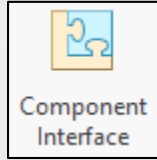# Creo Parametric Tips and Tricks Volume II - Assemblies

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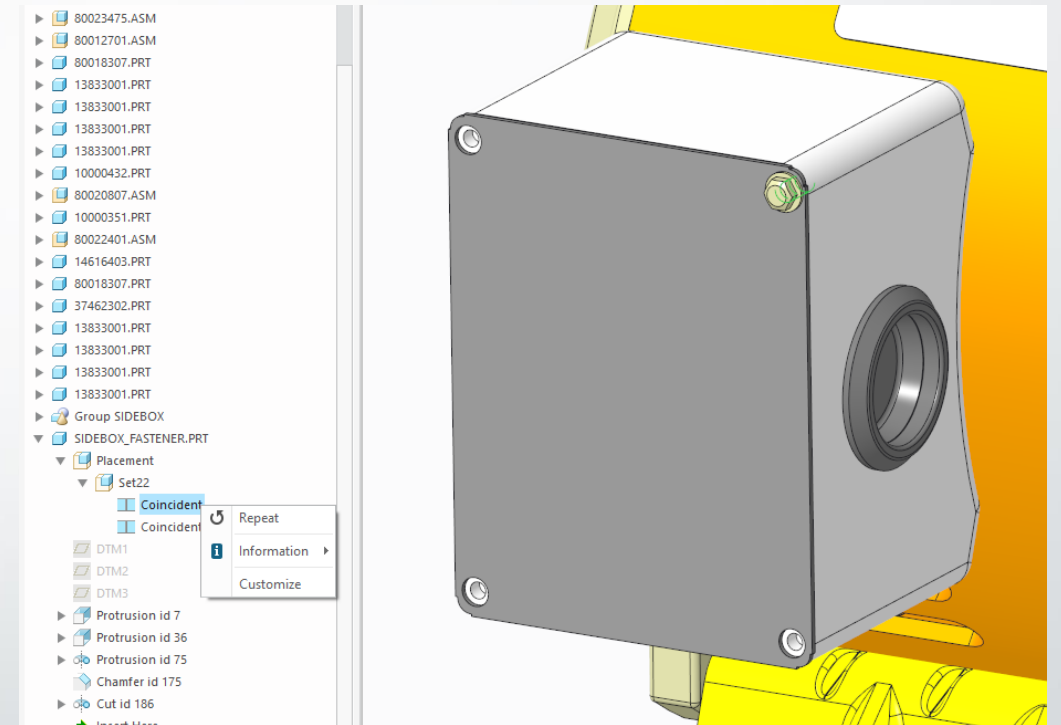# Component Interfaces

- The geometry used to constrain a component can be stored in a Component Interface in order to accelerate component placement.

- Use the **Component Interface** tool on the Model tab to define it.

- Component Interfaces can also be created on-the-fly when placing a component by holding down the right mouse button and selecting **Save as Interface**.

- When placing the component, simply select the assembly references.

- The component can be placed multiple times by holding down the right mouse button and selecting **New Location**.
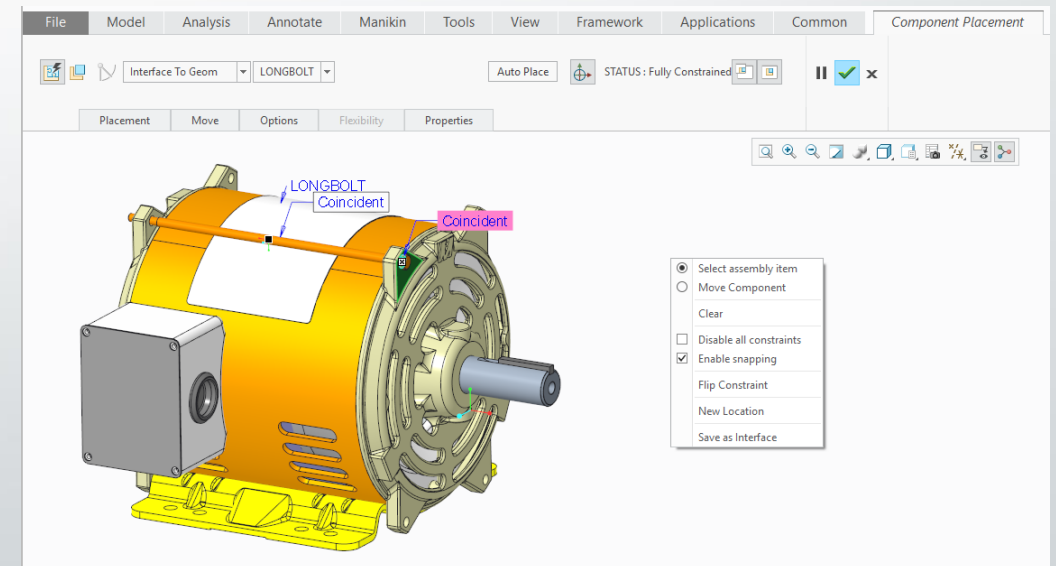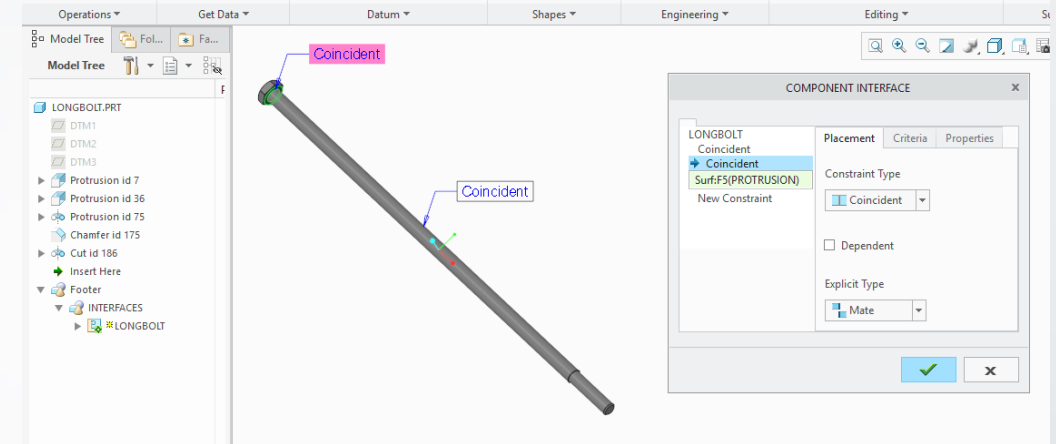
Repeat Using Model Tree

- The Repeat command is used to place multiple instances of a component in an assembly.

- In addition to right clicking on a component and selecting Repeat, you can also execute the command using the Placement folder in the Model Tree.

- Expand the Placement folder and select the constraint(s) you wish to change. Use the CTRL key to select multiple constraints.

- Then hold down the right mouse button and click **Repeat**.

# Repeat Using Model Tree (cont'd)
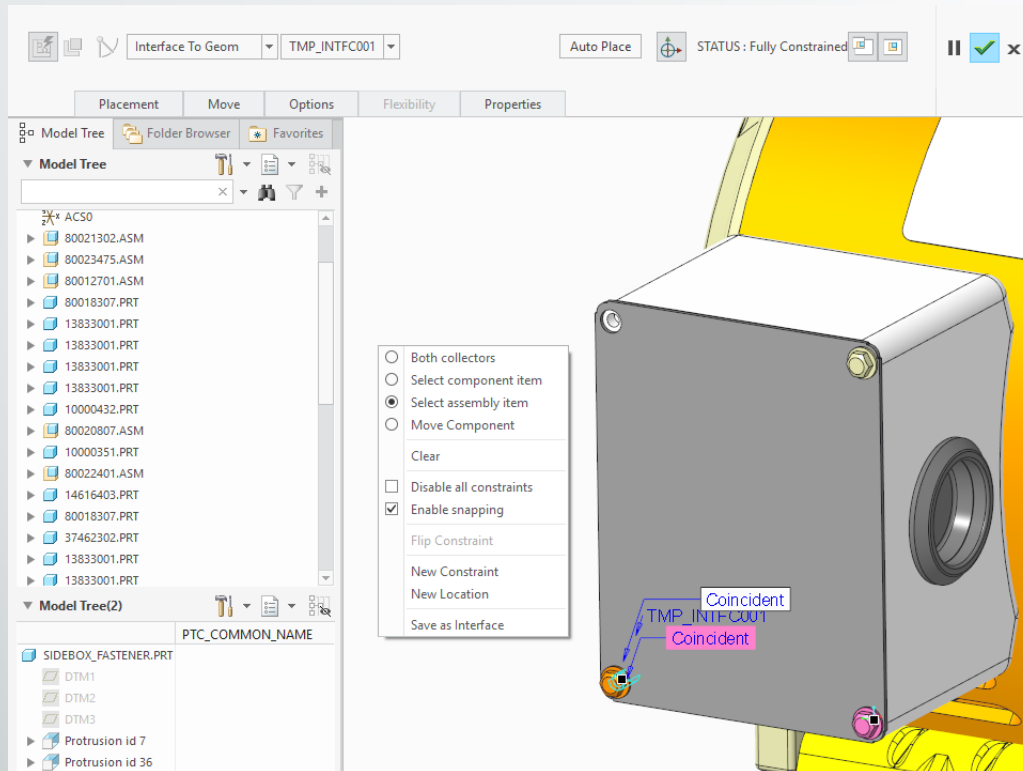
- This will create a temporary Component Interface in the model.

- Select the new constraint reference.

- Place multiple instances by holding down the right mouse button and selecting **New Location**.

- You can also turn this into a Component Interface by holding down the right mouse button and selecting **Save as Interface**.

Inserting a New First Skeleton

- The first Skeleton in a model is unique. It has no constraints and cannot be reordered.

- Other Skeletons cannot be reordered or inserted above it.

- Sometimes you want another Skeleton to appear above the current first Skeleton to create references.

- Suppress all the components and features in the assembly.

- Then use the Component Create tool to make a new Skeleton model.

- Resume the previously suppressed components and features.

- The newly created Skeleton is now at the top.
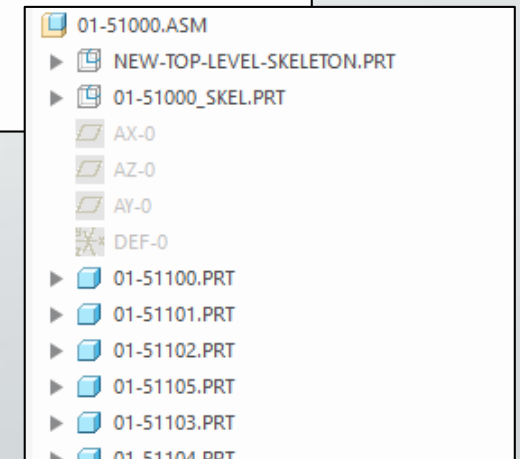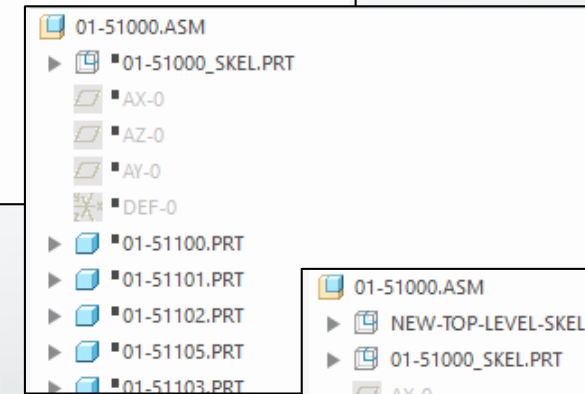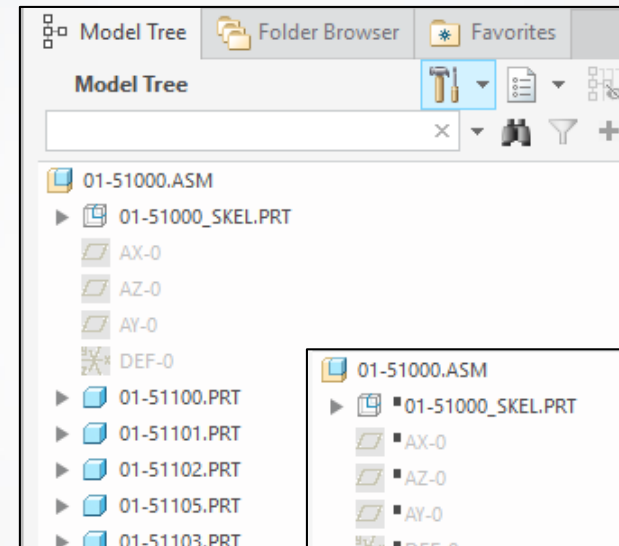
Edit and Add Parameters using Model Tree
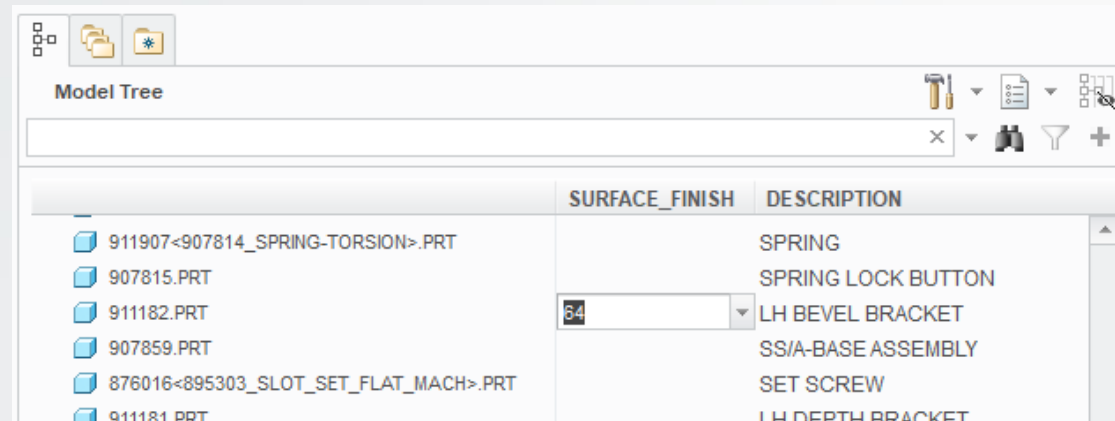
- The Model Tree can be used to edit the parameters of the components in an assembly.

- Add the desired parameter as a column to the Model Tree.

  - Click the **Model Tree Settings** icon > **Tree Columns**.

  - Change the Type drop-down menu to **Model Params**.

  - Select or type the name of the parameter and add it to the Displayed list.

- If the parameter doesn't exist in the model, the Parameter Properties dialog box will open to allow you to add it.
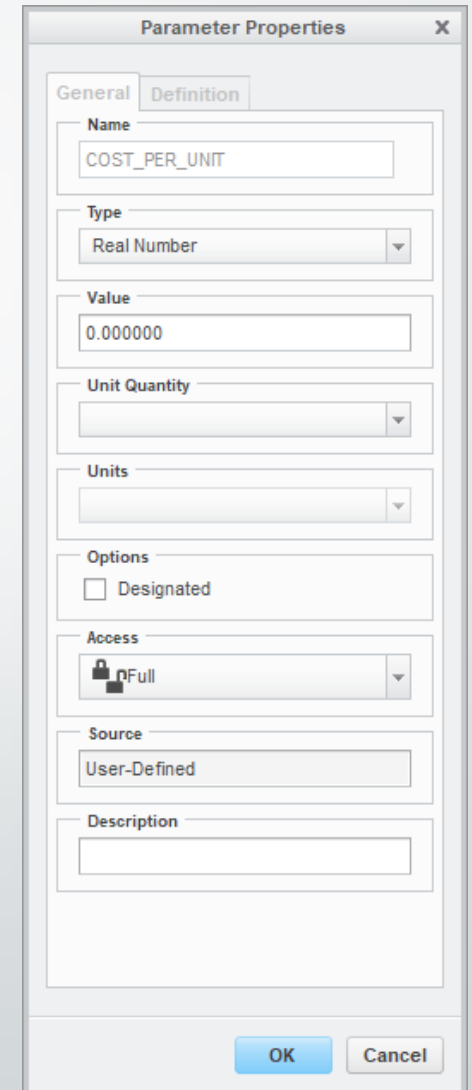
Assembly UDFs

- Often we need to assemble the same collection of multiple components in multiple places in an assembly.

- We could create a subassembly, but this would create an additional level in our Product Structure.

- Assembly User Defined Features (UDFs) can be used to place multiple components in one step, without having to create a subassembly.

- To define a UDF, click Tools > UDF Library > Create.

- Enter a name, select Stand Alone > Done, pick the components, and write the appropriate prompts.

- The UDF will be stored in a .gph file.
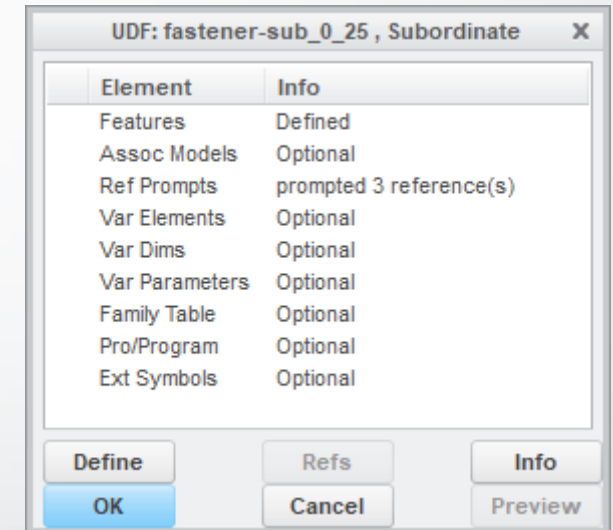
Assembly UDFs (cont'd)
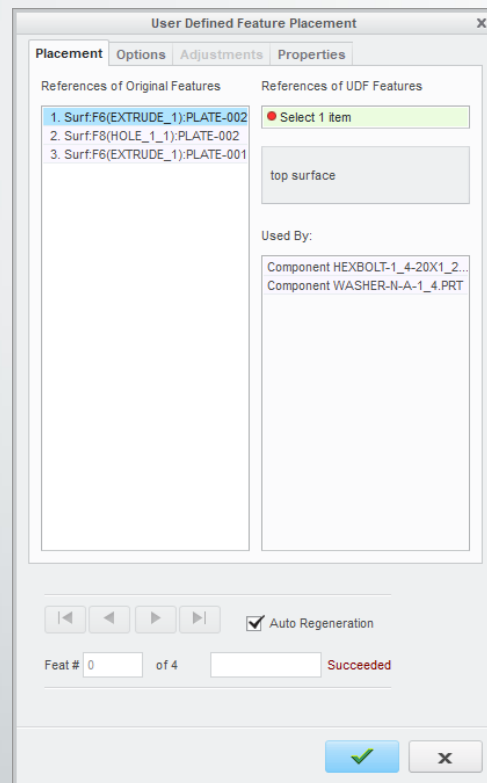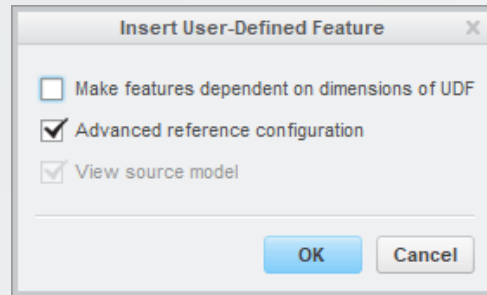
- To place the UDF, click the User Defined Feature icon from the Model tab.

- Select the .gph file.

- Click OK from the Insert User-Defined Feature dialog box.

- Select the necessary references to place the collection of components.

- Click the green checkmark to complete placement.

- The components will appear as a local group in the Model Tree.

- The Local Group can be reference patterned if desired.

Thank You!

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