Plant 3D User Community Virtual Meet Up
August 13\textsuperscript{th} 2019

Jason Drew
Designated Support Specialist
GoTo Webinar Platform Attendee Operations

- Use your internet or a phone to connect audio
- Or ask a question
Introduction

- Jason Drew

- Designated Support Specialist
  - Plant 3D and P&ID
  - AutoCAD
  - Inventor
  - 3DS Max
  - Navisworks
  - Fusion 360
  - Vault

- 10 years IT Support

- 3 years P&ID Design (Oil & Gas)

- 11 years Autodesk Specialist
Agenda

- Overview
- Plant 3D News
- Importing Equipment from Manufacturing Designs and Vendors
- Open Discussion and Q&A
Overview

Objective:

- To provide a routine engagement with the Plant Design Community in the local region
- To foster a collaborative user community while increasing the understanding and knowledge of Plant 3D and associated tools and workflows

Scope:

- Each session is intended to be a casual engagement, with a small portion for news and information followed by a more general discussion around the products and workflows. The discussion is hopefully driven from the users attending.
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New registration page, now online: https://www.autodesk.com/customer-success/plant-3d
Update problem on P3D 2020.0.1 with AutoCAD 2020.1

- Do not install the regular AutoCAD 2020.1 update with Plant 3D 2020.0.1
- The next Plant update will solve this problem and then you can install the AutoCAD 2020.1 update.

Plant 3D Collaboration maintenance

- On **Monday, Aug. 19th**, from **12:00 AM to 03:00 AM Pacific Daylight Time (UTC-7)**.
- Please don’t work on your Plant Collaboration projects during this time.
Plant Beta Program

No installation needed - access by Remote Desktop Connection

- **PCF per DWG Iso Creation**
  - In an effort to make the fabrication process a little more seamless (yes, a pipe joke) the team has added the capability to have PCFs created along with their matching DWG sheet counterparts.

- **Support Fitting to Fitting piping for Lap Joint connections**
  - No more modeling hoops to jump through and temporary little bits of pipe to add and remove

- **Improved handling of Pipe Slope Editing (rotating elbows)**
  - This will improve applying slope via Pipe Slope Editing (right click) on horizontal pipe in scenarios where rotating elbows at the end of the piping can be done to maintain the connection instead of breaking it.

- Register and join [Plant Customer Council](#) in Beta Forum. If you are not a Beta member: [sign up here](#)
“In the Pipes” Blog Has Moved

- Autodesk’s ongoing process to improve our customers experience - we moved the Plant 3D “In the Pipes” blog to a new home

https://blogs.autodesk.com/in-the-pipes/
We have noticed a few cases recently where this may help

**Issue:** Our client set up a new machine and was having issues with objects, such as fittings and valves, not appearing in Navisworks. The client installed the object enabler and still, the problem persisted.

**Troubleshooting:** We verified to make sure Object Enabler was installed correctly (it was). This problem has come up in a previous support case and the issue was the “PLANTSAVEDETAIL” system variable.

**Solution:** We had the client change the value from 0 to 1 in PLANTSAVEDETAIL and after reloading the model in Navisworks all of the objects appeared as normal.


Reference:
Autodesk Knowledge Network - [Link](https://www.asti.com/plant-support-highlights-2019-7-15/)

Sets the detail of the proxy graphics when Plant 3D objects are viewed in AutoCAD or Navisworks without object enablers.

<table>
<thead>
<tr>
<th>Type: Saved in: Initial value:</th>
<th>Switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Low detail. Sets proxy graphic detail to use lines. This setting reduces the size of the DWG file when saved.</td>
</tr>
<tr>
<td>1</td>
<td>High detail. Sets proxy graphic details to use surfaces. Recommended setting when the drawing is used in Navisworks.</td>
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Importing Equipment from Manufacturing Designs and Vendors
Why Simplify Equipment Models?

- Equipment and Vendor models are often very large and have many features and details that are not required for the piping modelers.

- Removes unnecessary detail like internal components and small features.

- Models not simplified can cause performance issues in design applications like Plant 3D due to complexity.

- Reduce issues and can improves the quality and speed when creating Orthographics.

- Efficient use of Vendor models to create Catalog components.

- Can protect equipment designers intellectual property.
Adding Equipment to Plant 3D

- There are numerous ways to add equipment into Plant 3D. The following are the primary examples of these workflows.

1. Import ADSK File (a.k.a. Convert Inventor Equipment)
   - Exported from Autodesk Inventor
   - Can have BIM intelligence

2. Copy file to project (make a DWG a project drawing)
   - Exported from Autodesk Inventor or Fusion 360

3. Create a block from an exported DWG
   - Exported from Autodesk Inventor or Fusion 360
How Do You Receive Equipment Models?

- The most valuable distinction when receiving equipment models from others is the level of relationship with the supplier
  1. If you are downloading or receiving catalog or library models you likely won’t have the ability to request a more simplified model.
  2. If you are receiving them from a design team, you may be able to request the files be supplied in a format or formats that best suit your workflows.

- The main differences
  - Models supplied from a design team are much easier to handle
  - File creation is significantly easier if created from within the design application

- When you don’t have this option, if the equipment design changes you may need to reapply model simplification all over again to be able to work effectively in other authoring tools.
Work with the Design Team

- When you have a relationship with the design team that own the models, it is best practice to have the design team supply the equipment models in an appropriate format for your needs.

- The major benefit of this become evident if the design has to change. If the design changes, typically design applications will systematically update the files for exporting and re-sending, with very little extra effort. In this situation the updating of the files to supply is highly efficient and more reliable than re-processing by the Plant team.

- Autodesk Inventor can supply files for use in AutoCAD and Revit tools very easily. This has the added advantage of maintaining the BIM detail added by the design team.

- Most design applications will have similar functions but are unlikely to have the Revit family or .ADSK file formats.

- The process discussed in the following slides are the same that might be used by a design team to process exports for sharing.
What Options Do I Have To Do It Myself?
### What Options Do I Have To Do It Myself?

<table>
<thead>
<tr>
<th><strong>Autodesk Inventor</strong></th>
<th><strong>Fusion 360</strong></th>
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<tbody>
<tr>
<td><strong>Pro’s</strong></td>
<td><strong>Pro’s</strong></td>
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<tr>
<td>High level of functionality and options</td>
<td>Very easy to learn and quick to pickup</td>
</tr>
<tr>
<td>BIM Data attribution and ADSK file format export for native Plant import</td>
<td>Can work dynamically with Autodesk Inventor</td>
</tr>
<tr>
<td>IPT or IAM files can be imported directly into AutoCAD</td>
<td>Can export model as Inventor Part file</td>
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<td>Can connect to BIM 360 Team via desktop connector</td>
<td>Simultaneous multi-person workflows</td>
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<td></td>
<td>Files stored in BIM 360 Team projects</td>
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<tr>
<td><strong>Con’s</strong></td>
<td><strong>Con’s</strong></td>
</tr>
<tr>
<td>Complicated to master and a steep learning curve to get started</td>
<td>Does not export to ADSK format</td>
</tr>
<tr>
<td></td>
<td>No native BIM data attribution and no Plant 3D Connectors</td>
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Using Fusion 360 to Simplify a Model

- Import / Upload Equipment Model, open model in Fusion 360
- Open a new Simulation Study, select “Simplify” to activate the workspace
- Use the provided tools to simplify the model
- Export the Simplified model to Fusion file format
- Open simplified file and Export to desired format (e.g. DWG)
- Add model to Catalog, as project file etc. as required
Export DWG from Fusion 360

1. Navigate to the 'Export' option in the menu.
2. Select 'Export' from the dropdown menu.
3. Name your file in the 'Export' dialog box.
4. Choose 'DWG file' in the 'Type' dropdown.
5. Click 'Export' to finish the process.
For More Information

These articles will provide more information and details for use with Fusion 360


- Autodesk CFD: Fusion 360 CAD Simplification: https://youtu.be/P1g6dxSnfYg

- Use Fusion 360 to Simplify Models for Autodesk CFD: https://youtu.be/16xIcYnqOzI
Using Autodesk Inventor to Simplify a Model

- Load supplied part or assembly file to a new or an existing project
- Open the Imported equipment assembly (create an assembly and add the part if required)
- Create a new “representation” and activate the view
- Initiate the Shrinkwrap command
- Select features and settings to remove the desired features and details. Set the file name and export details of the new part that will be created
- The new simplified part file is opened in inventor. This part can also be exported to DWG directly from within Inventor.
Autodesk Inventor to Export to ADSK file

- In Inventor, select the Environments tab, and pick BIM Content
- From the BIM Content Tab, select “Pipe Connectors” to add Connections for Plant 3D
- When all BIM data has been added, select “Export Building Components”, and save the ADSK file in a desired location
- In the Plant 3D Project select “Convert Inventor Equipment” to import the ADSK file. The imported model will have pipe connections as configured, that can also be edited
Export DWG from Inventor
For More Information

These articles will provide more information and details for use with Inventor.

- **Autodesk Help; Create a Shrinkwrap part:**

- **Quick Tip – Shrinkwrap:** https://youtu.be/QJFAada1GgA

- **Leveraging Inventor Data with AutoCAD Plant 3D | Autodesk Virtual Academy:**
  https://youtu.be/85mn93rpVgl

- **Inventor Shrinkwrap to Plant 3D:** https://youtu.be/kYr_mSJxuF8

- **Inventor 101: Simplify and Share with Shrinkwrap:**

- **Shrinkwrap and derive? What's the difference? | Autodesk Inventor:** https://youtu.be/WQCO2YLHxgk

- **Inventor 2020 Help; About Simplified Assemblies:**

- **Inventor to Revit ADSK Export - A How To Guide:** https://youtu.be/zXI8oJ1wq28
Open Discussion and Q&A

Ask your questions in the Q&A panel
for getting involved
Don’t forget to send your feedback survey
Reference Materials and Links

- Autodesk Knowledge Network
- Autodesk University
- Autodesk YouTube
  - Plant search Link
  - Autodesk AutoCAD Plant 3D
- Autodesk ANZ
  - AEC Collection – Let’s make a project
- In The Pipes
Transport Layer Security (TLS): Updates Required to Maintain Software Access

- **Issue:**
  Transport Layer Security (TLS) 1.0/1.1 is vulnerable to man-in-the-middle (MITM) attack that can compromise data exchanges. This applies to *single-user subscribers* using the software versions listed below; customers using software or versions not listed and customers using perpetual or multi-user (network) licenses will not be affected.

- **Environment:**
  This issue affects a selection of Autodesk software used on Windows, Mac, and Linux versions 2014, 2015, 2016 and/or 2017.
  For most 2018, 2019, or 2020 software versions, your software and account are not affected.