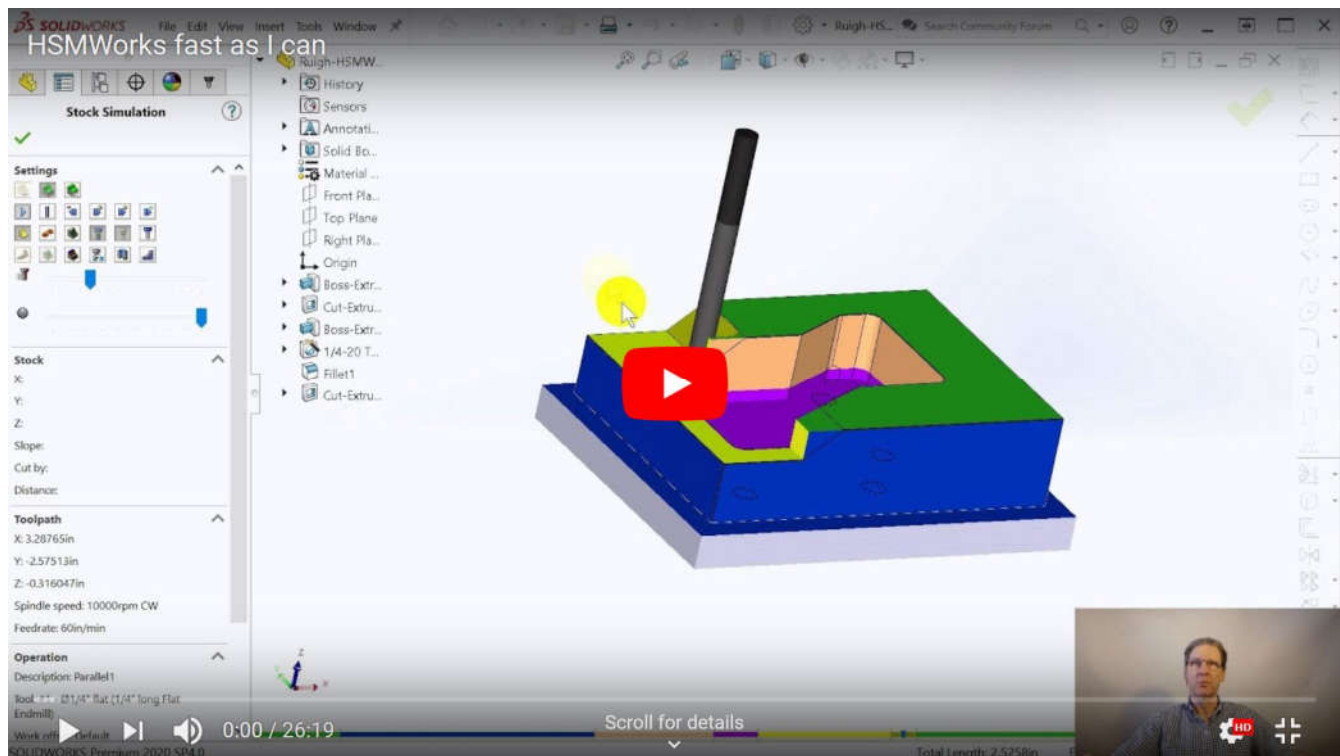# ─RAKO STUDIOS─

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HSMWorks fast as I can

I get the test part programed in 22 minutes, a new personal best. This is despite a few screw-ups. HSMWorks is my keeper CAM.

Beginning part here.
Finished part here.

I go back to the test part I programmed in the First, Second, and Third impression videos. This time I program the whole part in one go. This test part, made by my buddy Dave Ruigh was designed to screw up CAM systems doing any automatic feature recognition. Sure enough, the "Drill Wizard" in HSMWorks made the same mistakes other wizards did, like in SolidWorks CAM by CAMWorks. It was simpler to just pick the holes individually and do separate center-drill, drill, and tap operations. I probably could have speed things up a little with more practice, but you rarely get more than one shot at doing a new part.

I feel SolidCAM is a bit more capable, allowing picking geometry "point to point". SolidCAM also has a functioning fixture avoidance in 2D pocketing, though it cannot avoid clamps in facing like VisualMill by MecSoft. Once I got the "protect operation" feature figured out, this was not a big problem. Also livable was the lack of stock condition as you go down the tree. You have to simulate everything before the operation you are working.

All in all, HSMWorks is my chosen program, since I can rent it for $500 a year, versus spending $5,000 on a CAM program with a perpetual license. Next up will be making some test cuts and trying the post-processor.

HSMWorks, the good:

Of the CAM programs I have tried, I like the HSMWorks user interface the best. It is not quite as easy to setup a part as VisualMill, but it is better once you start making toolpaths.

In the second impression episode I did a couple of contours, a 3D Parallel operation, and a facing. A quick look at the other 3D toolpaths shows them to be comprehensive, I suspect they use the ModuleWorks kernel for 3D, like most every other CAM program. I can do spirals and radial and the other toolpaths that I would have to pay extra for if I bought SolidCAM.

There was the initial frustration in the first episode dealing with the setup and tool library, but that is a minor annoyance compared to the slickness of the toolpath dialogs. One thing I love is that there are only 5 tabs in the CAM tree. The tool tab is first, and HSMWorks will pre-select the last used tool, which I love.

The geometry tab is pretty straightforward. Like the other programs, if you don't select anything in a facing op, it will machine all the way to the stock outline. I did not need to make a sketch to profile the flat area of the part. I did not need a sketch to control the tool when doing the slopes So far, only SolidCAM was able to do this. I do prefer the SolidCAM method of being able to connect points for a geometry.

I prefer the "operations" mentality of HSMWorks compared to the "features" mentality of SolidWorks CAM by CAMWorks. BobCAD CAM also makes you pick a feature geometry and then it decides if it is a pocket, etc. I prefer to "help" the program by telling it I am doing a pocket, or a contour, or whatever. I do like BobCAD's handling of holes, I did holes in HSMWorks in the third impression episode.

The best thing about the HSMWorks UI is that it is not spread out over some giant dialog boxes like the other programs. Most all of what you do is in the side-panel where the SolidWorks tree lives. This means much less mouse movement to fill out the dialogs. The downside is that there is no room to label the boxes. You have to hover over things to get a help tip until you remember what does what.

There is this moronic marketing myth that says if you spread the dialog box out with tons of white-space, it is simpler. No, it's worse. There were instances in SolidCAM where the 2D chamfer was invoked by a drop-down on the left of a big dialog box. The 3D chamfer gets invoked by checking a box that is on the right side of a big dialog box. I didn't see that at all.

Because the HSMWorks designers forced themselves to stay inside the tree area, it makes the dialogs compact, and for me, much easier to navigate and remember. It was also a lot easier on my wrist since it took so little mouse movement to fill out the dialogs.

So far the only giant dialog has been the tool library. I described some difficulties I had with this dialog the first episode, but this is all minor learning-curve stuff. I also has some problems setting up the stock and part zero, but also minor stuff now that I have been through it.

My problem is that I am an intermittent prototype user. So I might not use the software for weeks or months before needing it intensely. This makes having a memorable intuitive interface very important to me. The sketchy stuff I can make notes on to remind me what do if I haven't use the program in a while.

I got a deal, renting the software for $300 the first year, $500 a year after that. This is a better deal than spending $5000 to buy a package.

AutoDesk, the bad:

They don't tell you, but soon you will be getting emails for GIS (geographic information system) software that as much to do with the CAM software I just bought as would flower shop ownership software. There was other spam mail, you have to log on and turn them all off.

The big disaster was I could not get HSMWorks activated on my computer. The install program gives you three choices. 1) HSMWorks Premium. 2) HSMWorks Ultimate. 3) Fusion entitlement. If you install 1) or 2) you get to spend a couple hours with chat, email, and phone help, and they still can't tell you what you did wrong. I figured it out after a day of messing with things, including uninstalling and re-installing the add-in three times.

Seeing as how I just bought something called HSMWorks, I picked 2). It was pre-selected in the install dialog. It turns out the fine folks that run the customer experience group have decided that since buying their Fusion 360 *entitles* you to use HSMWorks, choice 3) is what you should be installing.

The install program also enables HSMWorks to run on SolidWorks startup, which I dislike. When I enabled the plugin SolidWorks would pop up a dialog asking for a serial number for HSMWorks. I wish they told me that you need to have it work at startup at least once, and then after that you can disable it until you want to enable it at the start of a CAM session. This is my preferred use case.

A considerable time was spent with four different support people that did not believe the program would ask for a serial number. They said it is a web authorization. I am pretty sure the plugin was "phoning home" and when it did not see HSMWorks Ultimate as a product in my ownership, it bombed out to the serial screen. The salesmen and the support people were totally focused on Fusion 360 to the neglect of everything else. Like all suffering with software, the program would put me in giant time-consuming loops, where it started with asking for a log-on. I typed in the credentials I knew to be good, and then without explanation got a screen asking to start a trial or buy. I hit the "Already have a license" in the lower right. I said to switch user, it tells me to sign out and quit. Then when I start this misery all over again, it gives me a delightful note that I have failed. I went around in loops for a half-hour, until I suspected the problem was it saw my account, but the account did not authorize HSMWorks. So I went to the account management, un-enabled Fusion with HSMWorks, reassigned it to myself, and did a few more loops. Only on the third add-in uninstall and reinstall from my computer did I try the "Fusion entitlement" choice.

I just checked the "Get Started" first email and there is nothing about it timing out or about checking the right software to install. It is chock full of pretty people doing fancy things, but no useful information that would have saved me a few days of suffering.