FOCUS ONREAL DESIGN AUTOMATE THEREST

M-Files – SOLIDWORKS integration

Francois Simon 06.02.2016





M-Files/SOLIDWORKS Plug-in overview

M-Files/SOLIDWORKS plug-in introduction video

Watch our M-Files/SOLIDWORKS plug-in introduction video:



Requirements from M-Files:

M-Files 9 or 10. The integration requires that the client and server versions are the same.

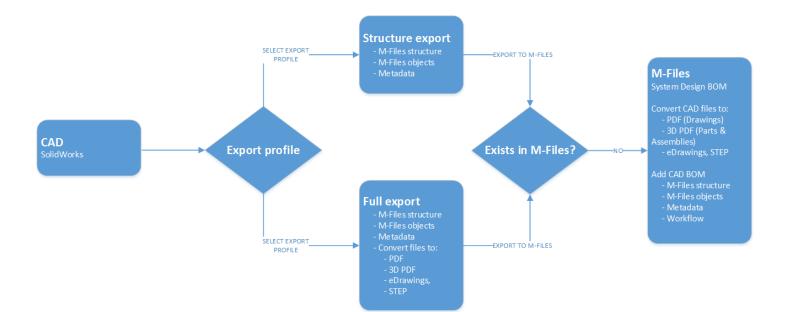
Features:

- o Export SW BOMs as new structures to M-Files
- o Create new objects in M-Files
- Mapping to M-Files projects
- Export SW Meta data (Custom properties) to M-Files
- Update existing structure in M-Files
- o Export converted SW files to M-Files

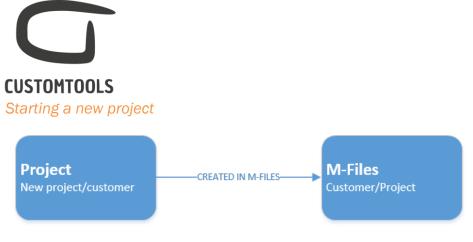
:: CUSTOMTOOLS product of ATR Soft Oy :: info@CUSTOMTOOLS.info :: www.CUSTOMTOOLS.info ::



Customer's environment with M-Files overview



:: CUSTOMTOOLS product of ATR Soft Oy :: info@CUSTOMTOOLS.info :: www.CUSTOMTOOLS.info ::



A new project is starting for a new customer/an existing customer. If the customer already exists in M-Files then the new project is added to M-Files. If the customer does not exist already in M-Files, he will then be added, and a new project will be added as well afterward.

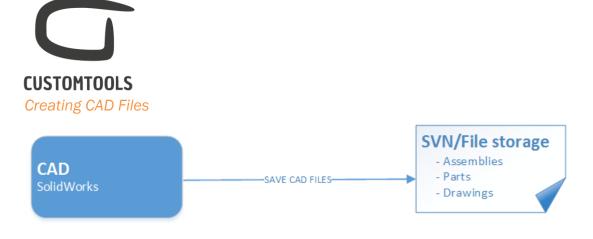
λi	New - Customer 🛛 🗕 🗙	3 0	New - Customer project 🛛 🗕 🗖
General		General	
Class:	Customer	Class:	Customer project
Use template:	×	Use template:	
Properties:		Properties:	
Name or title:	ATR Soft	Name or title:	Conveyor
		Owner (Customer):	ATR Soft
Created:	17/06/2014 08:06	Created:	17/06/2014 09:03
Created by:	TSA-CTSERVER\Administrator	Created by:	TSA-CTSERVER\Administrator
Last modified:	17/06/2014 08:06	Last modified:	17/06/2014 09:03
Customer projects Permissions:	More Properties Full control for all internal users	Relationships	More Properties
	Tull another from all internet scores	Relationships Permissions: Workflow:	More Properties Full control for all internal users

Adding a new customer in M-Files

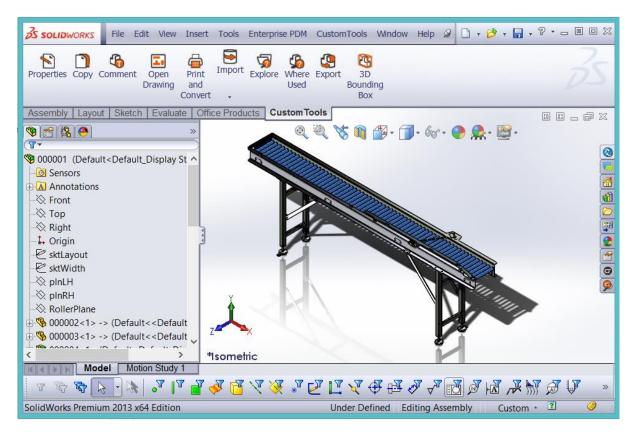
Adding a new customer project in M-Files

~	Name 🔺	Size	Date Modified
M-Files'	ာ 🍕 Conveyor		17/06/2014 09
New 🔺	ା 💑 Owner (Customer) (1)		
Signment	⊐ 💑 ATR Soft		17/06/2014 08
Stomer	→ 🧐 Customer projects (1)		
🧭 Customer project	4 Conveyor		17/06/2014 09
🤝 Document	New Customer project		

Viewing the Customer (ATR Soft) and Customer's project (Conveyor) in M-Files



CAD files are created in SOLIDWORKS and will be stored on the file storage system used by the customer. Please note that in our integration M-Files is not used to store native SOLIDWORKS files, as it is not a PDM system.



Assembly created in SOLIDWORKS





A SOLIDWORKS assembly can be exported at any time to M-Files. During the first export, the SOLIDWORKS Files can be converted to any of 25 files formats supported by SOLIDWORKS. The conversion is done as a batch operation by using CUSTOMTOOLS.

In addition, we will create the SW BOM structure inside M-Files and create M-Files objects for parts and assemblies. During the export SOLIDWORKS metadata (custom properties) will be exported as M-Files attributes.

			CustomStructure	c (customitoois)		
PrintAndConvert	WhereUsed 🛛 🐺 File (Operations				
ructure view:						Profile
tem Name	Number {1022}	Configuration {1025}	Revision {1023}	Description {1026}	Check-in As	Export profile: Export to M-Files
🚮 🗹 0001-Default.sldd	irw					Export to in thes
0001.SLDASM	0001	Default	В	CONVEYOR MAIN D	New object	Selection
🚮 🗹 0002.slddrw						
0002.SLDPRT	0002	Default	В	BASE PART DRAWI	New object	
🚮 🗹 0003.slddrw						
0003.SLDPRT	0003	Default	A	FLAT BAR PART DR	New object	No preview available
🚮 🗹 0004.slddrw						no preview available
0004.SLDASM	0004	Default	A	CONVEYOR SUBAS	New object	
🚮 🗹 0005.slddrw						
- M 2 0005.SLDPRT		Default <as machined=""></as>		AXLE PART DRAWI	New object	
🚮 🗹 0006.slddrw						
- M 2 0006.SLDPRT		Default	В	BRACE PLATE	New object	Filename:
0007.SLDASM	0007	Default	А	LEG FRAME SUBAS	New object	C:\Users\Frasimon\Documents\CustomT
0008.slddrw 💽						
= M 2 0008.SLDPRT		Default <as machined=""></as>	А	FLAT BAR PART DR	New object	BOM
ST						Exclude Invalid Rows
- M 2 0009.SLDPRT		Default		BRACING	New object	
0010.SLDPRT		Default	A00	LEG BRACE PLATE	New object	Excluded from BOM
MIV 0011.SLDPRT		Default	A00	LEG BRACE PLATE	New object	Apply to Files
		Default		FRAME PART DRA	New object	
0013.SLDPR1		Delaut		TRAIVIL PART DRA		
0014-Delau			-		>	
arch string:	Sea	arch < >			/	Export
						Close

Exporting CAD Structure to M-Files from SOLIDWORKS

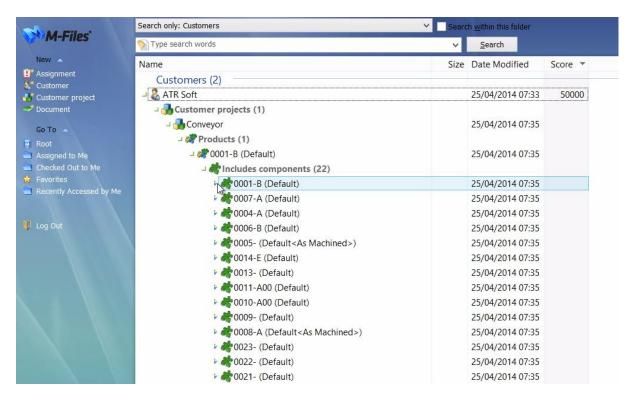
In the screenshot above lines marked as Green corresponds to new objects that will be created in M-Files. Please note that the colour code used can easily be customized based on your wishes.

^{::} CUSTOMTOOLS product of ATR Soft Oy :: info@CUSTOMTOOLS.info :: www.CUSTOMTOOLS.info ::



Once the CAD Files is exported to M-Files it can be linked to a project in M-Files.

Here the project Conveyor, created for the Customer ATR Soft, is selected.



Objects created in M-Files

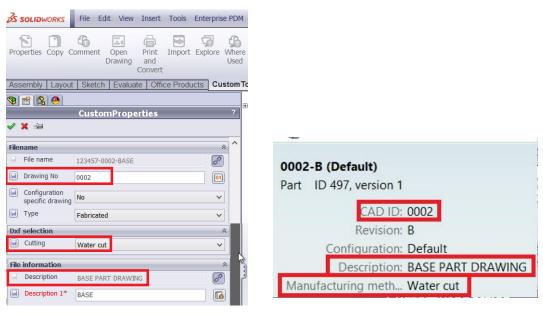
CUSTOMTOOLS		
🔺 💐 0013- (Default)		25/04/2014 07:35
🚰 0013-DXF Sheet.dxf	47 KB	25/04/2014 07:35
🔁 0013-Sheet2.pdf	84 KB	25/04/2014 07:35
🔁 PREVIEW.pdf	209 KB	25/04/2014 07:35
> 💏 Products (1)		
> 💏 Components (1)		

CAD Part shown as an object in M-Files with the related converted files.

Under each object in M-Files, there will be the different converted files for the parts/assemblies. (e.g.PDF for drawings, 3D PDF for parts, DXF for sheet metal parts,...).

Exporting CAD Metadata to M-Files:

When objects are created in M-Files, metadata of the SOLIDWORKS files are exported as attributes of the object in M-Files.

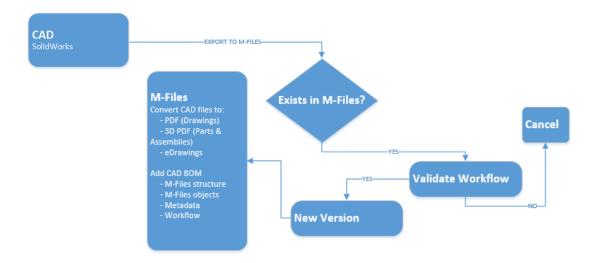


Custom Properties defined in SOLIDWORKS

Attributes of the object in M-Files



If a structure that already exists in M-Files is exported to again, then a new version will be created in M-Files.



PrintAndConver	t 🚯 WhereUsed 🕘 File	e Operations						
Structure view:								Profile
Number {1022}	Configuration {1025}	Revision {1023}	Description {1026}	Cutting {1024}	Туре	Check-in As	^	Export profile: Export to M-Files
0001	Default	В	CONVEYOR MAIN D			New version		Selection
0002	Default	В	BASE PART DRAWI	Water cut	Fabricat	Use existing		
0003	Default	A	FLAT BAR PART DR	Laser cut	Fabricat	Use existing		
0004	Default	A	CONVEYOR SUBAS			Use existing		
0005	Default <as machined=""></as>		AXLE PART DRAWI	Water cut	Fabricat	Use existing		
0006	Default	в	BRACE PLATE			Use existing		Filename:
0007	Default	А	LEG FRAME SUBAS			New version		C:\Users\Frasimon\Documents\CustomTc
0008	Default <as machined=""></as>	А	FLAT BAR PART DR	Laser cut	Fabricat	Use existing		BOM
0009	Default		BRACING	Machining	Fabricat	Use existing		Exclude Invalid Rows
0010	Default	A00	LEG BRACE PLATE	Other	Purchas	New object		Excluded from BOM
0011	Default	A00	LEG BRACE PLATE	Other	Fabricat	Use existing		Apply to Files
0013	Default		FRAME PART DRA	Laser cut	Fabricat	Use existing		
<		-					~	2
Search string:	S	earch < >						Export

:: CUSTOMTOOLS product of ATR Soft Oy :: info@CUSTOMTOOLS.info :: www.CUSTOMTOOLS.info ::



Updating CAD Structure in M-Files from SOLIDWORKS.

In the screenshot above, we can see that a new part (0010.SLDPRT) was added to the subassembly (0007.SLDASM). In the CAD/Export dialog we can see that before exporting, we perform a check in M-Files. Lines marked as Yellow, corresponds to New versions that will be created in M-Files if we do the export. Lines marked as Green, corresponds to New objects that will be added to the existing structure in M-Files.