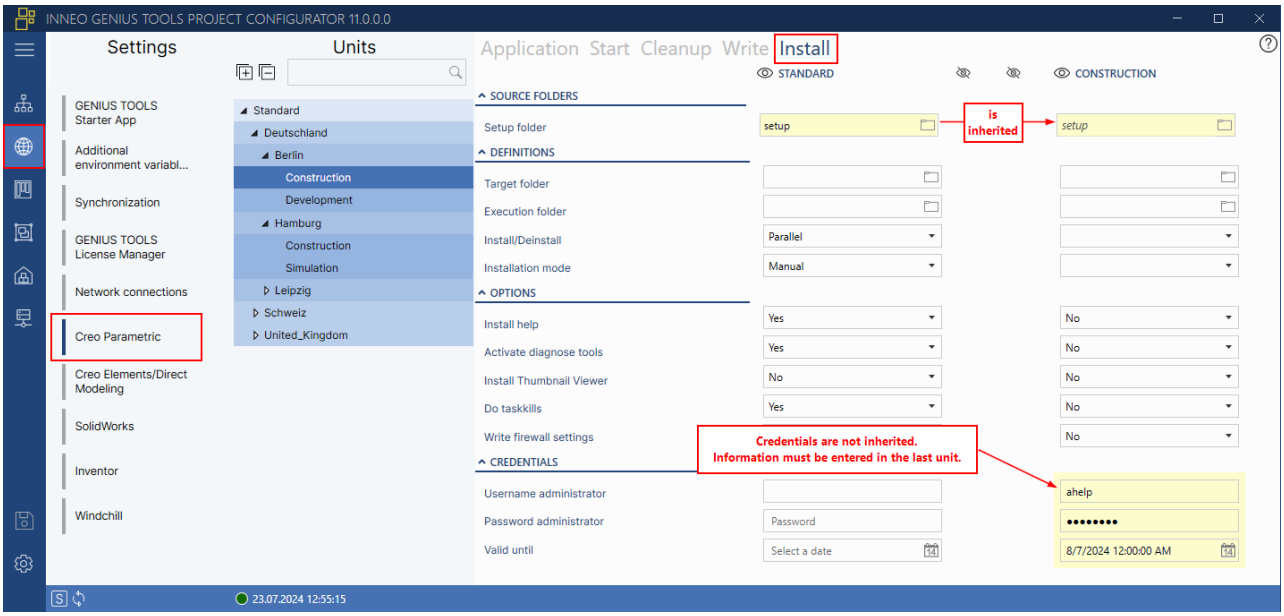
Project Configurator: Installing Creo Parametric on clients (11.0.0.0)

Creo Parametric setups can be synchronized to user computers and started there automatically or manually.

A Creo installation can be triggered automatically as soon as a user logs in with the corresponding unit in the GENIUS TOOLS Starter App, or manually when a Starter project is clicked on.

© 2024 INNEO Solutions GmbH

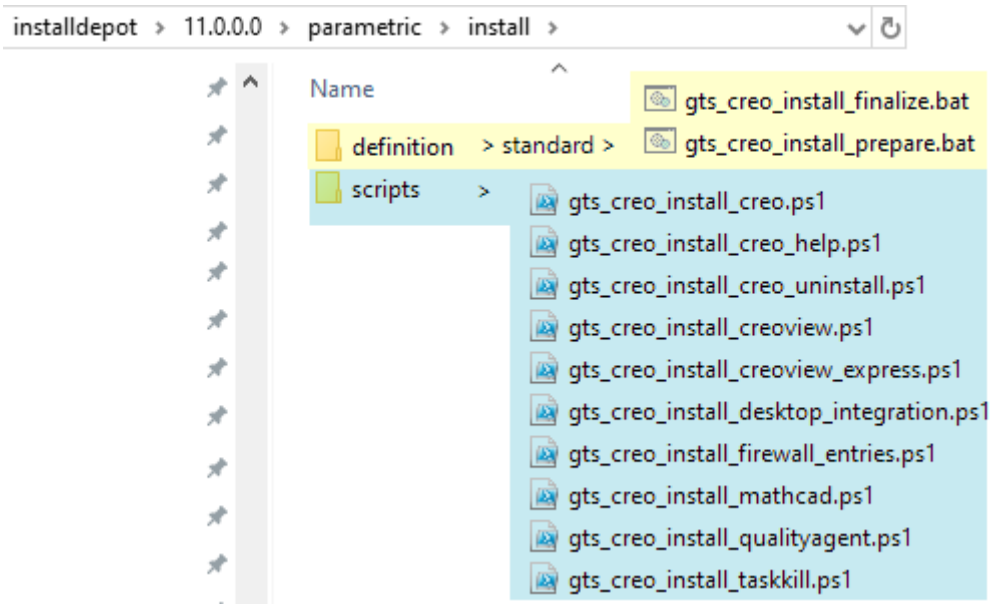
These settings are made in GENIUS TOOLS Project Configurator in the menu item *Configuration* in the new Install tab for global settings and units and in the menu item *Projects* for individual projects.



For the execution of Creo Parametric setups on the user computers, the setup and target directory are defined globally or for individual units, and the administrator's access data are specified with an expiration date for validity on the user computers.

Warning: The inheritance rules do not apply to the credential details. For the setup to be executed, this information must be entered in the Unit that the user selects.

Administrators specify a template installation and copy the required XML files manually into the caddepot. The new system folder *install* under *parametric* is available for this purpose.



© 2024 INNEO Solutions GmbH

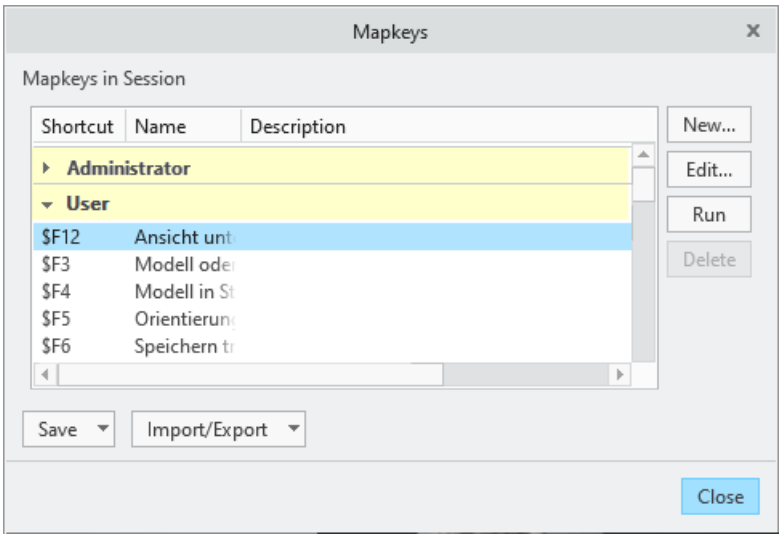
Follow the procedure in the GENIUS TOOLS Starter Manual in the chapter *Project Configurator > Creo Parametric > Installing Creo on user computers*.

Starter: Transfer of mapkeys supported (11.0.0.0)

As of Creo Parametric version 11.0.0.0, mapkeys (keyboard macros) are no longer read from the file *config.pro*, but saved in a new, separate mapkey file: *mapkeys.pro*. The storage location of this file determines whether the mapkeys it contains are used as administrator or user mapkeys.

Location for user mapkeys / User directory:	*%PTC_WF_ROOT%\.Settings\mapkeys.pro*
Location for administrator mapkeys / Administrator directory:	*<Installationsverzeichnis> \Common Files\text\ mapkeys.pro*

Mapkey files can be located in both directories.



Creo mapkeys dialog as of release 11

When Creo Parametric 11.0.0.0 is started for the first time, Creo automatically loads user and administrator mapkeys into the Mapkeys dialog, but does not create a file for administrator mapkeys.

GENIUS TOOLS Starter supports the transfer of mapkeys as follows:

1. User mapkeys are created
Mapkeys from a *config.pro* file that is located in the start or home directory are written to a mapkey file in the user directory.

2. Administrator mapkeys are created
Mapkeys from a *config.pro* file that file that is located in the text directory or alternative path are written to the administrator directory.

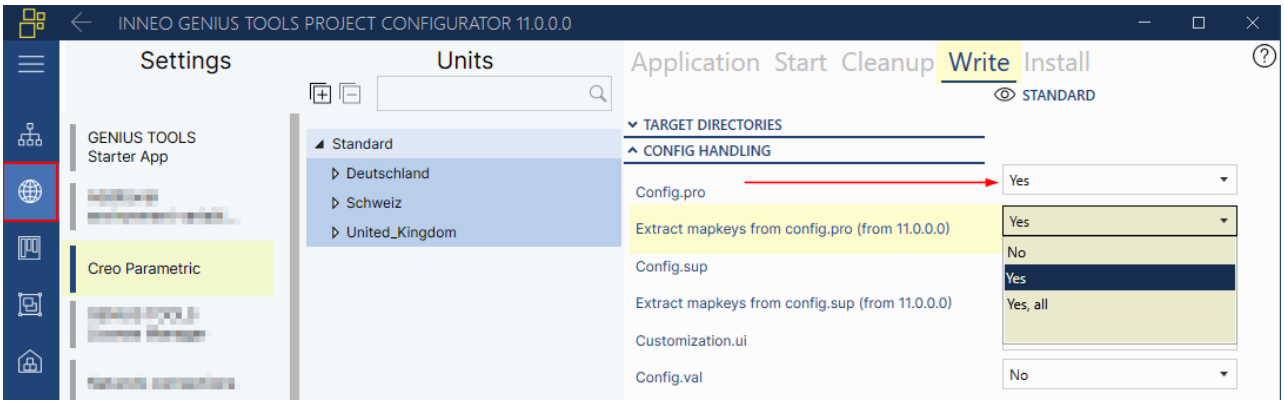
Mapkeys from a *config.sup* file are written to the administrator directory.

© 2024 INNEO Solutions GmbH

Please note: As soon as a mapkeys file exists in the user or administrator directory, mapkeys are only read from the Mapkeys.pro file(s), i.e. all mapkey entries in the Config.pro file and the Config.sup file are ignored by Creo Parametric.

3. Transfer of mapkeys can be defined

This transfer supported by GENIUS TOOLS Starter can be defined and switched off in GENIUS TOOLS Project Configurator.



Go to *Configuration* > *Creo Parametric* > *Write tab* > *Write configuration files*. If you set the field *Config.pro* to *Yes,* the new field *Extract mapkeys* appears below:

– Leave the default setting at *Yes* if there are no mapkeys in the file *config.sup*.

– Select *No* to disable support by GENIUS TOOLS Starter. Creo then automatically loads user or administrator mapkeys in the Mapkeys dialog, but does not create a mapkeys file for administrators. A message window appears in Creo.

If there are mapkeys in both the config.pro and the config.sup file, select:

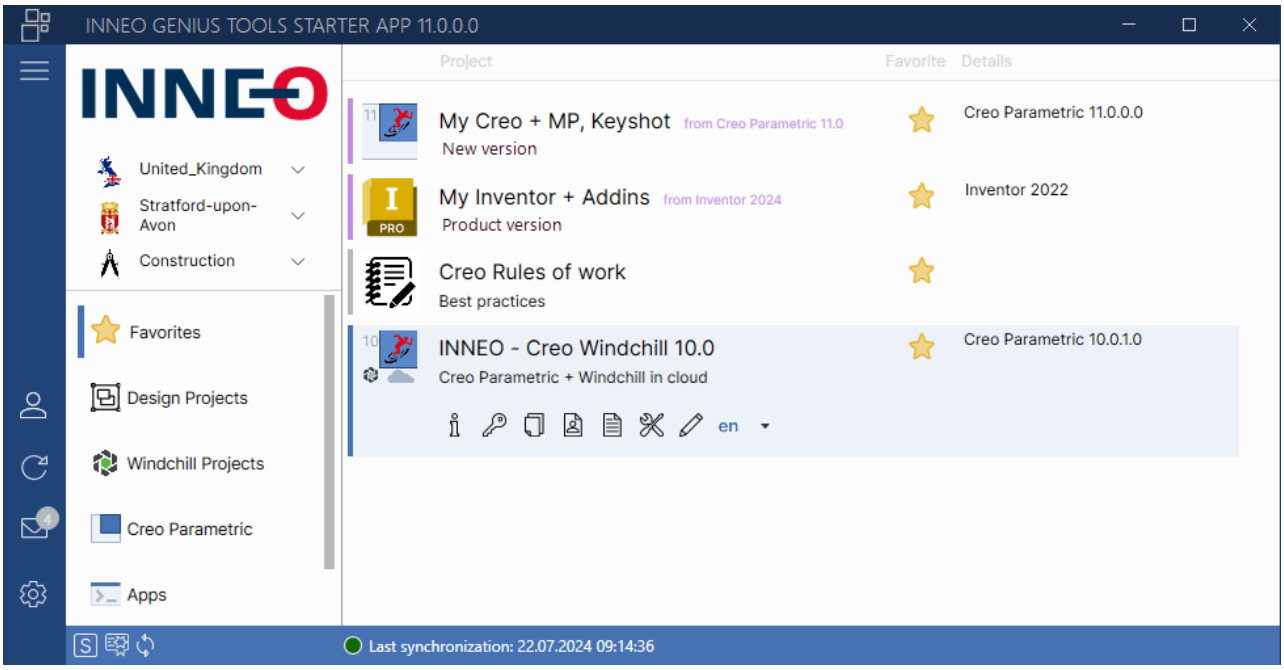
– under *Config.pro: Yes, extract all*
and
– under *Config.sup: Yes*.

Starter: Revised user interface design (11.0.0.0)

The design of GENIUS TOOLS Starter App and GENIUS TOOLS Project Configurator has been revised.

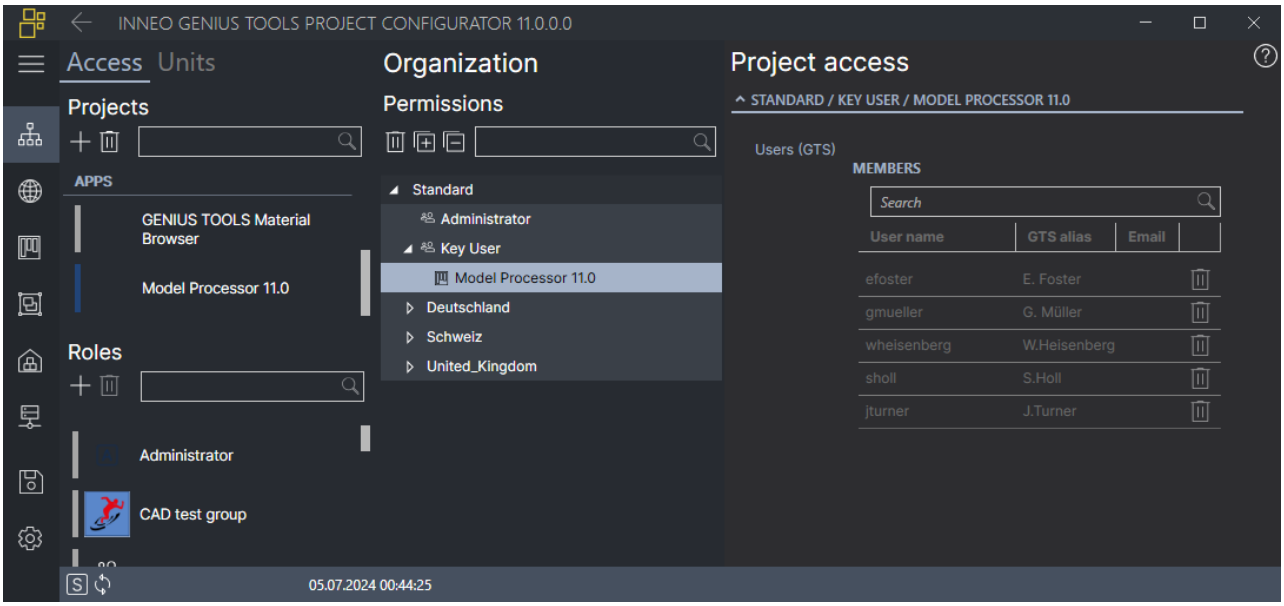
GENIUS TOOLS Starter App offers users new options for saving selected project options (Custom projects) and creating Favorites ⭐.

© 2024 INNEO Solutions GmbH



GENIUS TOOLS Starter App in bright color theme

In GENIUS TOOLS Project Configurator, access rights for projects and functions are no longer assigned in the menu item *Resources*, but under *Organization* in the new tab *Access*, where project access can now be restricted to both a role and a unit (unit-specific visibility of projects).



GENIUS TOOLS Project Configurator in dark color theme

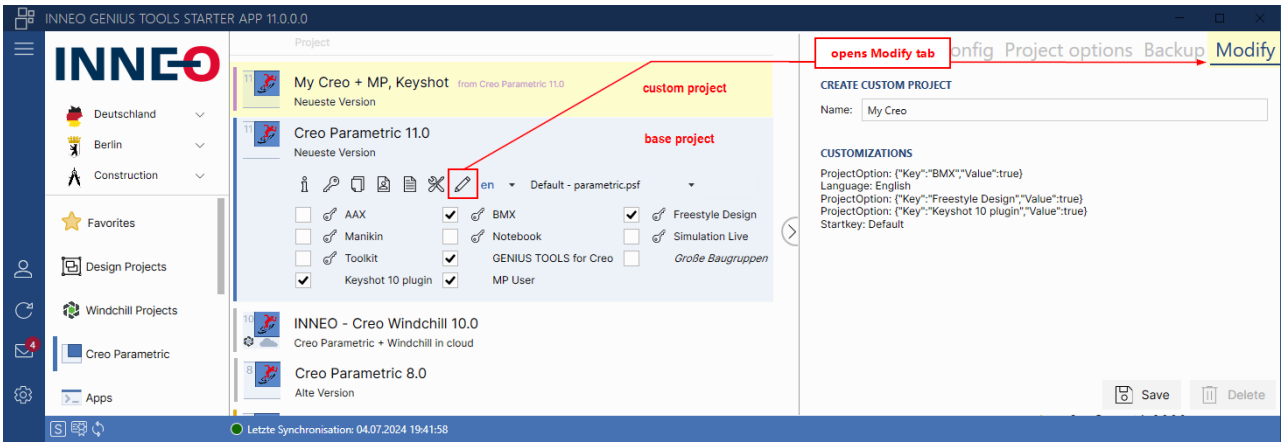
Starter App: Saving projects with user settings (11.0.0.0)

Users can save a project with all selected project options as a custom project.

To do this, select the desired project options (language, Creo start key, checkboxes with configuration settings) and click the icon under the project name. The new Modify tab

© 2024 INNEO Solutions GmbH

opens. Enter a name for the custom project there. After saving, the custom project appears in the project list with the specified name and a purple label indicating the original project from which it was created.

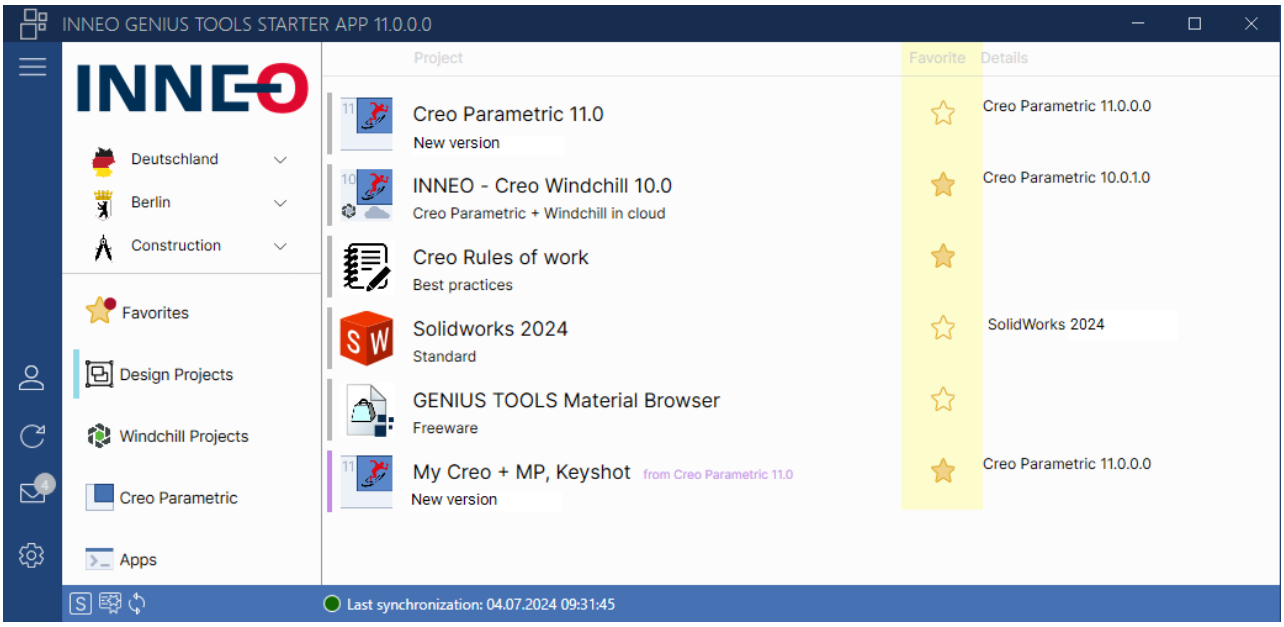


Modify tab for saving a custom project

Starter App: Creating a collection of favorite projects (11.0.0.0)

In GENIUS TOOLS Starter App users can mark individual projects as "Favorites" by clicking the new star symbol ☆. A red balloon appears in the button when a project becomes a favorite project.

If the first project is marked as a favorite, the Favorites button appears on the left of the GENIUS TOOLS Starter App. User can thus create a project collection by themselves.



GENIUS TOOLS Starter App with new column for favorite projects

Project Configurator: Groups become units (11.0.0.0)

User and computer groups have been abolished in their previous form and are now available as units.

© 2024 INNEO Solutions GmbH

Existing user and computer groups are automatically converted into units when updating to version 11.0.0.0 and later:

– After the update, the former groups appear as the last subunit in the organization tree, i. e. they are inserted under each last unit.

– Group settings (Menu item *Configuration*) will be transferred to the new unit(s).

– Configuration blocks that were created for user or computer groups (*UG_<nameofusergroup>_config.pro* or *CG_<nameofcomputergroup>_config.pro*), will be migrated into a new unit directory of the same name.

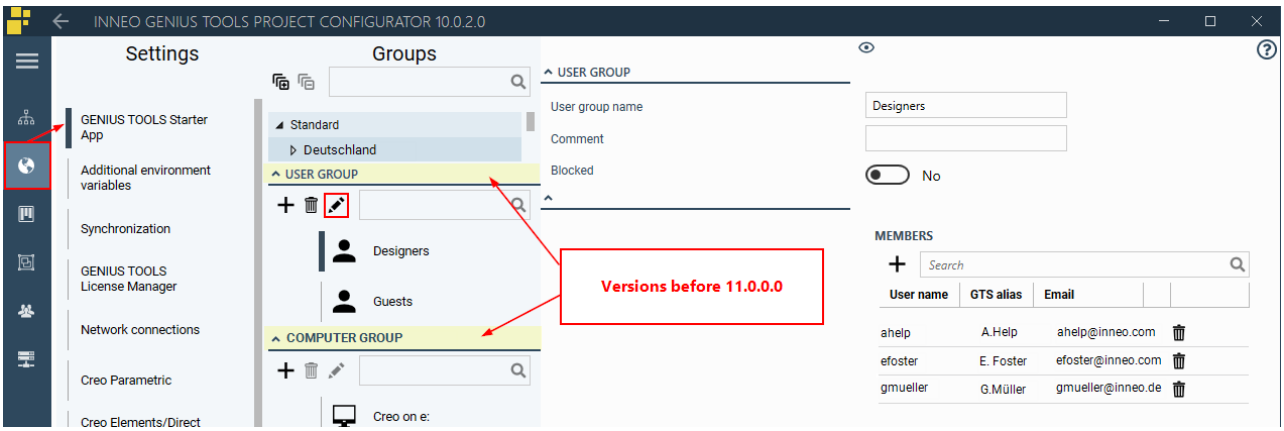
Please note: After the update, users with permanent licenses can work with units and subunits of a further level. A subscription license is required for unrestricted working with units.

Since the assignment of access rights is defined via roles and roles can only be linked to units, but not to groups, it makes more sense to work with units.

The advantages of units over computer and user groups are:

1. Units can contain sub-units and therefore better reflect the organizational structure of a company.
2. A user can be assigned to several units.
3. The affiliation to a unit does not have to be maintained manually.

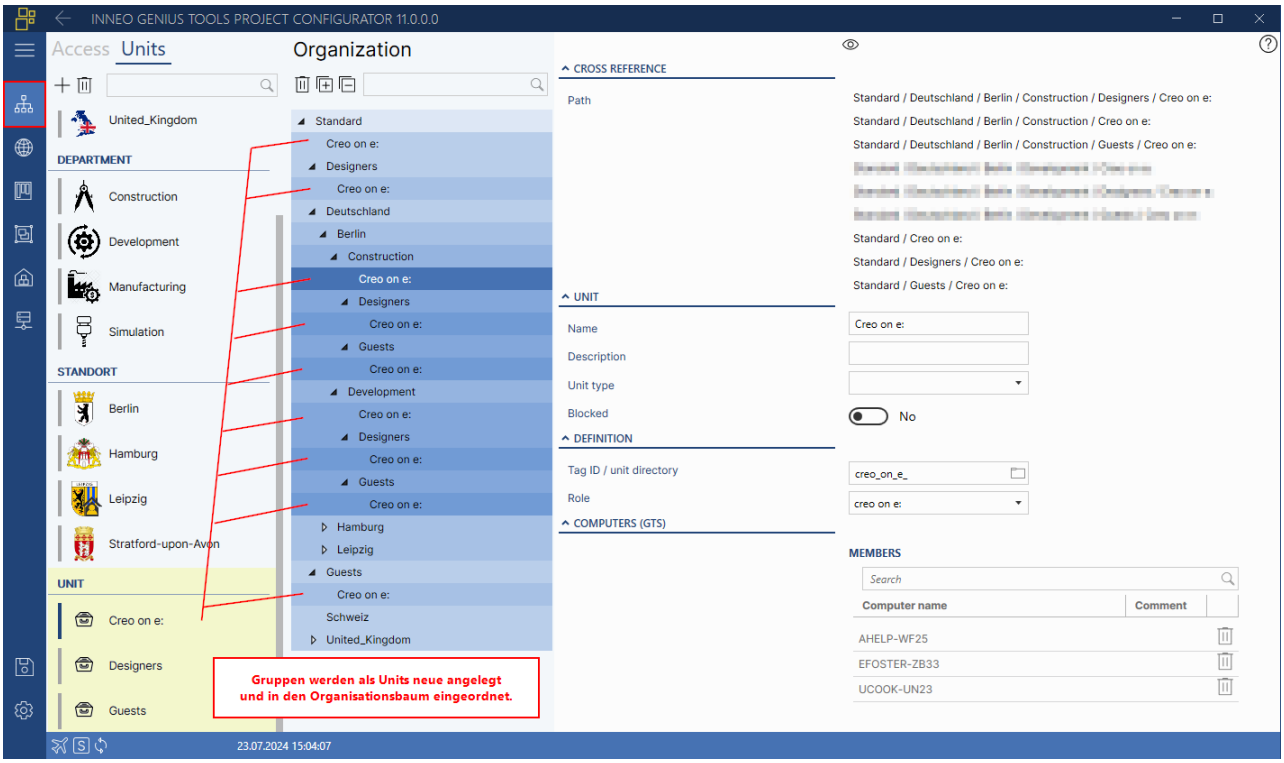
Existing groups will no longer be found in under the menu item *Configuration*.



User group Designers and Guests and computer group Creo on e: in menu item "Configuration" (up to version 10.0.2.0)

When updating, existing groups will be inserted as last unit under each unit in the organization tree (menu item *Organisation*).

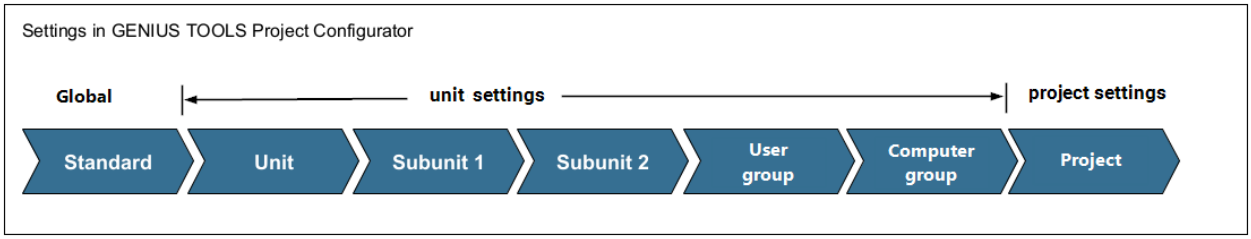
© 2024 INNEO Solutions GmbH



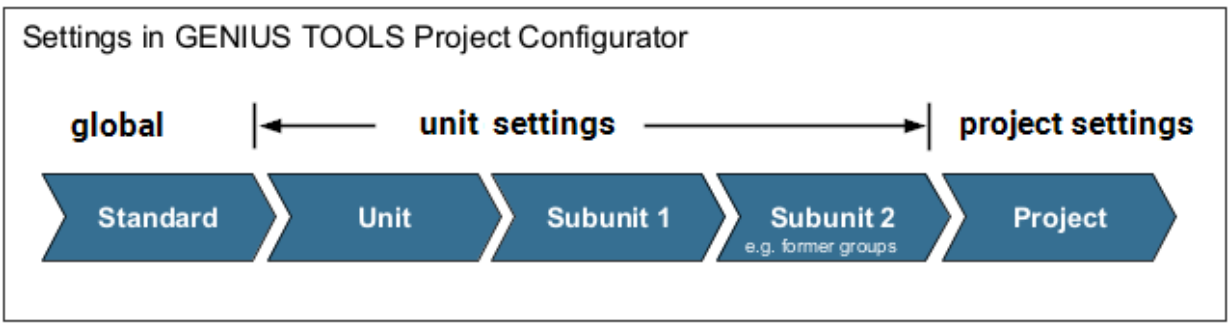
User group Designers and Guests and computer group Creo on e: as new units in organization tree (after update)

The insertion of groups corresponds to the call sequence of settings:

Call sequence of settings in GENIUS TOOLS Project Configurator up to version 10.0.2.0:



Call sequence of settings in GENIUS TOOLS Project Configurator up to version 11.0.0.0:



Project Configurator: Changed workflow for roles (11.0.0.0)

Roles are created and managed in the main menu item *Organization* in the new tab

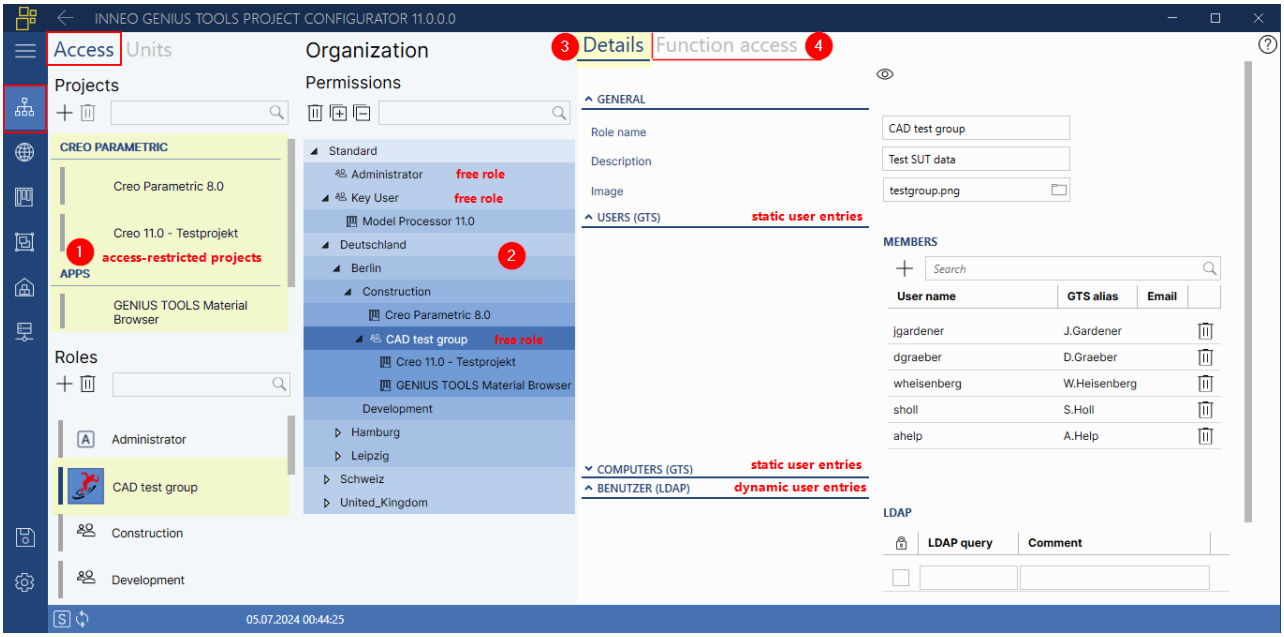
© 2024 INNEO Solutions GmbH

Access. The section *Roles* in the menu item *Resources* is no longer available.

Access restrictions for projects (1) are defined by inserting them into the new tree for permissions (2). The permissions tree can include both units and free roles, i. e. from version 11.0.0.0, project access can be restricted to both a role and a unit, see unit-specific visibility of projects. The workflow has been modified to enable this new feature.

As usual, users are assigned to a role as static or dynamic entries in the tab *Details* (3).

User rights for GENIUS TOOLS Starter App are defined in the tab *Function access* (4), which appears when a role is selected.

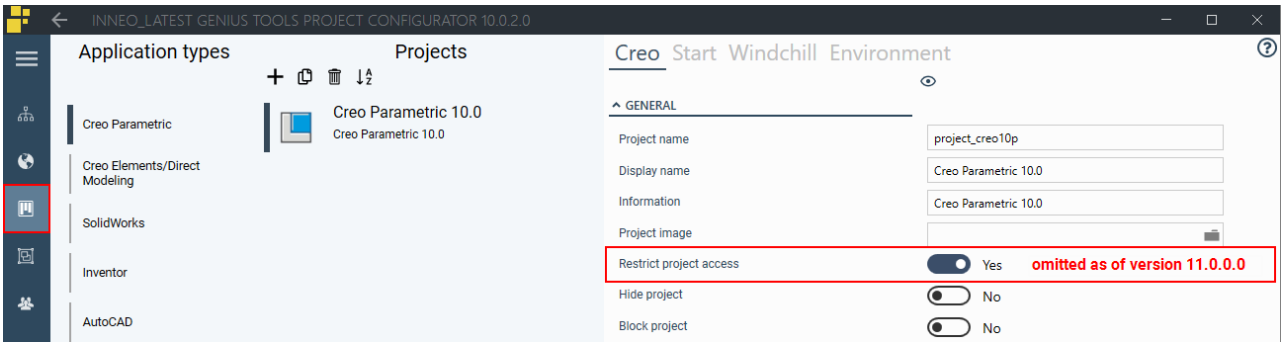


Managing roles in the new Access tab

The tree for permissions shows – like the tree for units – all units and subunits. These can restrict the access of a project. In addition, you can also use free roles for defining project access in the permissions tree.

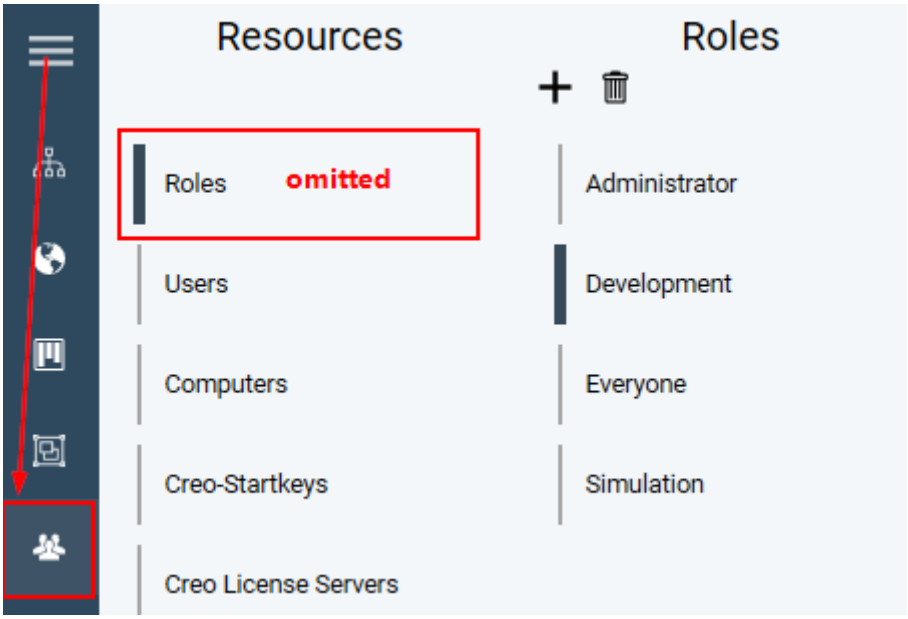
You can automatically migrate existing access-restricted projects when updating to version 11.0.0.0 and later, see Environment Administrator: Migrate access-restricted projects.

The button *Restrict project access* in *Projects* > *Application types* > *Creo* has been removed.



The section *Roles* in the menu item *Resources* has been removed.

© 2024 INNEO Solutions GmbH



Project Configurator: Unit-specific visibility of projects (11.0.0.0)

Access to a project can be restricted to a specific unit - in addition to the existing access restriction defined by a role. This is useful if users belong to several units, but a project should only be visible to a specific unit selected in the GENIUS TOOLS Starter App.

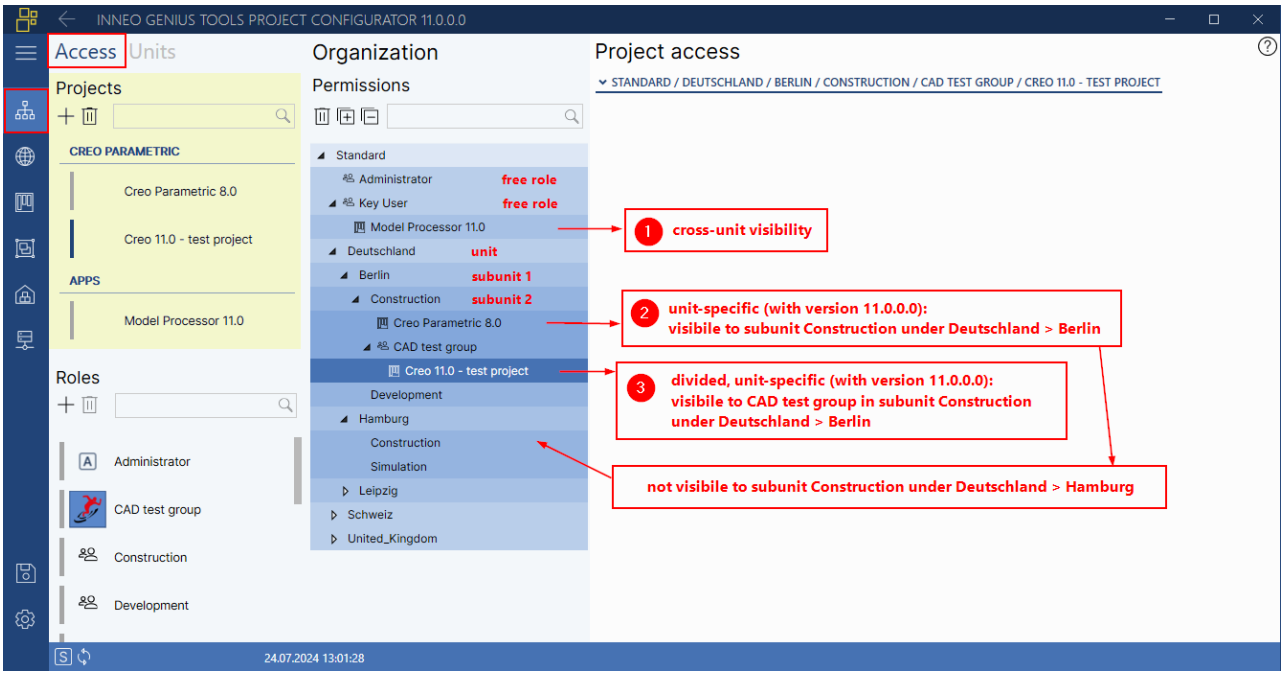
In the main menu item *Organization*, the new tab *Access* contains a permissions tree that defines project access. Roles that do not define a unit can be added to the permissions tree. These so-called "free roles" could previously be used, for example, to restrict access to a project to a group of key users without creating a unit for this group.

With the new option to restrict a project to a unit, free roles can now be used to restrict a project within a unit to a subset of the unit's members, e. g. a group within a unit can be given access to a test project.

Please note: Project access rights are always defined for members of a role. The role can be assigned to a unit or be used as a free role in the permissions tree.

To restrict access to a project, use the Plus symbol to select a previously created project. Then drag and drop the project under the unit or the free role for whose members the project is to be restricted.

© 2024 INNEO Solutions GmbH



Methods to define project access in the permissions tree

Thus, there are the following options for restricting project access. The examples below are described in the GENIUS TOOLS Starter Manual in the chapter *GENIUS TOOLS Project Configurator* > *Restricting project access* with step-by-step instructions.

1. Cross-unit visibility (with free roles)

All members of this role see the projects in GENIUS TOOLS Starter App that are assigned to the role. If a user is assigned to more than one role, he will see the restricted projects in GENIUS TOOLS Starter App, regardless of which unit he selects.

Example: The company ABC would like to limit access to the data revision program GENIUS TOOLS Model Processor to a small group of designers who have been trained to use this software. There should not be an extra unit for this group of key users. The key users, who are members of several units, should be able to open the program out of all units.

2. NEW: Unit-specific visibility (with assigned roles)

If a user is assigned to several roles, the visibility of a project can be restricted to the selection of a specific unit.

Example: The company ABC wants Creo Parametric version 8.0 to be used only by designers in Berlin, as this version is needed for a specific customer project. Designers who are also members of other units / roles will only see the project when selecting the unit *Berlin* and subunit *Construction* in GENIUS TOOLS Starter App.

© 2024 INNEO Solutions GmbH

3. NEW: Divided unit-specific visibility (with free roles)

A project can be restricted to members of a free role within a unit.

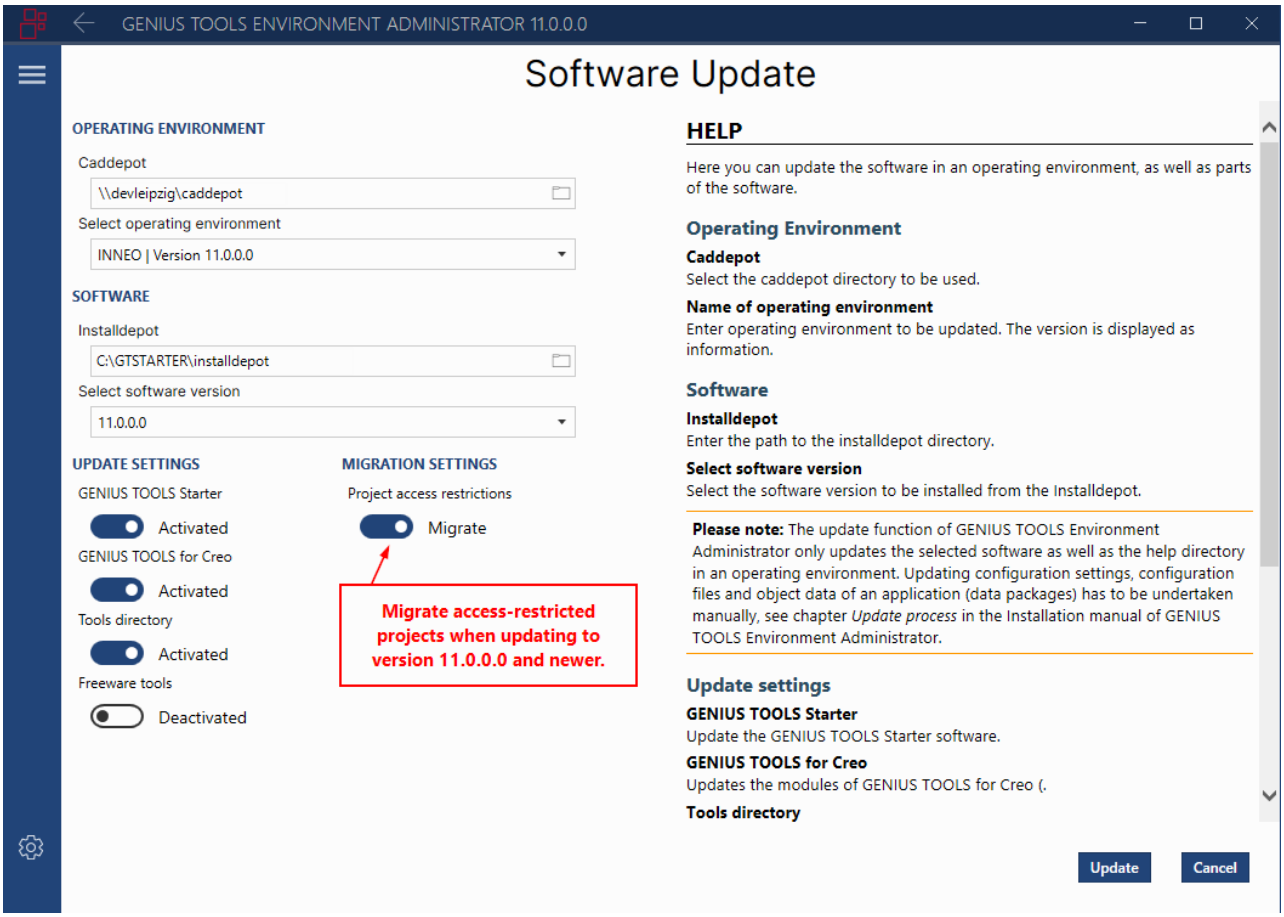
Example: A test group is to be given access to a test project within the unit *Construction*.

Environment Administrator: Migrate access-restricted projects (11.0.0.0)

Existing access restrictions for projects will be integrated automatically into the new Access tab in the Organization menu item in the permissions tree when you update to version 11.0.0.0 and later, if you leave the default migration setting in GENIUS TOOLS Environment Administrator set to *Migrate*.

After the update, access-restricted projects appear under the role to which the restriction applies. All roles are categorized under the unit Standard, as all projects have so far been visible across all units. After the update, you can restrict the visibility of projects on a unit-specific basis.

If you want to reassign the access rights for projects, you can deactivate the migration process in GENIUS TOOLS Environment Administrator. The access restrictions for projects will then be lost.



© 2024 INNEO Solutions GmbH

6 GENIUS TOOLS for Creo

The following section contains information on news in GENIUS TOOLS for Creo. GENIUS TOOLS for Creo includes all components of the products GENIUS TOOLS Parameter and GENIUS TOOLS Library.

6.1 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

© 2024 INNEO Solutions GmbH

Extension module	Description	Release
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
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

© 2024 INNEO Solutions GmbH

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.

6.2 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.

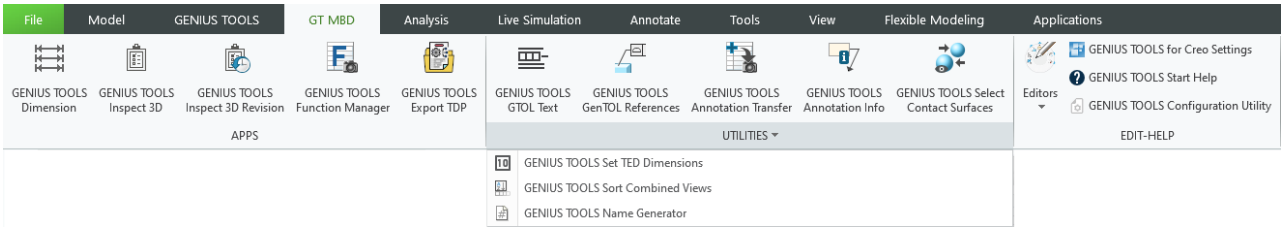
GENIUS TOOLS for Creo: New product „GENIUS TOOLS MBD for ISO-GPS“ (11.0.0.0)

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
– GENIUS TOOLS Function Manager
– GENIUS TOOLS GTOL Text
– GENIUS TOOLS GenTOL References
– GENIUS TOOLS Annotation Transfer
– GENIUS TOOLS Annotation Info
– GENIUS TOOLS Select Contact Surfaces (in part mode) / GENIUS TOOLS Find Contact Surfaces (in assembly mode)
– GENIUS TOOLS Export TDP
– GENIUS TOOLS Set TED Dimensions
– GENIUS TOOLS Sort Combined Views
– GENIUS TOOLS Name Generator:
  An established module from the ribbon menu *GENIUS TOOLS*, which is available with the same functions.

© 2024 INNEO Solutions GmbH

– GENIUS TOOLS Quick Access:
  An established module from the ribbon menu *GENIUS TOOLS*, which is available with the same functions.



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

6.2.1 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.



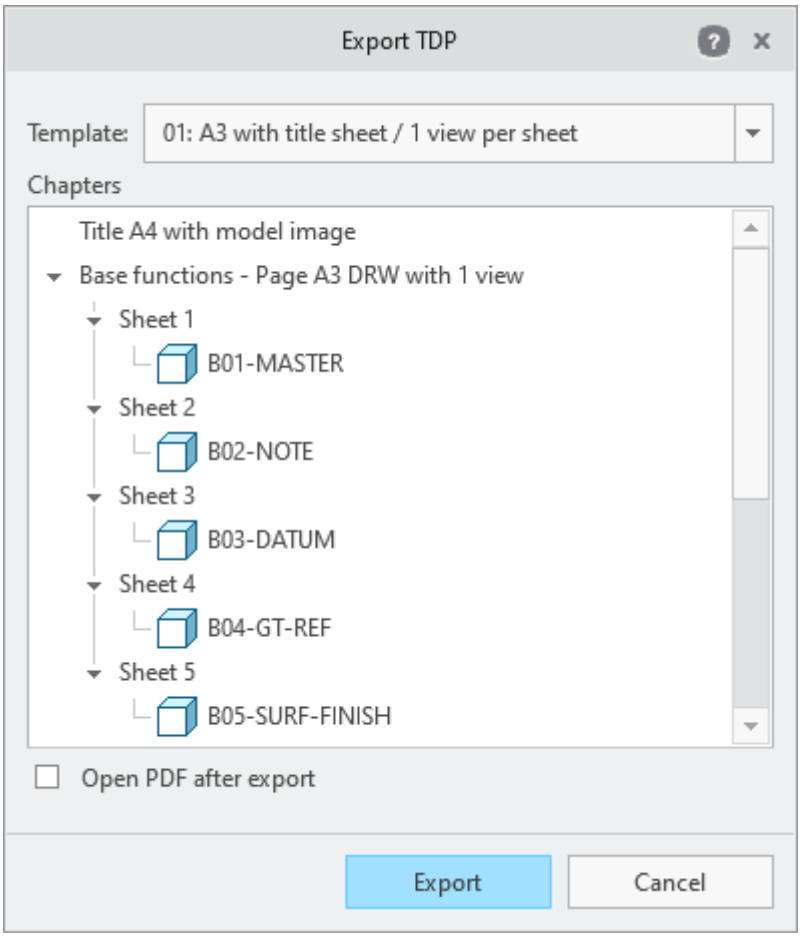
6.2.2 GENIUS TOOLS Export TDP

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.

© 2024 INNEO Solutions GmbH



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

6.2.3 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.

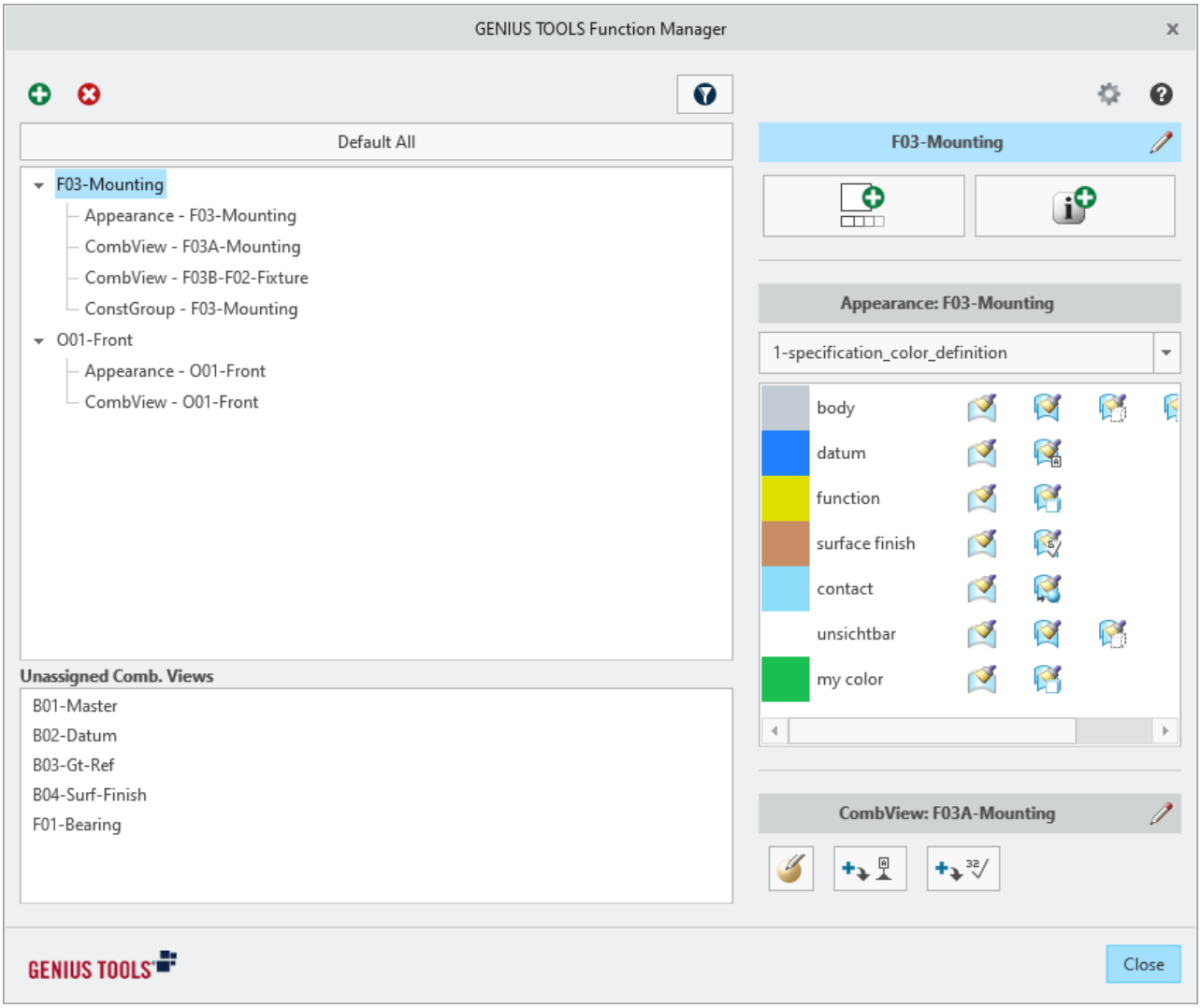
Function Manager is available in part mode and in assembly mode with the following features:

1. Overview of existing functions and their functional objects (combined views,

© 2024 INNEO Solutions GmbH

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.



© 2024 INNEO Solutions GmbH

6.2.4 GENIUS TOOLS Inspect 3D

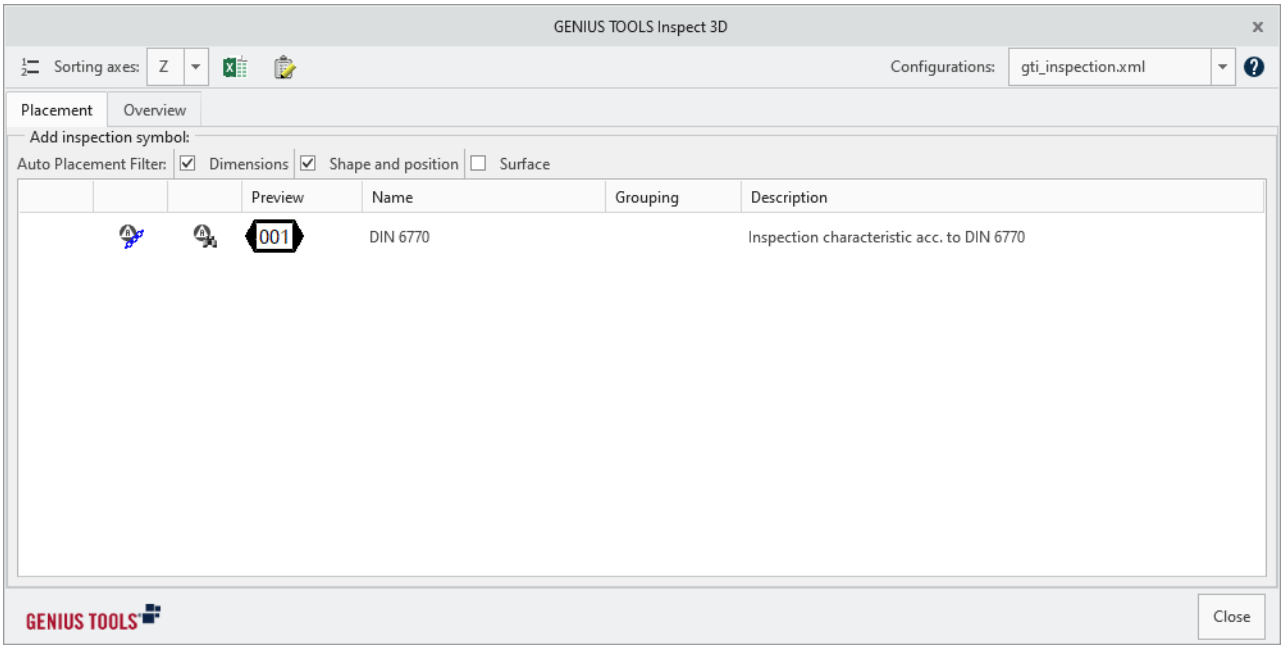
New module „Inspect 3D“ (11.0.0.0)

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



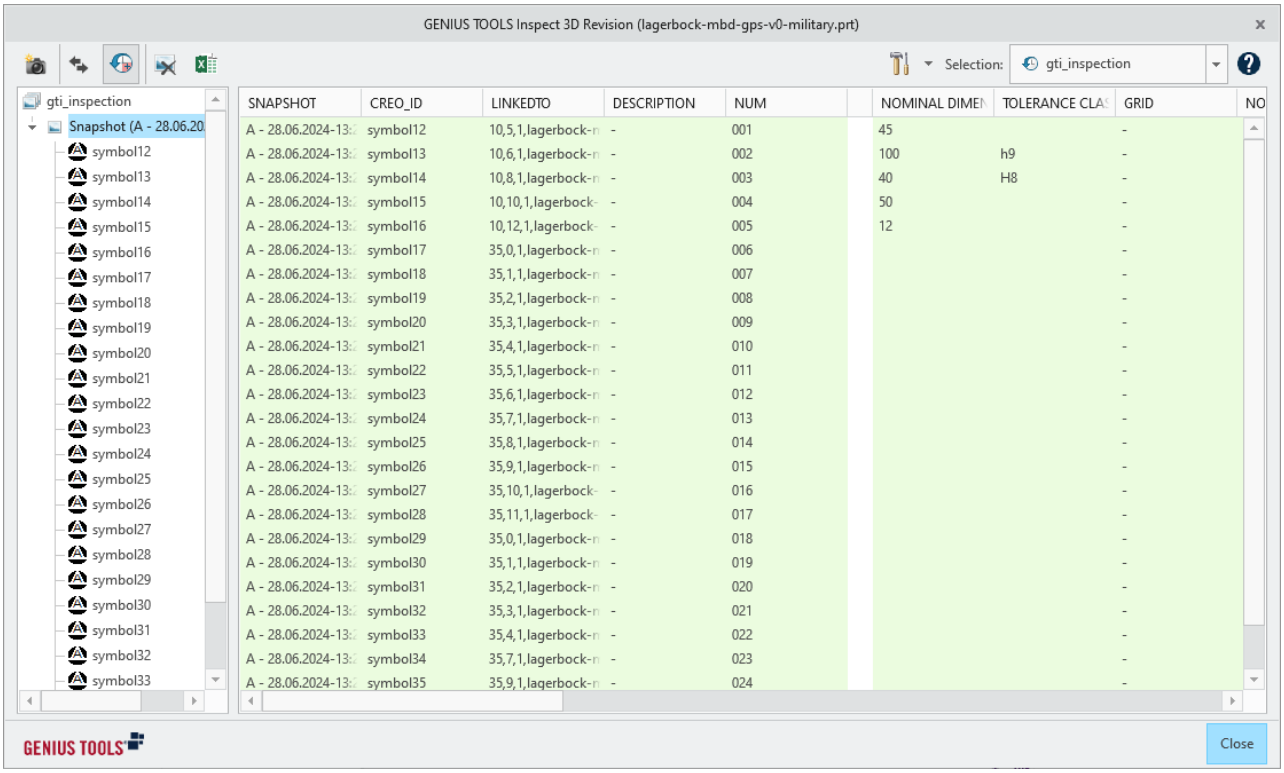
© 2024 INNEO Solutions GmbH

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.

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.



© 2024 INNEO Solutions GmbH

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.

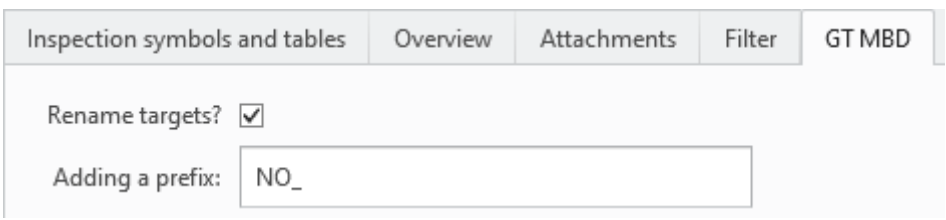
Comment text	Column name
gti:gtol_datum_references	Datum references
gti:gtol_left_text	Left text
gti:dim_value_text	Dimension text
gti:gtol_top_text	Top text
gti:gtol_right_text	Right Text
gti:gtol_value	Tolerance value
gti:gtol_bottom_text	Bottom text

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.

© 2024 INNEO Solutions GmbH

6.2.5 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:

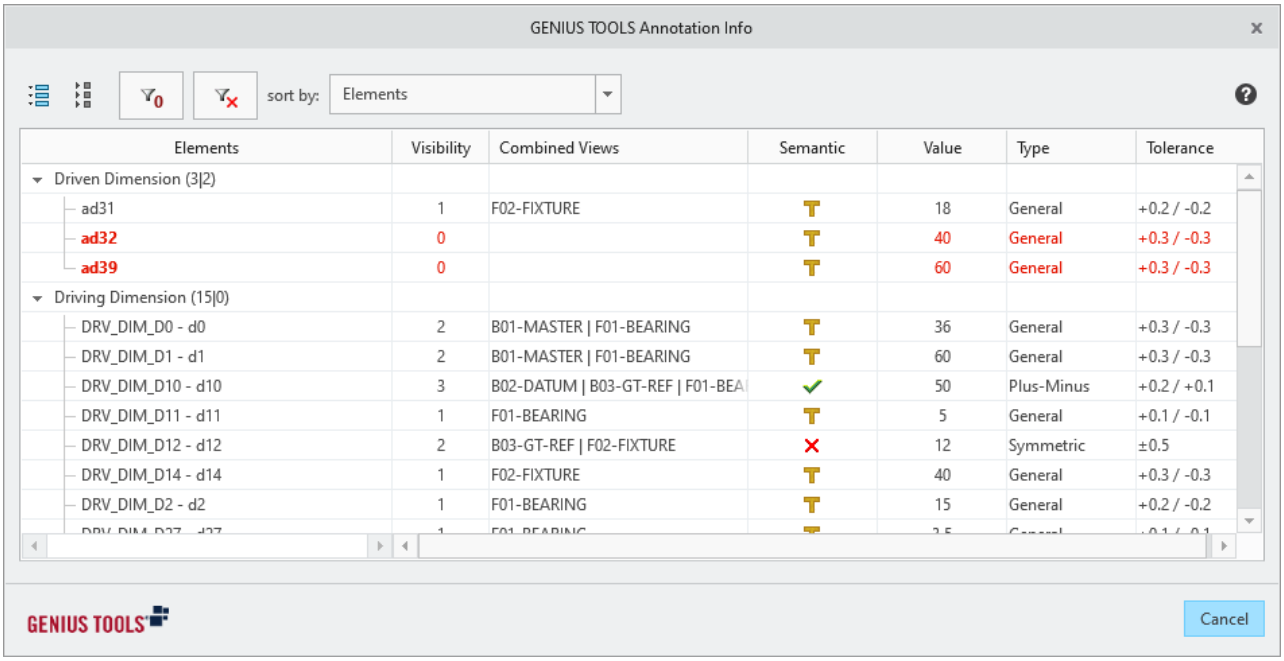
1. Viewing occurrence and frequency of annotations in a clear and concise table format
2. Finding annotations and thus dependencies that are not visible in any combined state

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

– to manage combined views, see *Function Manager*

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

– to transfer annotations, see *Annotation Transfer*



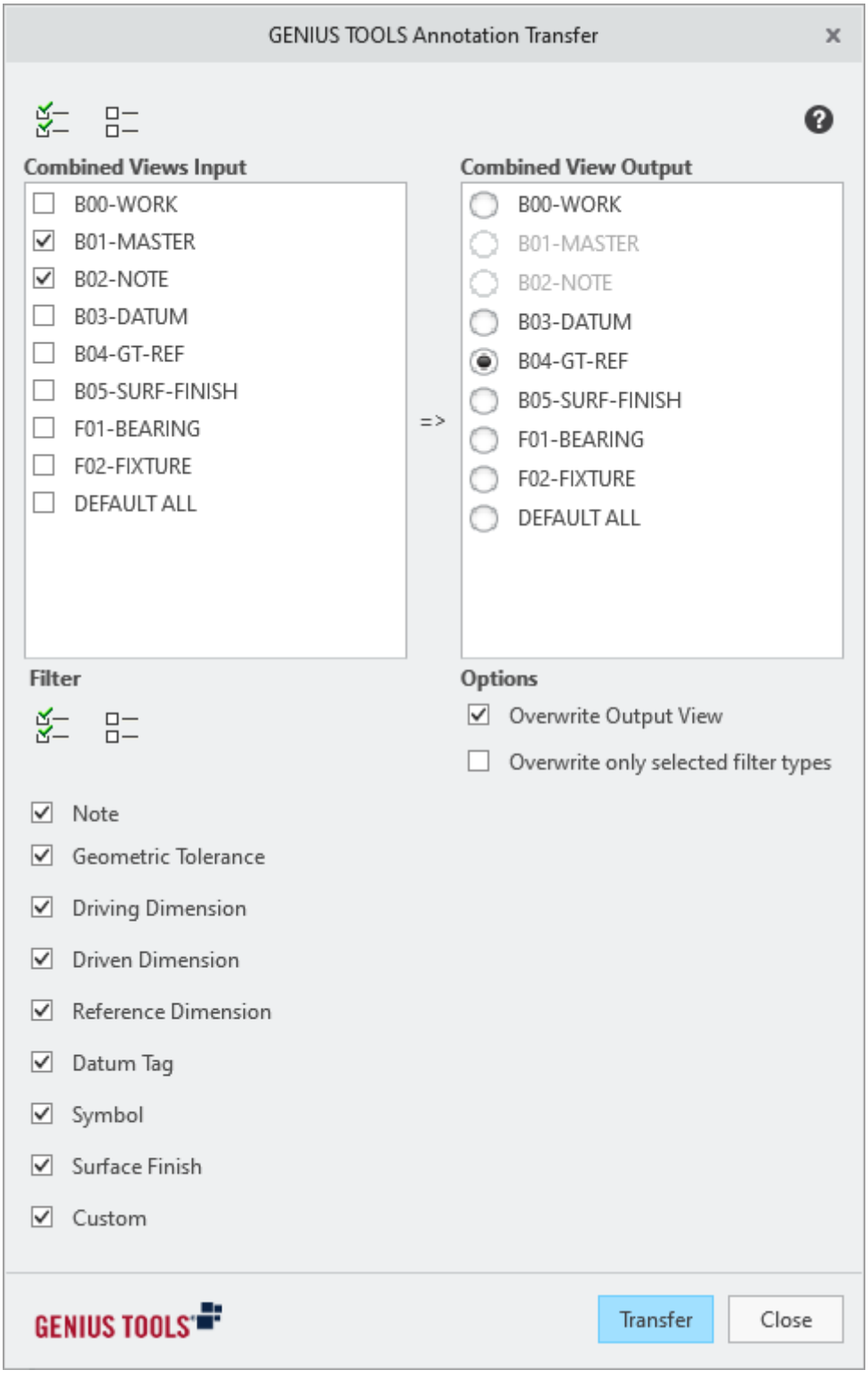
Utilities – New function „Annotation Transfer“ (11.0.0.0)

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

© 2024 INNEO Solutions GmbH

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:

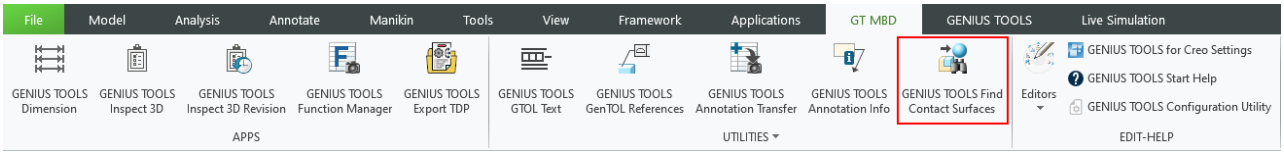


© 2024 INNEO Solutions GmbH

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*.

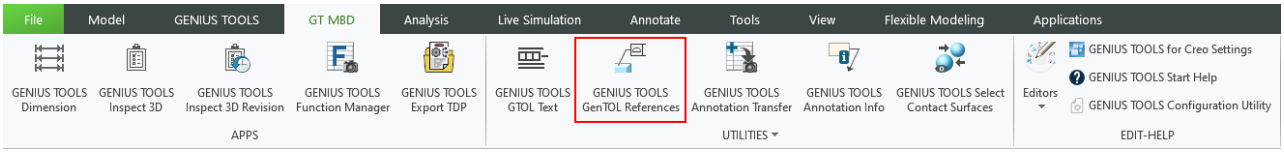
The function *Find Contact Surfaces* is a pure analysis tool that searches for the adjacent surfaces to a surface (= contact surfaces). These contact surfaces depend on the assembly in which the part is used. Open *Find Contact Surfaces* and then click on the surface you want to find the contact surfaces for. The function *Select Contact Surfaces* 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.



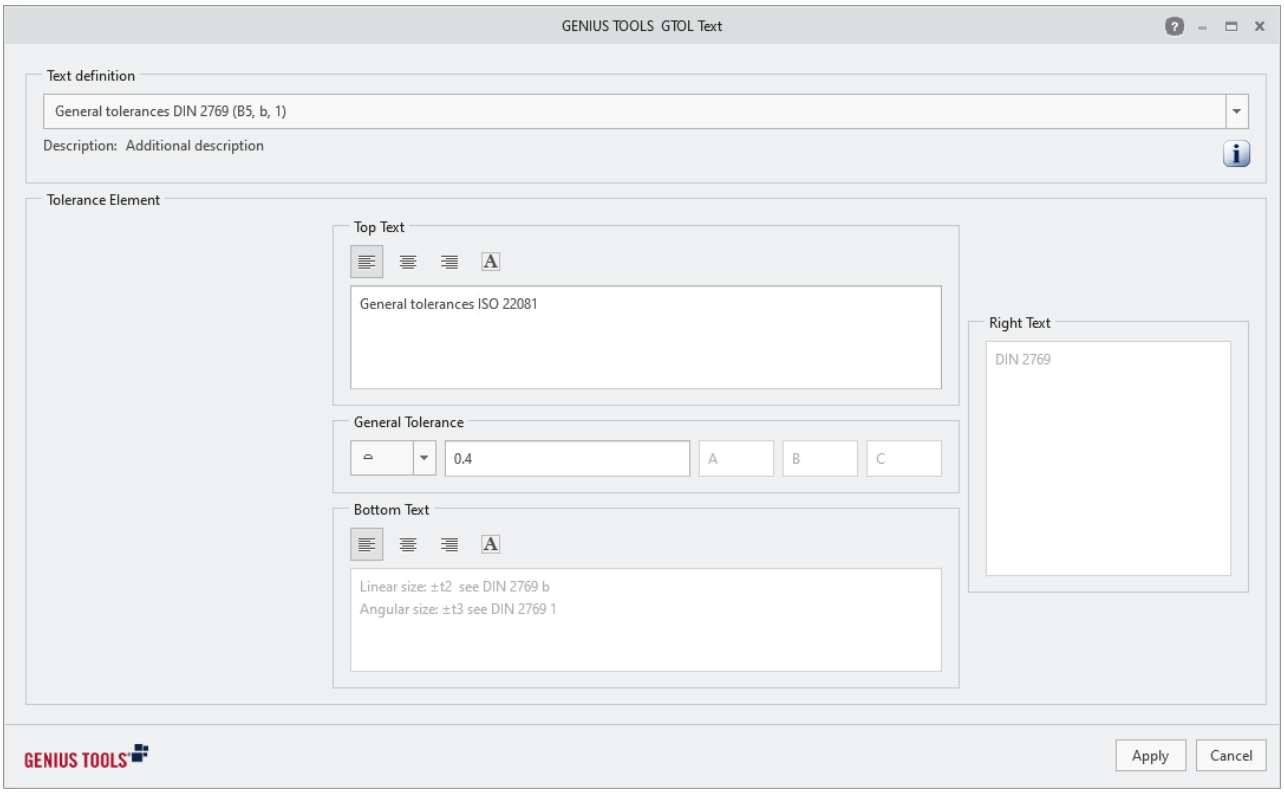
New module „GTOL Text“ (11.0.0.0)

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

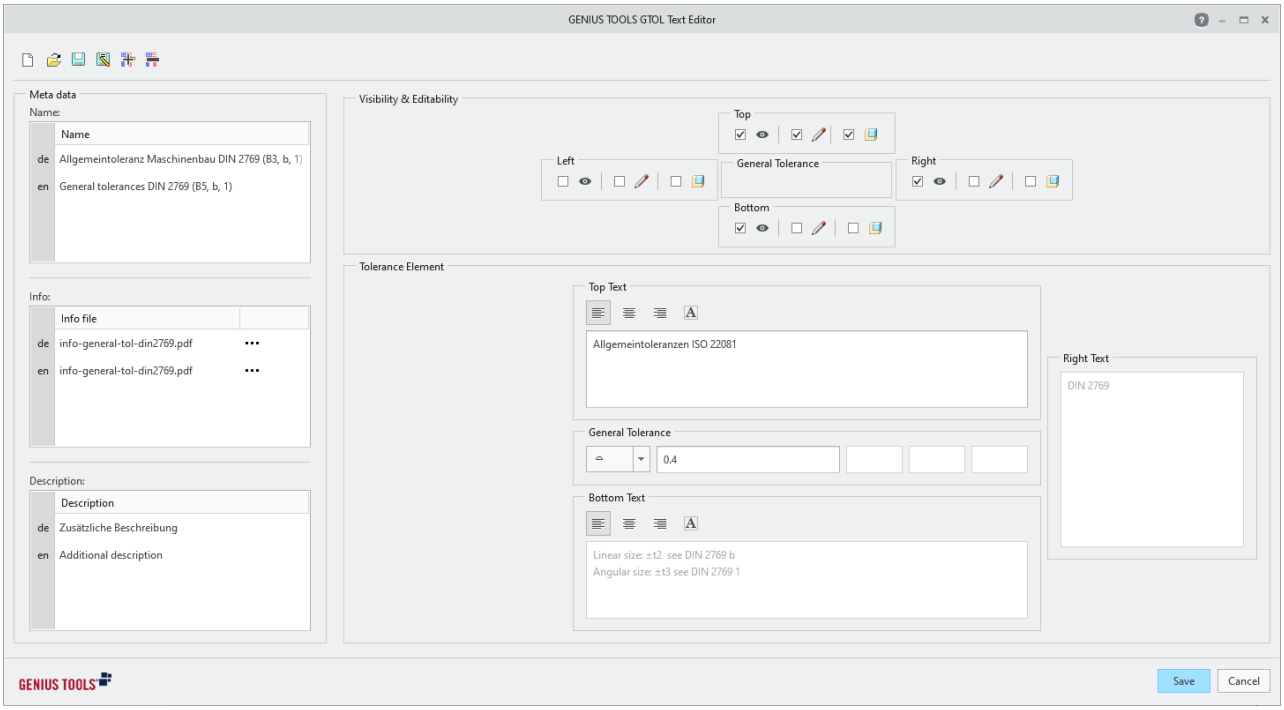
Use *GTOL Text* allows to edit texts of existing shape and position tolerance annotations. Set up templates for these texts and links to more information using the *GTOL Text Editor*.

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

© 2024 INNEO Solutions GmbH



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

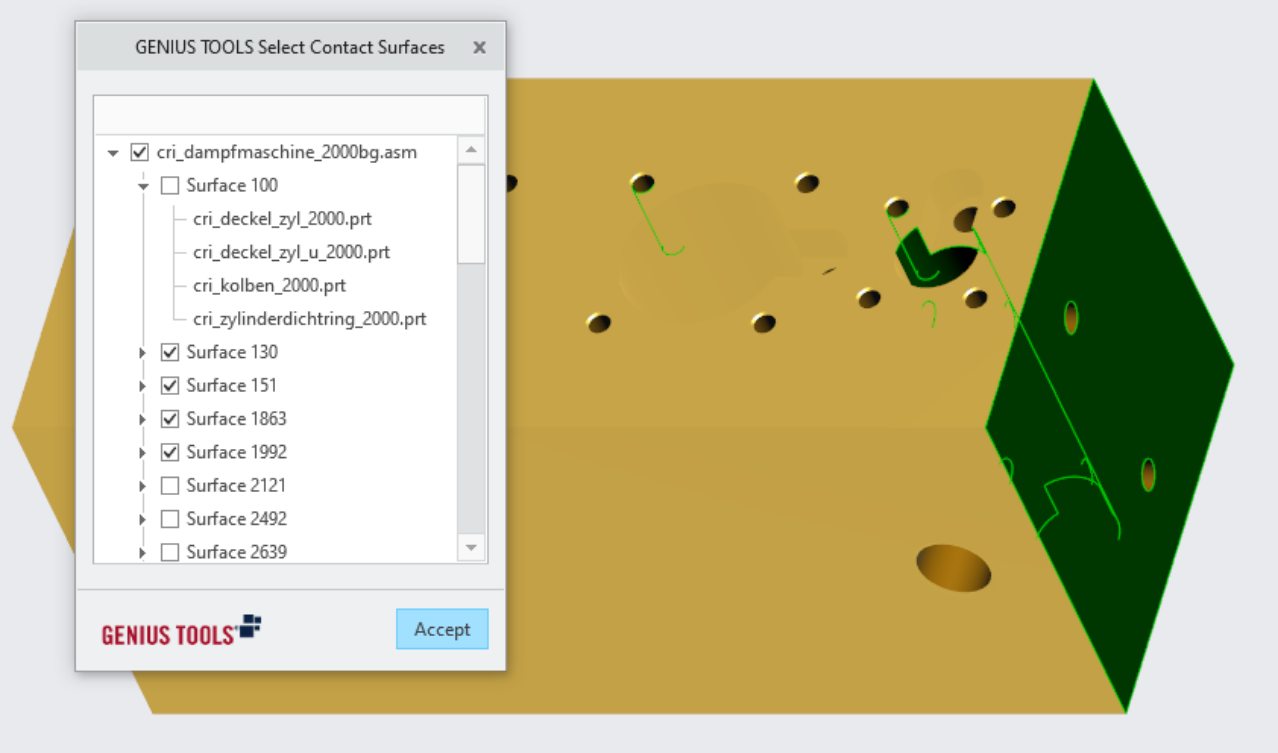


Utilities – New function „Select Contact Surfaces“ (11.0.0.0)

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

© 2024 INNEO Solutions GmbH

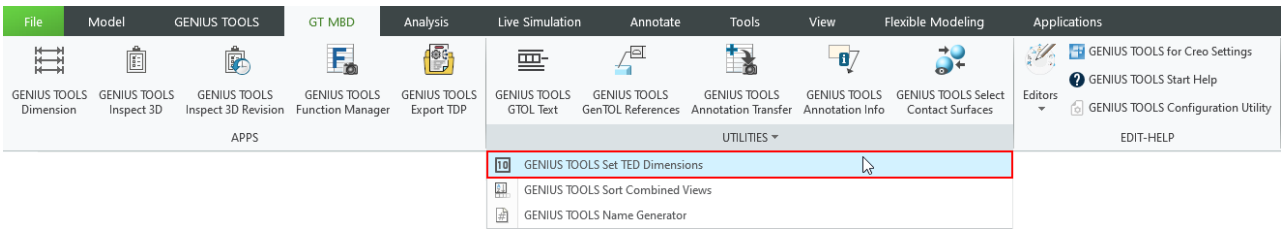
After *searching for a part's contact surfaces*, the identified contact surfaces can be viewed and selected with *Select contact surfaces* and colored with *Function Manager*.



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.

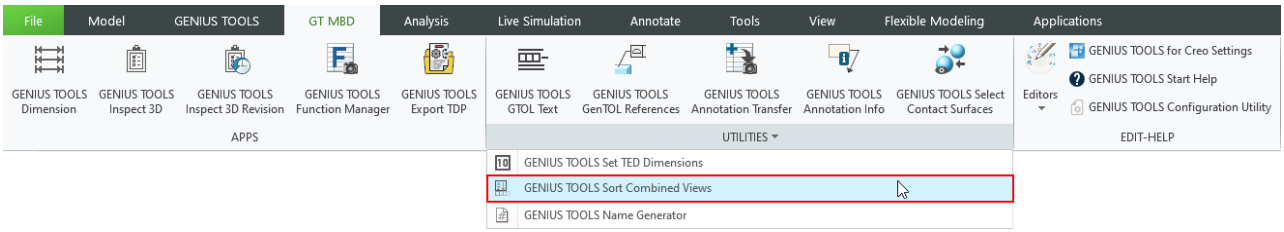


Utilities – New function „Sort Combined Views“ (11.0.0.0)

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.

© 2024 INNEO Solutions GmbH



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.

6.3 Configuration options

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

6.3.1 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\

© 2024 INNEO Solutions GmbH

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

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%

© 2024 INNEO Solutions GmbH

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

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\\

© 2024 INNEO Solutions GmbH

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

© 2024 INNEO Solutions GmbH

7 Contact details

Please don't hesitate to contact us for further information about our products.

United Kingdom

INNEO Solutions Ltd

60 Cygnet Court

Timothy's Bridge Road

Stratford-upon-Avon

Warwickshire CV37 9NW

Phone: +44 (0) 1564 793720

Fax: +44 (0) 1564 793872

Germany (Headquarters)

INNEO Solutions GmbH

IT-Campus 1

73479 Ellwangen

Phone: +49 (0) 7961 890-0

Fax: +49 (0) 7961 890-177

www.inneo.co.uk

© 2024 INNEO Solutions GmbH

8 Copyright

Copyright 2024 by:
INNEO Solutions GmbH
IT-Campus 1
73479 Ellwangen
Germany

This documentation is protected by copyright. All rights reserved. Without prior written consent of an authorized representative of INNEO Solutions GmbH it must not be copied, photocopied, reproduced, translated, communicated or converted to electronic or machine readable form in whole or in part. The unauthorized use of the documentation can lead to a claim for liquidated damages or legal prosecution. INNEO Solutions GmbH does not accept liability for possible faulty information in this documentation and the consequences resulting from such.

Note on registered trademarks:
Most of the software, hardware and trade names mentioned in this documentation are also registered trademarks of the respective software manufacturers.

Registered trademarks and trade names of INNEO Solutions GmbH:
GENIUS TOOLS, Startup TOOLS, INNEO