Perfecting the System For Revit

David Butts

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About the Speaker…

David Butts, BIM Specialist – Gannett Fleming

- 30+ Years experience with Autodesk software products
- AAS Architectural Technology
- 13 years – Autodesk Reseller, Senior Application Engineer/Training Manager
- 7 years with Gannett Fleming, manages the implementation/training/optimization of engineering applications

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About the Lab Assistants…

Anthony Conchado, BIM Specialist – Gannett Fleming

Josh Martz, BIM Specialist – Gannett Fleming

Kimberly Fuhrman, Senior BIM Technical Specialist – EDGE Global Technology Solutions

This Session Will Be Interactive!

http://join.fxptouch.com/122429

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- Personalize
- Chat
- Ask questions
- Take notes
- Move to current slide

Class summary

This hands-on lab will teach you the comprehensive steps needed for controlling project system settings, and then demonstrate how to capitalize on (or disable) sizing and analysis tools related to the system. You'll learn about creating the target-source relationship between parts, and then review using the systems to improve the quality of your documentation. The class will cover HVAC (heating, ventilating, and air conditioning), piping, and electrical items.

Key learning objectives

At the end of this class, you will be able to:

- Learn comprehensive steps for controlling project system settings, including mechanical and electrical system project settings
- Understand how to create the target and source relationship between equipment without routing a duct, pipe, or wire
- Learn how to capitalize on the system sizing and analysis tools, and learn how to maximize project performance when you don't need these features
- Learn how to improve the quality of your construction documents by capitalizing on system-based features

The System Rules and Four Step Process

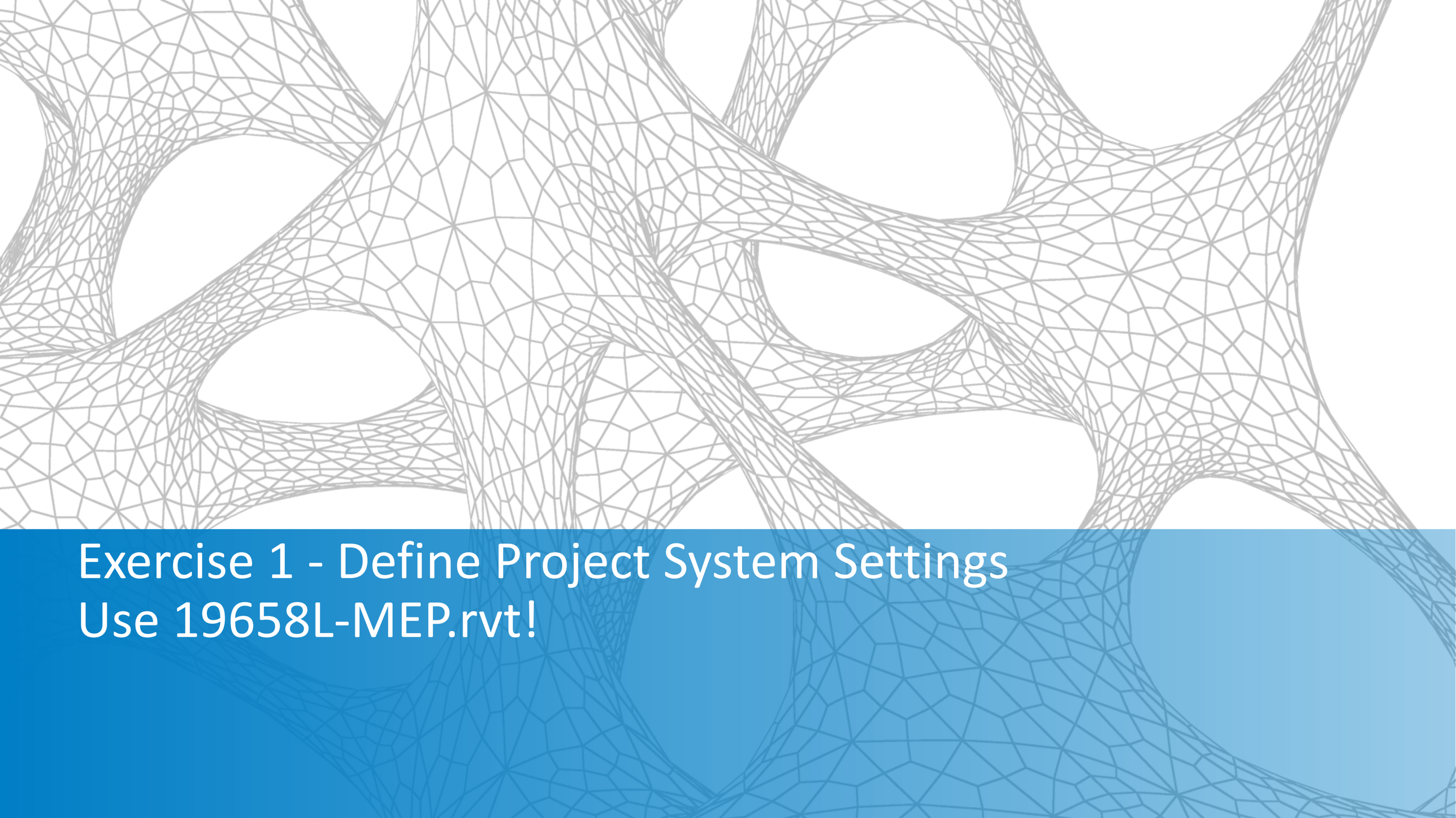
Do you currently use systems for anything other than colors in a model?

Why?

- By following the same repeatable process, you can get more efficient at completing projects on time and under budget. The primary steps are:
  - Select and Locate Equipment – the targets and sources that define a system;
  - Define and Refine the System – creating the system that connects the equipment together;
  - Connecting Geometry – adding the ducts, pipe, conduit, cable tray and wire;
  - Annotating the Model – adding tags, schedules and other annotations in views for the construction documents.

Before you start – follow these rules:

- Always start from a template (or starter project)
- Include in the template families that require predefined type mark values (but don’t overload the template)
- Include in the template predefined system types for duct, pipe, etc.
- Begin by selecting and adding **target** and **source** equipment
- **Systems** are defined by targets, but do not require a source to complete the system



Exercise 1 - Define Project System Settings
Use 19658L-MEP.rvt!

What disciplines do you work in most often?

A Mechanical HVAC

B Electrical

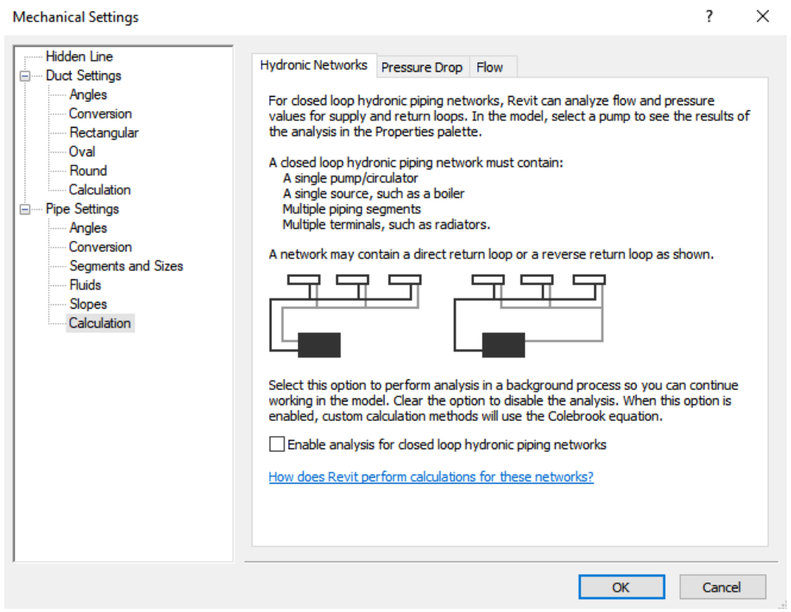
C Plumbing

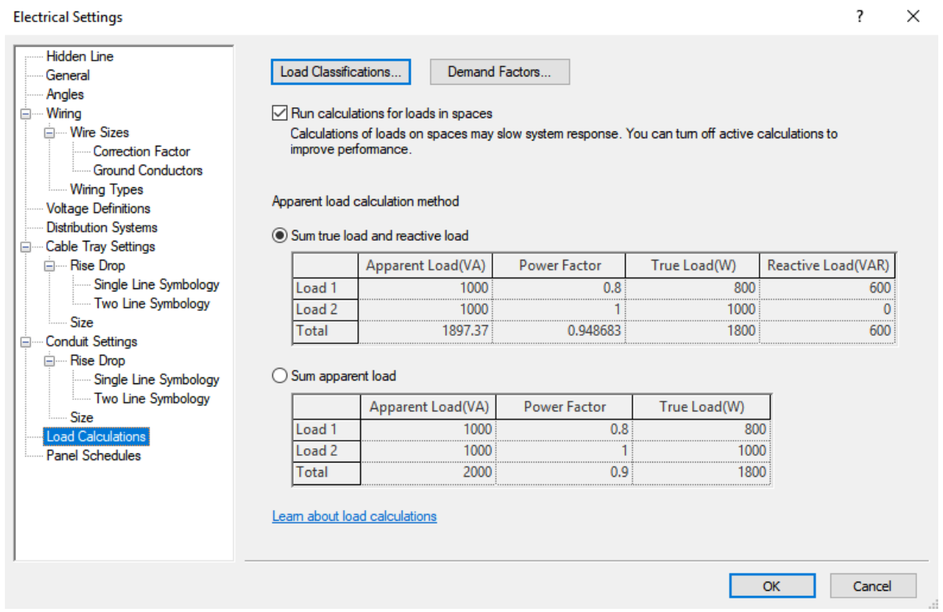
D Process

E Every daggum one lately

Key Steps

- Define Electrical and Mechanical Settings in the template
- Defining System Types

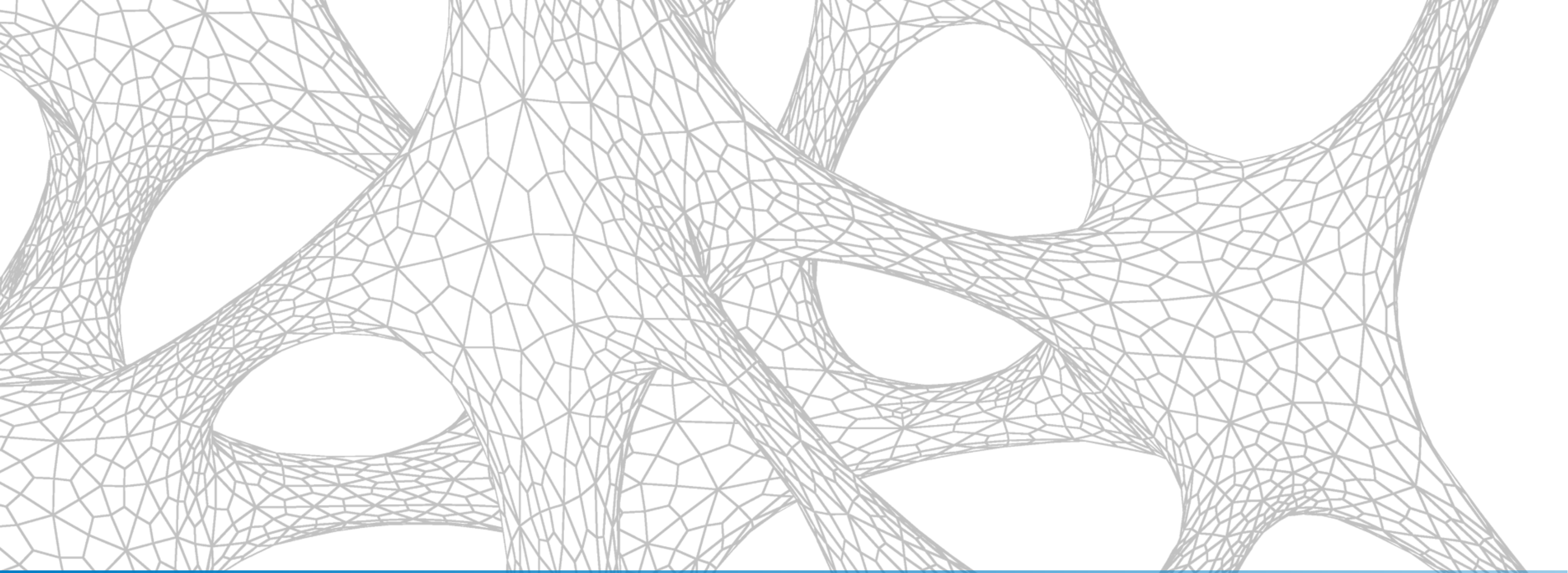




Exercise 2 – Creating the Target Source Relationship
Continue using 19658L-MEP.rvt!

Key Steps

- Define System and Circuits by targets
  - Lights
  - Air Terminals
  - Pumps/Tanks/Plumbing Fixtures
  - Name your systems!
- Add sources to complete the system
  - Panels
  - HVAC Units
  - Pumps/Tanks

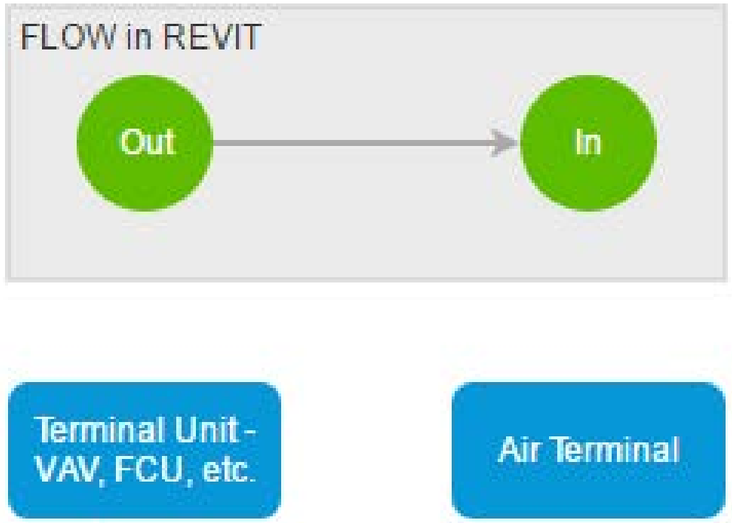


Exercise 3 – Leveraging Systems for Sizing and Analysis
Open 19658L-MEP-Analysis.rvt!

How likely was your firm to use Revit for sizing systems such as duct, pipe or circuiting before today?

Key Steps

- Understand the role of the family duct/pipe/electrical connector and its settings, including flow



- Understand connector system settings

Key Steps

- When using sizing/load tools, it must be a well-formed system
- When sizing, the system must have calculations enabled
- Sizing tools are based on industry standard formulas, but may not contain detail that external applications could provide
- **Other** systems don’t do squat!

Exercise 4 – Key Tips and Benefits
Continue with 19658L-MEP-Analysis.rvt!

Key Steps

- Using TAB System based selections
- Use View Filters based on Systems
  - Rule Based
  - Selection Based

- Tracking System Equipment Data with Spaces
  - Duct Systems
  - Power/Lighting

Has this class helped you get a better understanding about Revit systems and how they could help your projects?

Questions!

Remember – ES122429-L is the class – please remember to complete the survey!

Thanks for attending!

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Make anything.