

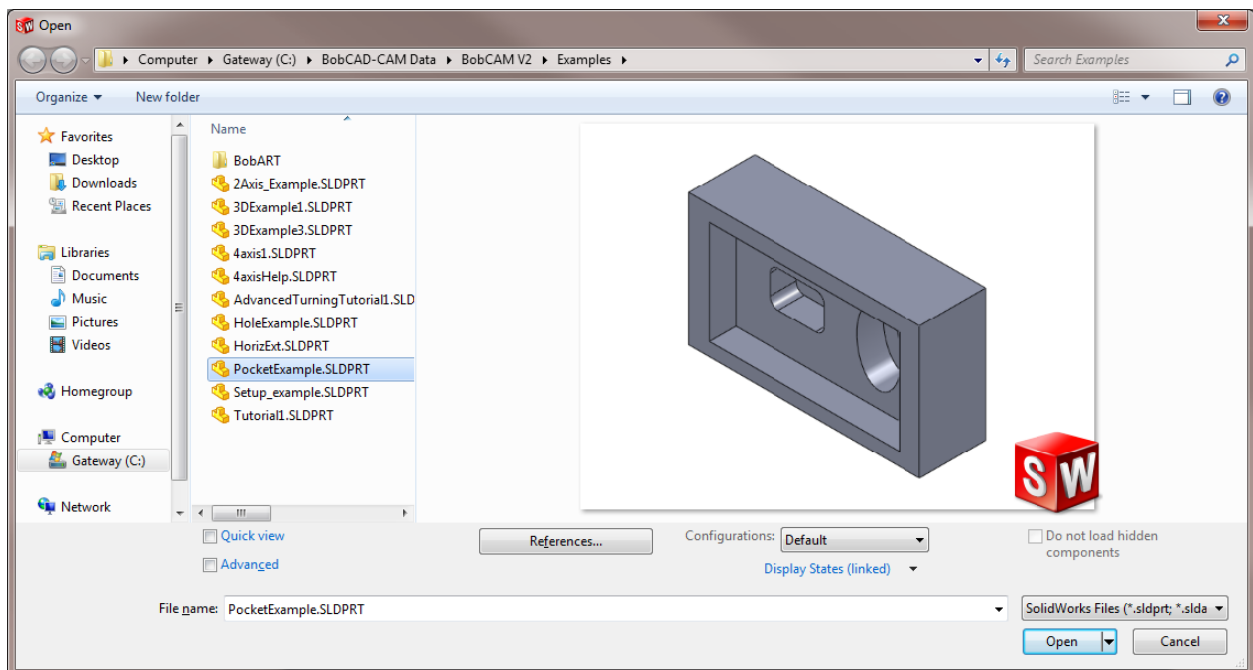
# BobCAM for SolidWorks™

## Setting up the SolidWorks Part Machine Coordinate System

*This exercise is dedicated to teaching you how to create a Coordinate System and Machine Setup in BobCAM V2. It also explains setting up multiple machine setups.*

Once you have loaded or created a part into the software for machining you will want create the Coordinate System. This has to be done before you can define the Machine Coordinate System in the CAM Tree to indicate where the zero position is of the part. The reason for doing this is because you will need to indicate the machine coordinate in the CAM Tree. The software just needs to know this so that the toolpath and g-code program you create is correct. Here is an example and it is the method you will use to accomplish this.

1. Inside SolidWorks, go to File and choose Open.

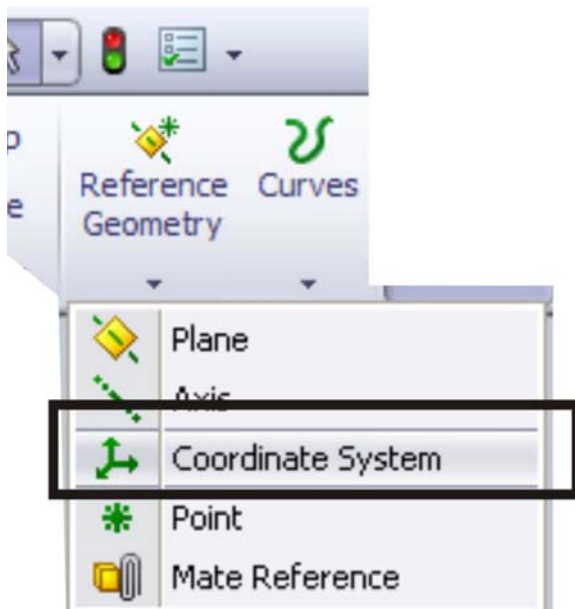


Locate the file called, "**PocketExample.SLDPRT**" and click on it and then click the Open button to load the file. Typically the file path is **C:\BobCAD-CAM Data\BobCAM V2\Examples**

- When the part file opens into the workspace we will want to set the machine coordinate for creating the toolpath. Click on the Feature Tab.

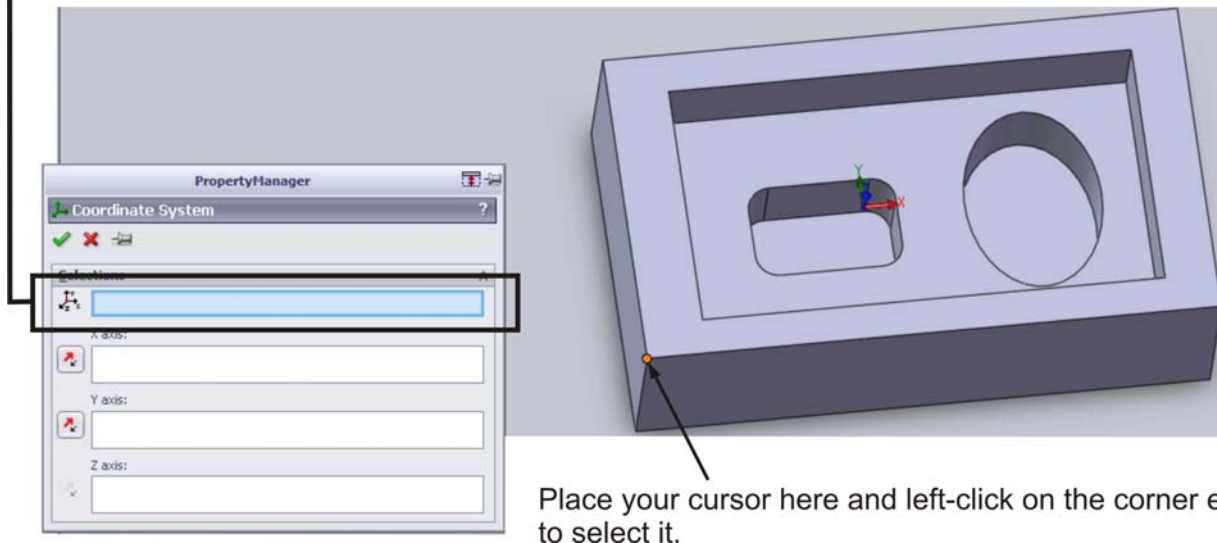


Next click on the Reference Geometry button and then choose Coordinate System.



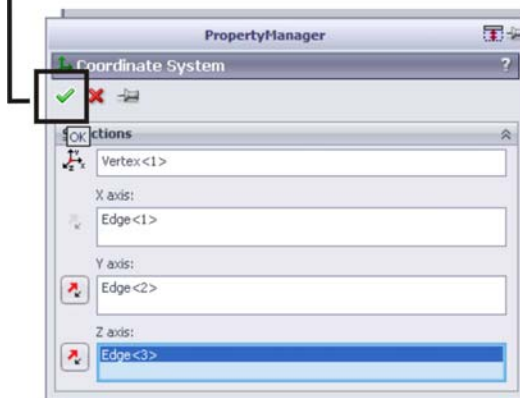
This will load the Property Manager for the Coordinate System onto the screen.

This field will be active first.



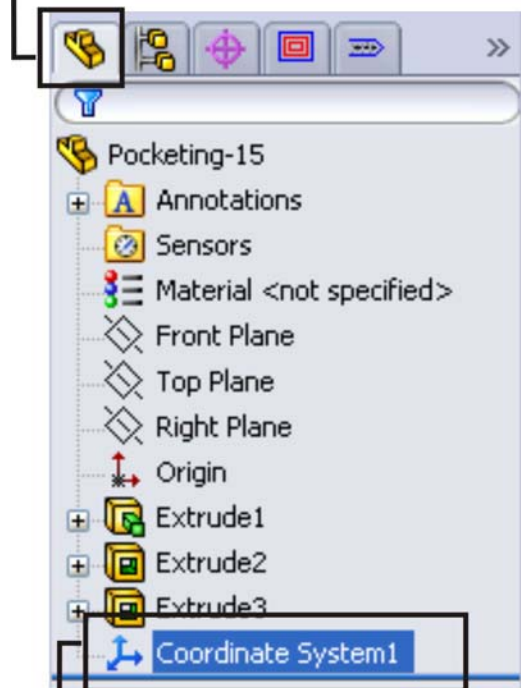
That will set the coordinate system and define the X, Y and Z axis. Now you need to click the green checkmark to indicate OK.

Click the green check mark to indicate OK.



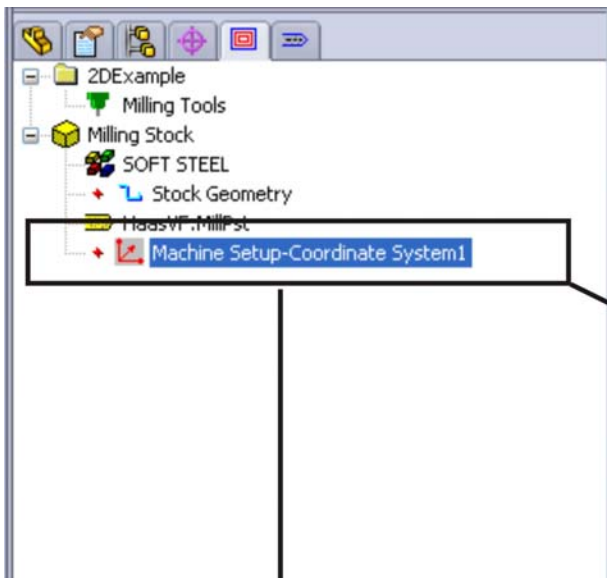
Now you will have the new coordinate system for this part.

The Feature Manager Design Tree Tab



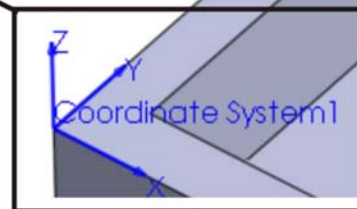
The new Coordinate System 1

Now when you open the BobCAM - CAM Tree you will see the **Machine Setup** Coordinate listed.



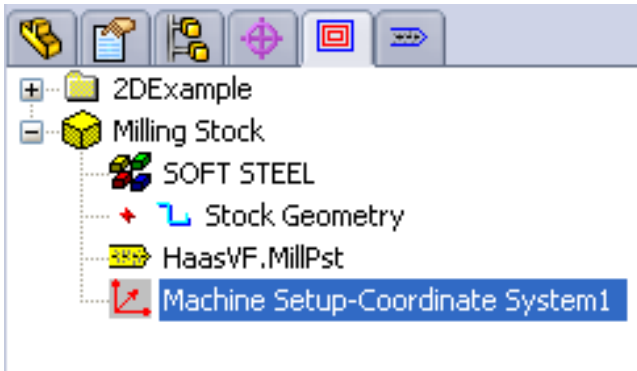
The Machine Coordinate Setup

The Machine Setup is based off of the Part Coordinate System and is critical to creating correct toolpath and NC Program.

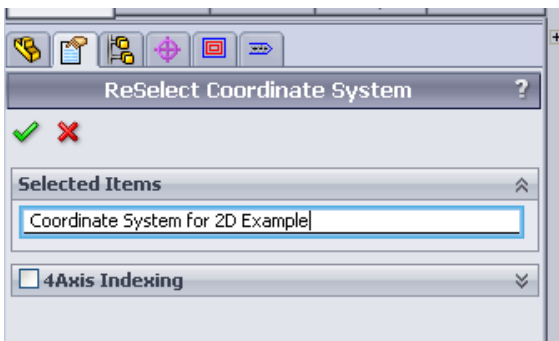


The Part Coordinate System

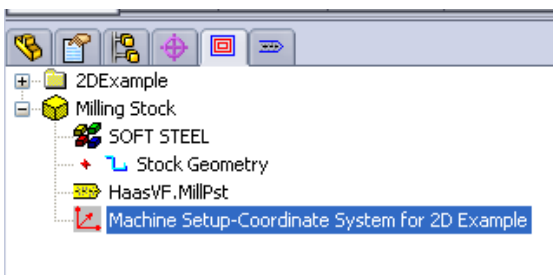
To set up the **Machine Coordinate** you place your cursor on it and right click your mouse. Choose Re/Select by clicking on it. This opens up the Selection Manager. You can click on the Coordinate System located on the part and it will be listed under Selected Items. If you click the green checkmark to indicate OK, the Selection Manager will go away and you will notice that the red plus symbol next to Machine Setup in the CAM Tree will be gone and you will be ready to load a machining feature now.



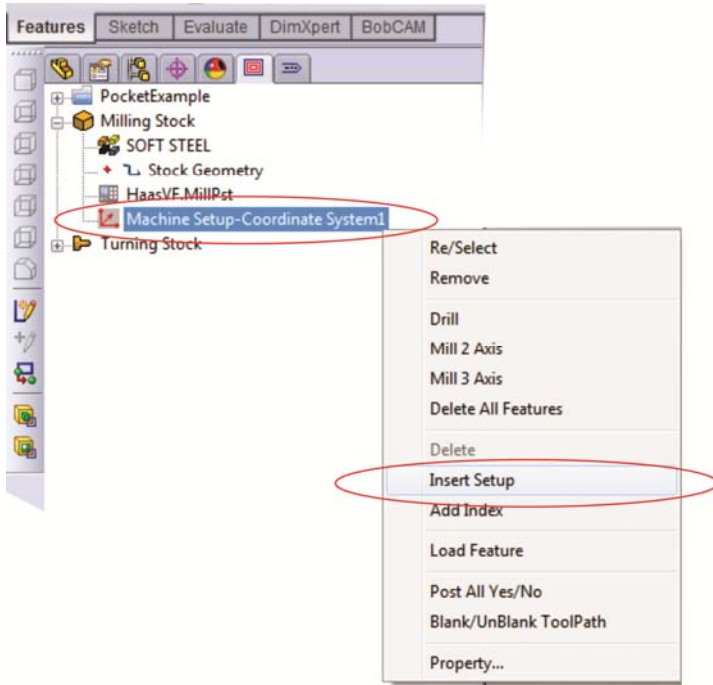
You can name the Machine Setup-COordinate System by right-clicking your mouse on it in the tree, left-click Re/Select and then change the name.



Then when you click the green checkmark to indicate OK, the name can be seen in the CAM Tree.



BobCAM V2 allows you to create multiple machine setups. To do this create a new coordinate system. Next, right-click on the machine setup in the CAM Tree and click Insert Setup.



This creates another setup as if the part was being re-fixtured (basically a new work offset so that you can machine on another face) and adds it under the first in the tree. To add a completely new machine setup for a different Coordinate System you may have, right-click on Milling Stock in the tree and choose Add-Setup at the bottom of the pop-up menu.

If you right-click the Machine Setup in the CAM Tree you will also see ADD Index. This adds an Index System to the Tree which is used for 4th Axis programming.

That concludes this exercise.