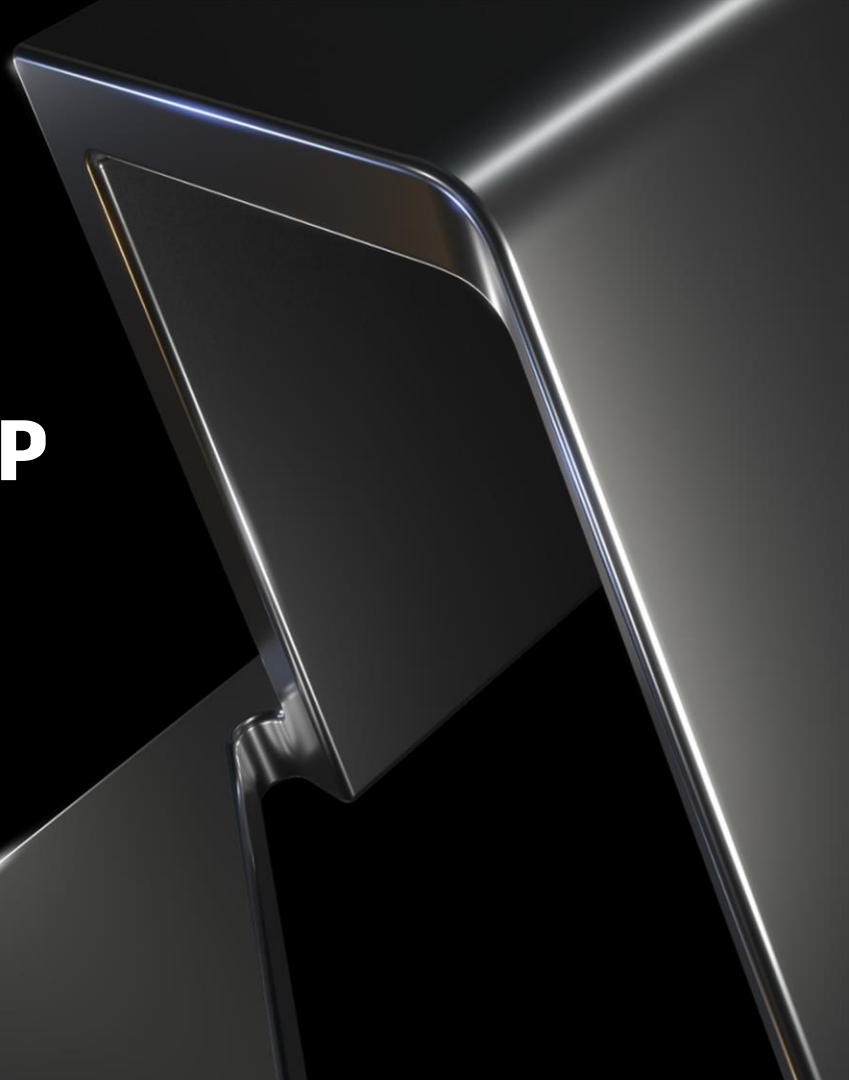
AUTODESK UNIVERSITY

Model Simplification – IP Sharing



Harpreet Waraich

Education Specialist
IMAGINiT Technologies

About the speaker

Harpreet Waraich

Harpreet holds her diploma in Mechanical Engineering Technology- Automotive Manufacturing from Georgian College, Ontario, Canada. She has worked for several years as a mechanical designer/drafter in different companies. For the past 7 years, she has been working with IMAGINiT Technologies, where she provides training and consulting for different verticals of Inventor and AutoCAD. She also has her Autodesk Certified Instructor(ACI) Certification.

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TECHNOLOGIES

Introduction to Model Simplification

Overview

What is the need?

- Large Assembly management
- Incorporate placeholder geometry into an assembly
- Share IP across different softwares and different companies
- Collaborate and innovate for better designs
- Share models with Inventor and non-Inventor users
- Sharing models to satisfy the terms of a business deal

Concerns with sharing

- Protecting your company's Intellectual property (IP) in your design.

Learning Objectives

- Using Simplify tool to simplify the model
- Create a Derived part
- Simplify vs Derived
- Neutral files

Original Assembly

Simplified Assembly

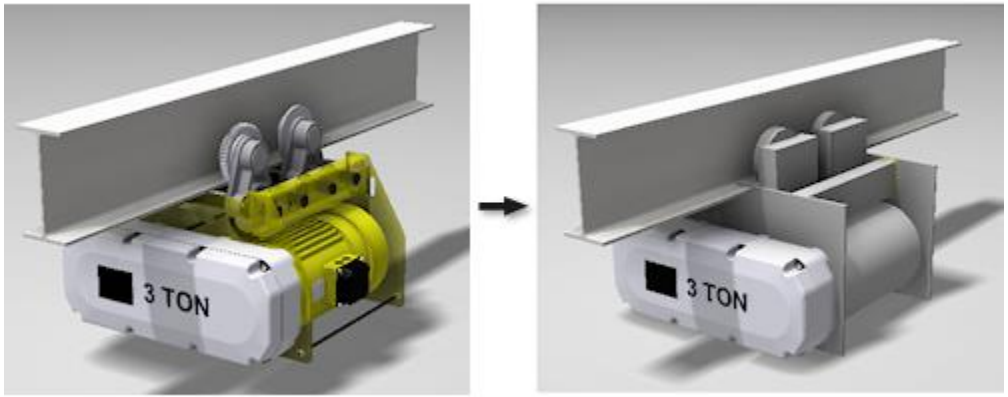
Objectives

1. Using Simplify tool to simplify the model

Simplify Tool

Overview

- The simplify tool can be used to create a derived part or Revit model that is a simplification of the original component, or it can create a substitute model state in a current assembly.



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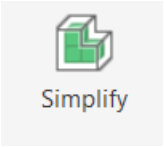
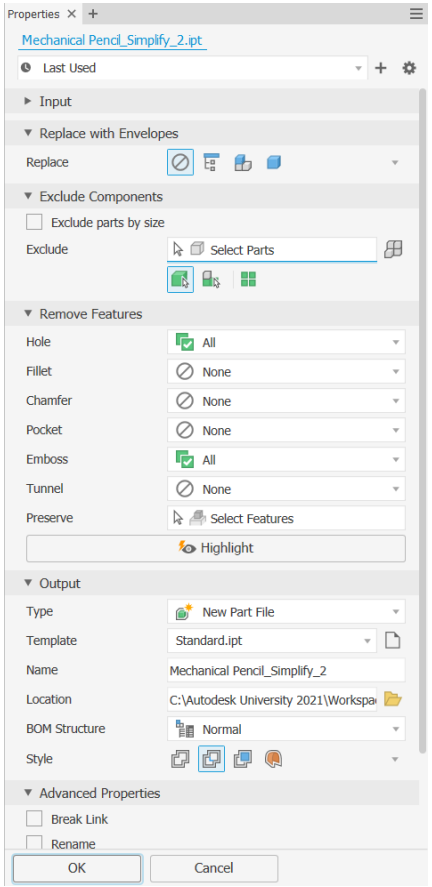
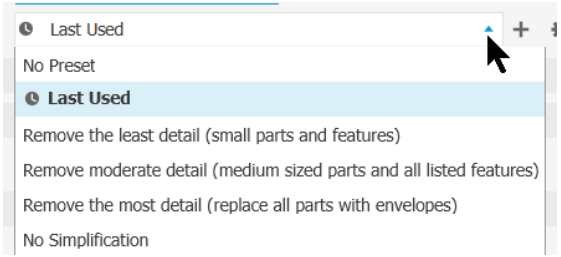
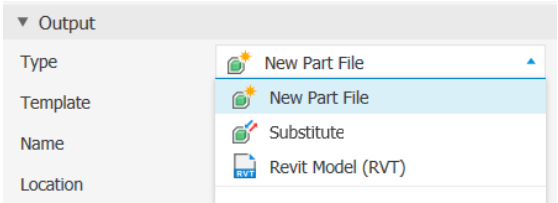
Simplify Tool



- Exclude components
- Remove Features
- Output
- Replace with envelopes
- Presets



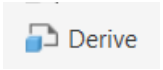




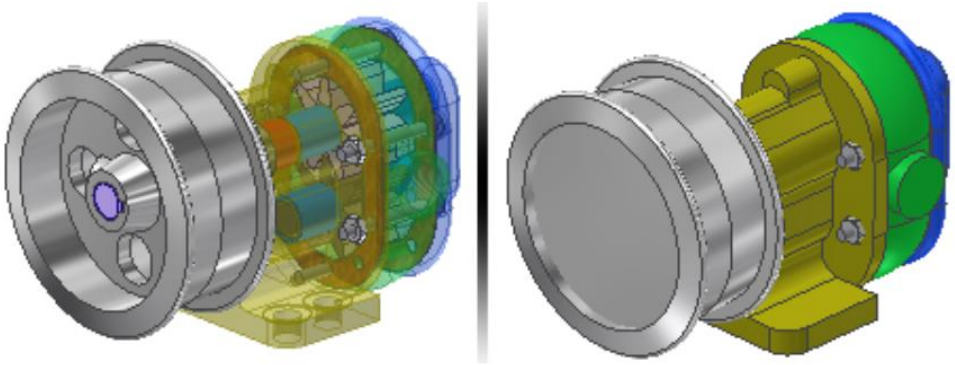
Objectives

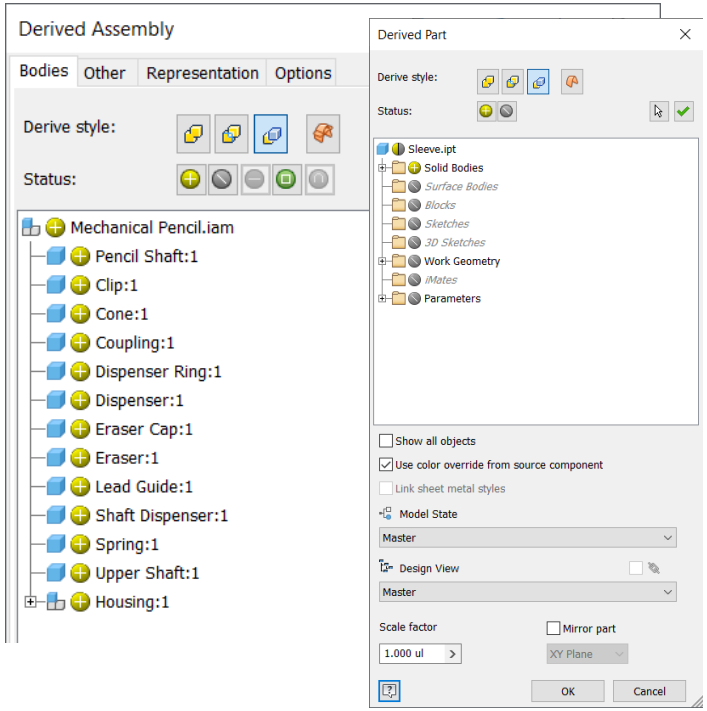
1. Using Simplify tool to simplify the model
2. Create a Derived part
3. Simplify vs Derived
4. Neutral files

Create a Derived Part

- Derive Component Tool 

to create a Derived Part or Derived Assembly





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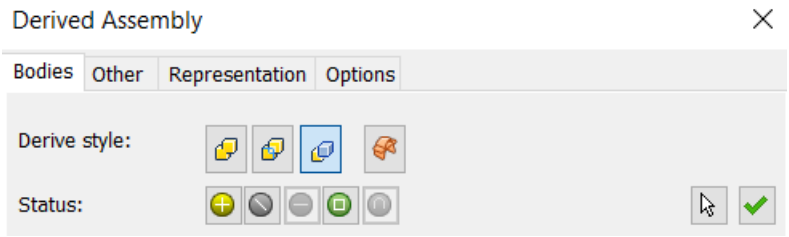
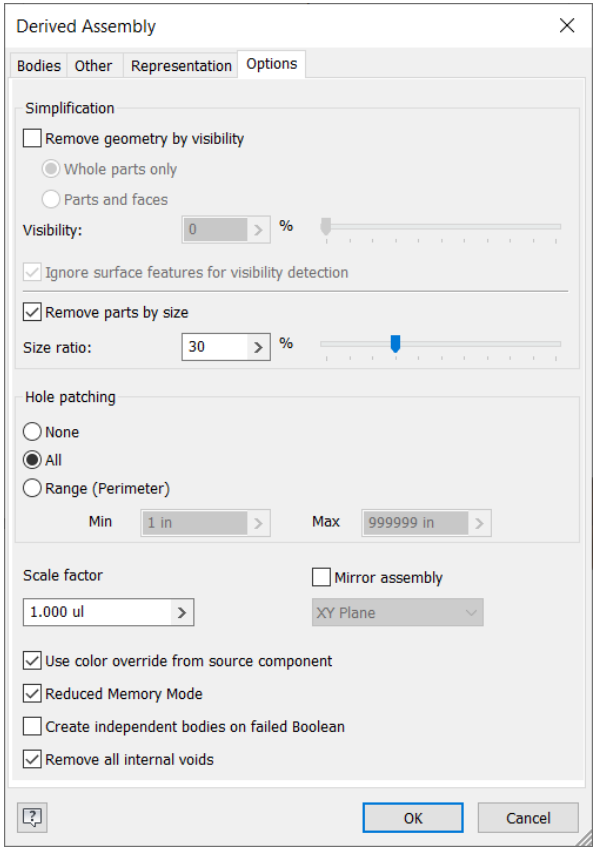
Derived Assembly

- Remove geometry by visibility
- Remove parts by size
- Patch Holes
- Scale or mirror





Objectives

1. Using Simplify tool to simplify the model
2. Create a Derived part
3. Simplify vs Derived
4. Neutral files

Simplify vs Derived

Simplify

- You can select components individually for inclusion or exclusion
- You specify the components and features you want to remove
- Protect intellectual property
- Simple to use
- You can use built – in presets.
- Create a part from an assembly
- Create an .ipt or .rvt or create a substitute model state

Derived Component

- Select elements to add, exclude or subtract from the resulting derived component.
- you can remove parts by size or visibility, and you can patch holes
- Protect intellectual property
- Create a part by referencing existing parts or assemblies as base components
- Create an .ipt file

Objectives

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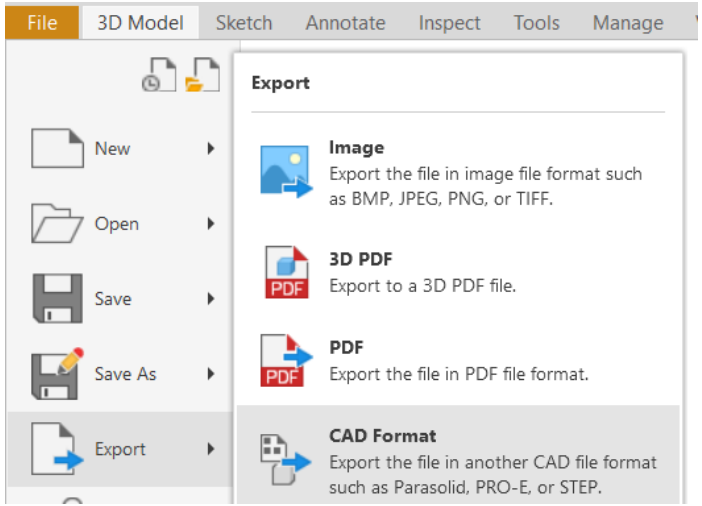
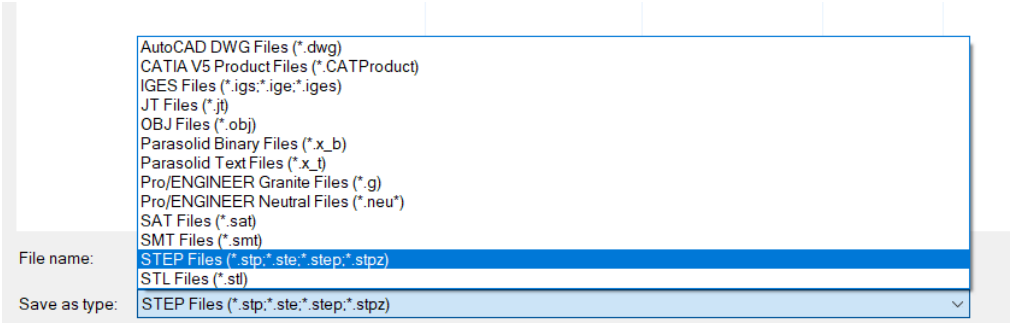
Neutral files

- Export Assembly to a neutral 3D CAD files i.e., IGES or STEP files.

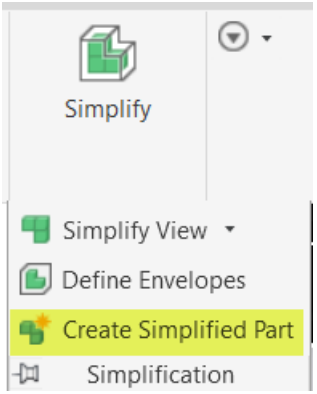


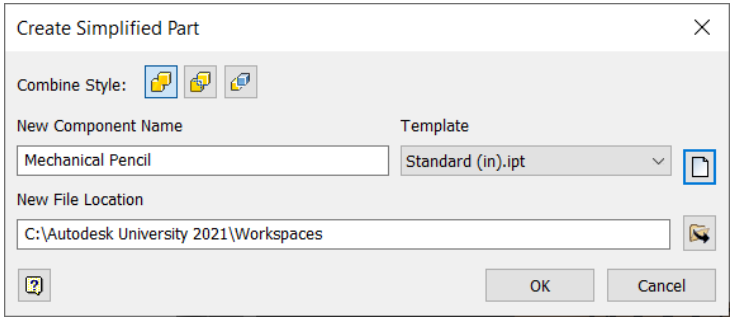


Create a simplified part (bonus material)

Other Simplification tools

- Create a simplified view to pick the components to include
- Define Envelopes
- Create a simplified part
- Edit a simplified part





Summary of Learning Objectives

- Using Simplify tool to simplify the model
- Create a Derived part
- Simplify vs Derived
- Neutral files

Original Assembly

Simplified Assembly

THANK YOU!

Don’t forget to “Like” my class!

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