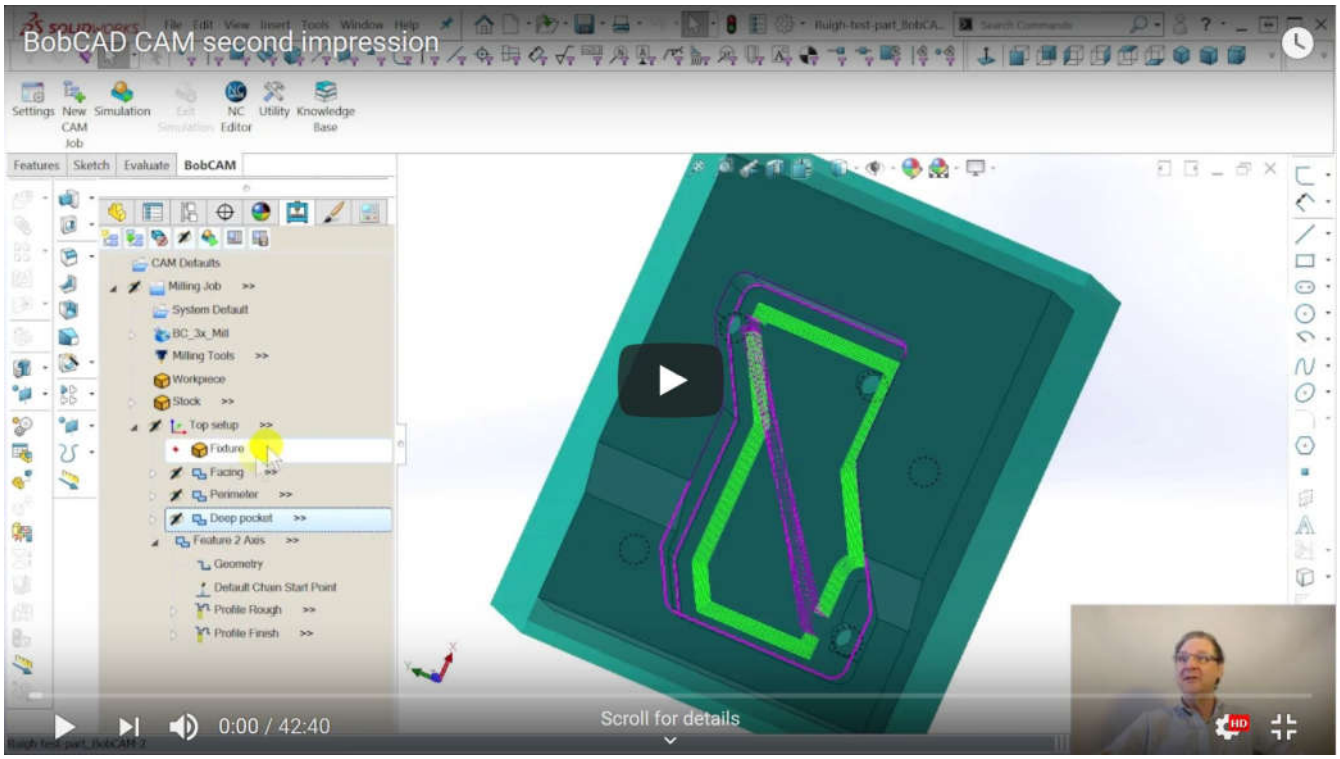
RAKO STUDIOS

BobCAD-CAM second impression (youtu.be/mtgmiB94_ls)

I add two pocket geometries to the toolpaths. I still had to add a sketch to the model to get things perfect.



Part file at beginning here.
Part file at end here.

Note the demo part file will only open with toolpaths in another demo version, you can't open it in a paid-for BobCAD CAM. This is fine, they are just trying to stop bootlegs.

While the large "Wizard" dialog box is still off-putting, I am getting used to the BobCAD CAM user interface in this video. I am still disappointed with the simulator. It does not have a graphical representation of gouges and excess, but puts up little text boxes that are hard to understand.

There is the usual programmer dreamed-up jargon, "blank" instead of "hide," "System compensation" instead of "What dang side will the tool cut on," and other typical software lack of common sense. Most programs have this disconnect with programmer-speak.

Thing is, I have gotten through the whole part in one of my practice sessions, and it did finish things and make a part that at least looks OK. The goofy report said there was no excess material, and there were 5 gouges where I expected them, where the 5 tapped holes were, which is normal since the tap diameter hogs out bigger than the tap drill hole in the model.

The demo program continues to delight me since it allows you to save the file, unlike VisualMill. It will only put out a few lines of G-code, so there is no way of knowing how good the actual code works, but the simulator gives a rough idea of what is happening.

In this episode, I take 40 minutes to cut two pockets. I could have whipped through them, but I felt it was better to show how a person unfamiliar with the program has to go back and forth to get the toolpaths right.

Picking the toolpath for the deep pocket was simple, I just used SolidWorks to pick the edges of the pocket at the top of the part. Despite the fact those edges were on three different planes, the software understood what I was trying to do. I have been playing with MasterCAM, and it chokes if you select geometry that is not on one plane.

After I picked the geometry, there is the usual dialog-box dizziness of making sure BobCAD is cutting on the right side of the geometry (System Compensation). You specify the tool you want to use, the depth of the cut, since it guessed wrong, and the fact that I wanted to take multiple depth cuts rather than one deep cut.

I didn't see a place to do adaptive toolpaths with constant load like iMachining in SolidCAM, or VoluMill in SolidWorks CAM by CAMWorks. The toolpath were simple prismatic offsets to the geometry. There is a "Strategy" dialog box in the wizard where you can specify if you want a rough then finish, or just one or the other. Finishing will not let you select hogging out the center of the pocket however, it will only do the perimeter.

The simulator did an adequate job of showing what was going on, but I long for a color-coded "compare" function like in SolidWorks CAM by CAMWorks or VisualMill. This uses color-coding on the model to show where there is material left and where there is a gouge.

BobCAD-CAM just lets you run a report and pastes little text boxes all over the simulated part. These are hard to interpret, and I still have no idea of how accurate they are. VisualMill made it easy to see stock that was even less than a thousandths of an inch gouged or excess.

The shallow pocket below the deep pocket took two tries. At first I defined the geometer simply as the bottom face of the pocket. This made the toolpaths just stop when they reached the two holes that broke out from underneath. SolidWorks CAM and VisualMill would make toolpaths that tried to follow the little arcs defined by the holes, and that would leave excess stock or create a gouge in the deep pocket wall.

BobCAD-CAM let little "scallops" of uncut material where the two breakout holes were. In once case, it would have worked, since the drill coming from underneath would have removed the scallop. The occluded breakout hole did not work out so well. The little scallop would only be partially removed since it was a near a through-hole.

Because of this, I ended up doing what I had to do in SolidWorks CAM and VisualMill, draw a sketch in the model that ran an edge across the breakout holes where the toolpath should be running.

There was typical suffering with software, since just changing the geometry also redefined the pocket depth, but the sketch corrected the toolpaths and eliminated a gouge generated by the first try, when I asked for too many step-overs, 6 instead of 5.