Creating a New Remachining Sequence

Objectives
Learn how to create a new Remachining sequence.

Overview
What is a Remachining Sequence?
Creating a new Remachining Sequence
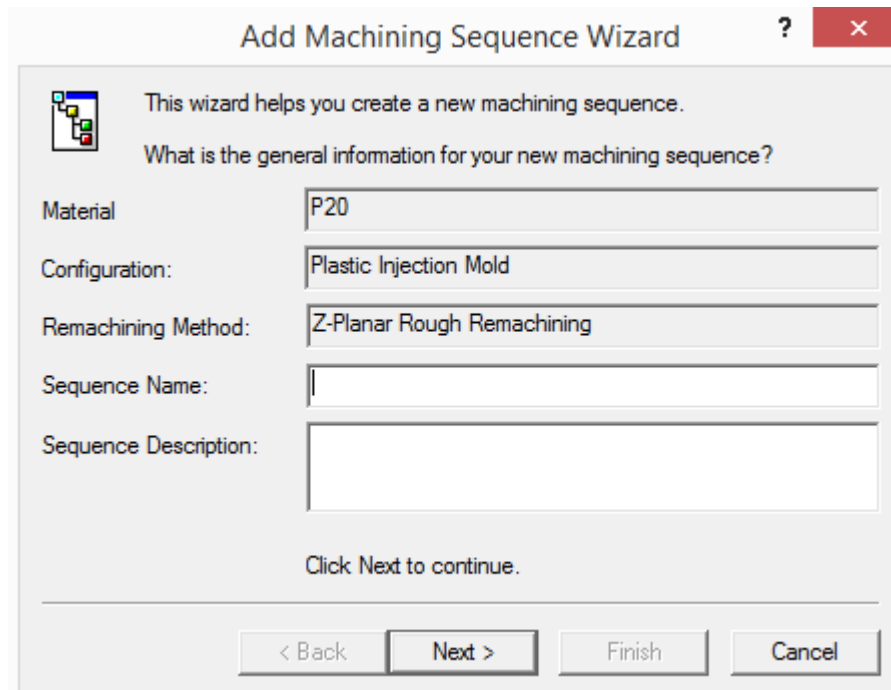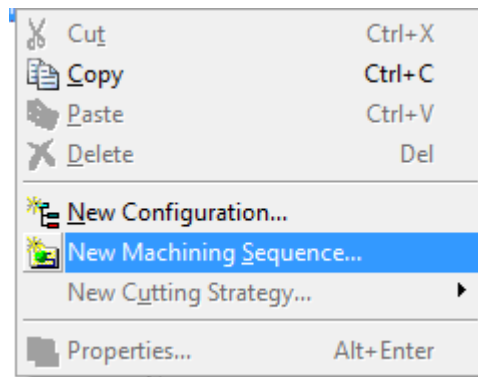
Remachining Sequences
Much like Feature-Based Machining Sequences, Remachining Sequences define a series of Strategies to re-machine the part. Again, new Remachining Sequences must be defined in the System database. These are found in the Remachining node under the Configuration. We currently support Z-Planar Rough Remachining, which can consist of any number of Z-Planar Strategies, either With Clear or No Clear. We have included an example Remachining Sequence in our database.

Creating a new Remachining Sequence
Similar to Feature-Based Machining Sequences, you have two ways of adding a new Remachining Sequence. Click on the Z-Planar Rough Remachining node and select the Insert/New Machining Sequence menu item or right-click on the same node and select New Machining Sequence from the menu. This starts up the Add New Machining Sequence Wizard.

Example – Create a new Remachining Sequence with 3 Z-Planar With Clear and 1 No Clear
In Insight, make sure to load the System Database. Go to "Cutting Strategy Selection/P20/Plastic Injection Mold/Remachining" and right-click on "Z-Planar Rough Remachining" and select "New Machining Sequence…"
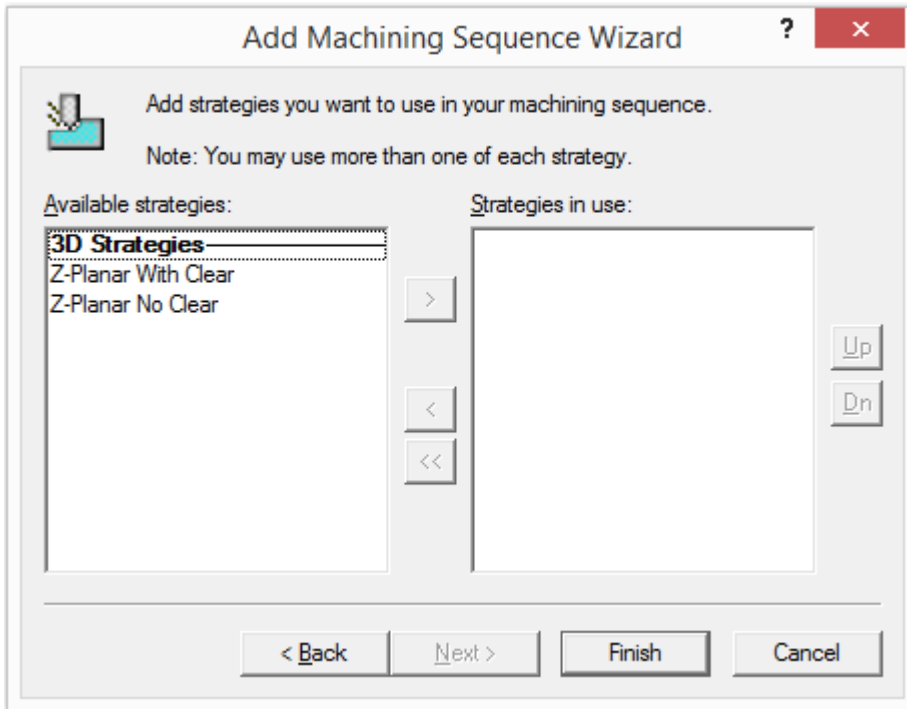

Page 1 - Remachining Sequence information
It's telling use the Material, Configuration, and Remachining type. We need to specify the Name and a Description.

       Name: Rough Remachining
       Description: Remachining with several tools

The Name and Description show up in Prospector, we'll see this later. Click Next.
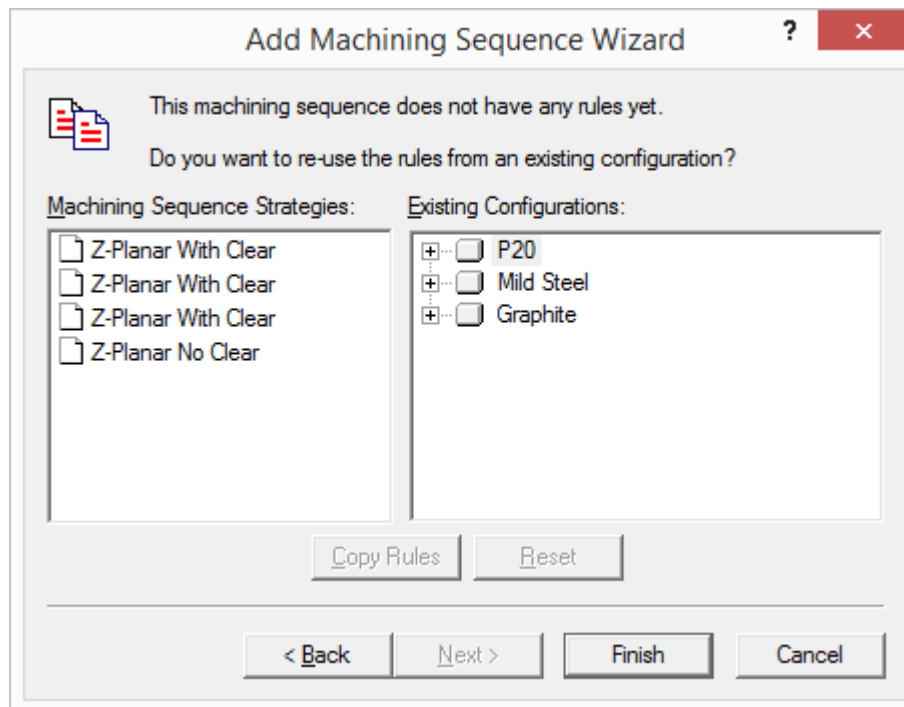

Page 2 - List of Z-Planar Remachining Strategies
On the left, we have the available Remachining Strategies. On the right, is the list of Remachining Strategies to be used for this Remachining Sequence. Double-clicking on a Strategy on the left will add it to the list. Double-clicking on a Strategy on the right will remove it from the list. Alternatively, you can use the > and < buttons to add and remove a highlighted Strategy. The << button will remove all Strategies. The Up and Dn buttons can be used to re-order the list by moving the selected Strategy up or down. You can add any number of Strategies. You can add multiples of the same Strategy. Add:

      Z-Planar With Clear
      Z-Planar With Clear
      Z-Planar With Clear
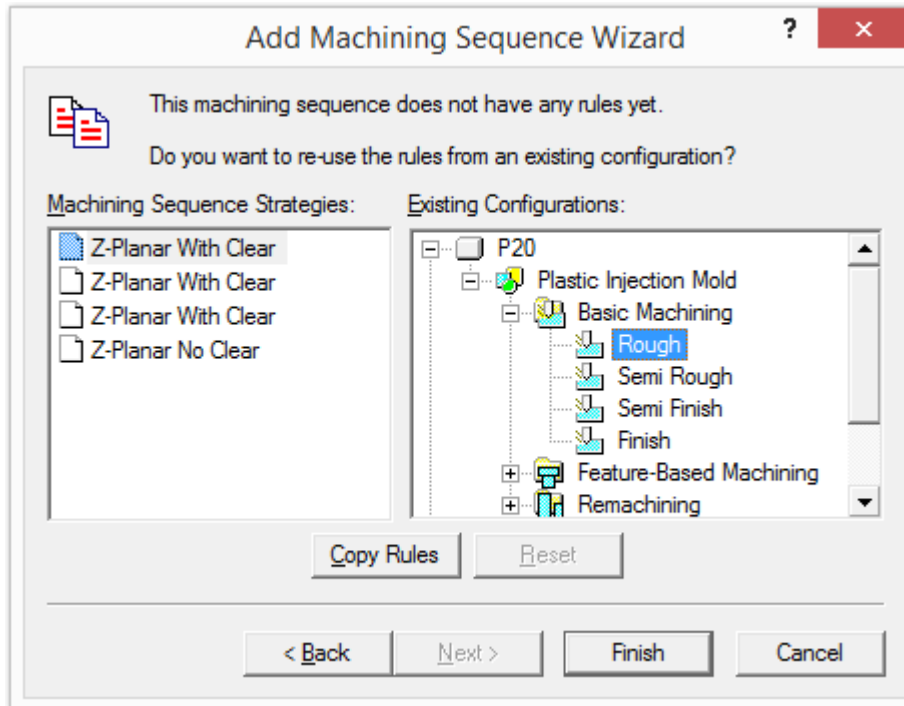   Z-Planar No Clear
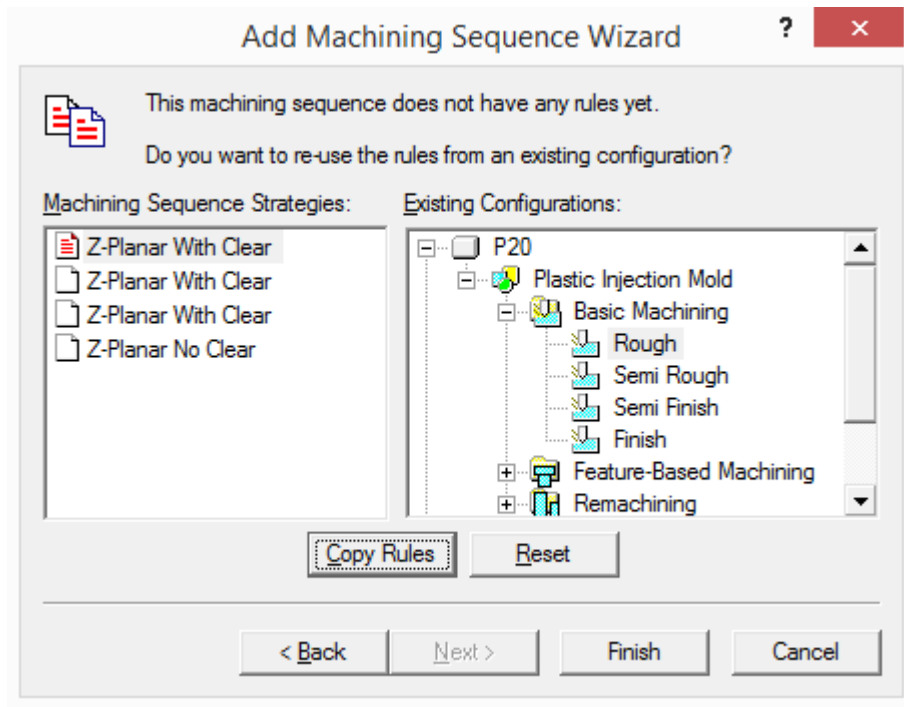
Click Next to go to the last page

Page 3 - Copy Rules
On the left, we have our list of Remachining Strategies. On the right, we have a list of Configurations, just like the Configurations
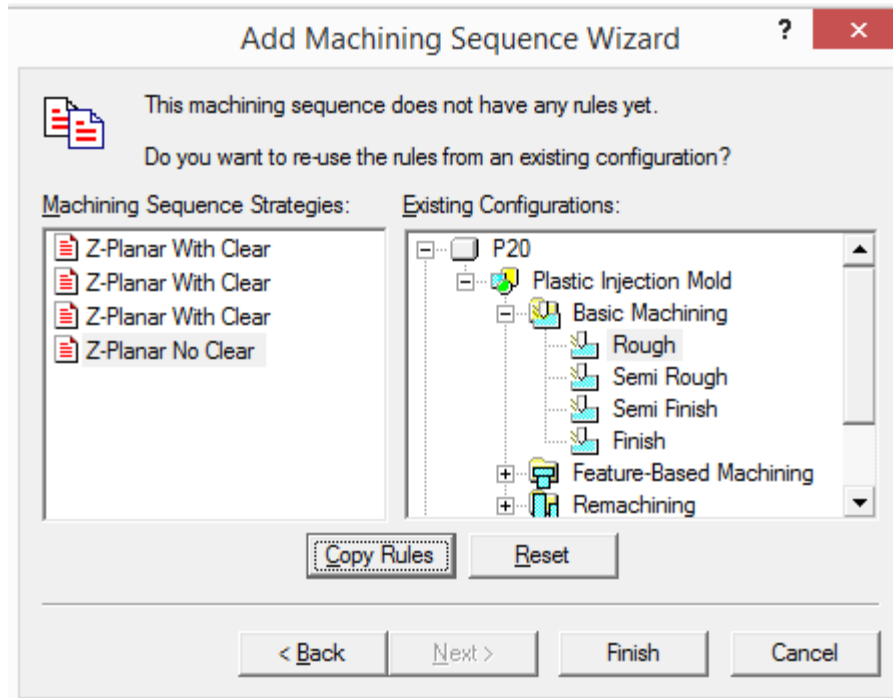
pane. We can copy the rules from any Configuration, either Basic Machining or Remachining. We'll copy the Rules from the Rough Category in Basic Machining. Click on the first Z-Planar With Clear. Go to "P20/Plastic Injection Mold/Basic Machining/Rough."

The Copy Rules button is now enabled, click it. The Strategy turns red indicating the Rules were copied. The Reset button is enabled if you want to delete the Rules:

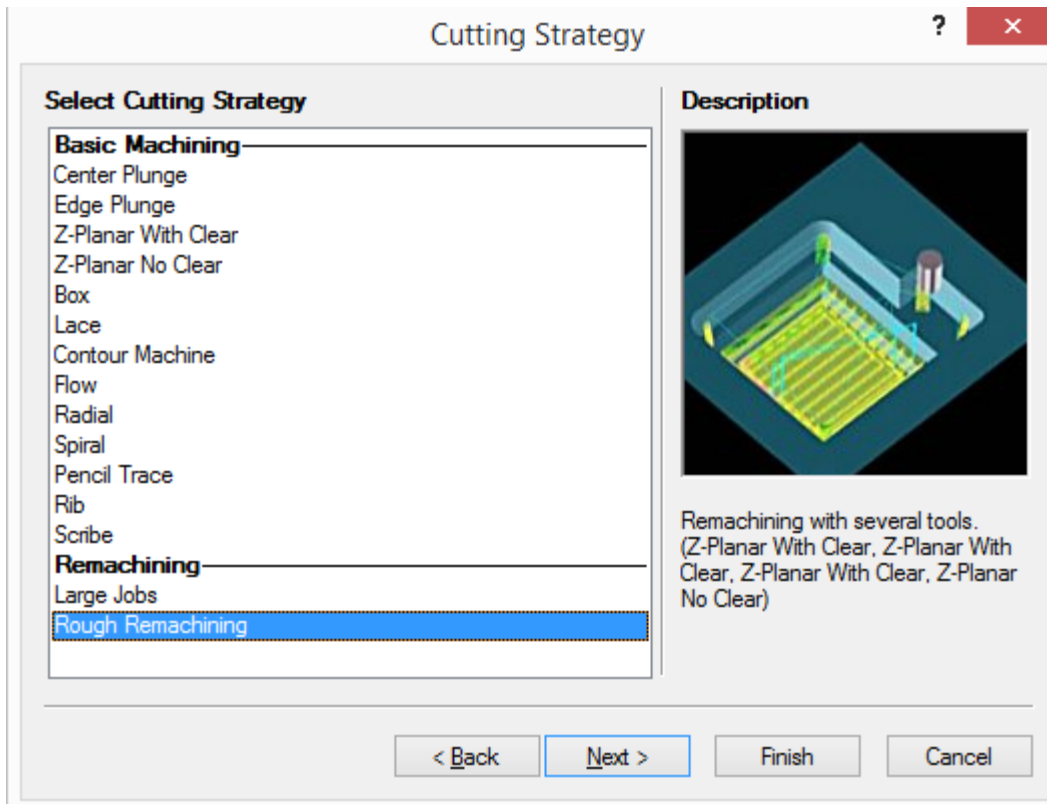Do the same for the other three Strategies:

Now click Finish to add the Remachining Sequence. Now we can click on any of the Strategies and make any changes we want. Let's change the Tool Diameters, since, in this scenario, we always Rough with the same tools. We'll be changing the Tool Type and Diameter for each Strategy. Use these values:
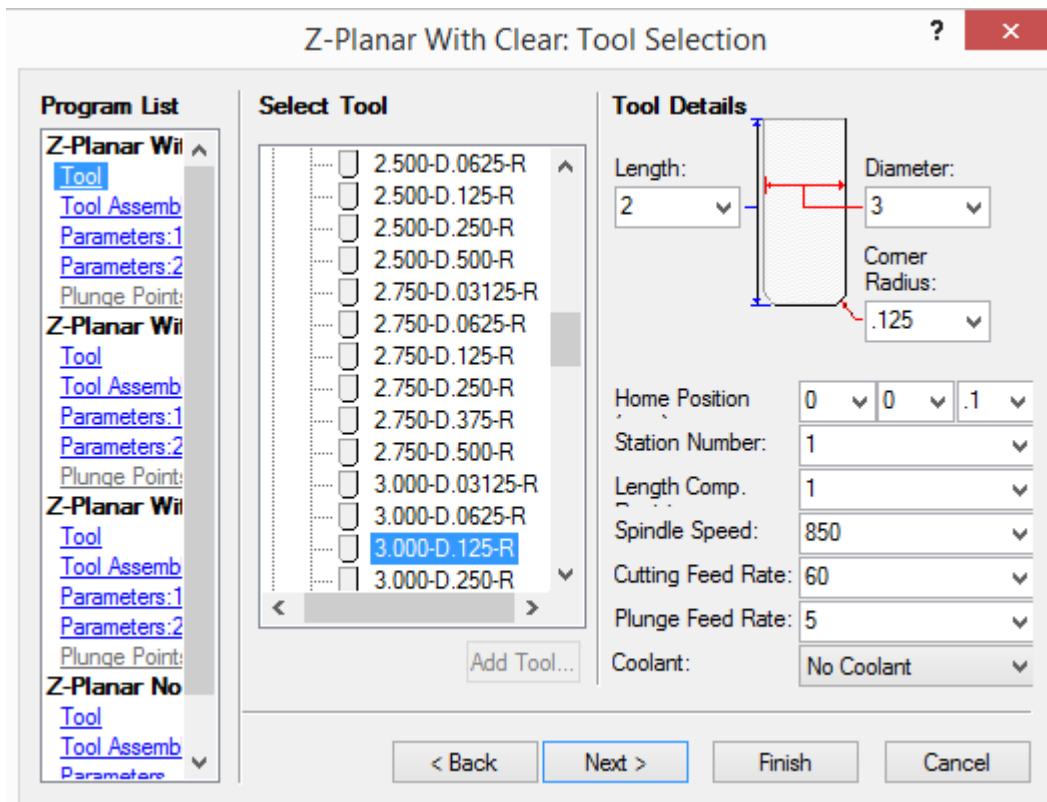
> 1st Z-Planar With Clear
> > Bull Tool
> > 4" Diameter
> 2nd Z-Planar With Clear
> > Bull Tool
> > 2" Diameter
> 3rd Z-Planar With Clear
> > Bull Tool
> > 1" Diameter
> Z-Planar No Clear
> > Bull Tool
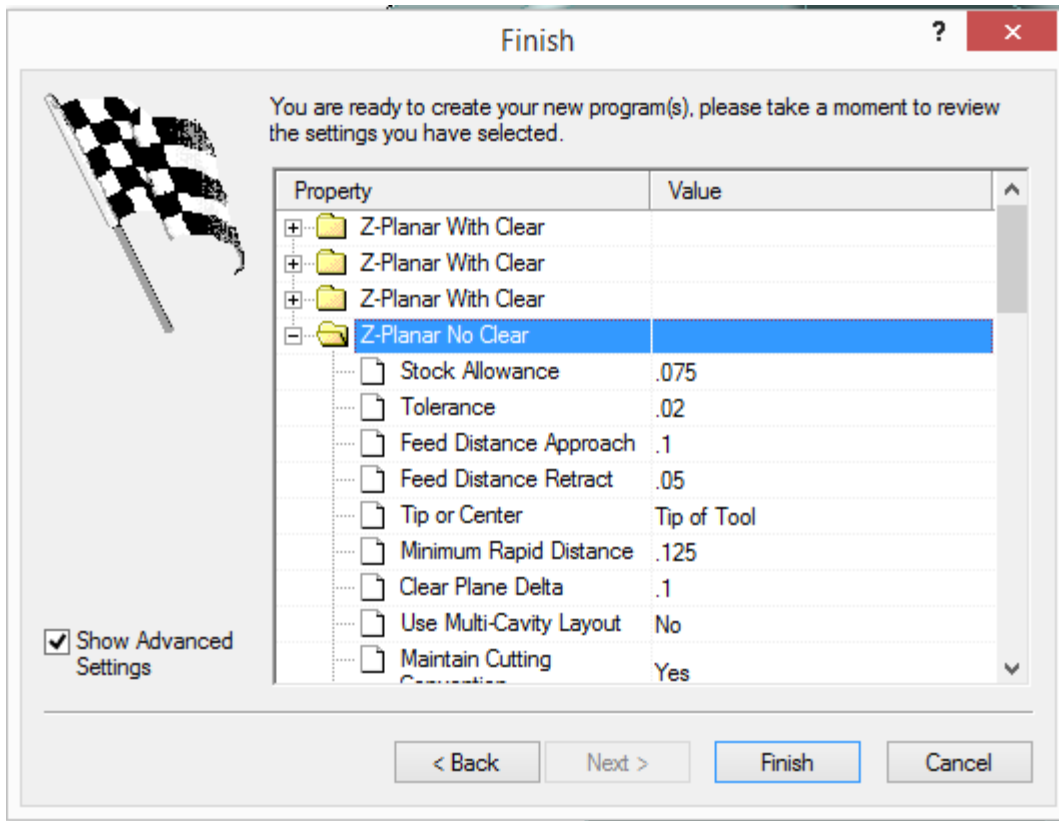> > 0.5" Diameter

Prospector
Let's test it out in Prospector. Save the System Database and switch to Prospector. Load the sample Project. In Rough Category, new 3D Program, Window Around Part, and Next to get to the Strategy page:

Under the Remachining divider, you should see the name we used for the Remachining Sequence - "Rough Remachining." Select it, you'll notice that the text under the graphic changes to include our description as well as the list of Strategies. Click Next.

And now we can go through the rest of the wizard. Each Strategy in the list will have its own Tool, Tool Assembly, and Parameters page. You can quickly jump around using the navigation control on the left. The last page contains a list of all the Strategies with all their Properties available to edit:

Visit each Tool page to ensure it selected the correct size cutter. Click Finish.