



Making Inventor & Vault Workflows work for you

Primary Speaker:

James Collins

CAD/PDM Administrator

Dynamic Attractions/ Dynamic Structures

Co-Speaker:

Ben Cornelius

PLM-PDM-CAD Systems Manager

Dynamic Attractions/ Dynamic Structures



About the Speaker

James Collins

CAD/PDM Administrator @ Dynamic Attractions/ Dynamic Structures

Originally from Australia where I completed a Mechanical Drafting apprenticeship with a sawmilling equipment manufacturer. During that time I started using Inventor (about 2005) and saw how magical 3d design could be. After completing my apprenticeship I worked in various industries from materials handling to minerals processing and at that time started using Vault. I was transferred to Canada in 2012 to head up the drafting team, where I first started using iLogic and realized what a powerful a tool it was. I now work for Dynamic Attractions/Dynamic Structures as CAD/PDM Administrator. In my spare time I can be found snowboarding, kiteboarding, running, taking photos or painting.

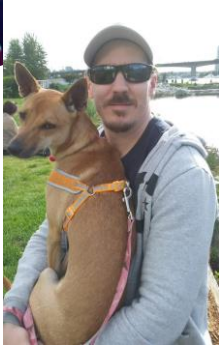


About the co-Speaker

Ben Cornelius

PLM-PDM-CAD Systems Manager @ Dynamic Attractions/ Dynamic Structures

Originally from the UK where I did a bachelor of science in product design where I started using Inventor in the early 2000's. I have used inventor and vault in industry ever since starting in the aerospace industry working on aircraft interiors. Then when I moved to Canada I worked for an Autodesk reseller helping customers conducting technical support, training, setup, installation and services whether in-house or on site. I then created configurators for the mining industry. I now work for Dynamic Attractions/ Dynamic Structures starting as Senior lead CAD modeler & CAD admin now as the PLM-PDM-CAD Systems Manager where I take care of the day to day running of the various CAD related systems. In my spare time I am either snowboarding, walking my dog, on the idea station or beta forum.



What we do



- Canada France Hawaii Telescope
- William Herschel Telescope
- Starfire Optical Range
- Keck I and Keck II
- Atacama Cosmology Telescope
- Thirty Meter Telescope (TMT)
(Still an active project)



What we do



- Dark Rides
- Theaters
- Coasters
- Custom Attractions
- Parts & Service



Four pronged approach

I AUTODESK®
INVENTOR® PROFESSIONAL

Out the box setup &
customization

V AUTODESK®
VAULT PROFESSIONAL

AUTODESK App Store



&

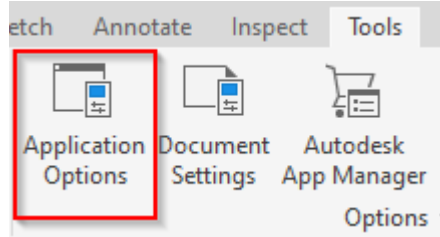
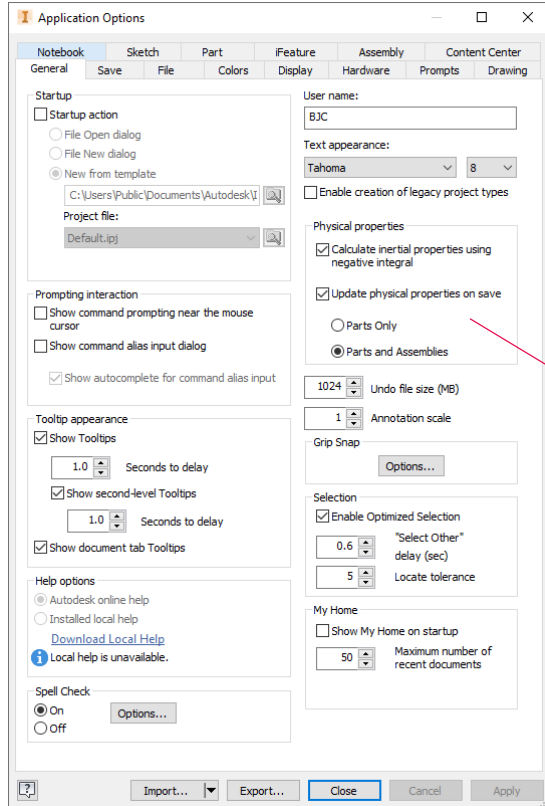
In-House



Custom iLogic

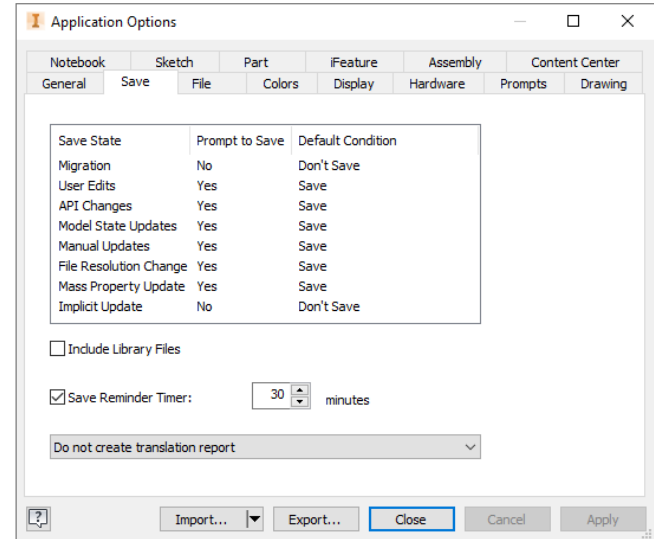


Utilizing our reseller



In order to
keep the
mass up to
date

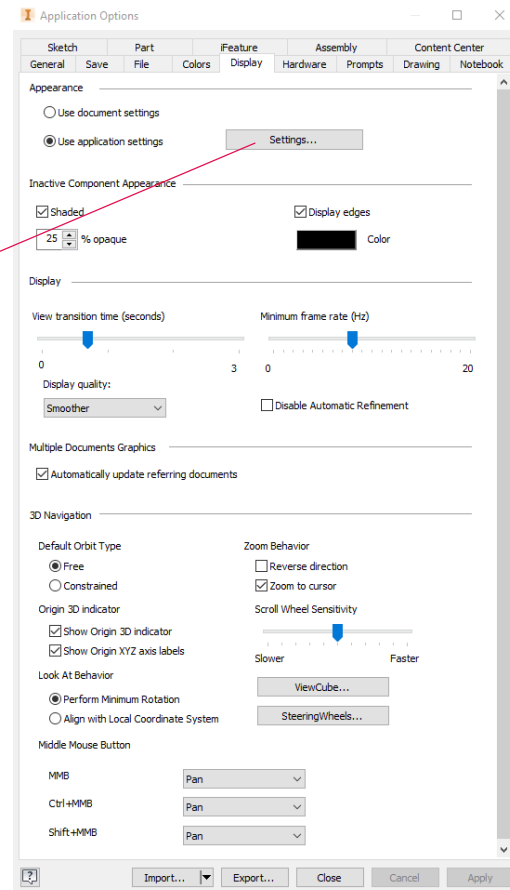
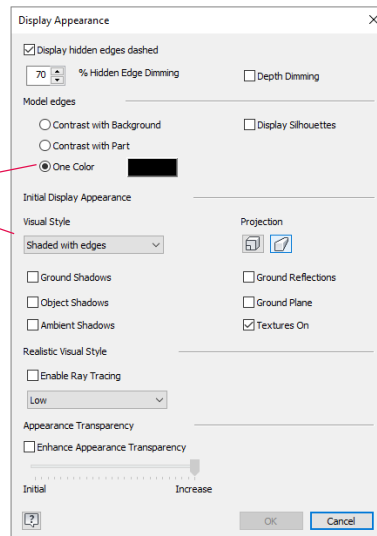
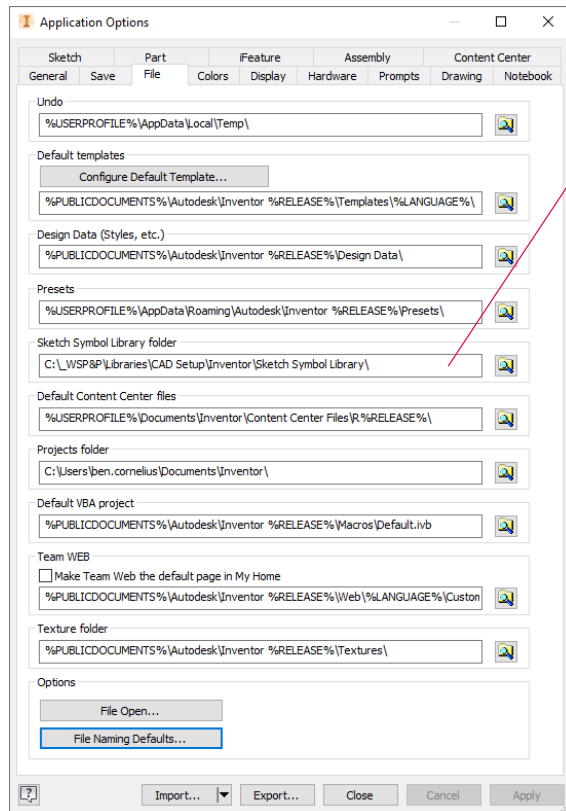
The save settings should
help with file dirtying



Setup

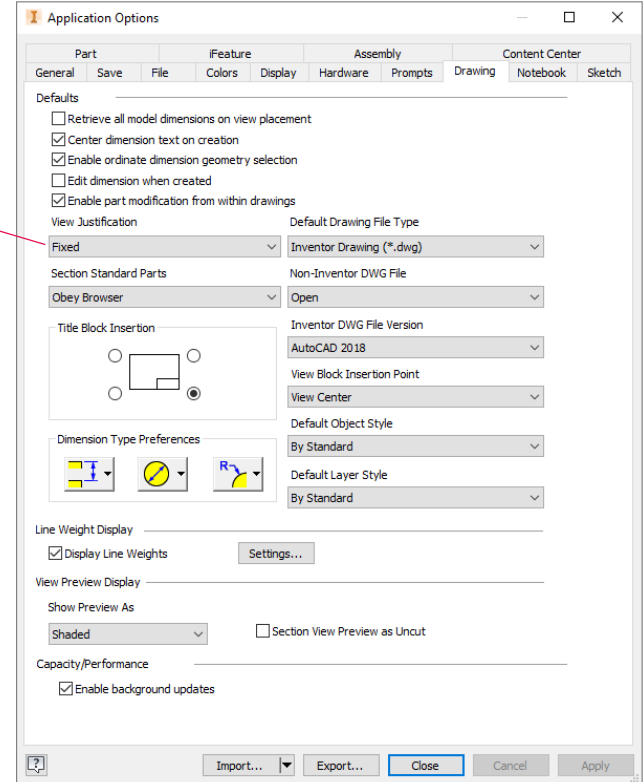
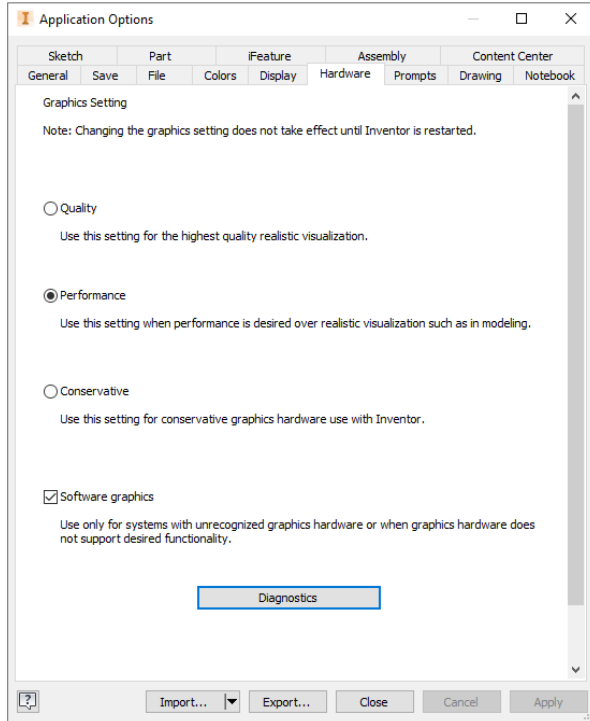
Our sketch symbols are
from a central location

Find it
easier for
viewing

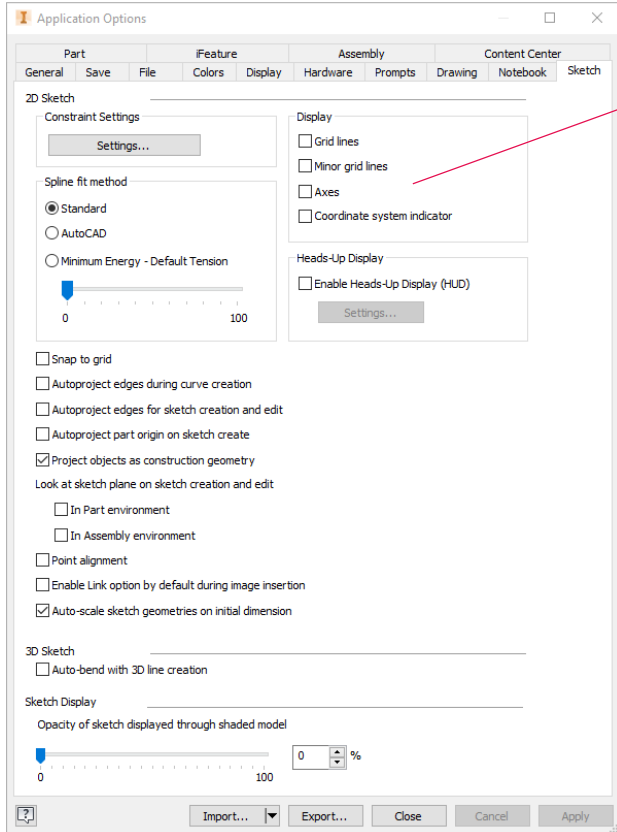


Setup

Would recommend fixed view justification over centered will prevent the views shifting when making changes



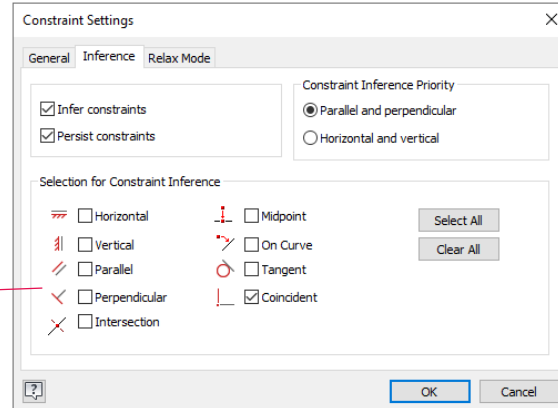
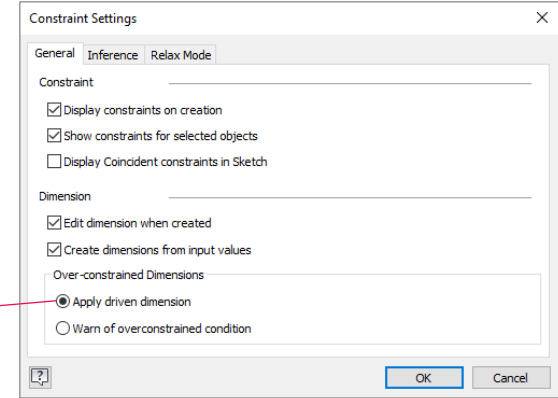
Setup



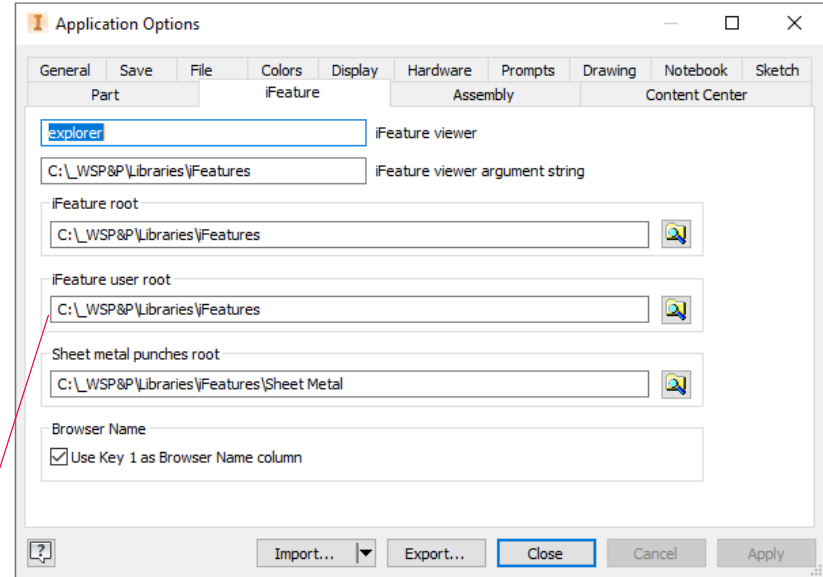
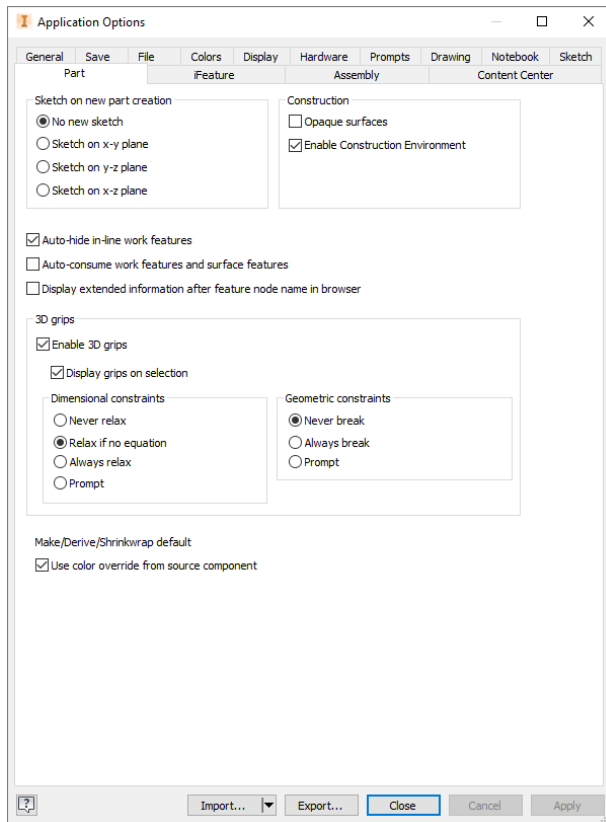
Will be a
clearer
view with
these off

Apply driven
dimensions other
wise the warning
will get annoying

Be careful when
turning these on as
they can create
unintentional
constraints



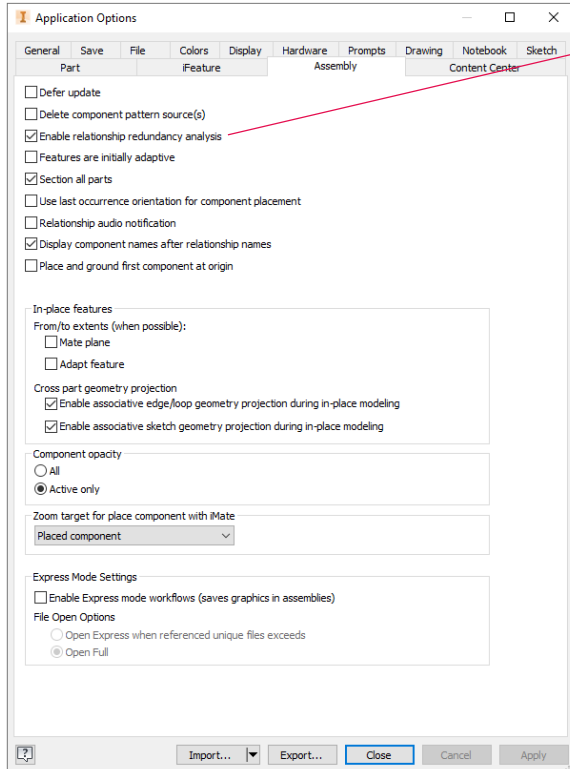
Setup



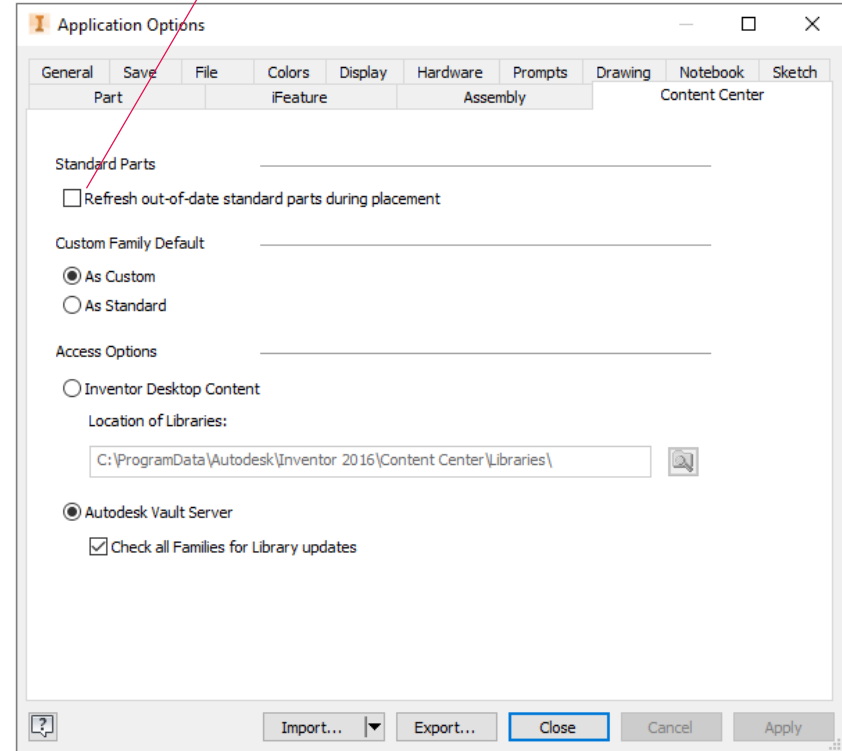
We have our iFeatures set to a central location

Setup

Based on our workflow this needs to be off

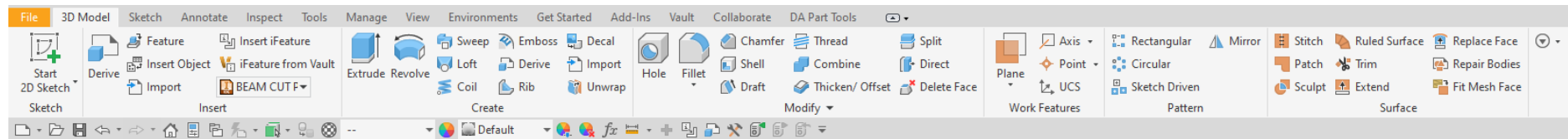


Turn on to ensure the constraint status works

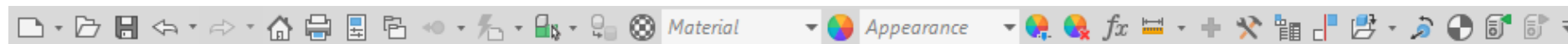


Setup

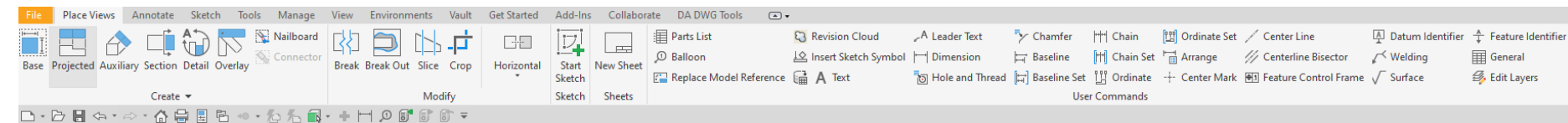
Part



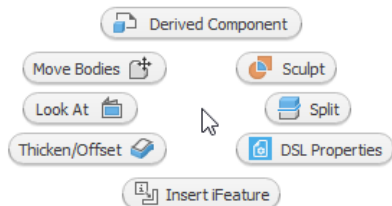
Assembly



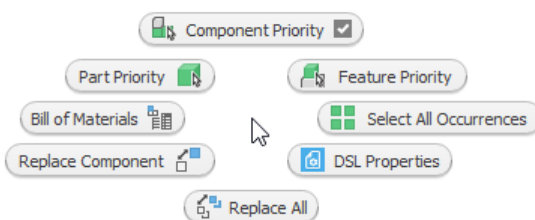
Drawing



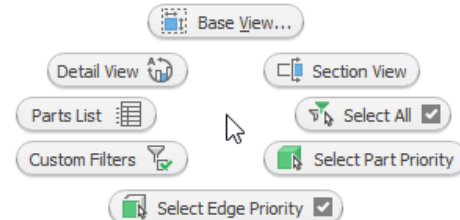
Part



Assembly



Drawing



Setup

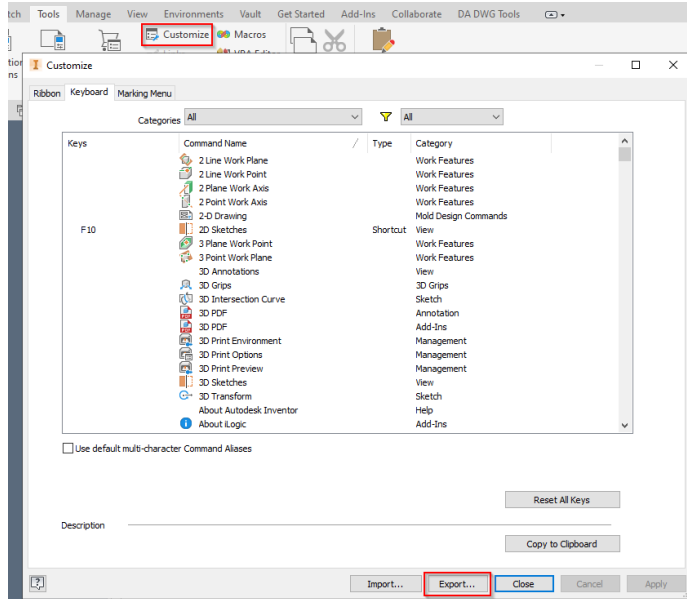
You can export these settings and use them for the deployment

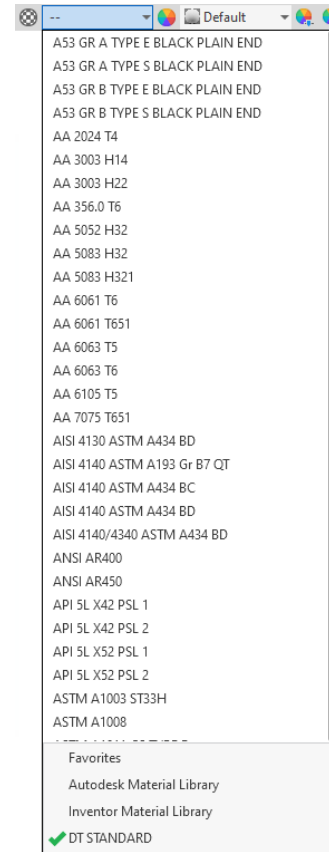
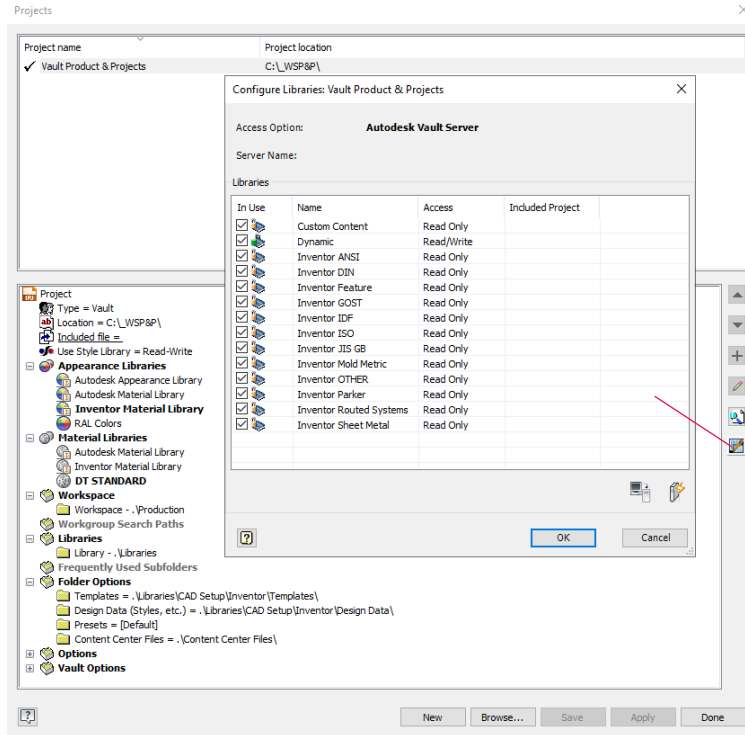
Customization Settings

- ☐ I would like to use the default Inventor settings.
- ☒ I would like to import custom settings.
Enter the full path to the file with the exported settings (for example, C:\Folder\MySettings.xml or \\Server\Share\MySettings.xml). The .xml file must be accessible when running the downloaded deployment. For more information, search for "Export custom settings to an XML file" in the Inventor help.

Browse

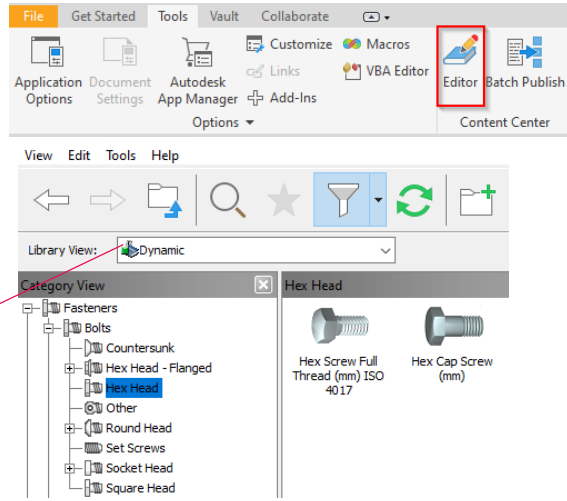
UI 2022.xml



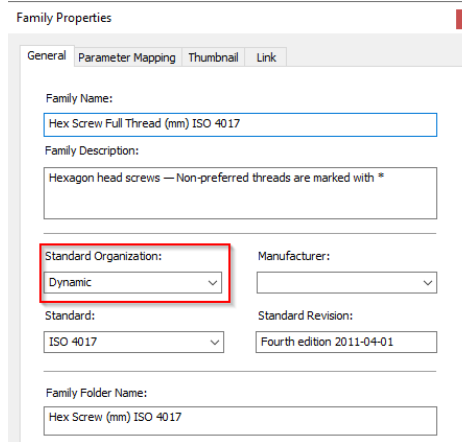


We have now included the standard organization to better call out materials

Setup

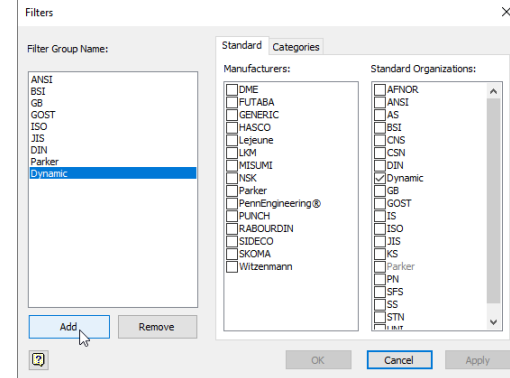
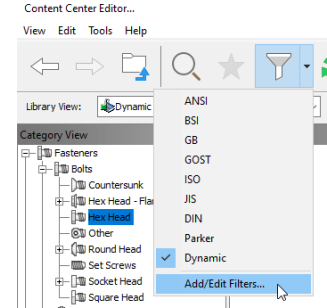


The filter is
needed,
otherwise
when you go
to place
there is no
library view



In order to batch out the filter with the deployment

```
set sourcedir="filepath\Center Settings\"
set targetdir="C:\Users\%USERNAME%\AppData\Roaming\Autodesk\Inventor 2022\Content Center\Settings\"
if not exist %targetdir% mkdir %targetdir%
xcopy /e /y %sourcedir%*. * %targetdir%
```



Why do we have a skeleton template and what automation is on the template?

BOM structure is set to phantom so it does not show up on the parts list.
The user parameters list out the material sizes which is convenient and causes fewer downstream errors.

Material Sizes

Key

Key can be filtered off

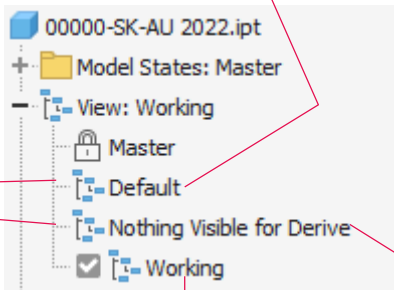
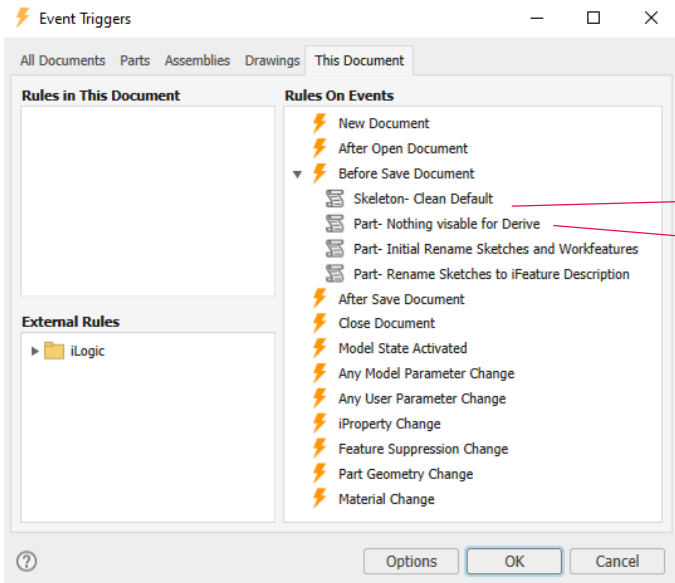
Parameter Name	Consum	Unit	Equation	Nominal Value	Driving Rule	Tol.	Mode	Key	Comment
Model Parameters									
User Parameters									
PL_3mm_1_8in		mm	0.125 in	3.175000		3...		<input checked="" type="checkbox"/>	
PL_5mm_3_16in		mm	0.1875 in	4.762500		4...		<input checked="" type="checkbox"/>	
PL_6mm_1_4in		mm	0.25 in	6.350000		6...		<input checked="" type="checkbox"/>	
PL_8mm_5_16in		mm	0.3125 in	7.937500		7...		<input checked="" type="checkbox"/>	
PL_10mm_3_8in		mm	0.375 in	9.525000		9...		<input checked="" type="checkbox"/>	
PL_13mm_1_2in		mm	0.5 in	12.700000		12...		<input checked="" type="checkbox"/>	
PL_16mm_5_8in		mm	0.625 in	15.875000		15...		<input checked="" type="checkbox"/>	
PL_19mm_3_4in		mm	0.75 in	19.050000		19...		<input checked="" type="checkbox"/>	
PL_22mm_7_8in		mm	0.875 in	22.225000		22...		<input checked="" type="checkbox"/>	
PL_25mm_1in		mm	1 in	25.400000		25...		<input checked="" type="checkbox"/>	
PL_29mm_1_1_8in		mm	1.125 in	28.575000		28...		<input checked="" type="checkbox"/>	
PL_32mm_1_1_4in		mm	1.25 in	31.750000		31...		<input checked="" type="checkbox"/>	
PL_35mm_1_3_8in		mm	1.375 in	34.925000		34...		<input checked="" type="checkbox"/>	
PL_38mm_1_1_2in		mm	1.5 in	38.100000		38...		<input checked="" type="checkbox"/>	

Parameters dialog box controls: Add Numeric, Update, Purge Unused, Import from XML, Link, Immediate Update, Export to XML, Reset Tolerance, Done.

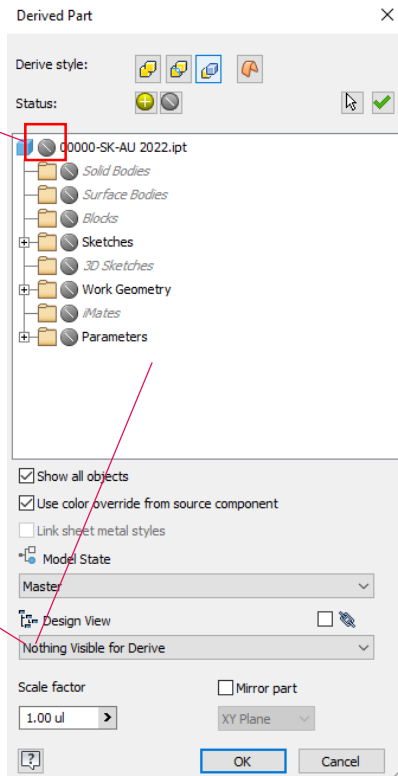
Why do we have a skeleton template and what automation is on the template?

Turns off all objects except sketches. In a part file it turns off all objects except solid bodies

Can be quicker and easier than turning everything off



User defined



Why do we have a skeleton template and what automation is on the template?

The image displays a CAD software interface with a skeleton template structure. The main window shows a tree view with the following items:

- Beam: 1(Beam:W 100x19.3(W4x13))
- Table
- SK2 Beam: 1 W 100 x 19.3 WP2

Below the main window, the 'Event Triggers' dialog is open, showing a list of rules for the document. The 'Rules On Events' section includes:

- New Document
- After Open Document
- Before Save Document
 - Part- Nothing visible for Derive
 - Part- Rename Sketches to iFeature Description
 - Part- Initial Rename Sketches and Workfeatures
 - Skeleton- Clean Default
- After Save Document
- Close Document
- Model State Activated
- Any Model Parameter Change
- Any User Parameter Change
- iProperty Change
- Feature Suppression Change
- Part Geometry Change
- Material Change

The 'External Rules' section shows a folder named 'iLogic'.

A 'Default Suffix' dialog is open, prompting the user to enter a default suffix for sketch and workfeature names. The input field contains 'AU 2022'.

The '00000-SK-AU 2022.ipt (Master) iProperties' dialog is open, showing the 'General' tab. The 'Name' field is empty, and the 'Type' is set to 'Text'. The 'Value' field is empty. Below the dialog, a tree view shows the structure of the part file:

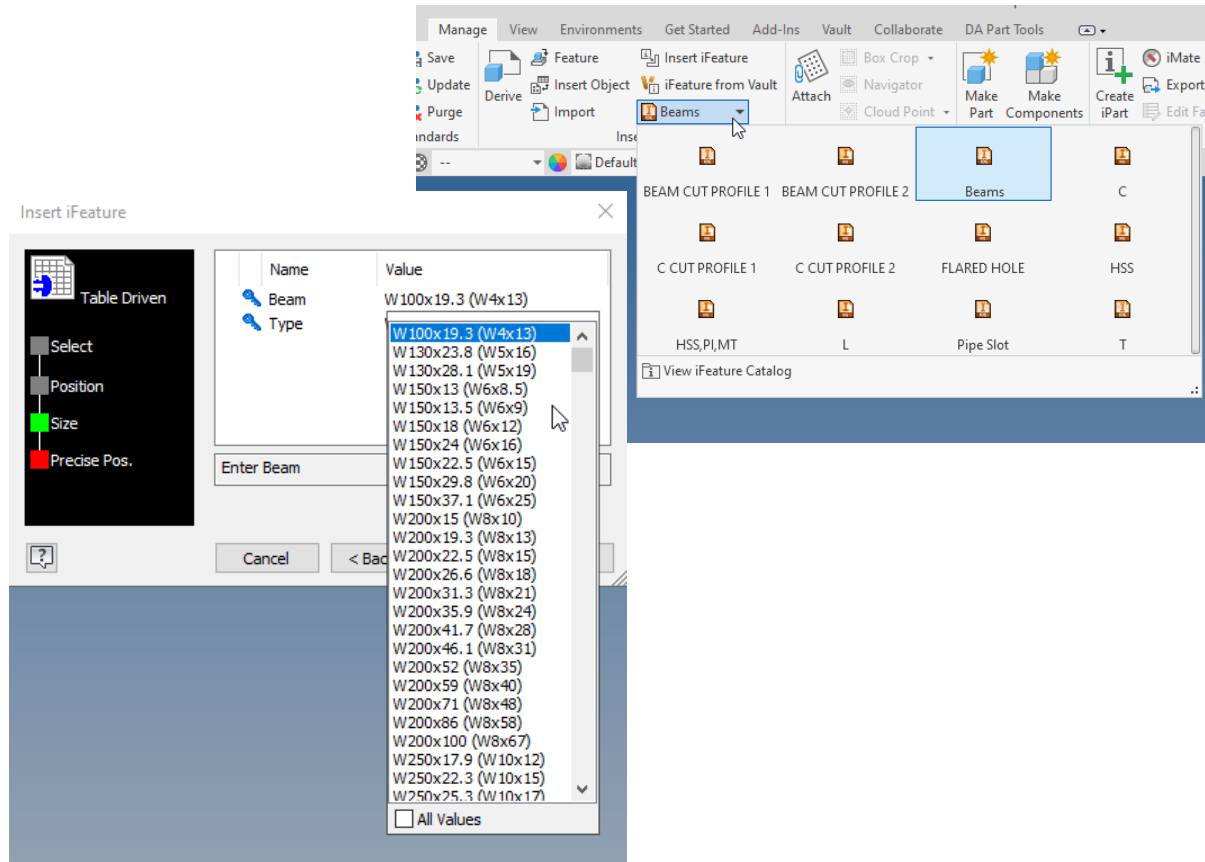
- 00000-SK-AU 2022.ipt
 - Model States: Master
 - View: Working
 - Origin
 - SK1 AU 2022 YZ
 - WP2 AU 2022
 - WP3 AU 2022
 - WA1 AU 2022
 - WPT1 AU 2022
 - WPT2 AU 2022
 - End of Part

Annotations and text boxes provide additional context:

- Prompts on first save. Does not do that on a part file**: Points to the 'Default Suffix' dialog.
- Renames if it's a default name**: Points to the 'Before Save Document' rule in the 'Event Triggers' dialog.
- Can be changed at anytime**: Points to the 'iProperties' dialog.

The need for a structural modeling system

We ultimately need the structural shape within the skeleton as it drives the connection shape and size. We also have a lot of custom cut outs. Sketch blocks are static therefore this is no good if the shape changes size, which lead us to using table driven iFeatures.



Skeletal Modeling Naming

Skeleton file

XXXXX-SK-? A vault numbering scheme is used for this

Open 18 characters max forced to capitals

Project/Product Number

Browser Node Naming

Skeleton non iFeature Sketches

SK2 SP CON WP4

This is automated with an iLogic external rule triggered by before save

Work plane Number

Optional Additional suffix

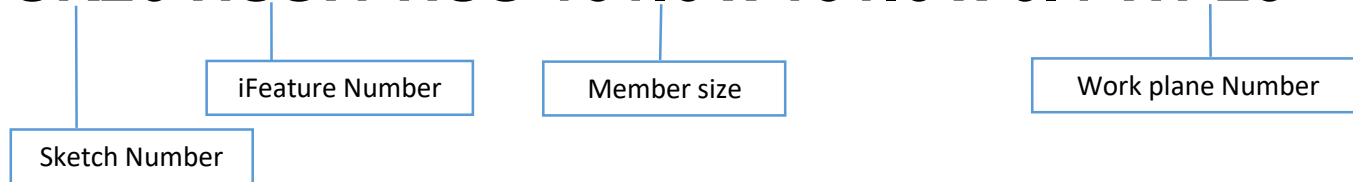
Optional suffix

Sketch Number

Skeletal Modeling Naming

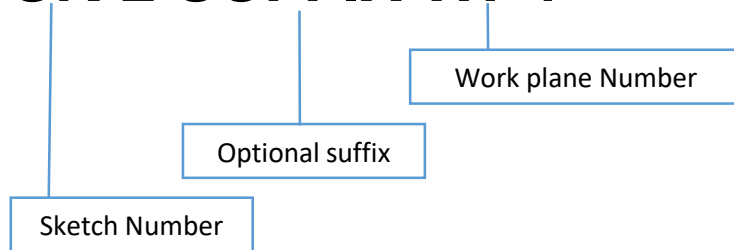
Browser: Skeleton iFeature Sketches

SK26 HSS:1 HSS 101.6 x 101.6 x 6.4 WP20



Browser: Part File Sketch Naming

SK-2 SUFFIX WP4

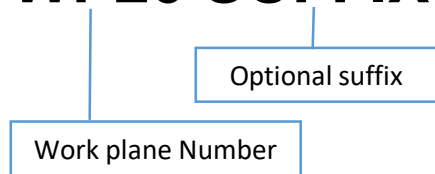


These are both automated with an iLogic external rule triggered by before save

Skeletal Modeling Naming

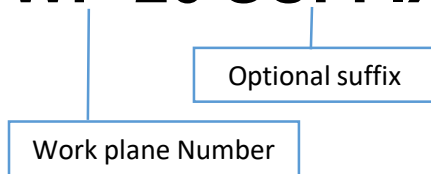
Skeleton WorkPlane

WP20 SUFFIX



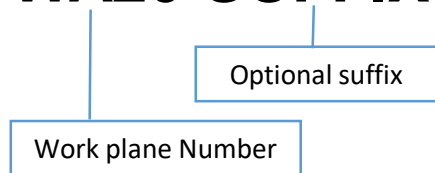
Part WorkPlane

WP-20 SUFFIX



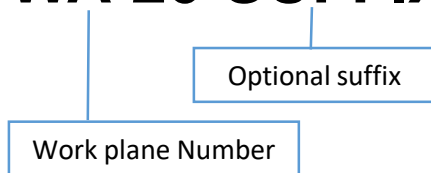
Skeleton WorkAxis

WA20 SUFFIX



Part WorkAxis

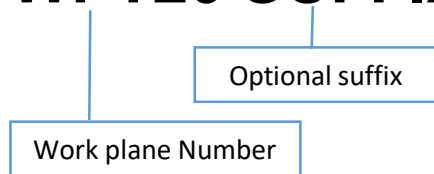
WA-20 SUFFIX



These are all automated with an iLogic external rule triggered by before save

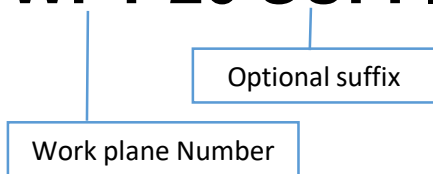
Skeleton WorkPoint

WPT20 SUFFIX



Part WorkPoint

WPT-20 SUFFIX



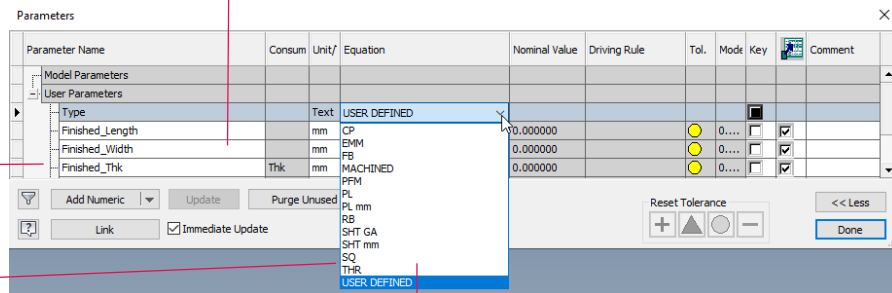
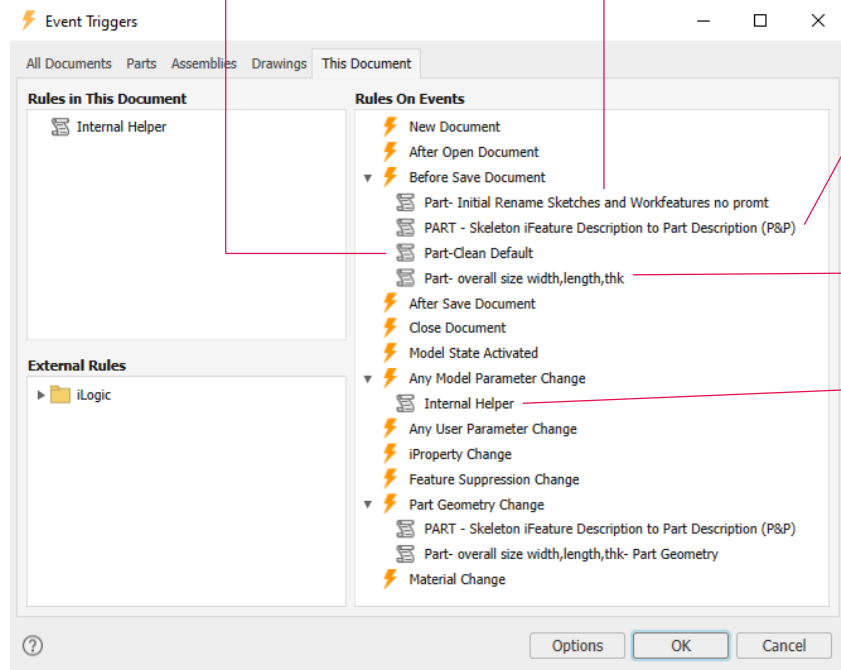
Part Template Automation

Turns visibility of all objects off except solidbodies on default view rep

Rename the browser nodes the same as the skeleton except there is no prompt and the scheme has an additional -

Push the in the material size/description to iProperties can updates if there is a size change

This is automated based on the minimum orientated bounding box



For non-iFeature items this pushes in the relevant equation. This is quicker and drives consistent data vs typing, and it's also linked to the geometry

Sheet Metal Part Template Automation

The same as the part template

Automatically changes
the gauge size

If a flat pattern exists that
overall size is used

Parameter Name	Cons	Unit/Type	Equation	Nominal V	Driving Rule	Tol	Mo	Ke	Comment
Sheet Metal Parameters:SHT_20GA_st (...)									
Model Parameters									
Reference Parameters									
User Parameters									
Type		Text	SHT GA						
Finished_Length		mm	172.784861587948 mm	172.78...		1...			
Finished_Width		mm	64.0000000000002 mm	64.000...		6...			
Finished_Thk		mm	0.911859999999682 mm	0.911860		0...			
SHT_GA		ul	20 ul	20.000...		2...			
Sheet_Metal_Style		Text	DEFAULT						
Thk		mm	d1	0.911860		0...			

Add Numeric Update Purge Unused Import from XML Reset Tolerance << Less
Link Immediate Update Export to XML + Done

Automatically
changes the style
if left on default

Can be linked from
skeleton file

Style and Standard Editor [Library - Read/Write]

Back New... Save Reset All Styles

Sheet Metal [Default]

Sheet Bend Corner

Sheet

Material

Thickness

Thickness

Unfold Rule

Default_KFactor

Miter/Rip/Seam Gap

Thickness

Flat Pattern Bend Angle

Report Bending Angle (A)

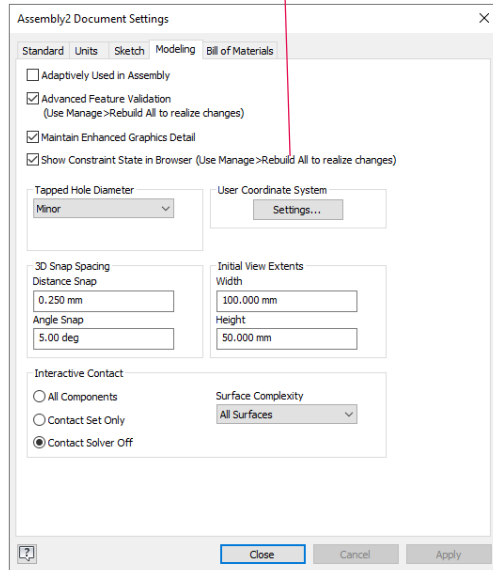
Flat Pattern Punch Representation

Formed Punch Feature

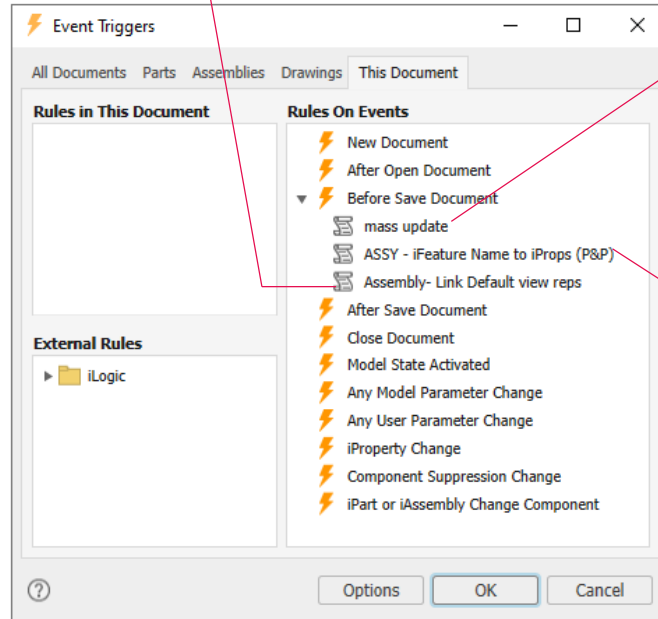
Import Save and Close Cancel

Assembly Template Automation

To show the constraint state in the browser setting saved with template



Keeps all component view representations linked to default and associative

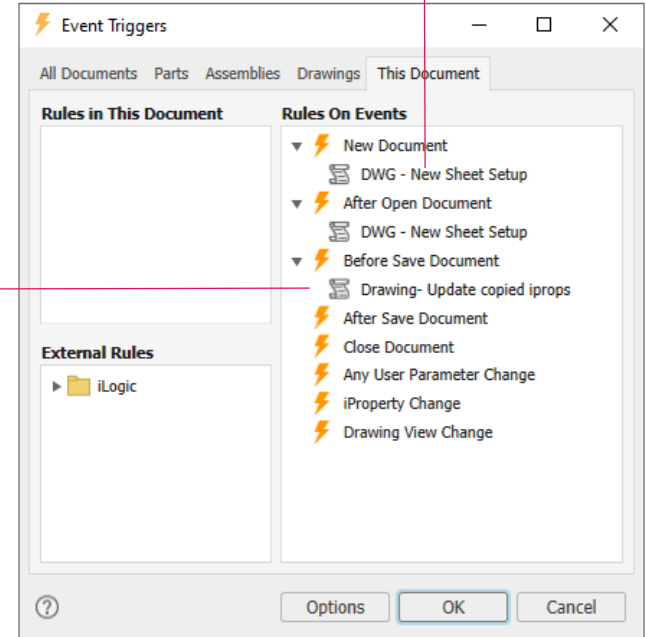
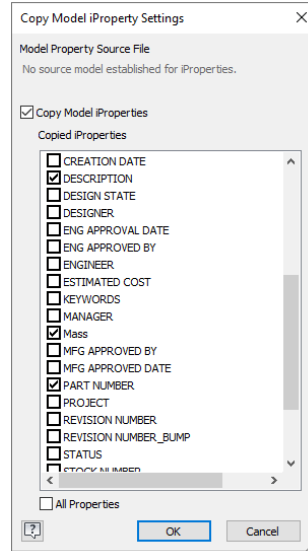
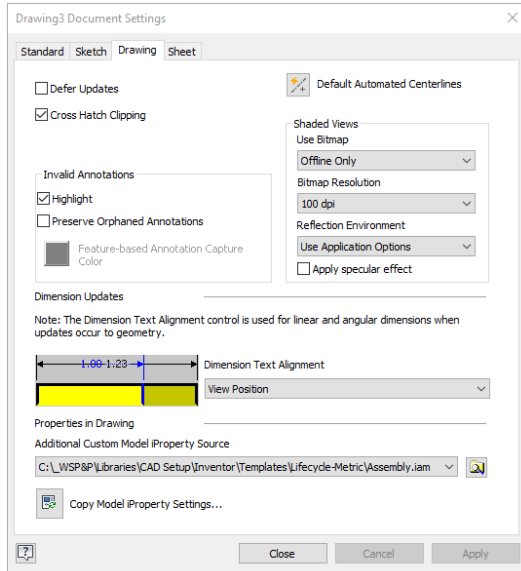


Mass Pushes to a custom iProperty so it can be seen in vault and so N/A does not appear

Ensures material sizes from structural shapes are kept up to date

Drawing Template Automation

We now have a smaller title block on the second sheet and every subsequent sheet. This is automated on New Sheet creation, even though there is no “New Sheet” trigger it is still possible with events



Keeps all copied iProperties from the model up to date

In House Add-In

Purchased component library validator

C-Part Validator

Components

c100334

iProperties

Summary Info

File Name
C:_WS\Libraries\Purchased Items\Mechanical
\Shock Absorber\c100334.ipt

Item Type
MEC ☐ Linear

Classification

Class 1: Library Class 2: Purchased Class 3: Mechanical

Class 4: Shock Absorber Class 5:

Manufacturer Info

Manufacturer Name
McMASTER CARR

Descriptors

Part Number: c100334 Description: 6309K34

Part Comments
VIBRATION-DAMPING MOUNT

Comments
VIBRATION-DAMPING MOUNT
McMASTER CARR #6309K34

DIMENSIONS
1.88" OD x 0.53 ID x 1.94"
47.75 OD x 13.5 ID x 49.3

TEMP RANG -20 DEG F. TO 180 DEG F.

COMPRESSION CAPACITY 130 LBS (59 KG)
SHEAR CAPACITY 50 LBS (22.7 KG)

Physical Info

Mass (kg)
0.065

Validation

- ☒ 0 Errors
- ☒ Purchased BOM Structure
- ☒ 4 Solid Bodies
- ☒ 0 Surface Bodies
- ☒ 0 Adaptive Sketches
- ☒ 0 Adaptive Features
- ☒ 0 Underconstrained Sketches
- ☒ Purged Unused Parameters
- ☒ Deleted Internal/External iLogic Rules
- ☒ Deleted OLE Links
- ☒ -- Material Name
- ☒ 201 File Size (KB)
- ☒ 0 Blocks for use in Skeletons
- ☐ False Validation run on this file

OK Apply Cancel

This does the following checks on our purchased component data and validates it

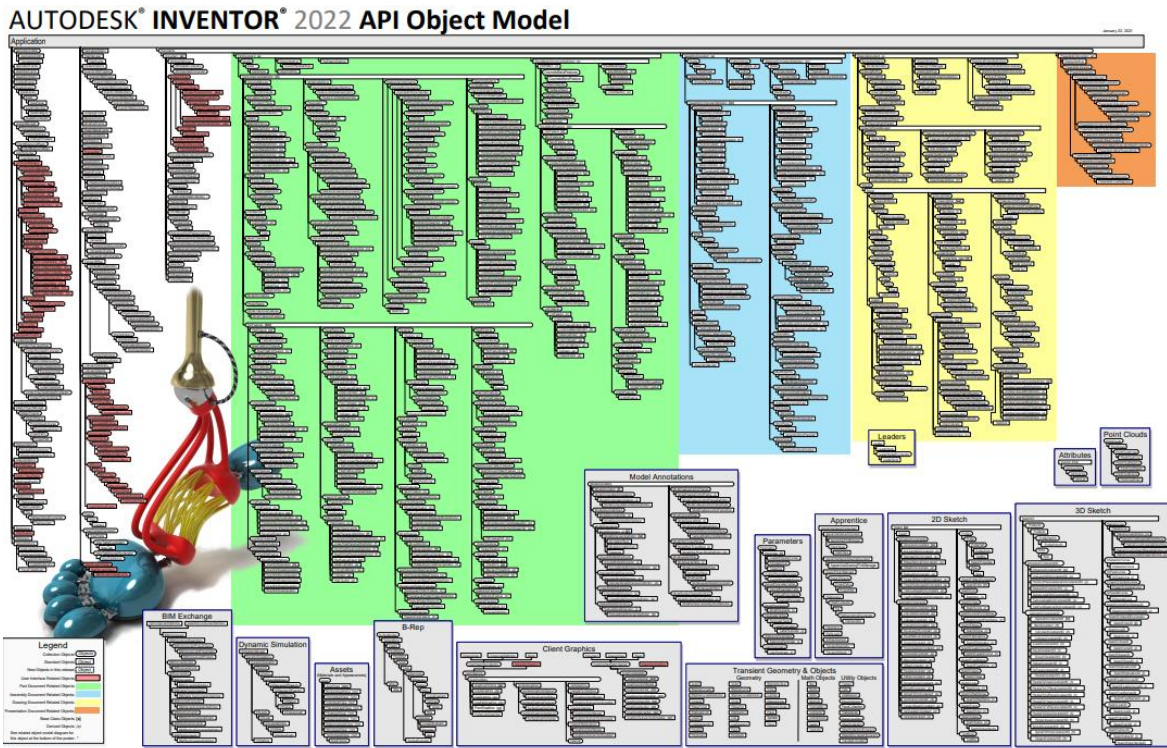
- Validation**
- ☒ 0 Errors
 - ☒ Purchased BOM Structure
 - ☒ 4 Solid Bodies
 - ☒ 0 Surface Bodies
 - ☒ 0 Adaptive Sketches
 - ☒ 0 Adaptive Features
 - ☒ 0 Underconstrained Sketches
 - ☒ Purged Unused Parameters
 - ☒ Deleted Internal/External iLogic Rules
 - ☒ Deleted OLE Links
 - ☒ -- Material Name
 - ☒ 201 File Size (KB)
 - ☒ 0 Blocks for use in Skeletons
 - ☐ False Validation run on this file

**AUTODESK®
INVENTOR®**

If this then that
Start small with simple
conditional statements

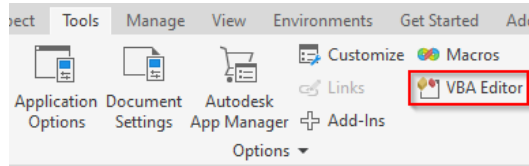
Using the API

red can use the Alt+P map to find where an object resides by using ctrl+F searching on the PDF but I find in general the help website is more useful

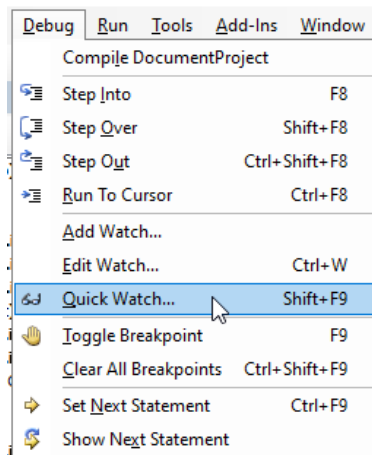
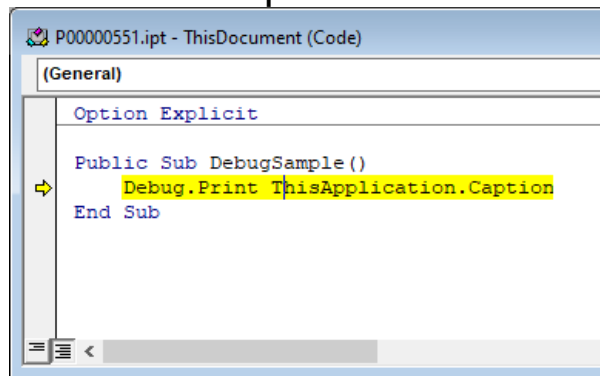


Getting Started Quickly with iLogic Guide

You then investigate all objects within the document



Use F8 to step into the code



Watches	
Expression	Value
ModelStates	
ActiveModelState	
Application	
Count	2
ExcelWorkSheet	
MemberEditScope	kEditAllMembers
ModelStateTable	
Parent	
Type	kModelStateObject
Item 1	
Application	
AttributeSets	
BOMDelegate	Nothing
Document	
FactoryDocument	
MemberDocument	
ModelStateType	kMasterModelStateType
Name	"Master"
Parent	
SubstituteDocumentDescriptor	Nothing
SubstituteOccurrence	Nothing
Type	kModelStateObject
Item 2	
Application	
AttributeSets	
BOMDelegate	Nothing
Document	
FactoryDocument	
MemberDocument	
ModelStateType	kCustomModelStateType
Name	"Assy Machining"
Parent	
SubstituteDocumentDescriptor	Nothing
SubstituteOccurrence	Nothing
Type	kModelStateObject

Getting Started Quickly with iLogic Guide

To find an object within the model you can use this iLogic

```
Imports system.windows.forms
```

```
Dim oObject As Object
```

```
oObject= ThisApplication.CommandManager.Pick(SelectionFilterEnum.kAllEntitiesFilter, "")
```

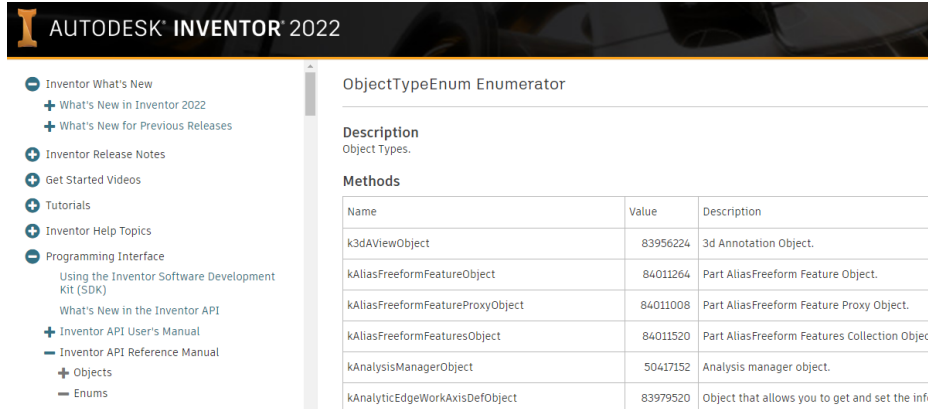
```
Dim oClip As String
```

```
oClip= oObject.type
```

```
Clipboard.SetText(oClip)
```

Getting Started Quickly with iLogic Guide

help.autodesk.com/view/INVNTOR/2022/ENU/?guid=ObjectTypeEnum



The screenshot shows the Autodesk Inventor 2022 help interface. On the left is a navigation pane with a tree view containing the following items: 'Inventor What's New' (expanded), 'What's New in Inventor 2022', 'What's New for Previous Releases', 'Inventor Release Notes', 'Get Started Videos', 'Tutorials', 'Inventor Help Topics', 'Programming Interface' (expanded), 'Using the Inventor Software Development Kit (SDK)', 'What's New in the Inventor API', 'Inventor API User's Manual', 'Inventor API Reference Manual', 'Objects', and 'Enums'. The main content area is titled 'ObjectTypeEnum Enumerator'. It includes a 'Description' section with the text 'Object Types.' and a 'Methods' section containing a table with three columns: 'Name', 'Value', and 'Description'.

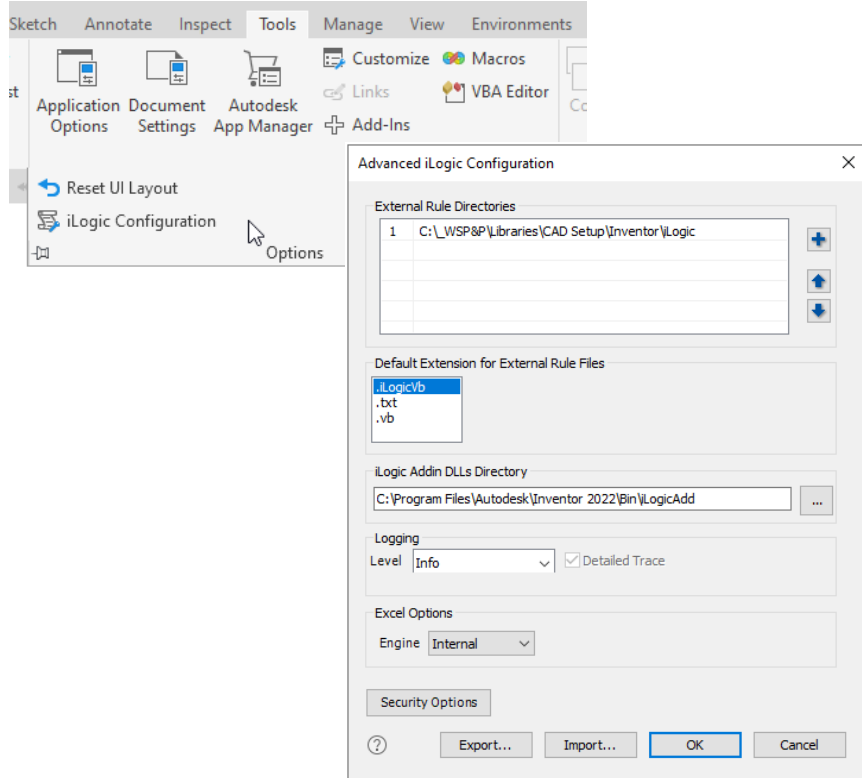
Name	Value	Description
k3dAViewObject	83956224	3d Annotation Object.
kAliasFreeformFeatureObject	84011264	Part AliasFreeform Feature Object.
kAliasFreeformFeatureProxyObject	84011008	Part AliasFreeform Feature Proxy Object.
kAliasFreeformFeaturesObject	84011520	Part AliasFreeform Features Collection Object.
kAnalysisManagerObject	50417152	Analysis manager object.
kAnalyticEdgeWorkAxisDefObject	83979520	Object that allows you to get and set the infor

Use ctrl F paste in from the iLogic rule

Resource

From the Trenches with Autodesk Inventor
inventortrenches.blogspot.com

Setup



When exported for application options 2022 onwards now includes the iLogic configuration path

ApplicationOptions.xml - Notepad

File Edit Format View Help

```
<ExternalRuleDirectories>
  <ExternalRuleDirectory Path="C:\_WSP&amp;P\Libraries\CAD Setup\Inventor\iLogic"/>
</ExternalRuleDirectories>
</iLogic>
```

Application Settings

☐ I would like to use the default Inventor settings.

☐ I would like to use settings closely related to AutoCAD.

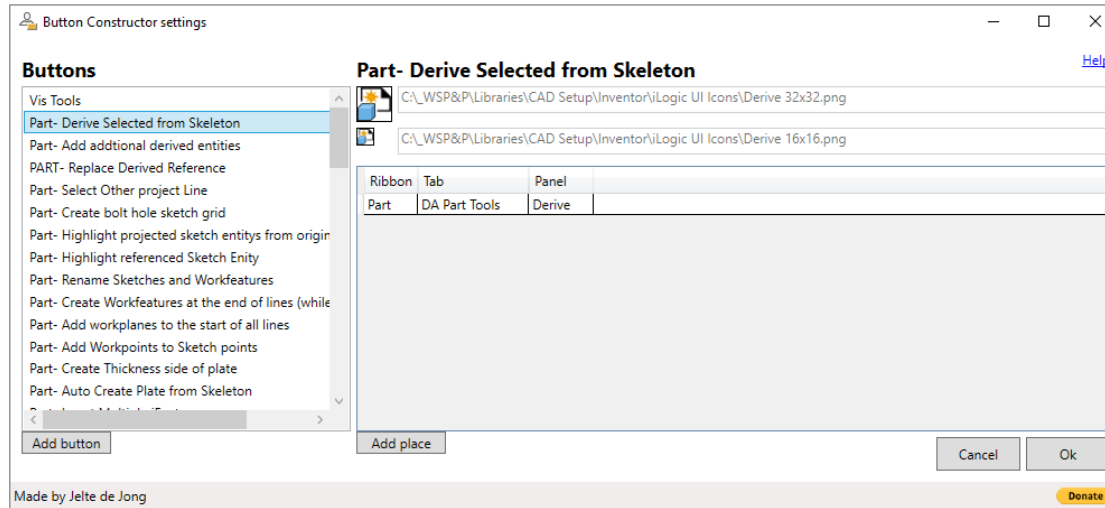
☒ I would like to import custom settings.

Enter the full path to the file with the exported settings (for example, C:\Folder\MySettings.xml or \\Server\Share\MySettings.xml). The .xml file must be accessible when running the downloaded deployment. For more information, search for "Export custom settings to an XML file" in the Inventor help.

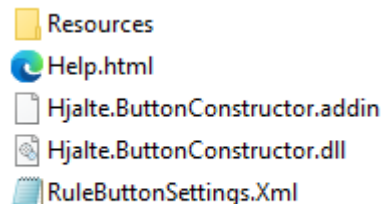
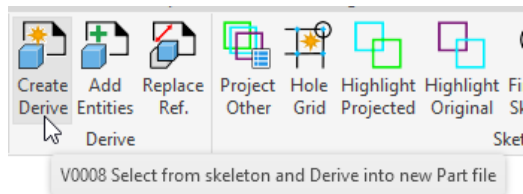
Browse

ApplicationOptions.xml

Button Constructor allows you to put iLogic rules on our own custom ribbon tabs



C:\ProgramData\Autodesk\ApplicationPlugins\Button Constructor.bundle\Contents



```
<ExternalRuleButton>
```

```
  <name>Create  
  Derive</name>
```

```
  <internalName>Part- Derive Selected from Skeleton_BtnCmd</internalName>
```

```
  <standardIconFilePath>C:\WSP&P\Libraries\CAD Setup\Inventor\iLogic UI Icons\Derive 16x16.png</standardIconFilePath>
```

```
  <largeIconFilePath>C:\WSP&P\Libraries\CAD Setup\Inventor\iLogic UI Icons\Derive 32x32.png</largeIconFilePath>
```

```
  <descriptionText>V0008 Select from skeleton and Derive into new Part file</descriptionText>
```

```
  <places>
```

```
    <ButtonPlace>
```

```
      <ribbonName>Part</ribbonName>
```

```
      <ribbonTabName>DA Part Tools</ribbonTabName>
```

```
      <ribbonPanelName>Derive</ribbonPanelName>
```

```
      <ribbonTabInternalName>id_DA_Part</ribbonTabInternalName>
```

```
      <ribbonPanelInternalName>Derive.Ribbon</ribbonPanelInternalName>
```

```
    </ButtonPlace>
```

```
  </places>
```

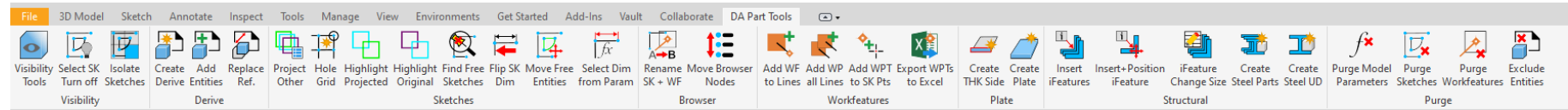
```
  <ruleName>Part- Derive Selected from Skeleton</ruleName>
```

```
</ExternalRuleButton>
```

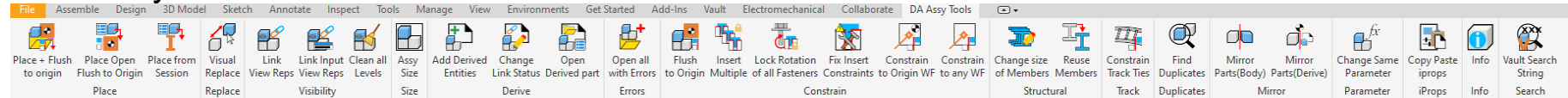
Dynamic's set of iLogic tools

Below is logic rules on custom ribbons using an app from the app store button constructor

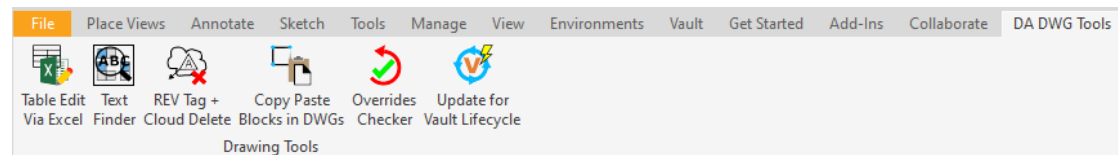
Part



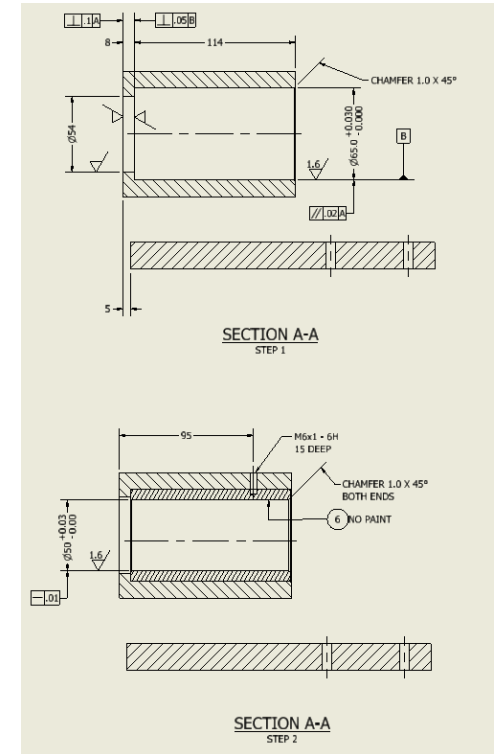
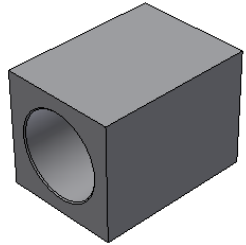
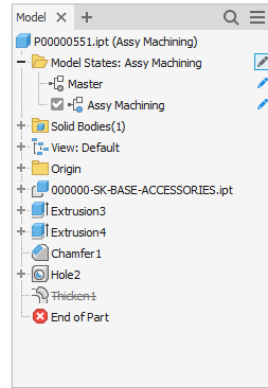
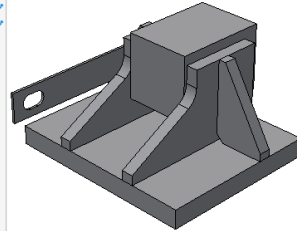
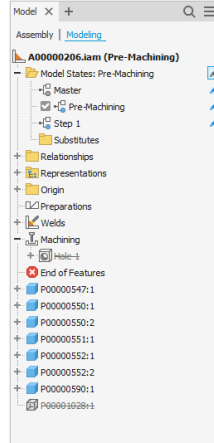
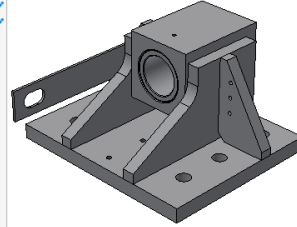
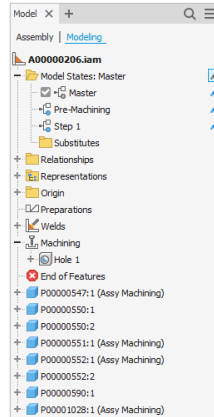
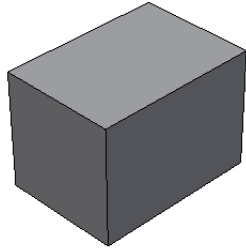
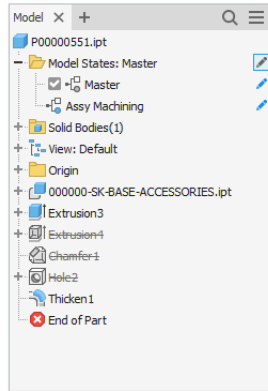
Assembly



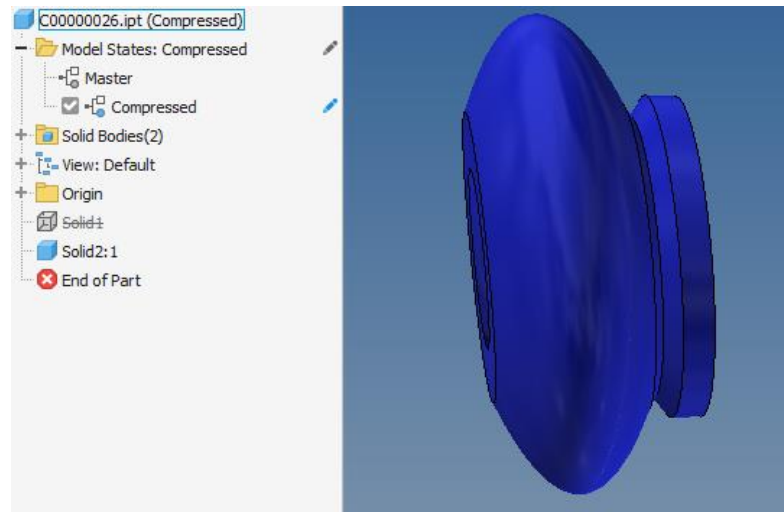
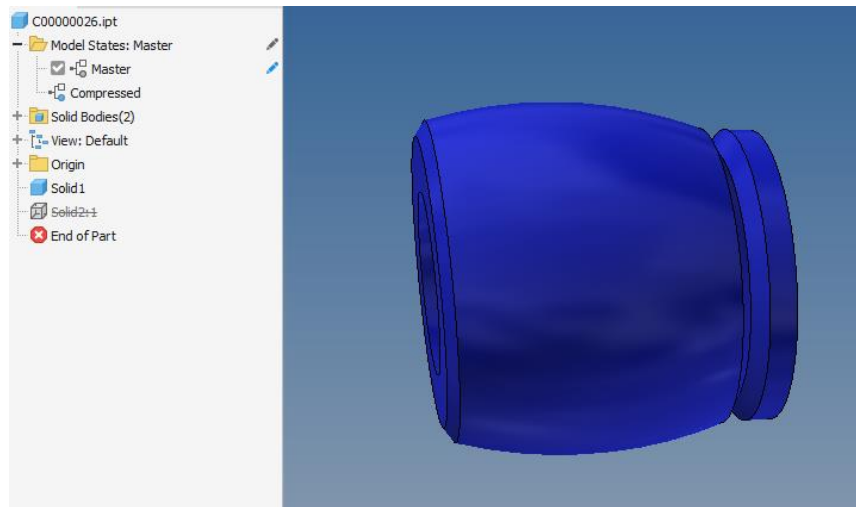
Drawing



Model States



Model States



Setup

C Library Lifecycle

Available Groups:

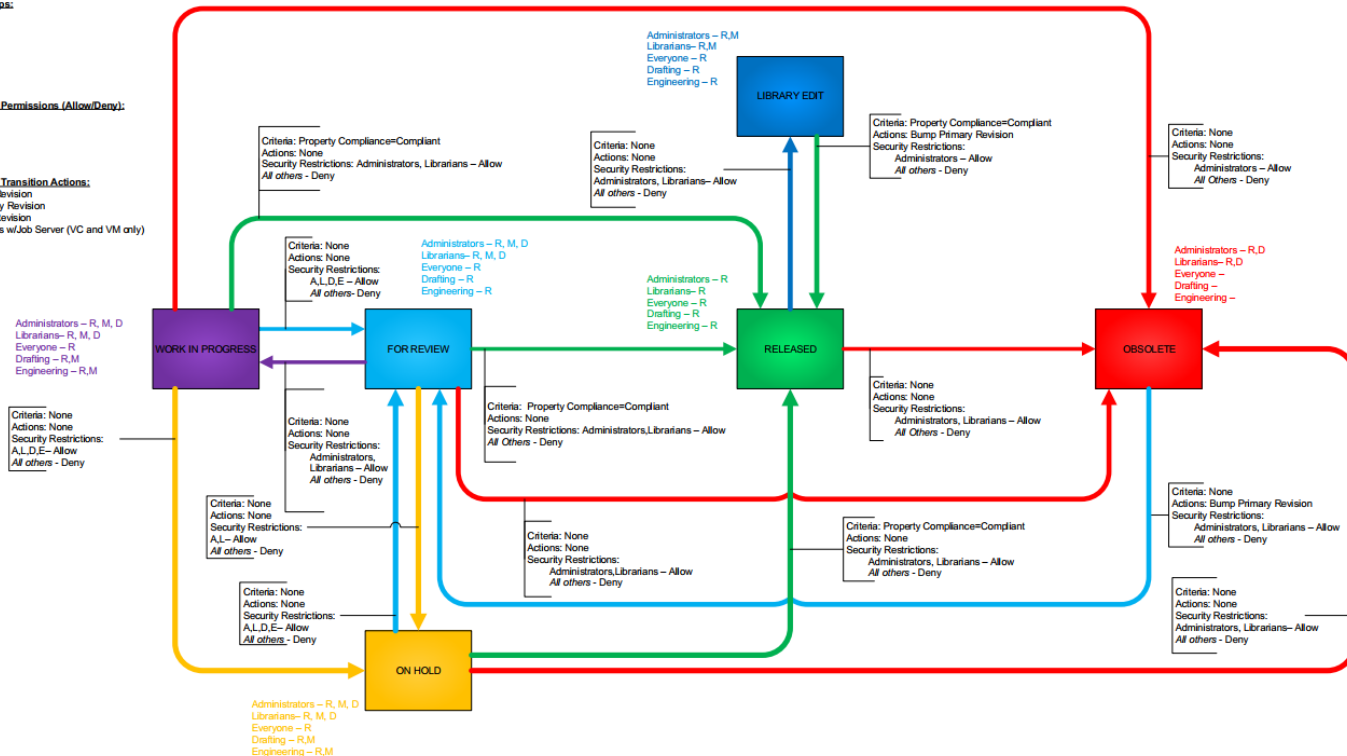
Administrators
Librarians
Everyone
Drafting
Engineering

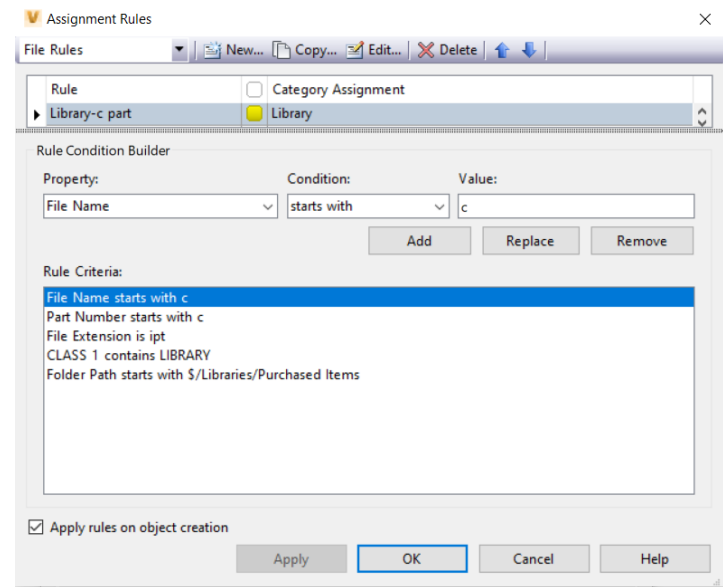
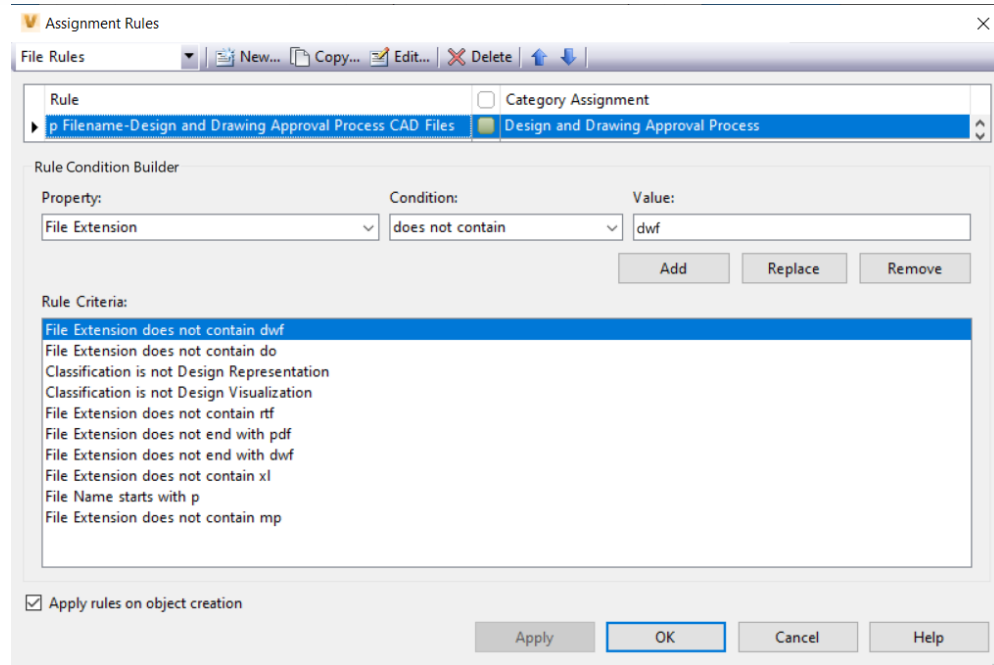
Lifecycle State Permissions (Allow/Deny):

R = Read
M = Modify
D = Delete

Lifecycle State Transition Actions:

Bump Primary Revision
Bump Secondary Revision
Bump Tertiary Revision
Synch Properties w/Job Server (VC and VM only)





Content Center Lifecycle

Available Groups:

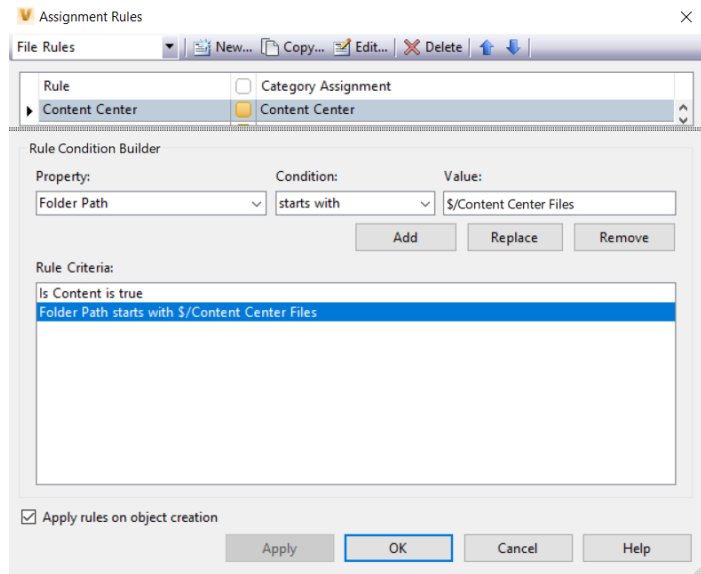
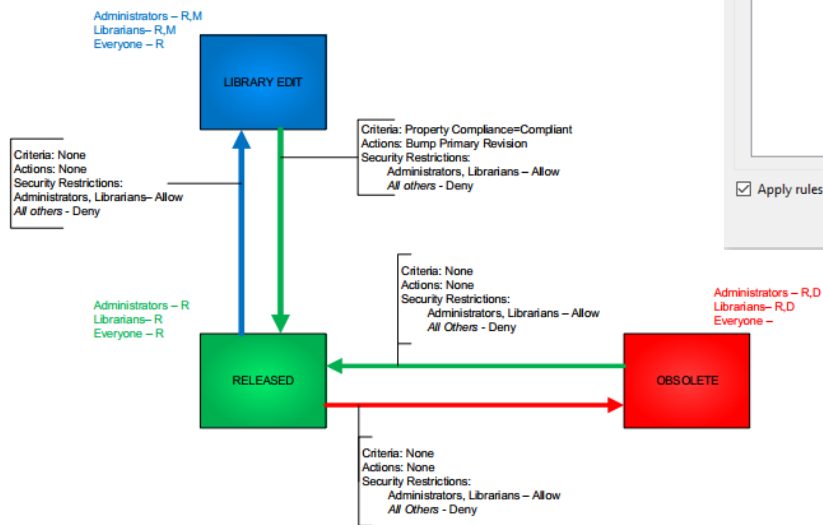
Administrators
Librarians
Everyone

Lifecycle State Permissions (Allow/Deny):

R = Read
M = Modify
D = Delete

Lifecycle State Transition Actions:

Bump Primary Revision
Bump Secondary Revision
Bump Tertiary Revision
Synch Properties w/Job Server (VC and VM only)



Setup/Customization

Reports

We currently use custom reporting for our drawing release process



Approval/Initiation Report

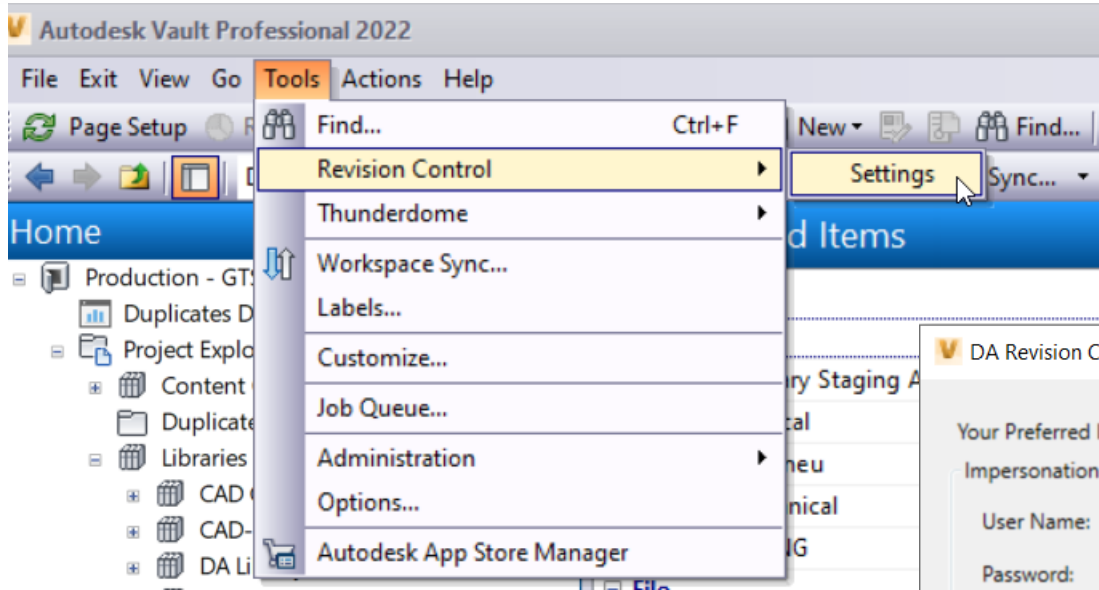
Folder Name : \$/Projects/2022/22-522 FT39 Monterey Bay V2/Production/Approval Records/20220310-2 (Code 100)

Generated By : GTS2K\jeffrey.gosior

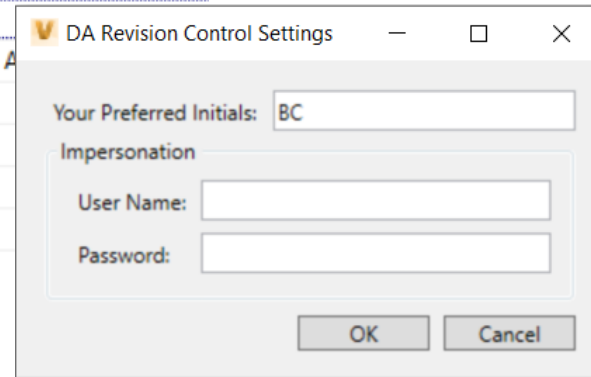
Date : 2022/03/17 01:44:19 AM

File Name	Description	Revision	Version	Lifecycle Definition	Project Name	Comment
22522-A1000.pdf	MOTION BASE PAD ASSEMBLY	1	15	Design and Drawing Approval Process PDFs Only	FT39 MONTEREY BAY V2	Update Design Representation
22522-A1001.pdf	BASE BEAM	1	9	Design and Drawing Approval Process PDFs Only	FT39 MONTEREY BAY V2	Update Design Representation
22522-A1002.pdf	BASE BEAM	1	9	Design and Drawing Approval Process PDFs Only	FT39 MONTEREY BAY V2	Update Design Representation
22522-A1003.pdf	BOX COLUMN	1	12	Design and Drawing Approval Process PDFs Only	FT39 MONTEREY BAY V2	Update Design Representation
22522-A1004.pdf	BOX COLUMN	1	11	Design and Drawing Approval Process PDFs Only	FT39 MONTEREY BAY V2	Update Design Representation

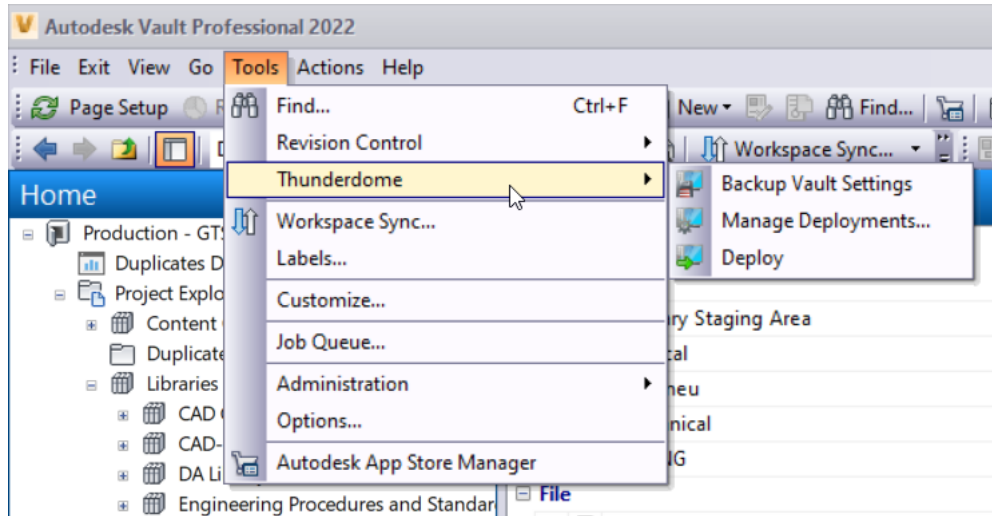
AUTODESK® VAULT PROFESSIONAL In-House Add-In



Automatically fills in the
revision table initials on
lifecycle transition



App store

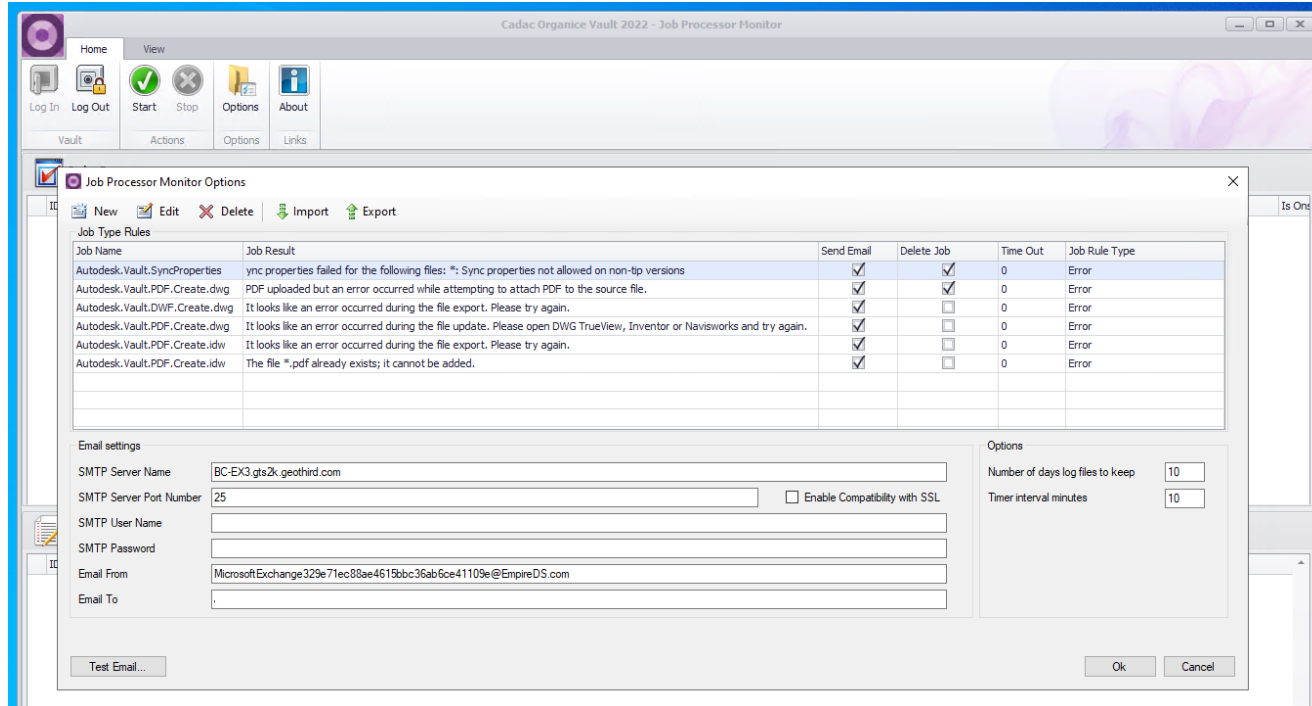


Enables us to push out client settings to all machines including settings like shortcuts, filter configurations, grid states, view styles, and saved searches

Job Processor Configuration



This can remove reoccurring errors from the job queue



Vault Mirror

In order to keep our setup files in vault and up to date on all users machines we use vault mirror

USAGE: VaultMirrorPlus.exe [SERVER] [VAULT] [WINDOWS|VAULT] [USERNAME] [PASSWORD] [VAULT PATH] [LOCAL PATH] [RECURSIVE: TRUE|FALSE] [KEEP FOLDER STRUCTURE: TRUE|FALSE] [ALL|FILESONLY|FOLDERONLY]

Server – the vault server host

Vault – the vault name

Windows or Vault – type of login user

Username

Password

Vault Path – “\$/Designs” for example

Local Path = “C:_VW\Designs\” – end with “\”

Recursive – true or false (includes subfolders)

Keep Folder structure or download all to one directory – true or false

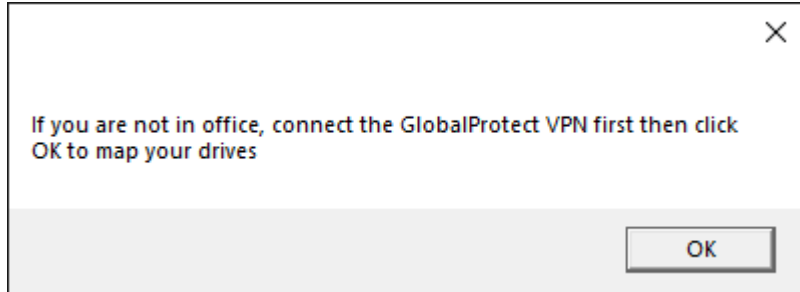
ALL or FILESONLY or FOLDERONLY – FOLDERS ONLY only creates the folders locally. FILES ONLY only downloads existing files (empty folders are ignored). ALL downloads files and creates empty folders.

Example

"C:\Program Files\Vault Mirror 2022.2.1\SolidCAD.VaultMirrorPlus.exe" vaultserver vaultname accounttype
username password "\$/Libraries/CAD Setup" "C:_WSP&P\Libraries\CAD Setup\" TRUE TRUE ALL

Vault Mirror

For remote users this is apart of our map network drives batch file

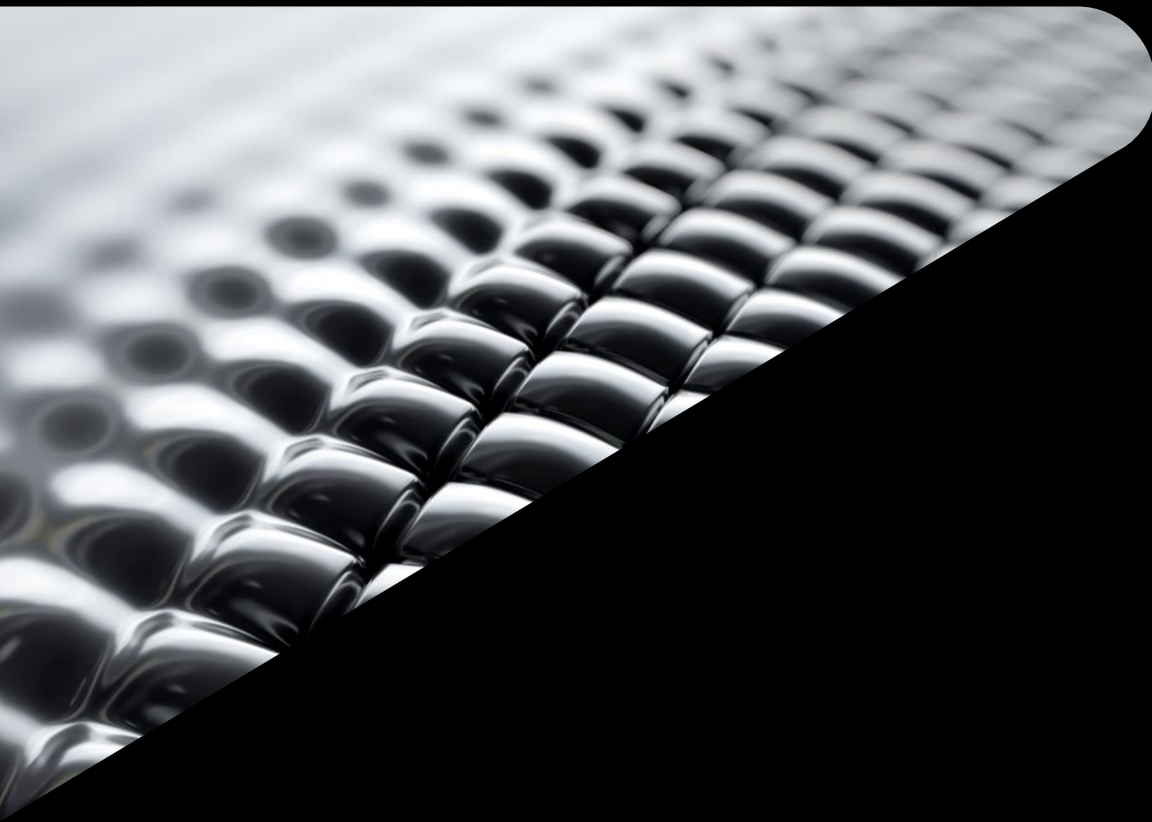


For office users it runs with windows task scheduler at 10am. This is also good for users that do not restart their machine



Batch code used
to create task for
deployment

```
@echo off
SET VAULT_MIRROR_PATH=filepath\VaultMirror_Cad-Setup.bat
IF NOT EXIST "%VAULT_MIRROR_PATH%" GOTO SKIP_SCHEDULING
schtasks /create /f /tn "Vault Mirror" /tr "%comspec% /c 'START " /MIN '%VAULT_MIRROR_PATH%' ^& exit'" /sc DAILY /st 10:00
GOTO END
:SKIP_SCHEDULING
echo File %VAULT_MIRROR_PATH% does not exist
:END
```




iLogic Tools

Demo

Future Improvements

Updating the purchased component validator to suit our new system and new functionality added



Technically component not part as we have assemblies

Collapsible

Title Bars could be a different colour based on which Vault the user is logged into

Give warning if not this root location based on new Library process

Allows the user to search on descriptions the user can then pick from description drop down the categories will then back fill based on that choice.

Example(s) are given here from new c library spread sheet based upon category and description chosen. In most cases will be one example but for some could be several so may require a scroll bar. These will be read only but copy paste is allowed.

Give Warning if miss match or incorrect

From new C Library spread sheet

Drop down based on categories chosen from new C library spread sheet. This cannot be typed in. If a new entry is required it would have to be requested

Drop down from new C Library spread sheet. This cannot be typed in. If a new entry is required it would have to be requested

Validation

- ☐ 0 Errors
- ☐ Purchased BOM Structure
- ☐ 4 Solid Bodies
- ☐ 0 Surface Bodies
- ☐ 0 Adaptive Sketches
- ☐ 0 Adaptive Features
- ☐ 0 Underconstrained Sketches
- ☐ Purged Unused Parameters
- ☐ Deleted Internal/External Logic Rules
- ☐ Deleted OLE Links
- ☐ --Material Name
- ☐ 201 File Size (KB)
- ☐ 0 Blocks for use in Sketches
- ☐ False Validation run on this file

Using current historical data

CLASS 3	CLASS 4	CLASS 5	Description	Additional Info	Exclude
MECHANICAL	ADHESIVE/ SEALANT/TAPE		ACRYLIC ADHESIVE ACTIVATOR		
MECHANICAL	ADHESIVE/ SEALANT/TAPE		ACRYLIC ADHESIVE CARTRIDGE	35 ml	
MECHANICAL	ADHESIVE/ SEALANT/TAPE		ACRYLIC FOAM TAPE	1" x 36 YD	
MECHANICAL	HARDWARE		ACTUATOR	AC	
HYD-PNEU	VALVE		ACTUATOR - SPRING RETURN		
ELECTRICAL	CONTROL		ACTUATOR- ILLUMINATED PUSHBUTTON	AMBER	
HYD-PNEU	GAUGE		ACTUATOR VALVE MONITOR		
ELECTRICAL	MOTOR		ACTUATOR ROD	84 x 1526	
HYD-PNEU	TANK		ACUMULATOR HIGH PRESURE		
HYD-PNEU	HOSE & FITTINGS		ADAPTER	#08 M JIC x 1/2" MNPT STRAIGHT, SS	
HYD-PNEU	HOSE & FITTINGS		ADAPTER	#8 SAE-O RING BOSS TO 3/8" BSPP	
HYD-PNEU	HOSE & FITTINGS		ADAPTER	1/4" FNPT TO 3/4" MNPT	
HYD-PNEU	HOSE & FITTINGS		ADAPTER	1-5/16" SAE-O RING BOSS x 3/4" MNPT	
HYD-PNEU	HOSE & FITTINGS		ADAPTER	3/4" M SAE O RING BOSS TO 3/4" MNPT	
HYD-PNEU	HOSE & FITTINGS		ADAPTER	3/4" JIC 37' FLARE TO SAE-ORB 1-1/16"-12	
HYD-PNEU	HOSE & FITTINGS		ADAPTER	3/8" M SAE TO 3/8" MNPT	
HYD-PNEU	HOSE & FITTINGS		ADAPTER ELBOW 90°	3/8" M BSPT TO 3/8" F BSPT, 304 SS	
HYD-PNEU	HOSE & FITTINGS		ADAPTER ELBOW 90°	1" MNPT TO 1" FNPT	
HYD-PNEU	HOSE & FITTINGS		ADAPTER SWIVEL	3/8" HOSE BARB TO 3/8" F SAE 45 DEG	

BC RUBBER
HEYCO
SBC
TURCK
3 PHASE
3M
80/20 INC
A2
AAA ACME
AAC
ABB
ACCROSEAL
ACCU-CABLE
ACCUMULATORS INC
ACCURATE MANUFACTURED PRODUCT GROUP
ACCURIDE
ACE

This will then create a validation property and value that can then be used with property compliance in vault

Note: Items on the spread sheet that contain something in the exclude column should not be added to the drop downs

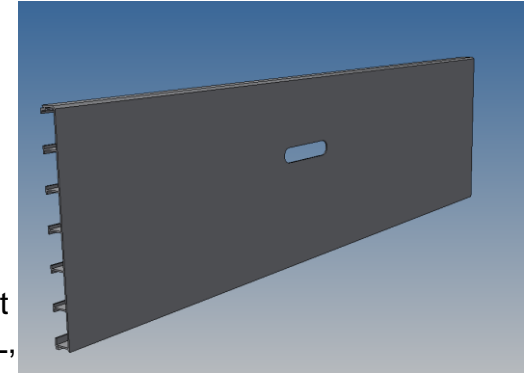
Future Improvements

Complete our vault utilities with Solidcad

- On demand step file creation
- Lifecycle change notifier with ad hoc
- On demand and lifecycle transition DXF creation

Lifecycle – e.g. on lifecycle transition state on an ipt from Lead review to released looking at the configuration file if sheet metal sub file type and had flat pattern or e.g. ((Description: PL, ITEM_TYPE: PL, ITEM_TYPE: SHT, ITEM_TYPE: FDK , Item Type: PL, Item Type: SHT, Item Type: FDK) therefore we need to be able to define properties and contains) then save temp file to sheet metal file sub type find largest face then create flat pattern using SheetMetalComponentDefinition.Unfold2 Method then export DXF (Flat pattern DXF options should also be in configuration file) output file should have same category, lifecycle definition and state as original source file.

On demand - e.g. would be the same as lifecycle except would not look at property conditions.



Eg of FDK – Floor Deck

Future Improvements

- **Vault Downloader**

User will select a file (or multiple files) within Vault Explorer and within the right-click context menu, select the option "Email Files". The files will then be downloaded from vault to a temporary location and renamed to incorporate the naming convention within the configuration file.

For example, if the source filename is "Widget.DXF" and the Revision is "3", the filename will be renamed to "Widget_3.DXF"

If the total file size is under the threshold defined within the configuration file, a new Microsoft Outlook email will be initiated and the files automatically attached. If however, Microsoft Outlook is not installed or if the file size exceeds the threshold, the user will be prompted for a download location instead.

- **Suppress Derived link on released**

The lifecycle definition(s) for Inventor part files (IPT) will be configured so that on release, a custom job ("Inventor.Suppress.Derived.Link") is automatically placed onto the job queue. When the job is executed, if the Inventor part file includes a derived component with an active link, that link will be suppressed.


Future Improvements

- Extract Bill of Materials

In Vault Explorer, user will select a single Inventor assembly for which they want to export the Bill of Material and via the right-click menu, select the custom command "Export BOM". A dialog will appear in which the export location will be specified. The assembly bill of material will be exported according to the configuration file which will supply the export type, format and iProperties to include within the export.

- Adding drawing checks for overridden parts list cells, overridden dimensions, overridden balloons then adds validation property and value then using property compliance in vault
- Inventor drawing sheet sets
- Vault data standard
- New Inventor add-in to Validate our new setup CAD data
- We now have Autodesk Fusion 360 Manage (PLM) which we initially will use for ECO's and transmittals


Idea Station & Beta forum

9 Ben-Cornelius

12-14-2013 06:52 PM | IMPLEMENTED

Insert Constraint Lock Rotation

I want the option to lock the rotation when using the insert constraint


 Add tags


VOTE

468 Votes

80 Comments (29 New)

POST A COMMENT


 Report

9 Ben-Cornelius

12-13-2013 07:01 PM | IMPLEMENTED

Flip command on mate axis

When mating an axis from one part to another it often mates the wrong way you than have to cancel out rotate the part the remate it. This very time consuming and requires a lot of clicking. All you need is a flip option.


 Add tags


VOTE

403 Votes

24 Comments (4 New)

POST A COMMENT

 Report


6 james.collinsPWQR2

05-04-2018 11:36 AM | IMPLEMENTED

Edit Constraint add Suppress Button

Hi Guys, I am really liking the ability to edit suppressed constraints, but I don't want to have to exit the Edit Constraint command, to un-suppress the constraint. It would be great to see a Suppress tick box in the Edit Constraint command. Thanks, James

assemblies constraint, Edit Constraint, suppress


 Add tags

VOTE

14 Votes

6 Comments (0 New)

POST A COMMENT

 Report

forums.autodesk.com

feedback.autodesk.com



Autodesk and the Autodesk logo are registered trademarks or trademarks of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. Autodesk reserves the right to alter product offerings, specifications and pricing at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document.

© 2022 Autodesk. All rights reserved.