AUTODESK. UNIVERSITY

Revit to Fusion to Autodesk CFD

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About the speaker

Dave Graves

Dave is a Sr. Technical Specialist on the Autodesk Owners and Ecosystems team. He has a BSME from North Carolina State University and has spent time in Telecommunication industry before moving to the world of Simulation and CAD. At Autodesk Dave has worked with various manufacturing solutions including Fusion 360 and has been involved with the Autodesk CFD product for over 15 years.

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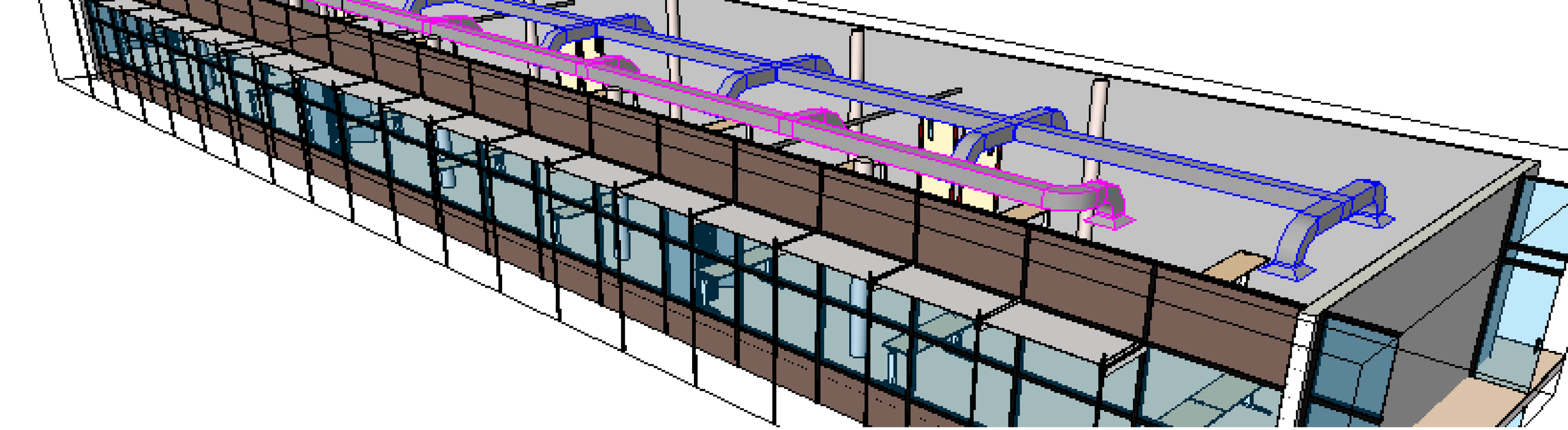


Course Objectives

Learn about the workflow from Revit to Inventor to Fusion 360.

Learn how to optimize Revit geometry for simulation using the Fusion 360 Simplify tool.

Discover good practices for Autodesk CFD geometry preparation.

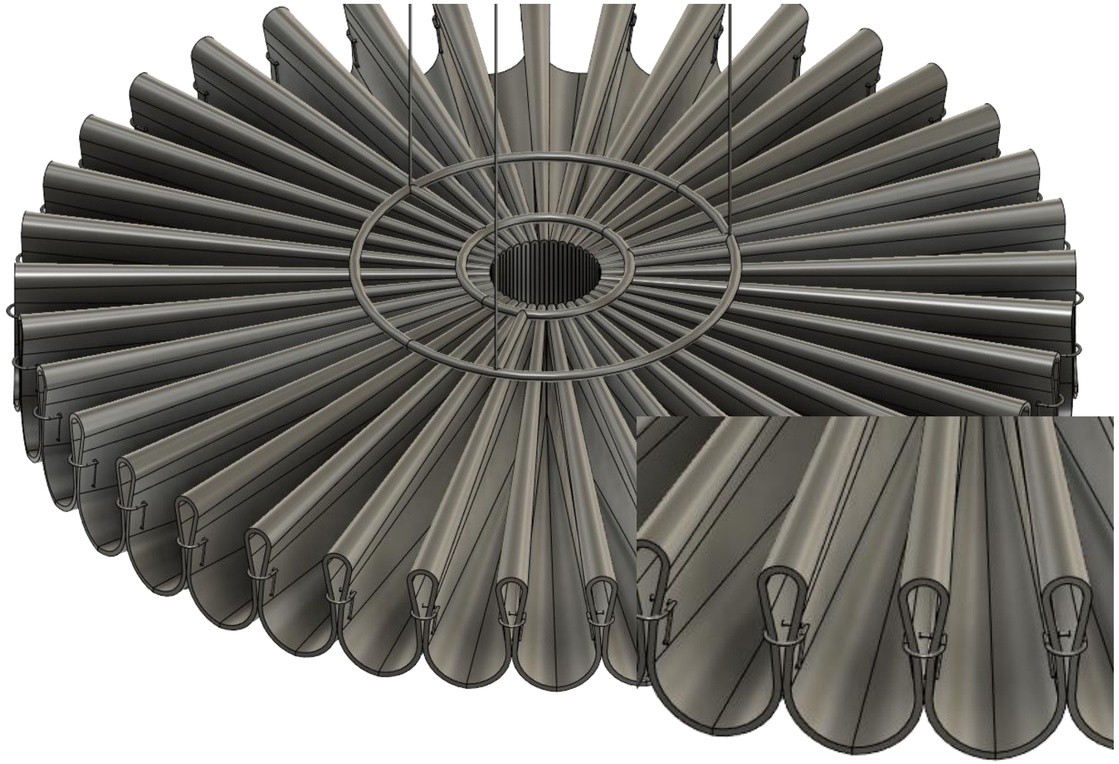
Learn how AnyCAD, Revit, Inventor, and Fusion 360 work together.

Why?

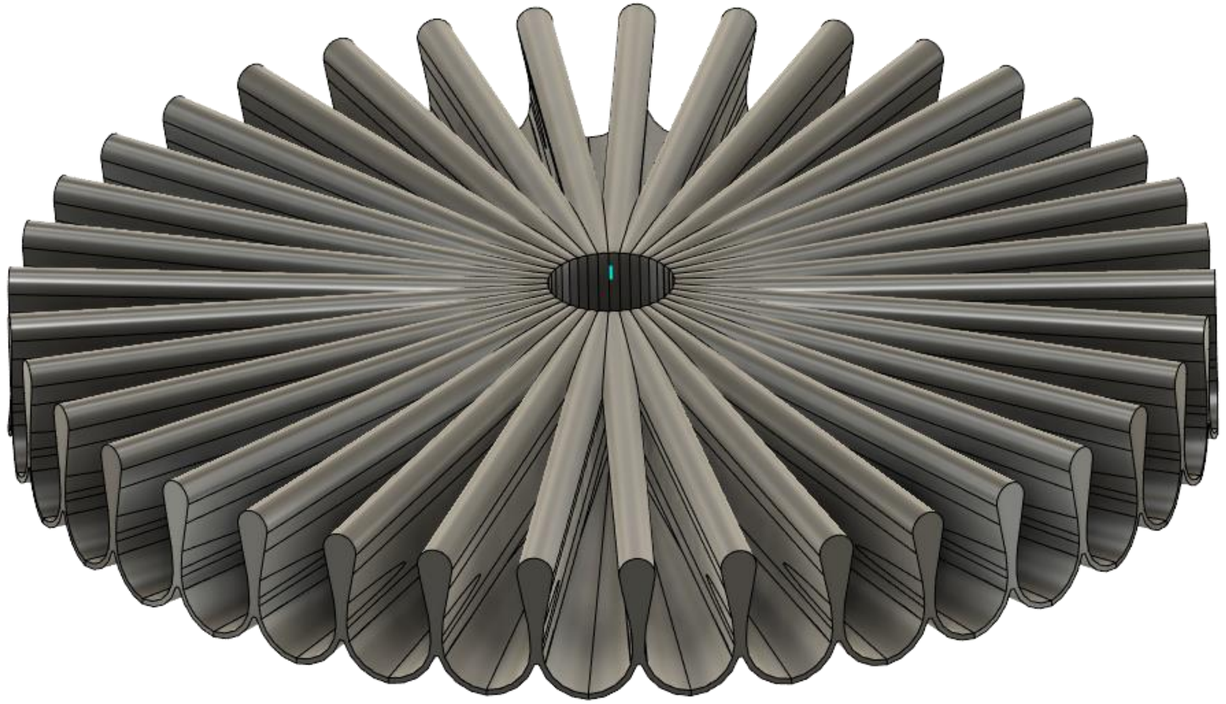
Autodesk CFD works direction with Revit, Why would I want to add another tool/step in the process?

- **Un-Optimized Geometry can cause**
  - Meshing Errors
  - Substantial Longer Run Times (order of Magnitude)
  - Make it more difficult to get good results
- **Autodesk CFD is much more efficient with simulation optimized geometry**
  - Revit is not designed for geometry optimization
  - Fusion 360 has specific built features for simulation geometry
- **Fusion 360 does not read native Revit Files**
  - Inventor Does Read Native Files

Geometry Simulation Optimization

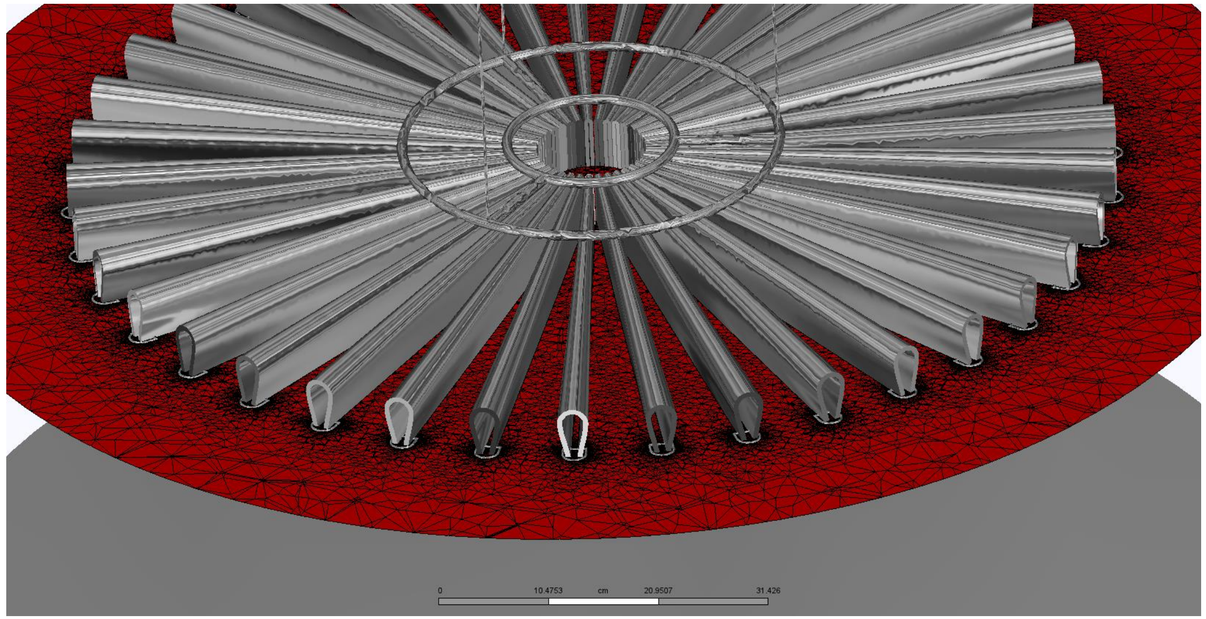


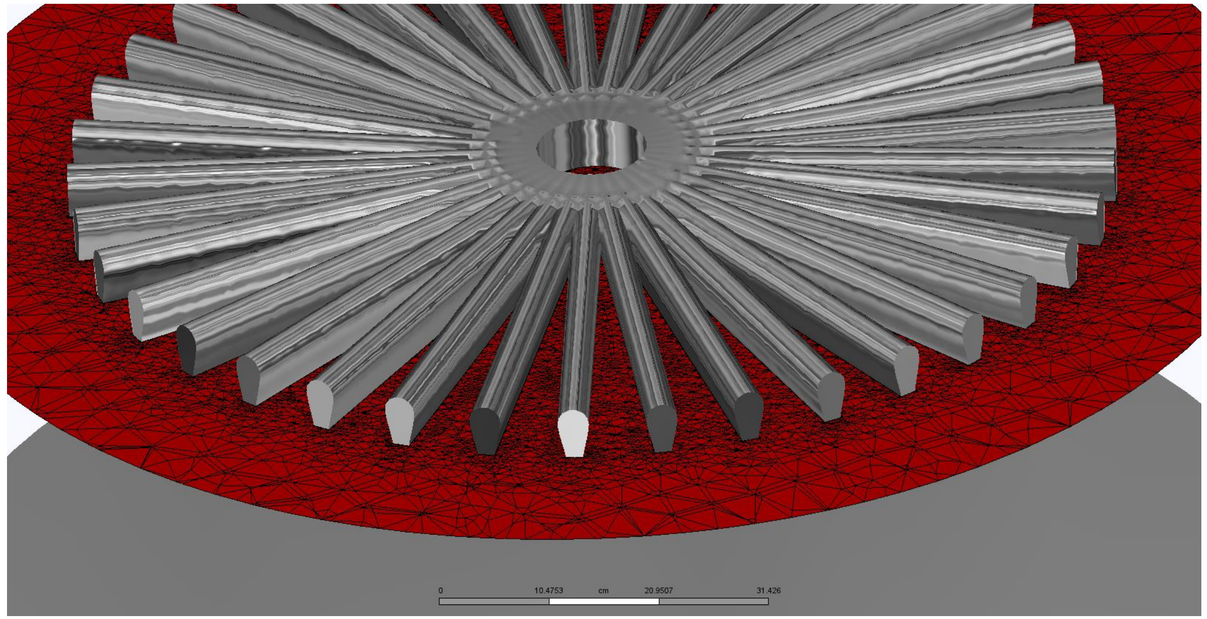
Default Revit Light Fixture



Minor Geometry Optimization

Geometry Simulation Improvement





Default Revit Light Fixture

7,322,261 Elements

2,166,236 Nodes

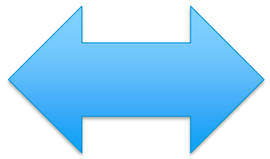
Minor Geometry Optimization

2,733,481 Elements ~67% Reduction

853,214 Nodes ~60% Reduction

Tools and Workflow

FUSION TEAM



Product/Workflow Demonstration

Summary

- Learn about the workflow from Revit to Inventor to Fusion 360.
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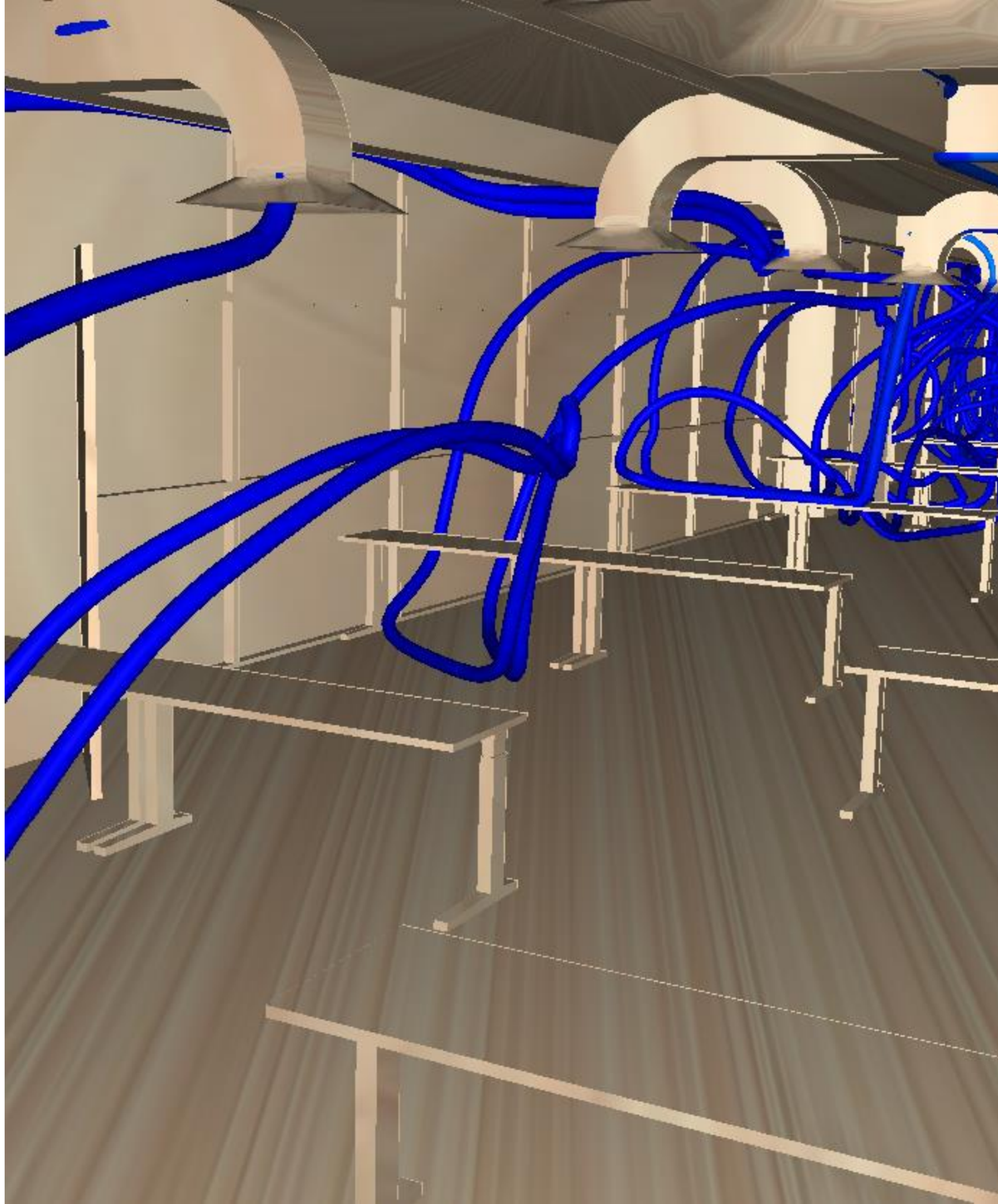

Thank You