Plant 3D User Community Virtual Meet Up
May 12th, 2020

David Manning
Designated Support Specialist
Plant 3D User Community Virtual Meet Up
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Joel Harris
Designated Support Specialist

Nabil Nougha
Technical Specialist AEC / Plant
Plant 3D User Community Virtual Meet Up
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Martin Buss
Designated Support Specialist
Before we begin

- Keep your line muted to reduce background noise, until you ask a question.

- Have a question? Use the Questions box or raise your hand.

- This webinar is recorded. The recording will be available at: https://customersuccess.autodesk.com/webinars
David Manning
Designated Support Specialist

Providing technical support to enterprise customers and the Autodesk communities in the following products and associated workflows:

- Plant 3D and P&ID
- AutoCAD
- ReCap
- Recap Photo
- 6 years Steam Plant Design
- 12 Years Piping Design (Oil & Gas)
- 5 Years Autodesk Specialist
- Navisworks
- Fusion 360
- Vault
- BIM 360 tools
Vinod Balasubramanian

Senior Product Support Specialist

Vinod is currently a senior technical lead for AutoCAD toolsets software and a regular speaker at Autodesk University. He is responsible for handling business escalations on support issues, preparing partners for new releases, creating high-quality knowledge content, and helping to improve total experience of product for customers.
Martin Buss
Designated Support Specialist

- Premium Support Specialist at Autodesk since 2015.
- Mechanical engineer with experience in process engineering projects (power plant / pharma).
- Work experience with CAD piping applications like PDMS, PDS and Plant 3D.
- Supporting; Plant 3D, P&ID, BIM 360, Navisworks and AutoCAD.
Joel Harris
Designated Support Specialist

Providing technical support to enterprise customers and the Autodesk communities in the following products and associated workflows:

- Plant 3D and P&ID
- AutoCAD
- ReCap
- Recap Photo
- Navisworks
- Vault
- BIM 360 tools

- 23 years process piping designer
- 6 years AutoCAD developer/partner
- 5 years Autodesk Specialist
Nabil Nougha

Technical Specialist AEC / Plant

Providing technical guidance and adoption to customers and the Autodesk communities in the following products and associated cross industry’s workflows:

- Plant 3D and P&ID
- AutoCAD
- Revit
- Recap
- Navisworks
- Inventor
- BIM 360

- 8 years at Autodesk, based in Dubai since 2014
- 10 Years Piping Designer & Superintendent positions
- Oil & Gas, Water, Petrochemical, Nuclear Industries
Agenda

- Overview
- Plant 3D News: General Updates and News
- This Month's theme:
  What is better, Revit or Plant 3D? Pros and cons of each and when to use which tool. Revit and Plant 3D interoperability workflows
- Follow up Questions from last month
- Open Discussion and Q&A
Overview

Objective:
- Review Revit and Plant 3D and where each are at their strongest.
- Understand how Collaboration for Plant 3D works in version 2021 and how to get started with your first Project.
- Understand What Autodesk Exchange is and how to access Apps.

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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- This presentation also contains information, opinions and data supplied by third parties and Autodesk assumes no responsibility for the accuracy or completeness of such information, opinions or data, and shall not be liable for any decisions made based upon reliance on any such information, opinions or data.

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Plant 3D News
C4Plant / Server location

Europe or US servers

<table>
<thead>
<tr>
<th>Server Location</th>
<th>Modules Supported</th>
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<tbody>
<tr>
<td>US</td>
<td>Document Management</td>
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<td>BIM 360 app iOS/Android</td>
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<td>Europe</td>
<td>Document Management</td>
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<td>Project Management</td>
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<td>Field Management</td>
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<td>Project Home</td>
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<td>Insight (Dashboards, not Construction IQ)</td>
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<td>Design Collaboration</td>
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<td>Model Coordination</td>
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Europe Data Center FAQs
Collaboration for Plant 3D Access
Single User Subscriber license

Access to Plant 3D application = ☒
Access to Plant 3D collaboration feature = ☒
Access to Plant 3D shared project = ☒
Access to Plant 3D application = ☒
Access to Plant 3D collaboration feature = ☒
Access to Plant 3D shared project = ☒
What is better, Revit or Plant 3D?
Neither is better!
Both have strengths and best use cases
What Plant Does
The Plant 3D "Spine"
Spec & Catalog editor
AutoCAD P&ID
AutoCAD Plant 3D
Reports, Lists, BOM
Ortho & GA, BOM
Isometrics/BOMs

*Spec Driven Workflow*
What Revit does

"building oriented" solution

- A Revit file is a database = BIM
- Parametric families (objects, views, etc.)
- 2021 version is Generative Design featured
- Addresses 3 main areas:
  - Architecture
  - Structure
  - MEP

### Files and Extensions

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<th>Files</th>
<th>Extensions</th>
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<tr>
<td>Project template</td>
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<td>Family template</td>
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<td>Project</td>
<td>.rvt</td>
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Revit

In a Plant 3D project environment

Revit will particularly help with:

- Building elements & overall structures
- Concrete design (formwork and rebar)
- Cable trays, HVAC, Ducts
- Plumbing fixtures and Plumbing systems and pipes
Both Revit and Plant 3D compatible with ReCap Pro

Laser scans and photos / Points Clouds & Photogrammetry

- Capture the environment
- As built comparison
- Construction comparison over time
- Accurate measurements
- 3D BIM Models
- Reverse engineering
- Quality Control Verification
- VR & Advance Workflows
Both are can be stored in BIM 360 Docs
Revit since 2018.3 and P3D since 2021

Transform AEC project delivery centralizing data allowing teams to coordinating better design processes across authoring tools in a common data platform for design & construction projects.
P&ID Connector for Revit
Revit since 2018.3 and P3D since 2021

Cloud-based collaboration directly between AutoCAD Plant 3D and BIM 360 Design

Support for AutoCAD Plant 3D users to share design models with other AutoCAD Plant 3D users is maintained.

AutoCAD Plant 3D users can share P&IDs with Revit users, enabling Revit users to complete their work with a view of the overall plant design and enhance design processes.
When to use which tool?
Revit or Plant 3D or Both?

- High Piping Complexity
- Low Piping Complexity

- Revit (MEP)
- P3D

On Site | Pipe Fabrication | Off Site

- Civil Infra structure
- Education Institutions
- Industrial Facilities (Non-Process)
- Hospitals
- Commercial Buildings
- Water & Waste Water
- Industrial Facilities
- Semi-conductor
- Pharma/Biotech
- Mining & Mineral Processing
- Pulp & Paper
- Marine (Ships)
- Oil & Gas Refining
- Chemical/ Petrochemical
- Power Generation
- High Pressure Process
- Medium Pressure Systems
- Low Pressure Process
Pros and cons of each?
Why they add value?
Why using Plant 3D adds value

- Spec Driven design (Modeling and P&ID).
- Quick Intelligent P&ID drafting.
  - Industry Standard symbol libraries.
  - Data Validation tools.
  - P&ID’s can be used to support Revit pipe modeling with P&ID connector.
- Rapid and intuitive 3D Modelling.
  - Parametric Equipment templates.
    - Import ADSK files from Inventor with Iproperties
  - Basic structural modeling with industry standard sections.
    - Connected Advanced Steel for detailing and fabrication drawing.
  - Automated production of piping isometrics.
  - Automated reporting with easy project specific customization.

[Link: AutoCAD P&ID Productivity Study]
Why using Revit adds value

- Integrated Parametric BIM Solution with computational & Generative Design tools
  - Embedded Dynamo Player & Integrated Generative Design Tool (2021 Release)
  - Minimized time-consuming task's during Design, Detailing & Analysis

- Analysis Features for Sustainable & Design Codes for MEP & Structure
  - Includes libraries of parametric content for Architecture, Structure, MEP
  - Customizable via embedded Macros player

- BIM 360 Platform Interoperable Authoring tool (Publish directly to BIM 360 Design)
  - Integration of 3rd party CAD files, DWGs, IFCs, Pdfs, REVIT as links
  - Import/export QTOs lists & Schedules, Database connexion (DB Link)

- Realistic Native Rendering Capabilities / LOD monitoring capabilities
Revit & Plant 3D together adds value
Revit & Plant 3D together adds value*

Multi-disciplinary projects example

- An example project when products might work together:
  - Conceptual modelling & visualisation (Revit & Infraworks)
  - Piping and Instrumentation Diagrams (Plant 3D)
  - Equipment Detailing (Tanks, Pumps, etc.) (Inventor)
  - Structural (Pipe ways, Platforms, Supports, etc.) (Advanced Steel, Revit)
  - General Arrangements and Orthographic views (Plant 3D or Revit)
  - Concrete Structures and Slabs (Revit)
  - Analysis: Structure and Concrete (Robot Structural Analysis)
  - Coordination modelling, clashing (Navisworks or BIM 360 Coordination)
  - Visualisation and animation (Navisworks Timeliner, 3DS Max, Infraworks)

- Piping Services, Plumbing Pipes* & Fixtures, Ducts, HVAC Equipment, Cable Trays (Revit)
- Electrical Equipment, Control Panels, Electrical schematics (Revit, AutoCAD Electrical)
Revit / MEP
Autodesk Revit 2021

MEP Fabrication Extension Integration

Pipe Flow Units

1694350 L/h
423588 L/h
Revit / MEP
Autodesk Revit 2020.1*

MEP Systems Analysis

- Create analytical geometry from models
- Validate your model and review analysis
- Create custom analysis workflows
- HVAC systems sketch tool for spaces
- Extended zone equipment and plant loop types

Significantly integrated HVAC systems design analysis

*Revit 2021 includes all enhancements released in Revit 2020.1 and 2020.2
Revit / MEP
Autodesk Revit 2021

P&ID Modeler on BIM 360 Docs

- P&ID Modeler is now available on BIM 360 Docs
- Replaces functionality previously available on BIM 360 Team
  - P&ID diagrams are available in Revit
  - P&ID progress is color-coded to ensure correct usage and positioning

Centralized cloud platform for transfer of project information
Navisworks adds Value

Benefit of Aggregating Data in Navisworks Manage

- Retain Revit and Plant 3D elements properties which for quantity take off (QTO).
- Clash detection between models for enhanced coordination.
- Implement 5D visual scheduling of construction/revamping/logistic using the Timeliner.
- Import Project Management database file (MS Project or Primavera).

*Best Practice: Always make sure to identify common reference points at early design stage to ease placement, shared coordinate and scale management in Navisworks later*
Now your ready set-up, what next?
Open Discussion and Q&A

Raise your hand to ask your questions or add them to the Q&A panel.
Upskill Your Team
Plant 3D with the Experts 2021 Videos

https://www.youtube.com/playlist?list=PLXEyem_18syPZPb68zSgiLQHuwRJraLW
Revit Tutorials, Courses and AU Classes

Access resources that can help you learn how to use the software

Autodesk University (AU) Online Resources

- **Online Classes**: Search for classes presented at previous Autodesk University sessions. Recorded videos, data sets, slide decks, and hand-outs are available for many classes.

Autodesk Design Academy

- **Watch & Learn**: The Autodesk Revit resources of the Design Academy offer a getting started guide and videos to help educate students and educators.

Additional Videos

- **YouTube channel** for Autodesk Revit provides access to more videos created by Autodesk for our customers.

- **Autodesk Screencast** is a free service that allows anyone to capture, share, and learn from software workflows. Visit the Autodesk Screencast website to see interactive video tutorials created by industry experts.
Learn BIM 360

https://learnbim360.autodesk.com/

Learn how to use BIM 360 to accelerate delivery, coordinate effectively, and reduce risk on your construction projects.

Document Management
Manage your projects in one digital library, at your desk or on your mobile.

FREE

Approvals Workflow
Facilitate, control, and automate the review, distribution and approval of project drawings, models, and other documents.

FREE

Quality Management
Learn how to standardize your quality inspections.

FREE

Coordination
Display a single, unified view of your latest coordination models, and review clashes that are automatically located in those models.

FREE
The Customer Success Learning Hub

- Access to articles, product updates, tips and tricks, and more
- View previous webcasts
- Browse upcoming webcasts and live events
- Share expertise with industry peers and product teams

https://enterprisehub.autodesk.com

The Hub:
A Place to Learn, Connect, and Share Expertise.
Plant 3D Virtual Community

Monthly Virtual meetings in three time zones

- Resources Page: Plant 3D Virtual Community Meetup Resource Store

- Registration:
  https://www.autodesk.com/customer-success/plant-3d
Subscribe to the Health Dashboard to stay informed of maintenance or outages
Autodesk Health Dashboard
https://health.autodesk.com/

Sign In

Click Here

2021 + File Storage

2018 - 2020 File Storage

Services
Thank you... for getting involved
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
Plant 3D Virtual Community Meetup resources

by Customer Success Team • on November 21, 2018

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.

November 6th 2018

APAC Session

Agenda:
- Overview
- Plant 3D News
- Follow up on Last months Questions
- Update 2019.1
- Open Discussion and Q&A

EMEA Session

Agenda:
- Overview
- Plant 3D News
- Follow up on Last months Questions
- Update 2019.1
- Open Discussion and Q&A

AMER Session

Agenda:
- Overview
- Plant 3D News
- Follow up on Last months Questions
- Update 2019.1
- Open Discussion

Presentation

More detailed agendas to be published in advance in 2019

Presentation PDF Link

Presentation PDF Link
Other Virtual Meetups

Share with your co-workers

Monthly Virtual Meetup

- **Virtual Meetup** is a monthly webinar and an ongoing forum engagement, supplemented by in-person meetings at AU Las Vegas and Regional AUs. Flavors of the main agenda:
  - **Connect with Experts** – best practices and live discussions with subject matter experts
  - **Open mic** – customers presenting their stories or workflows
  - **Updates from product teams** – a product team comes to share what’s new in the release and what’s coming next
Plant 3D with the Experts - Video Blog Series

by Product Support Team • on August 16, 2019

Do you want to know more about Plant 3D?
Do you want to know a how to get started?
Are you an Plant 3D user or administrator with questions?

If you answered yes to any of these questions then this webinar series may be just the thing you need.

The Autodesk Product Support Team has planned a long list of short videos to help
AutoCAD Plant 3D Community Virtual Meet-up

Share on social media with your colleagues
AutoCAD Plant 3D Community MeetUp Webinars

Autodesk is proud to present our monthly AutoCAD Plant 3D Community MeetUp webinar series. In this space we will hear news and information on AutoCAD Plant 3D design solutions, participate in live Q&As with Autodesk specialists, and have the opportunity to connect with diverse members throughout the worldwide AutoCAD Plant 3D community.

The webinars are scheduled for 30 minutes, though we will always extend beyond the initial half hour whenever a lively discussion happens to take a life of its own.
“In the Pipes” has Moved

- As another step as Autodesk’s ongoing process to improve our customers experiences has moved the “In the Pipes” blog to a new home.

https://blogs.autodesk.com/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.