PTC® Live Global

CUST224: The Power of Positioning Assemblies in Creo View

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PACCAR Vehicle Integration Engineer

June 11th, 2013 – 4:00-4:45PM
Room 203A

*All presentations are subject to change

PACCAR Company Information

Windchill/Creo View 2/Creo Parametric 2

KENWORTH

DAF

Peterbilt

Positioning Assemblies

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Outline

- Statistics and Video
- What is a Positioning Assembly
- Why
- Big Picture
- Creo View Settings
- Publishing
- Benefits
- Needs

Positioning Assemblies - Statistics

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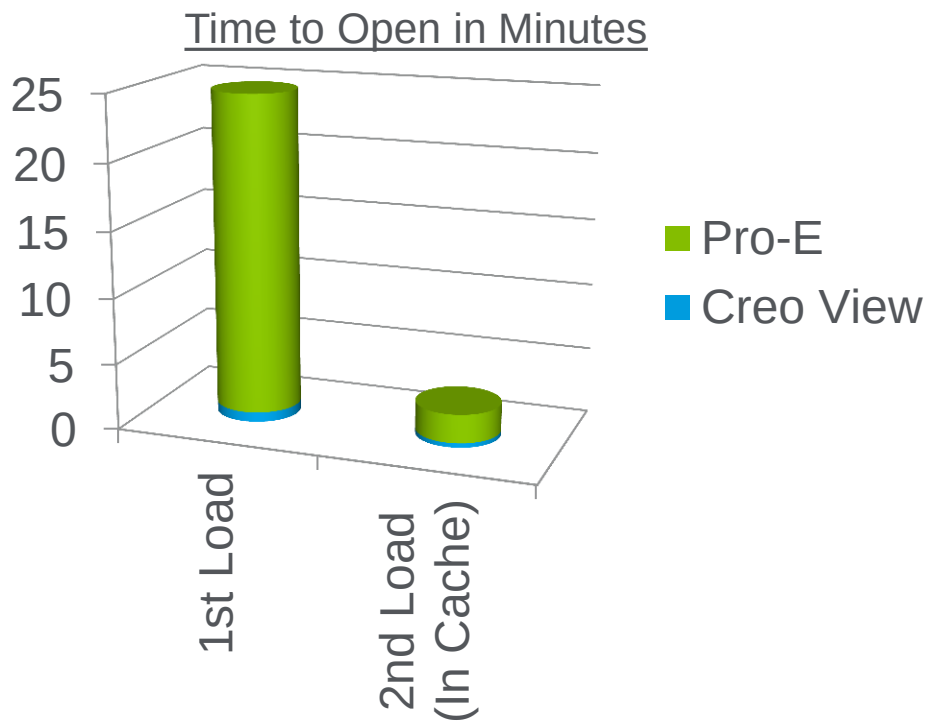
Opening Simplified Reps/Viewables/Annotations

- Simplified Rep Created in Top Level Assembly
- Auto Load in Creo View M040
  - *Enhancement in M040 Driven by PACCAR*



Positioning Assemblies - Statistics

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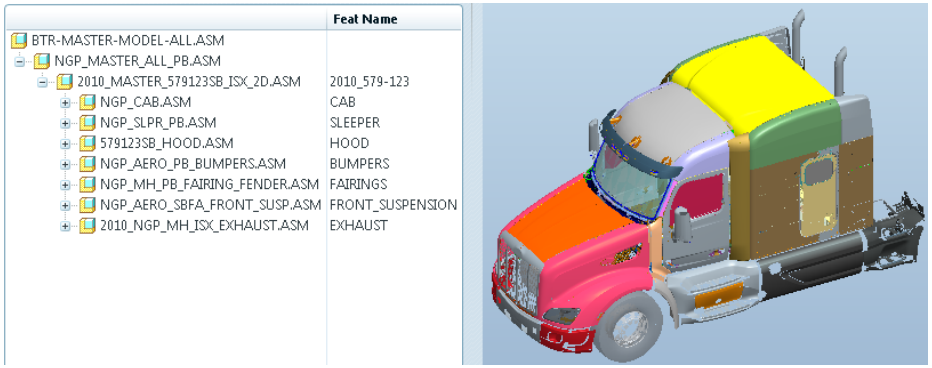
Opening Simplified Reps/Viewables/Annotations

Pro-E

1st Load = 1440 sec

2nd Load = 130 sec *(Cache)*



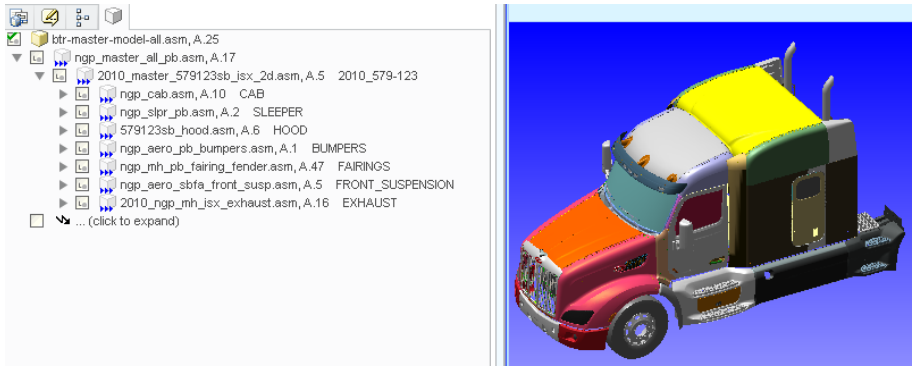
Creo View

1st Load = 44 sec

- 13 sec for links
- **31** sec for models

2nd Load = 20 sec *(Cache Enabled)*

- 13 sec for links
- **7** sec for models



Assembly Statistics:
Over 600,000 Required Dependents
216 - Assemblies Loaded
233 - Parts Loaded

Positioning Assemblies

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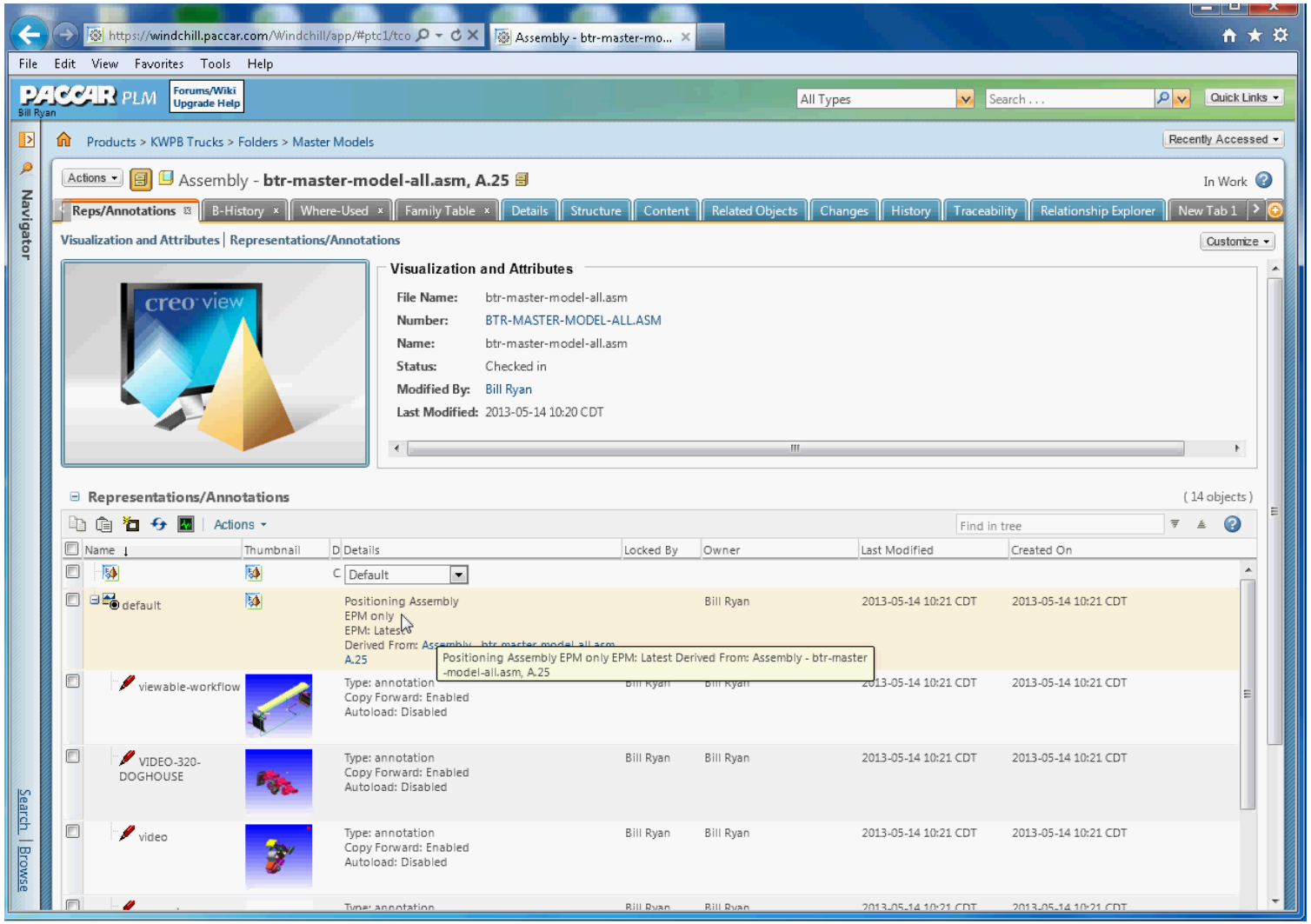
Video



Positioning Assemblies

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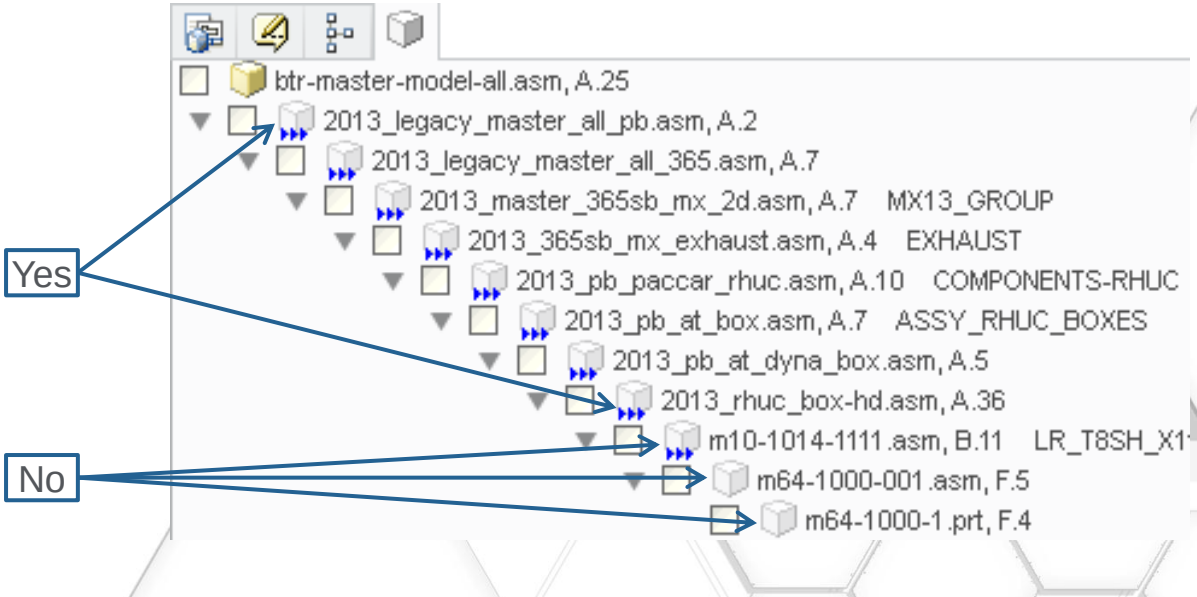
What is a Positioning Assembly

- A Positioning Assembly is a High-Level Assembly that is Used to Fix the Relative Location (Position) of its Child Assemblies.
- Icon Definition in Creo View Tree Structure

Indicates Parent Assembly is **Published** as a Positioning Assembly

Indicates Parent Assembly is **Not Published** as a Positioning Assembly



Positioning Assemblies

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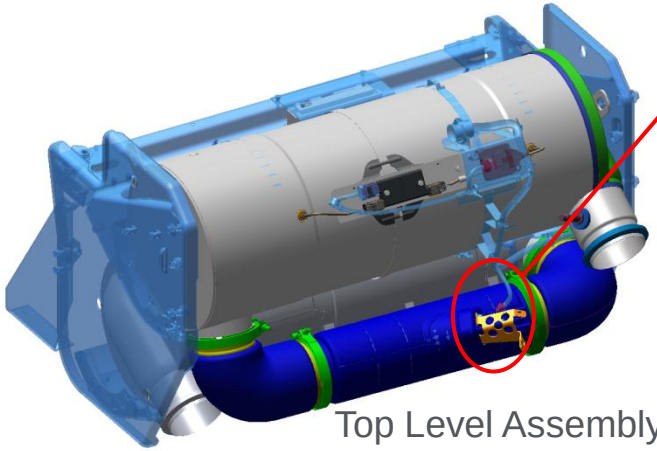
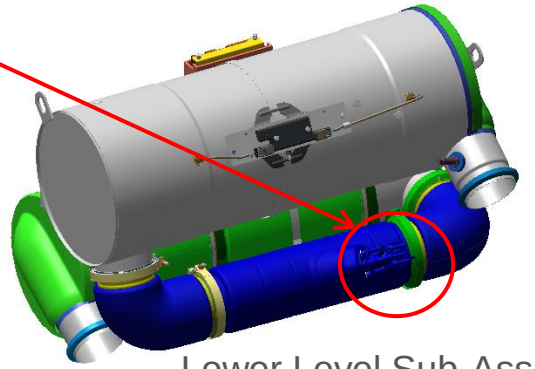
Why



Top Level Assembly

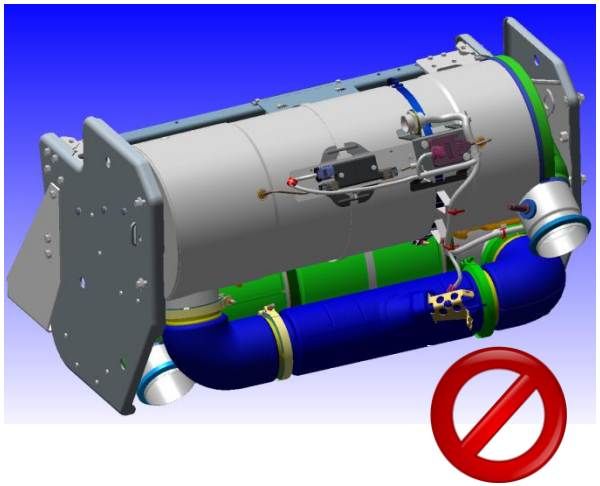
Check In Change from
Creo Parametric

Remove



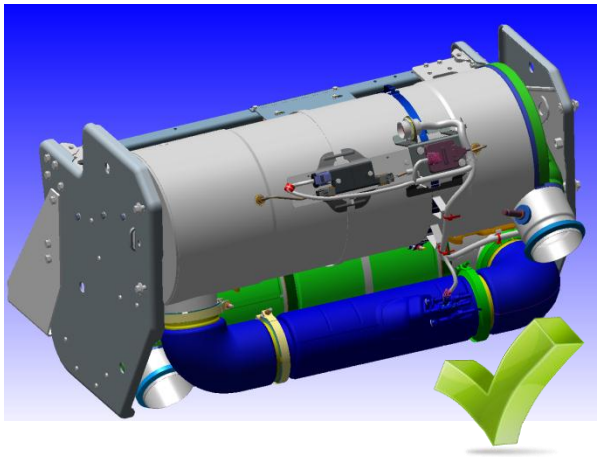
Lower Level Sub-Assembly

WITHOUT
Positioning Assembly



Load in
Creo View

WITH
Positioning Assembly



Positioning Assemblies – Big Picture

Integration of Creo View, Creo Parametric and Windchill for Large Development Assemblies

- Development uses Combination Top-Down and Bottom-Up Design with 150% BOM Assemblies including many levels of gathering assemblies to organize each system of the vehicle

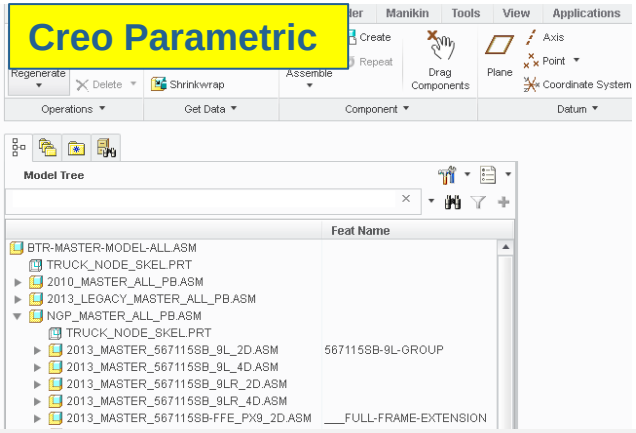
- Goal:
  - Navigate Large Assemblies and View Latest 3-D Cad Information Faster

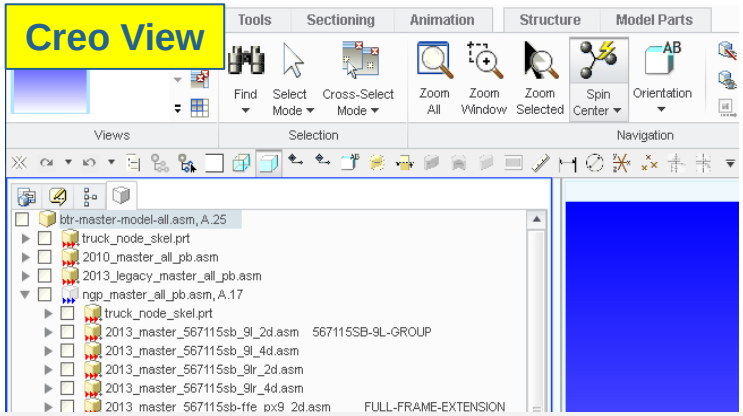
- Solution:
  - Positioning Assembly Publishing

Positioning Assemblies – Big Picture

Big Picture - Integration of Creo & Windchill

Information & Publishing





Assemble - Create/Modify

Component Placement Defined

Review, Analyze, Mark-Up

Navigate and Open Similar to Creo Parametric

Positioning Assemblies – Big Picture

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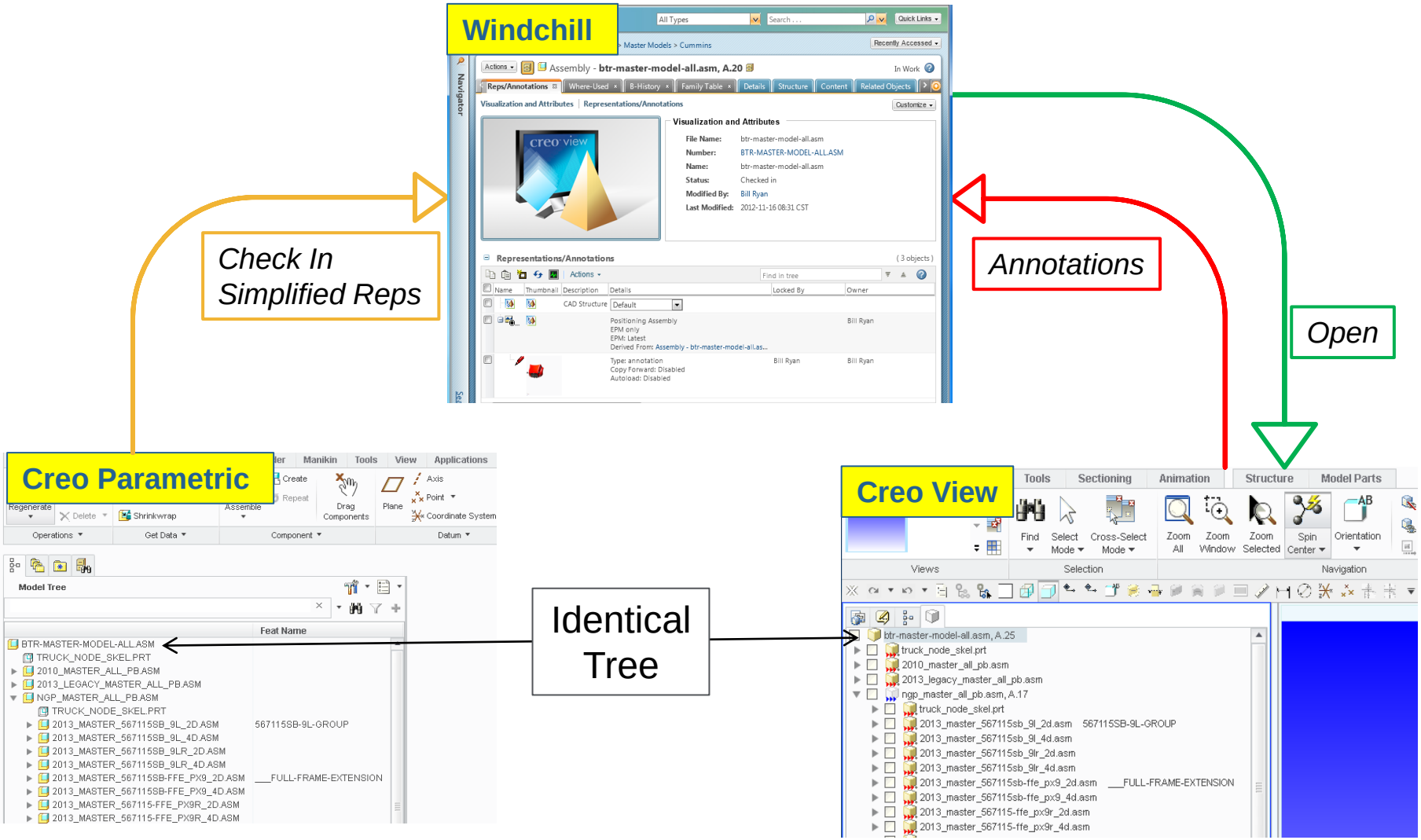
Workflow - Creo & Windchill



Positioning Assemblies - Settings

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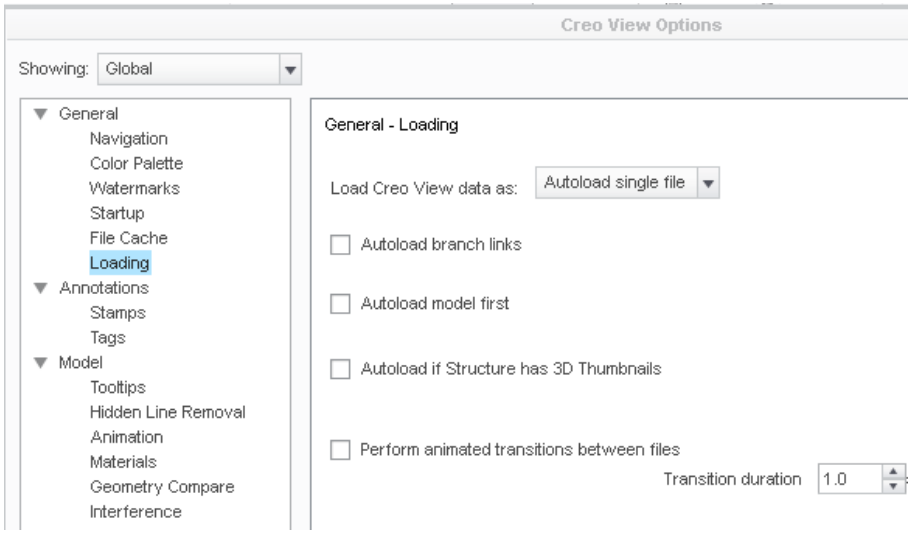
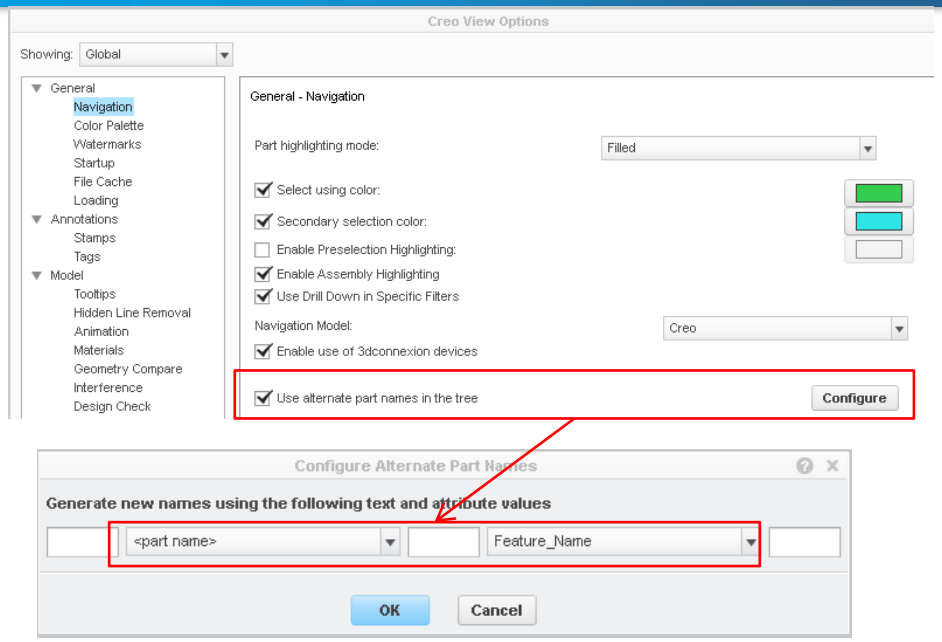
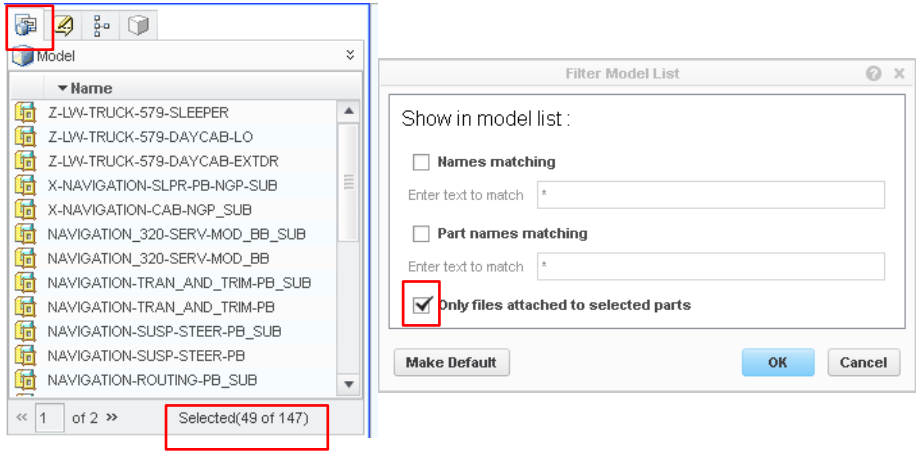
Creo View Settings



Load Minimal Data

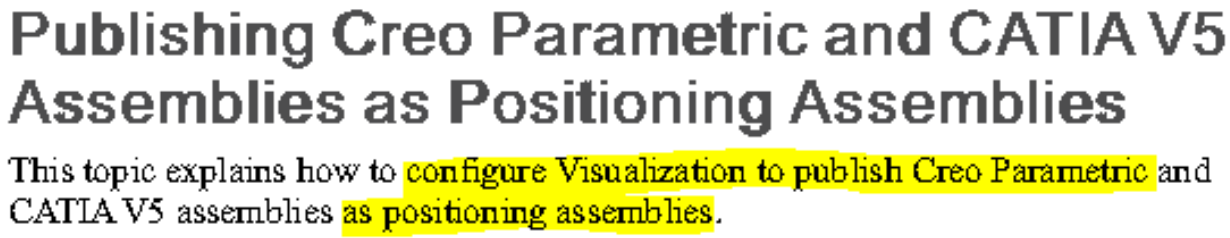


Navigation – Feature Name



Show **Viewables** Associated with Selected Assembly

Publisher Settings

- See Positioning Assembly Section of Reference Guide
  - http://www.ptc.com/WCMS/files/138204/en/WindchillVisualizationServicesGuide_10-1_M040.pdf
  - 

Publishing Creo Parametric and CATIA V5 Assemblies as Positioning Assemblies

This topic explains how to configure Visualization to publish Creo Parametric and CATIA V5 assemblies as positioning assemblies.

- Settings in PACCAR WVS Properties File
  - publish.positioningassembly.ibaname=POSITIONING_ASSY
    publish.positioningassembly.publishchildren=false

Positioning Assemblies – Windchill Publishing

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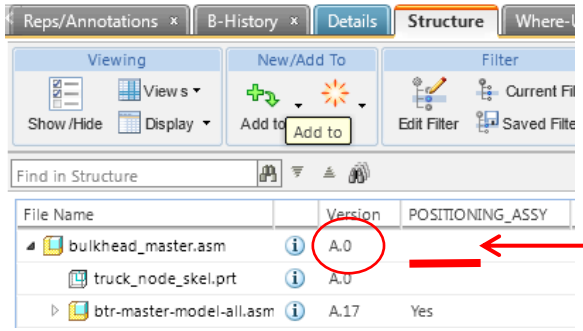
Publisher and Background Method Server

WVS Monitor

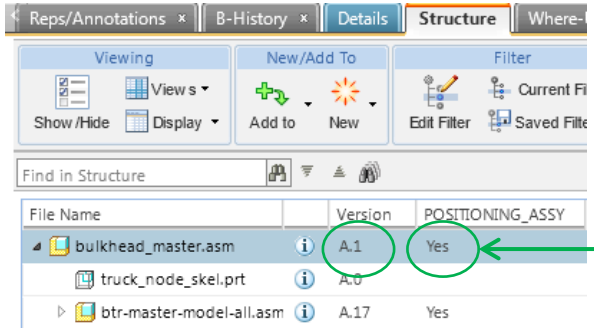
Q	Job		Job Status	Number	Name	Version
L5	2,294,127		EXECUTING	BULKHEAD_MASTER.ASM	bulkhead_master	A.0
L3	2,294,066		EXECUTING	CCR_CONSOLE_BOM.ASM	ccr_console_bom	A.15
L4	2,285,964		EXECUTING	EPL_PX9_GRID_HEATER.ASM	epl_px9_grid_heater	A.0
L2	2,285,800		EXECUTING	RAS_UNDERBODY_LINES.AS...	ras_underbody_lines	A.0
L1	2,285,108		EXECUTING	579_DEMO-2_AERO.ASM	579_demo-2_aero	A.13
L6	2,285,072		EXECUTING	S-TRUCK_MASTER_NGP_ISX...	s-truck_master_ngp_isx_2d.asm	A.25

6 Large Assemblies Publishing

Issues: Backed up Jobs
Unable to Release DWG
BGMS Performance



Reason: No Positioning Assembly Parameter



Solution: Add Positioning Assembly Parameter

Positioning Assemblies – Windchill Publishing

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Publisher Statistics

Job Summary for Bill Ryan All

Turn Auto Refresh On

Position	Q	Job		Job Status	Number	Name	Version	Context	User
	M2	2,314,834		JOB SUCCESSFUL	BTR-MASTER-MODEL-ALL.ASM	btr-master-model-all.asm	A.20		Bill Ryan

(0 objects selected)

Job Detail

<3 Minutes - Start to Finish

Refresh | Turn Auto Refresh On | Save Job Log

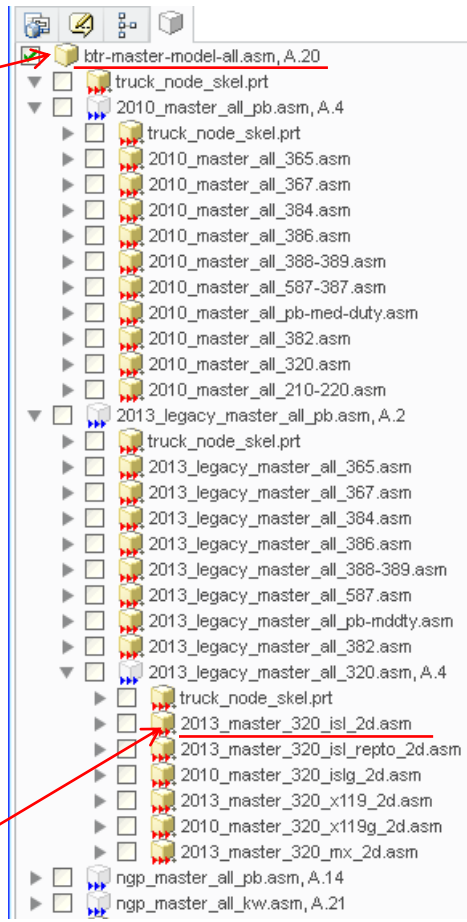
Queue Name:	M2	**Job Submitted:**	2013-01-16 13:31 CST
Job:	2314834	**Job Start:**	2013-01-16 13:33 CST
Job Type:	Publish Job	**Job End:**	2013-01-16 13:33 CST
Job Source:	Manual	**Job Status:**	JOB SUCCESSFUL
Number:	BTR-MASTER-MODEL-ALL.ASM	**Context:**	DevEng Archive
Name:	btr-master-model-all.asm	**User:**	Bill Ryan
Version:	A.20	**Description:**	

Job Log

```
Jan 16, 2013 11:33:13 AM:make temp dir /opt/ptc/wc/Windchill/tmp/pubtemp/publish7663347654458965864.tmp
Jan 16, 2013 11:33:13 AM:Start Job: Assembly  - btr-master-model-all.asm, A.20
Jan 16, 2013 11:33:13 AM:The EPMDocument Default Config Spec was selected as the default
Jan 16, 2013 11:33:13 AM:Start: Assembly  - btr-master-model-all.asm, A.20
Jan 16, 2013 11:33:13 AM:Authoring Application: Creo
Jan 16, 2013 11:33:13 AM:Use "Positioning Assembly" Processing
Jan 16, 2013 11:33:13 AM:Transferring Files to: /opt/ptc/wc/Windchill/tmp/pubtemp/publish7663347654458965864.tmp
Jan 16, 2013 11:33:15 AM:Number of Files (identified to be) Transferred: 1
Jan 16, 2013 11:33:15 AM:Creo Asm Conversion
Jan 16, 2013 11:33:15 AM:Added request to PROE queue
Jan 16, 2013 11:33:15 AM:No available connected worker
Jan 16, 2013 11:33:15 AM:Starting new worker wcpubprod3-PROE
Jan 16, 2013 11:33:25 AM:Job 425 submitted to worker: wcpubpro
Jan 16, 2013 11:33:25 AM:LOGID: worker_22.log
Jan 16, 2013 11:33:25 AM: Registering Server
Jan 16, 2013 11:33:33 AM: Downloading btr-master-model-all.asm
Jan 16, 2013 11:33:34 AM: Loading btr-master-model-all.asm
Jan 16, 2013 11:33:34 AM: Processing btr-master-model-all.asm
Jan 16, 2013 11:33:34 AM: Converting Author States
Jan 16, 2013 11:33:34 AM: Generating Output
Jan 16, 2013 11:33:38 AM:/opt/ptc/wc/Windchill/tmp/transfer/w3i1j425/btr-master-model-all_asm.pvs
Jan 16, 2013 11:33:38 AM:Asm Processing Returned: /opt/ptc/wc/Windchill/tmp/transfer/w3i1j425/btr-master-model-all_asm.pvs
Jan 16, 2013 11:33:38 AM:Start Store Component Viewable Files
Jan 16, 2013 11:33:38 AM:Uploading Files
Jan 16, 2013 11:33:40 AM:End Store Component Viewable Files: 53 Files
Jan 16, 2013 11:33:40 AM:remove temp dir: /opt/ptc/wc/Windchill/tmp/transfer/w3i1j425
Jan 16, 2013 11:33:40 AM:End: Assembly  - btr-master-model-all.asm, A.20
Jan 16, 2013 11:33:40 AM:New Representation Created: default
Jan 16, 2013 11:33:40 AM:Check for out of date Representations
Jan 16, 2013 11:33:41 AM:Number of Representations marked as out of date: 0
Jan 16, 2013 11:33:41 AM:End Job: Assembly  - btr-master-model-all.asm, A.20
Jan 16, 2013 11:33:41 AM:Publish Complete event dispatched
Jan 16, 2013 11:33:41 AM:remove temp dir: /opt/ptc/wc/Windchill/tmp/pubtemp/publish7663347654458965864.tmp
```

28 Seconds of Processing

Contains over 400 Truck Assemblies

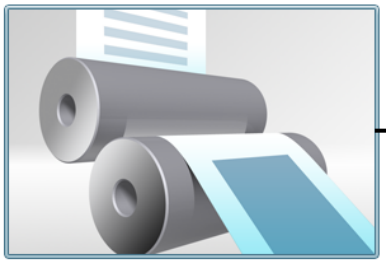


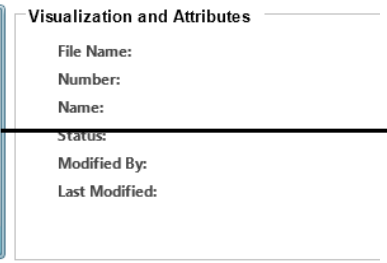
1 Truck Assembly w/ 150% BOM

Positioning Assemblies – Windchill Publishing

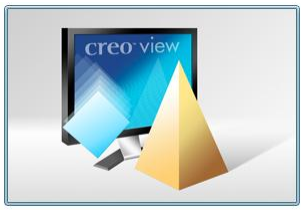
Publishing Options from Windchill

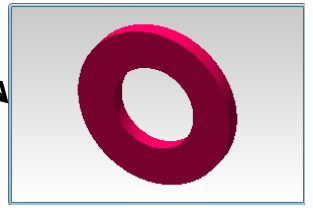
Manual Publish



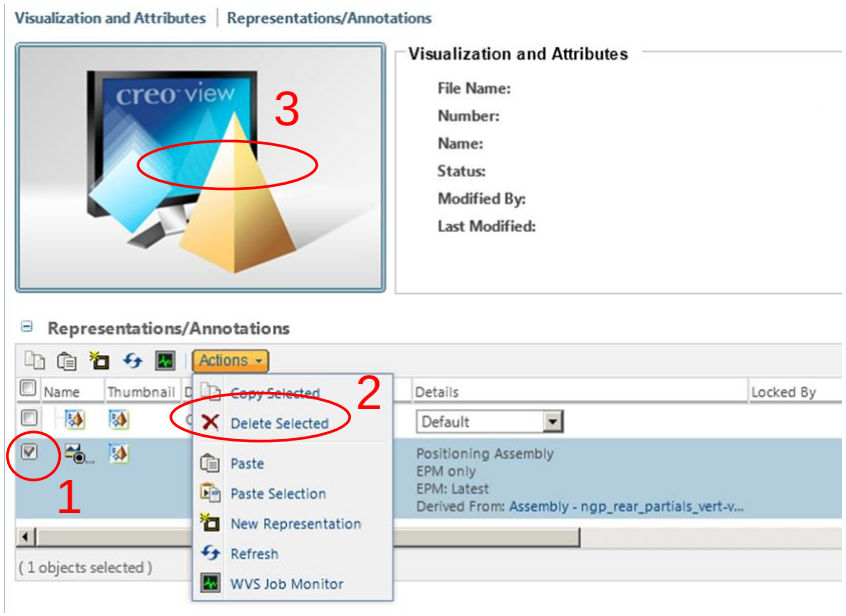


Click on Visualization Image to Publish





Re-Publish

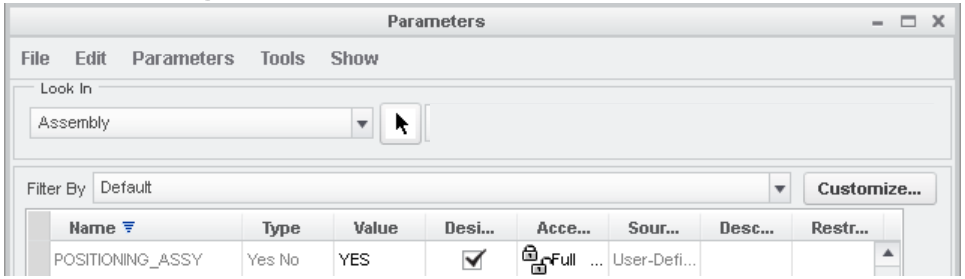


Delete Current Representation
Then Click on Visualization Image

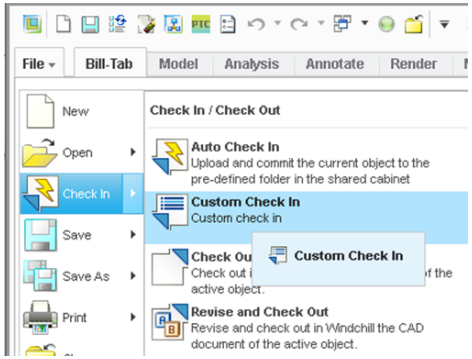
Why: Reference Case 11046166

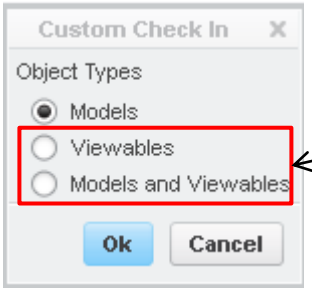
Positioning Assemblies – Creo Publishing

Publishing Options from Creo

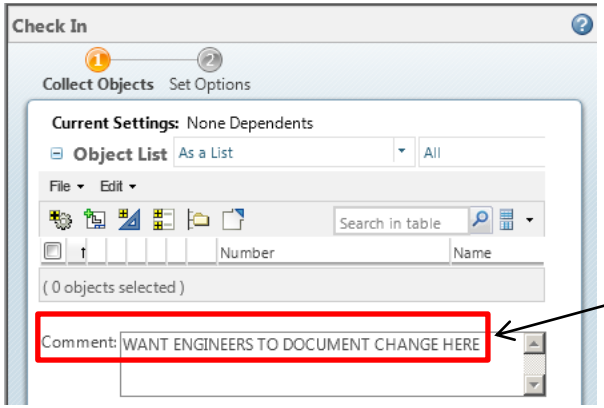


Parameter/Attribute
Drives Publishing on Check-in





Do Not Use
By-Pass Windchill Publisher



Custom Check-in
Enable Comments

Positioning Assemblies

Benefits of Positioning Assemblies

- View the Latest Information
- Maximize Performance in Creo View with Windchill
- Decrease Windchill Publishing Time
- Reduced Background Method Server Load
- Engineering Processes
  - Consistent Method between View and Parametric to Find and Load Graphics
  - Maintain Current Inputs – Structure, Assembly, Simplified Reps and Feature Names
  - Step towards Vision of “modify” in Parametric and “view” in View.
    - Less Objects in Parametric Workspace - Performance

Positioning Assemblies

What is Needed from PTC

- Windchill Publish Viewables for Simplified Reps using the Substitute Rule
- Related Information Documented Below:
  - Enhancement Request # 8086083
  - Case Number – C10377918
    - https://www.ptc.com/appserver/cs/view/case.jsp?n=10377918
  - TPI Number - 128154
    - https://www.ptc.com/appserver/cs/view/solution.jsp?n=128154
  - Related Ideas on the community site
    - http://communities.ptc.com/ideas/2030
    - http://communities.ptc.com/ideas/2548

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