What's New in NX...



Update Legacy NX Drawings to PMI

By Matt Martin

11/7/2017



WHO WE ARE

A joint venture of 2 Respected Professional Services companies established to back the best software with the best support. We are solely focused on Siemens/NX PLM.



SHERPA



- NX CAD/CAM/PLM
- 20 Engineers
- 2 veteran Teamcenter Architects
- Diverse range of design experience
- Training CAD/CAM/Tc
- Process Development & Automation
- Engineering & Industrial Design
- Teamcenter Services
- CAM/CMM Services
- Machining Services



• NX CAE, Femap

- 6 Engineers
- Femap, LS-Dyna, Nastran
- PhD, P.E.
- FEMAP Advisory
 Board











Update Legacy Drawings for PMI/MBD

- Use the Convert to PMI command to convert drafting views and objects directly to corresponding model views and PMI objects.
- You can convert specific annotations and dimensions, specific views or drawing sheets.

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2X ,875

• Drawings can be converted for PMI Batch Mode.

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+ 🖌 🚀 "AUXIL 44"

V Bottom"

- 🗸 \iint "DETAIL_35"

🗸 🛃 "Isometric"

🗸 🔗 "ORTHO_31"

🗸 🛃 "Trimetric" (Work)

I "Back"

🗸 🔔 "Front"

Image: Contract of the second seco

🗸 🛄 "Right"

🗸 🗗 "SX_32"

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Part Navigator

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Image: Contract of the second seco

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Limitations

NOTE:

SHERPA

- Some Drafting Dimensions do not have an associated PMI type. See List:
 - Approximate dimensions
 - Projected dimensions

1. MATERIAL: 6061-T6 AL

2. FINISH: ELECTROLESS NICKEL

DIMENSIONS NOT ON DRAWING.

3. REFER TO 3D MODEL FOR

- Manually edited dimensions
- Balloon notes created using shapes other _ than a circle.

- Target Point symbols
- Intersection symbols

А

6 X 1/4-20 ↓ .875

- Crosshatch & Area Fill symbols
- Some User Defined Symbols
- Bold Circle, Circular, Symmetrical & 2D Centerlines
- Offset Center Point symbols
- Break and foreshortening symbols

OVERWRITTEN

- Tables including Tabular notes, Parts Lists, Hole Tables and Bend Tables
- Embedded images

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Sheet Zone annotation.





Settings File

• Default settings file is located in your install directory:

 $\label{eq:convert} $$ UGII_BASE_DIR \ ugii\ onvert ToPmi\ onvert ToPmi Options. def$

- Use this file to establish conversion settings such as:
 - Log file folder location
 - Action on Errors
 - Number Error Limit
 - Conversion of annotations in views
 - Add a prefix to views
 - Many others and examples given in the file.
- The Settings File should be used for batch processing.

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Settings within Dialog

- In addition to the settings file, you can set up a conversion based on the needs of the drawing in front of you.
- These settings can be edited in an ad hoc fashion to experiment with results or to target specific dimension and annotation types.

	Convert to PMI Settings	s	ບ	X
	Find			
	Conversion Process Views Annotation	Conversion Options File	^	^
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Convert to PMI Report

- A detailed report of the conversion is saved within the part file where it remains until it is manually deleted.
- Access the report by displaying part properties. File > Properties. The Converted Drawing Item tab will be visible once the PMI application is started.
- You can also open the Conversion Report by Right Clicking the Work view and select **Open Conversion Report**.



Batch Processing

- Without starting NX, you can convert many drawings or very large drawings during off-peak hours.
- The ConvertToPMI program does the following:
 - Load a part or assembly and its components with specific load options.
 - Validates a configuration file location if specified.
 - Validates load options file location if specified
 - Converts all sheets, views and annotation from a drawing to a master part or an alternate target assembly if specified.
 - Saves the target master or assembly.
 - Closes all parts
 - Generates a log file

Command Prompt

c) 2017 Microsoft Corporation. All rights reserved.

:\Users\MMartin>cd c:\Siemens\NX110\NXBIN

::\Siemens\NX110\NXBIN>ConvertToPMI.exe -help Conversion log file - C:\Users\MMartin\AppData\Local\Temp\ConvertToPMI_-hel D_20171107085615674.log

:\Siemens\NX110\NXBIN>

ConvertToPMI.exe D:\parts\nx\123456_dwg.prt -TA D:\parts\nx\TargetAssembly.prt

×

Processing User Inputs.

ConvertToPMI Help:

[<drawing>] : Convert the Drawing Contents to 3D for the specified part file <drawing>. For Teamcenter give CLI spec of the drawing part CLI spec format : @DB/<MFK ID>/<rev id>, Use fnd0partIdentifier property on item in teamcenter to get MFK ID [-config <config.def>] : Conversion options file path input for conversion operation [-LO <load options file>]: Load options file. If not specified the ConvertToPMI load options.def file shipped with the installation will be used. [-TC] : To process in Teamcenter. [-u=<username> : Teamcenter username. This option is applicable for Teamcenter mode only. [-p=<password>] : Teamcenter password. This option is applicable for Teamcenter mode only. [-TA <filename>] : Specification for the target Assembly if used. [-NAME name] : If specified, indicates the target part is saved as a new Item/Rev and specifies the item name. [-NUMBER number : If specified, indicates the target part is saved as a new Item/Rev and specifies the item number. If "ASSIGN", system will assign new number. [-REV <revision>] : If specified without item name and number, just a new revision of the target part. If "ASSIGN", system will assign new revision.

What to Convert?

- You can Convert to PMI if you are programming parts in NX CAM to extract:
 - Dimensional Tolerance
 - Surface Finish
 - Thread information such as type, pitch, length.
- Should you convert everything? Generally no. Model Based Definition or MBD can more easily work with "reduced dimensions" as the 3D model geometry is the master. All non-dimensioned features should be referred to the 3D model.
- Convert to PMI will be a business process. How to handle released components. Convert on an As needed basis, when the model is revised, etc.





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engineering / analysis / data management

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- FEA Services
- CAM Programming Services
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