Model Processor

Version 11

Description of all functions

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Contents

I. Model Processor Suite

With the Model Processor, model information can be analyzed and processed with the help of so-called actions. The task of the Model Processor is to automate recurring tasks. You minimize sources of errors by eliminating the need to manually perform such tasks as exporting variant designations. You also save a lot of time, which is now available for more pertinent tasks.

Every step that you no longer want to perform manually, you define with the Model Processor in an "action". In "action lists" you bundle work steps in order to process them in sequence. The Model Processor is available in four versions that are designed to suit different users. With this range of products, you can use the advantages of the Model Processor in all departments of your company. Our Model Processor product range is presented on the following pages, including an overview of existing actions 5 .

The products of the Model Processor Suite help to comply with Creo Parametric model and work guidelines through a standardized implementation specified by the administrator. The individual products can be used in different situations.

– Interactive model preparation

– Batch processing

– Trigger mode (e.g. when saving a model in Creo Parametric)

– In the Windchill worker process

Model changes are defined in action lists. Action lists can also be used as commands within Creo Parametric to create specific functional extensions of Creo Parametric.

Overview of products and their usage

Model Processor	Usage
GENIUS TOOLS Model Processor Report	– Definition of action lists – Batch processing for analysis of model information
GENIUS TOOLS Model Processor Rework	– Contains Model Processor Report – Models modified during batch processing can be saved
GENIUS TOOLS Model Processor User	– Action list processing embedded in Creo Parametric – Requires Model Processor Report or Model Processor Rework for action list generation
GENIUS TOOLS Model Processor Worker Extension	– Action list processing in Windchill Worker – Requires Model Processor Report or Model Processor Rework for action list generation

II.   GENIUS TOOLS Model Processor Report

The basic component of the GENIUS TOOLS Model Processor is GENIUS TOOLS Model Processor Report. This is a pure analysis tool and at the same time the editor for generating the action lists. These can also be used in the Model Processor User and Model Processor Worker Extension. In addition, batch processing can be used to automatically load models and write model information contained in them to CSV files. Via filters you can control whether each action of an action list is executed or not.
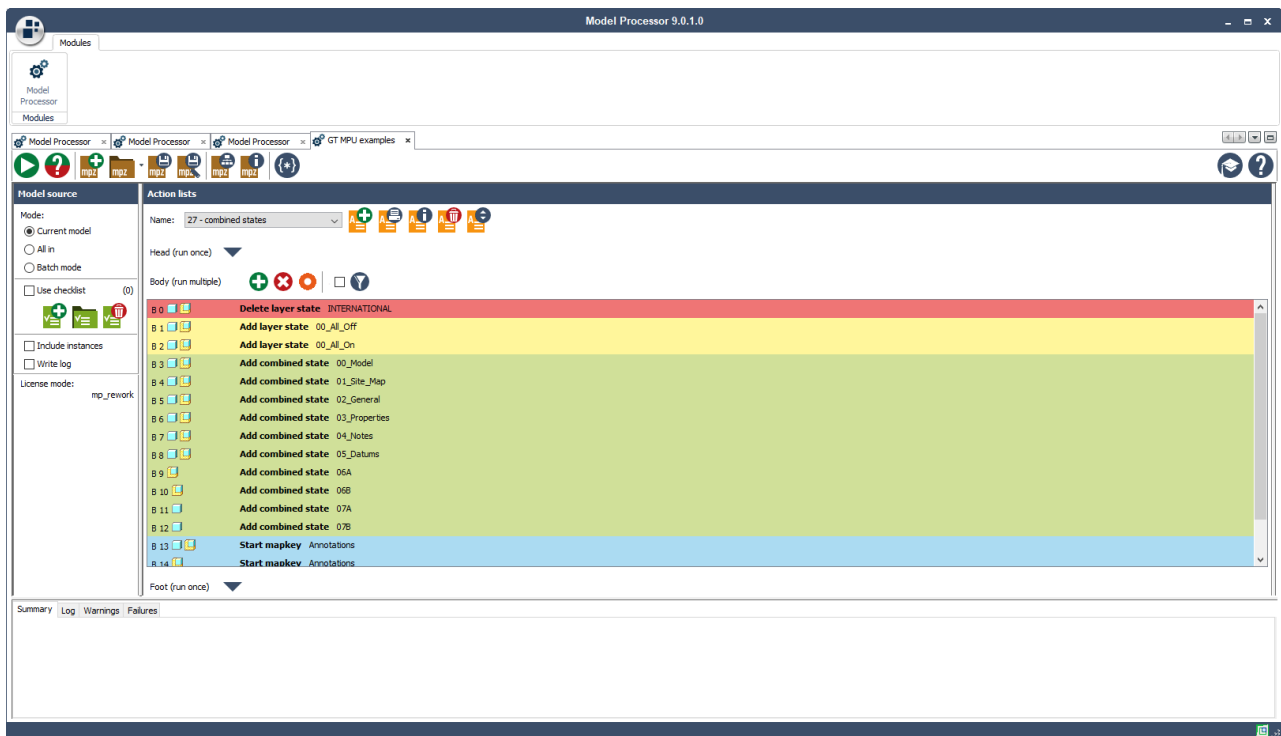
1. Actions

Environment

Clear all windows	Set model options (dtl)
Erase undisplayed models	Set user variable
Group action	Set user variable from URL
Request user input	Set working directory
Set config options	Write to Creo Log
Set environment variable	

PTC Windchill PDM

Add file to workspace	Clear workspace
Checkin model	Set server active
Checkout model	

Model

Add 3D annotation	Rename model
Backup action	Replace model
Cancel feature insert position	Rescale feature positions in assemblies
Compute mass	Run JavaScript
Copy model	Run sync app function
Create DM dot matrix	Save model
Create QR dot matrix	Set accuracy
Edit PTC_COMMON_NAME	Set all dimension bounds
Edit model dimension from file	Set feature insert position
Embed models	Set style
Insert first features	Set tolerance
Load tolerance table	Set units
Regenerate model	Set user variable from bounding box
Remove feature	Start ModelCHECK
Remove file from Workspace	Suppress feature

Model

Rename feature   Write to file

Model – Views

Add views   Set view

Rename view

Model – Relations

Add feature relations   Edit feature relations

Add model relations   Edit model relations

Delete feature relations   Set relation unit sensitive

Delete model relations

Model – Export

Export Creo View file   Export PDF/U3D file

Export IGES file   Export SAT file

Export JPG file   Export STEP file

Export NEUTRAL file   Export STL file

Export PARASOLID file

Model – Family table

Delete family table instance   Unlock all instances

Split up family table   Verify family table

Model – Appearance

Set appearance   Set appearance from rgb

Model – Layer

Add layer   Group layer

Add layer state   Rename layer

Delete layer / Move features   Set layer state

Delete layer state   Set layer status

Model – Combined state

Add combined state	Set combined state
Delete combined state	

Modell – Explode state

Add explode state	Set explode state
Delete explode state	

Model – Cross section

Activate cross section	Show cross section
Add cross section	Update all cross sections in model
Delete cross section	

Model – Material

Add material	Edit current material parameter
Add material parameter	Edit material from file
Delete material	Replace material

Model – Parameter

Add alternative model parameter to family table	Edit model parameter
Add associative parameter to flexible dimension	Edit model parameter from file
Add feature parameter	Edit parameter from dictionary
Add model parameter	Edit parameter from symbol text
Change all designation flags	Edit parameter from table cell
Delete feature parameter	Fill component parameters by reference
Delete model parameter	Rename model parameter
Edit drawing parameter from model	

Model – Pro/PROGRAM

Delete model Pro/PROGRAM input lines	Delete model Pro/PROGRAM lines

Model – Simplified representation

Create simplified representation

Delete simplified representation

Edit simplified representation

Rename simplified representations

Set simplified representation

Drawing

Edit model notes from file

Remove all annotations

Remove unused drawing models

Replace format

Replace view model display

Set current drawing model

Set current sheet scale

Show unbend features on views

Drawing – Export

Export 2D PDF file

Export DWG file

Export DXF file

Export TIFF file

Drawing – Note

Add note

Delete note

Move note

Drawing – Symbol

Add symbol

Change symbol group

Create Barcode (PDF417)

Create DM code symbol

Create QR code symbol

Delete symbol

Move symbol

Remove symbol paths

Update symbol definitions

Drawing – Table

Add table

Delete table

Move table

Report

Report Feature Parameters	Report layer
Report Pro/PROGRAM	Report materials
Report dependencies	Report model data
Report drawing data	Report parameters
Report drawing table cell	Report relations
Report family table	Report universal
Report feature positions	Write informative PDF
Report geometry properties	Write list all report

Open CSV Report (only possible before the model revision)

2. Filter options for actions

Assembly

Explode state exists	Style state exists

Drawing

Dimension text	Symbol in drawing
Format name	Symbol on drawing
Formats on sheets	Table on drawing
Is multi model drawing	current model
Sheet size	

Environment

Creo version	Model exists
Environment variable	User parameter
File exists	

Model

Dimension tolerance	Model sub type
Double defined Parameters	PDM object
File name	PDM object (deprecated)
Is modified	Parameter
Is regenerative	Parameter type
Layer	Path

Part

Current material name	Material parameter
Is skeleton	

Solid

Accuracy	Is generic
Combined state	Is insert mode active
Contains circular dependencies	Is instance
Cross section exists	Layer state exists
Feature exists	Relation
Feature from type	Simplified representation exists
Feature is flexible	Tolerance
Feature suppressed	Unit system
Geometry check exists	Unverified instance
Instance with name	View exists

III. GENIUS TOOLS Model Processor Rework

Model Processor Rework is the complete version of the Model Processor Suite and contains the Model Processor Report. In addition, there are actions with which you can save modified models. With this you put into practice the analyses created with Model Processor Report. That means you define tasks to be performed by all team members in the same way and with the same result. To automate changes to models in batch mode, you need Model Processor Rework.

There are additional actions that allow saving modified models within the batch processing.

Additional Actions

Environment	
Save config options	Start mapkey
Start MSDOS command	Start trail file

IV. GENIUS TOOLS Model Processor User

This version of the Model Processor is suitable for all team members. Action lists defined by the administrator are available to you with this license. You now execute these action lists via the Model Processor User within Creo Parametric. You can store one command per executable action list in the ribbon.

Action lists cannot be created or modified with the Model Processor User. This is for quality assurance purposes and has the advantage that different variants of an action list cannot circulate in a department.
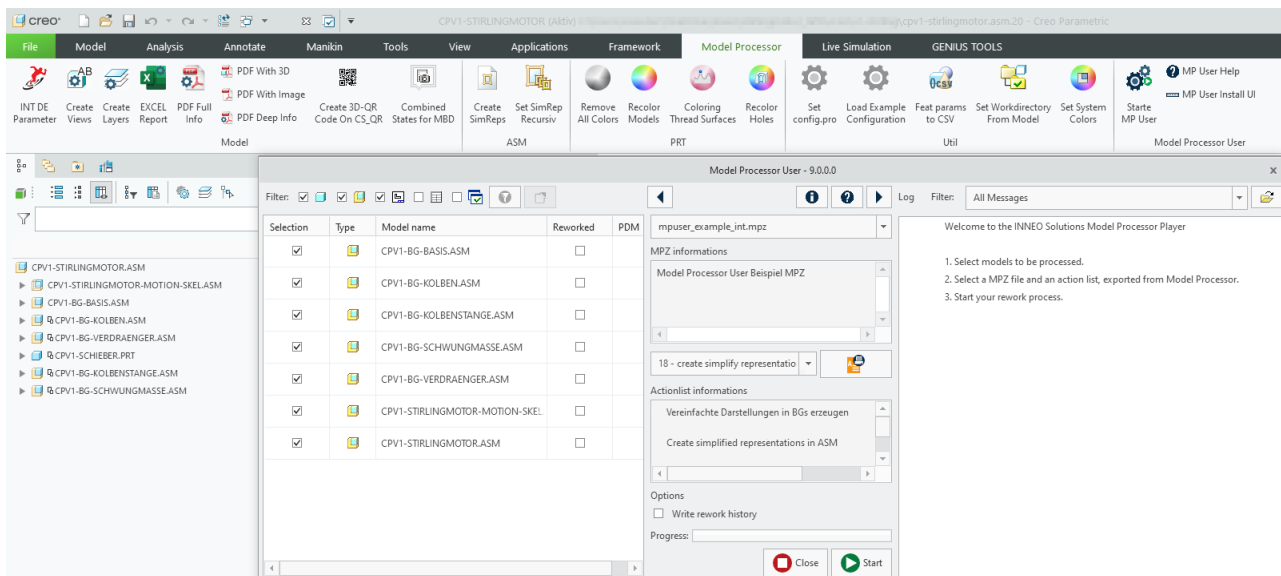
V.   GENIUS TOOLS Model Processor Worker Extension

While the variants of the Model Processor already presented are designed for engineers, the Model Processor Worker Extension is a way to let the whole company benefit from the automations. Model Processor Worker Extension works in the Windchill Visualization Process (also known as Windchill Worker). It processes action lists on your Creo Parametric models. You can also generate additional file formats from these models, such as STEP files, PDF files, and/or images rendered with KeyShot.

The data generated in this way are automatically linked to the original object in Windchill. At the same time, your original model is preserved.