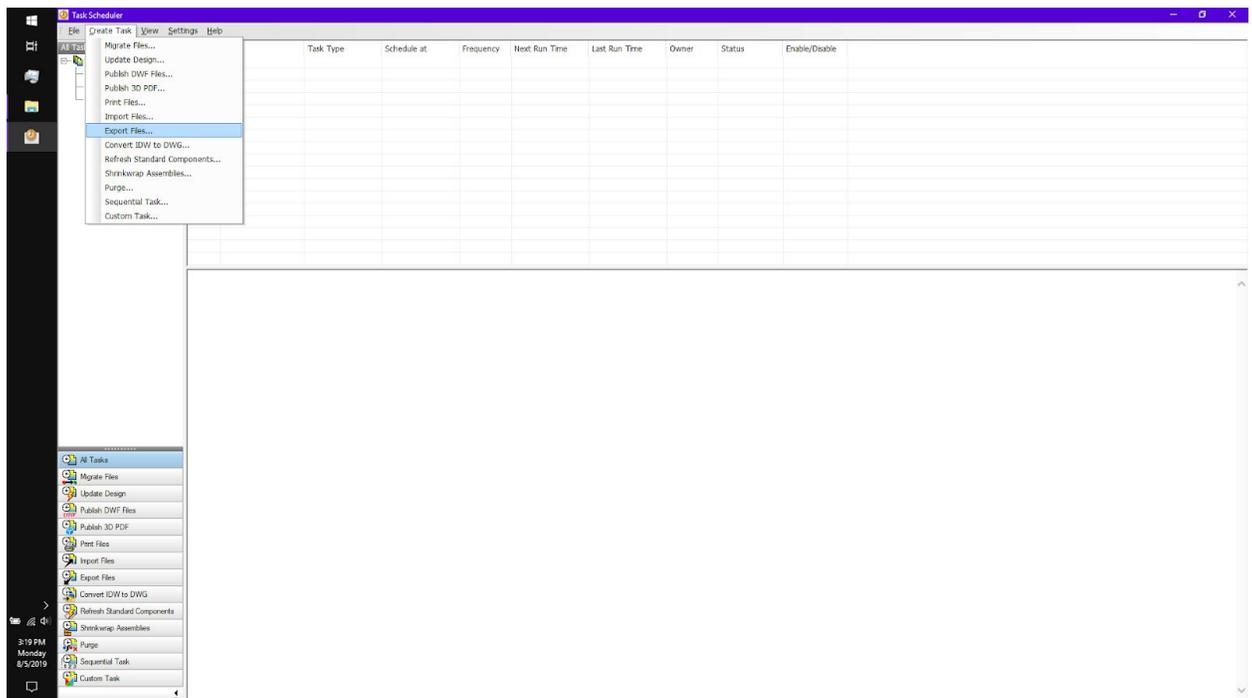


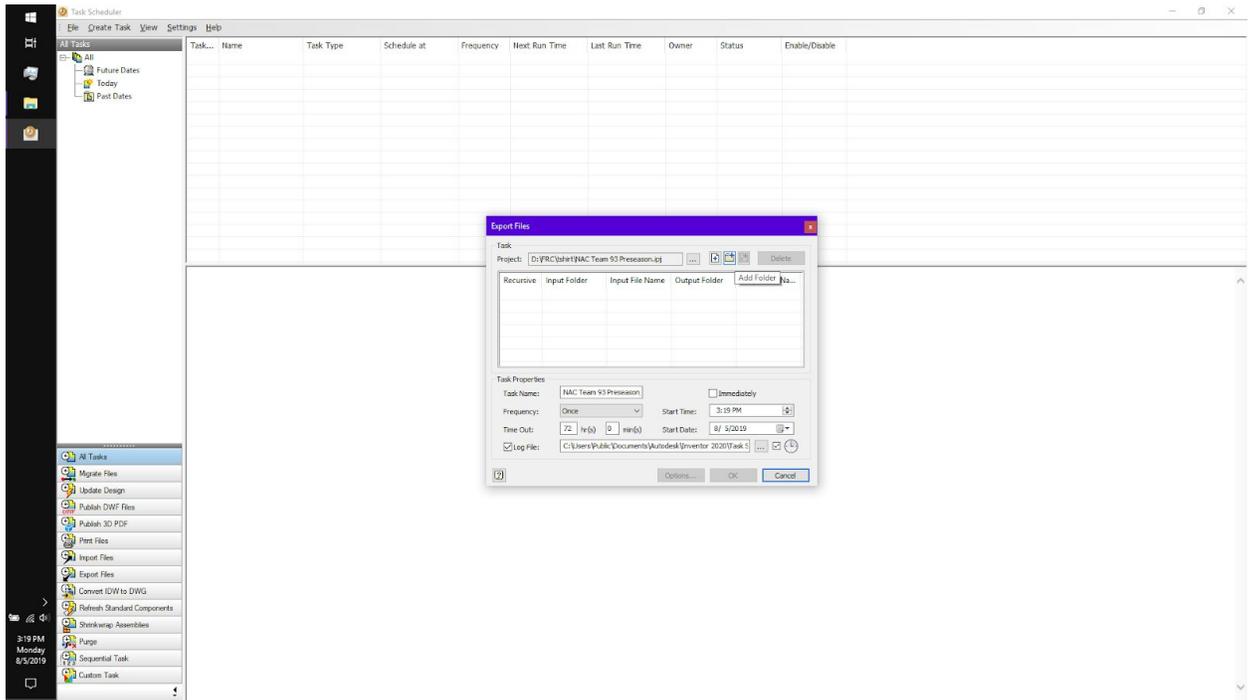
This document will guide you through exporting your part files from Inventor and rendering them in Blender. I do not have SOLIDWORKS and therefore do not know if there is a similar tool for it. If anyone knows how to mass export from SOLIDWORKS, let me know, and I'll add it here.

Inventor specific instructions:

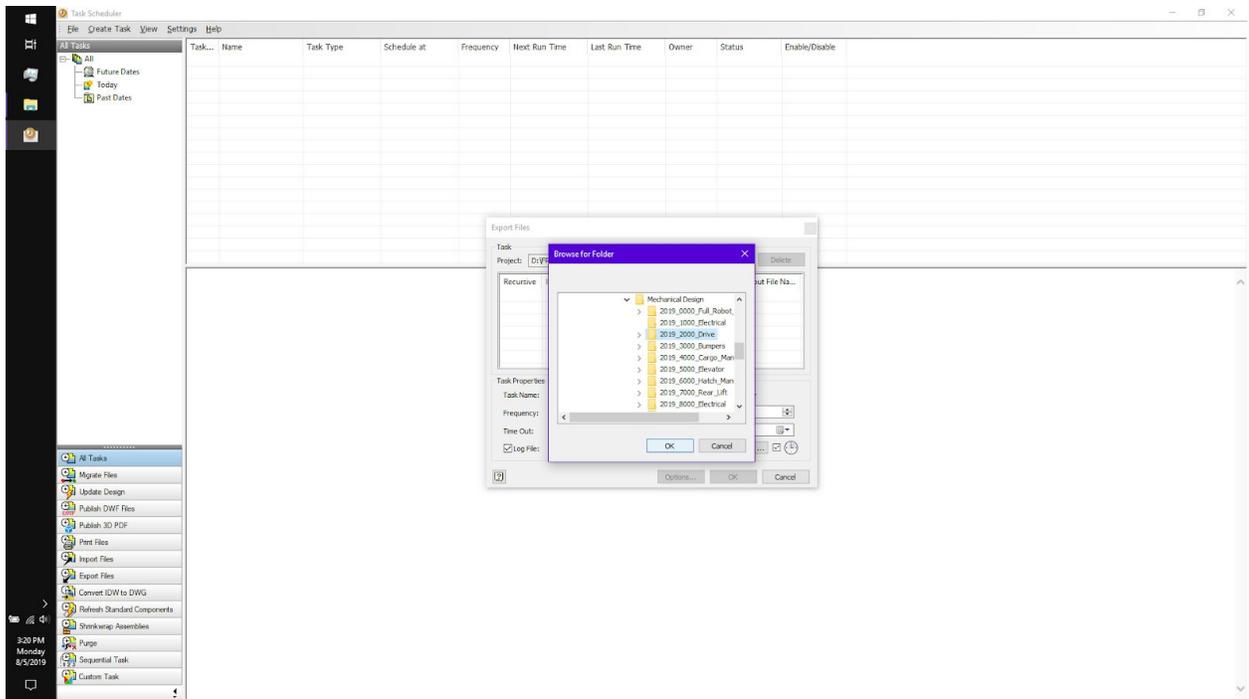
1. Close any open instances of Inventor (having it open can cause issues)
2. Open Task Scheduler (different than Windows Task Scheduler; it should be called Task Scheduler 20** depending on what version of Inventor you have installed)
3. In the menu bar at the top, click "Create Task" -> "Export Files..."



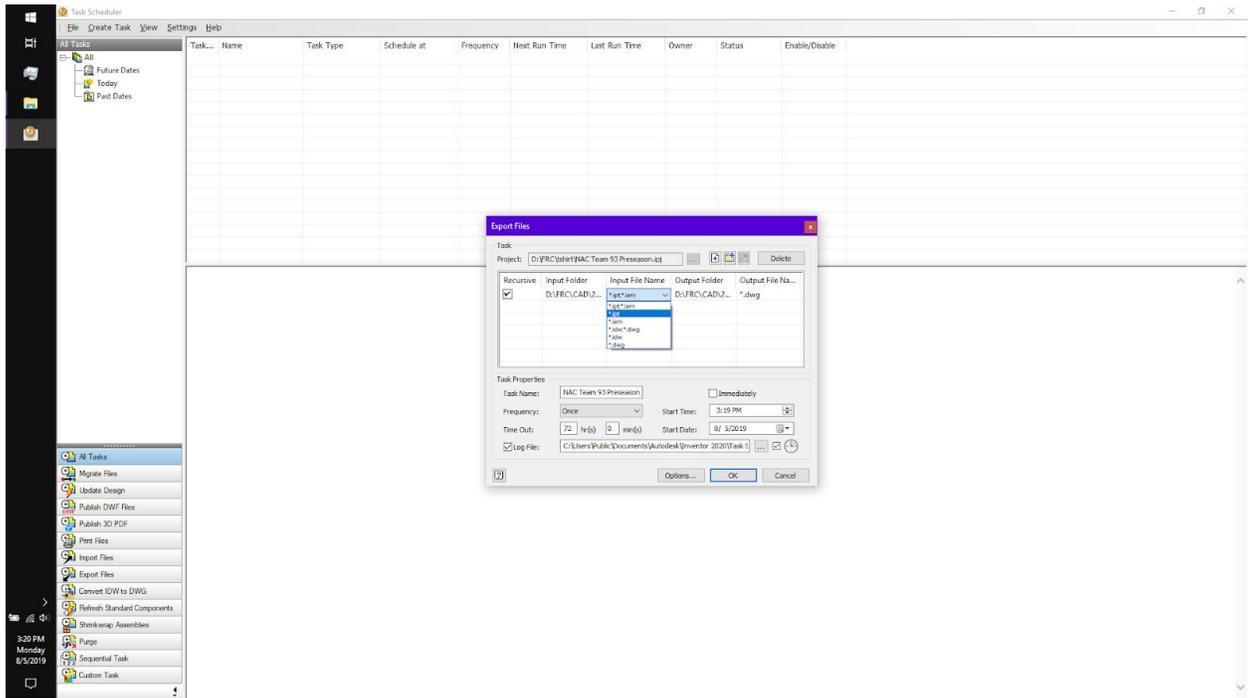
4. Generally, the active project file should not matter, so leave it and click the “add folder” button



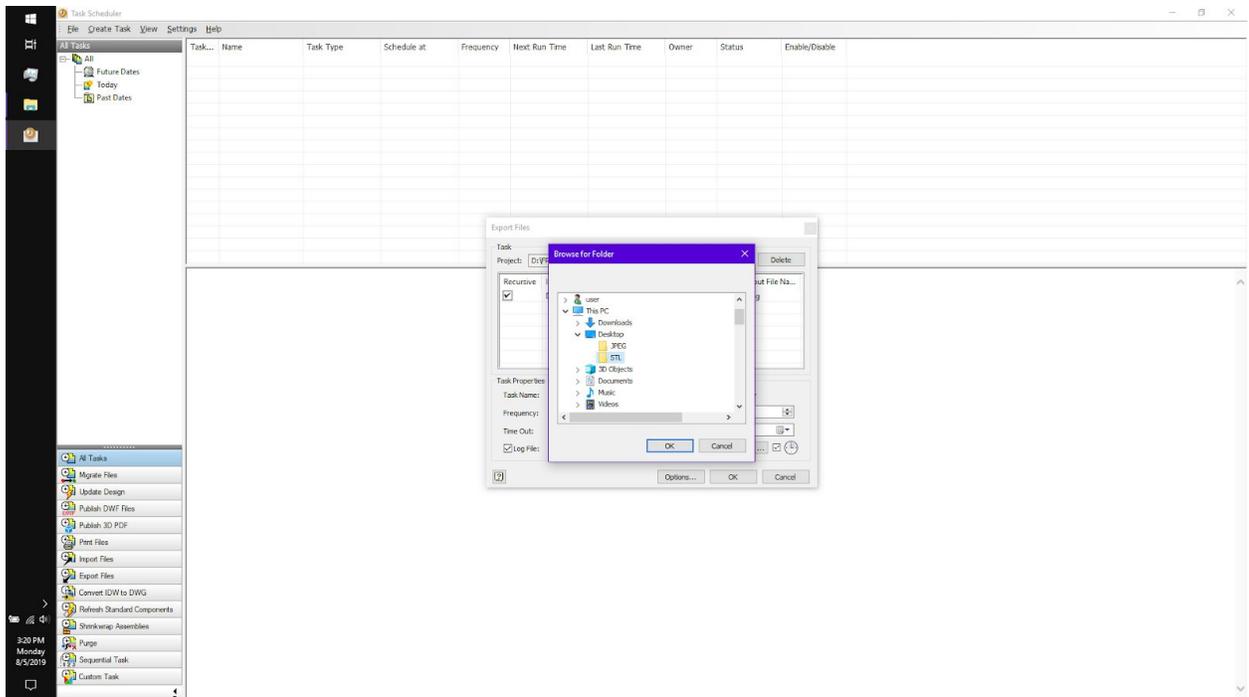
5. Navigate the folder containing the parts you want to render and click “OK” (I will be doing just our drive train)



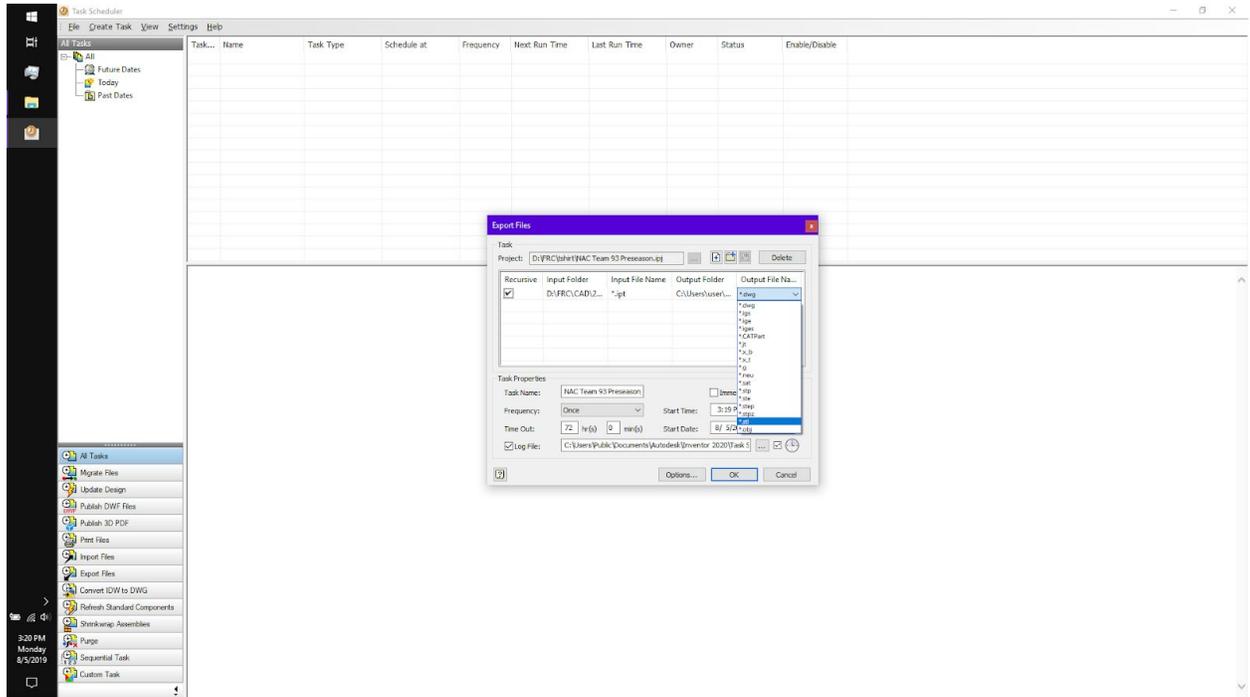
6. In the “Input File Name” dropdown, you can choose whether to export .ipt’s and .iam’s, or just .ipt’s (I will only be doing .ipt files because I only want the parts)



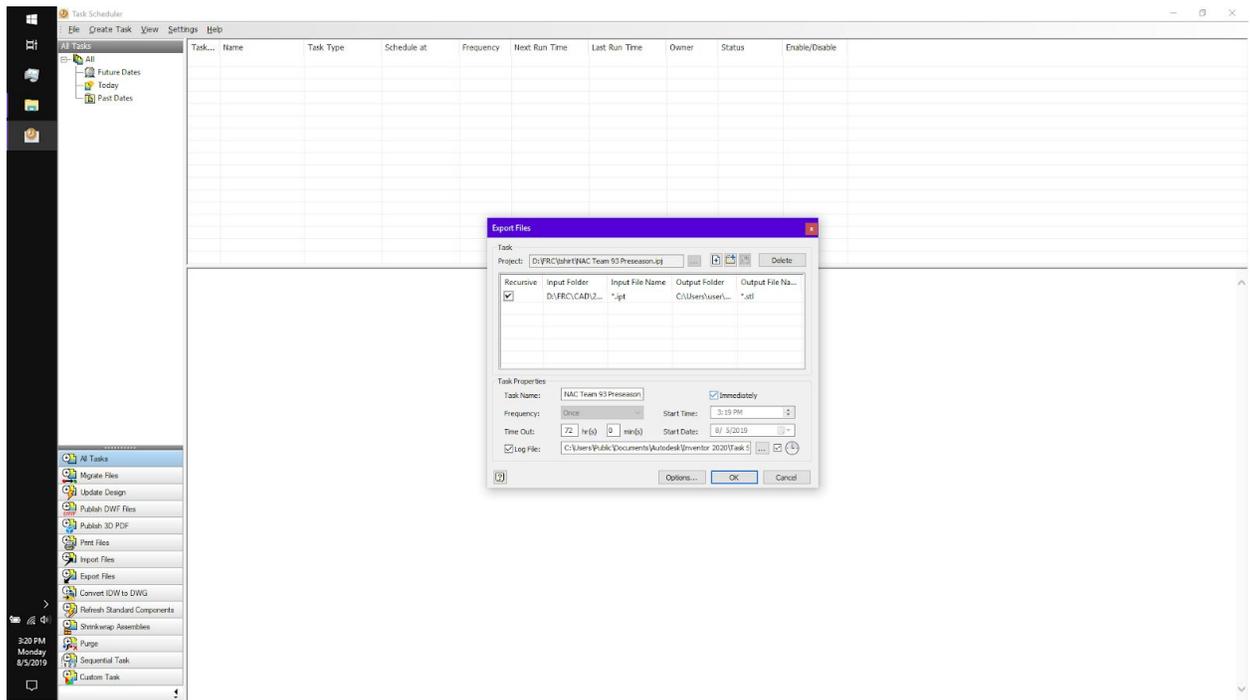
7. Under the “Output Folder” column, change the output folder to where you want to save the exported files (I will use a folder called “STL”)



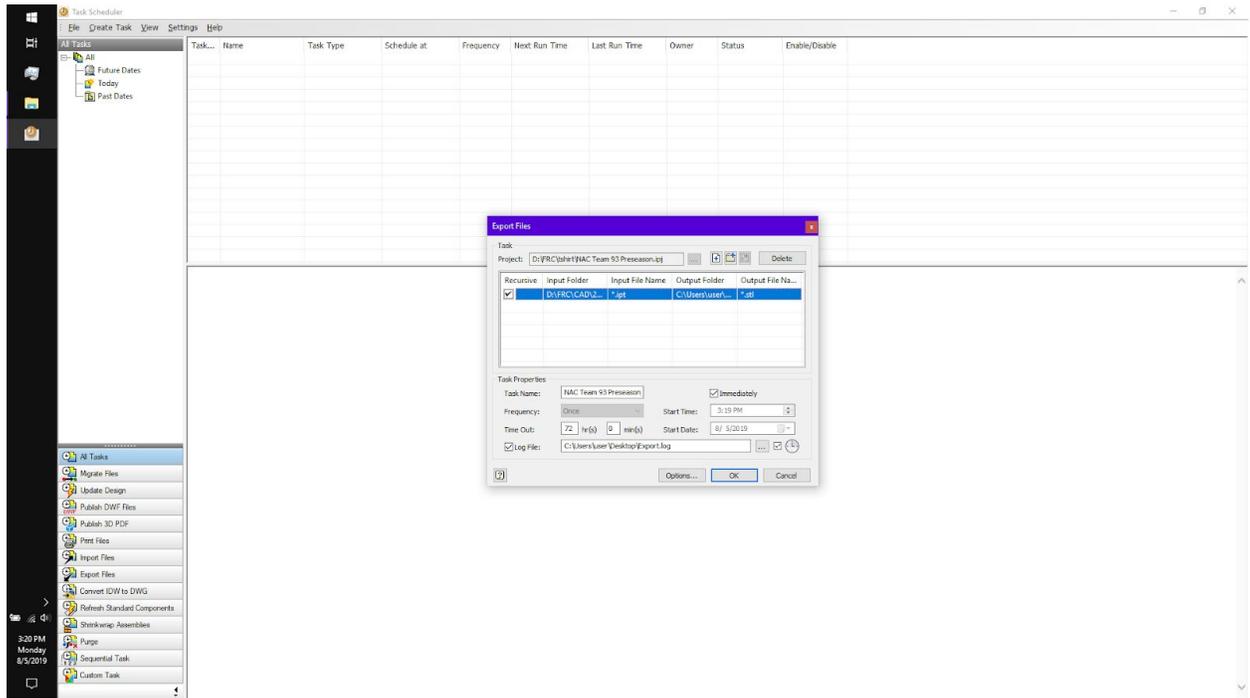
8. Under the “Output File Name” dropdown, select “*.stl”



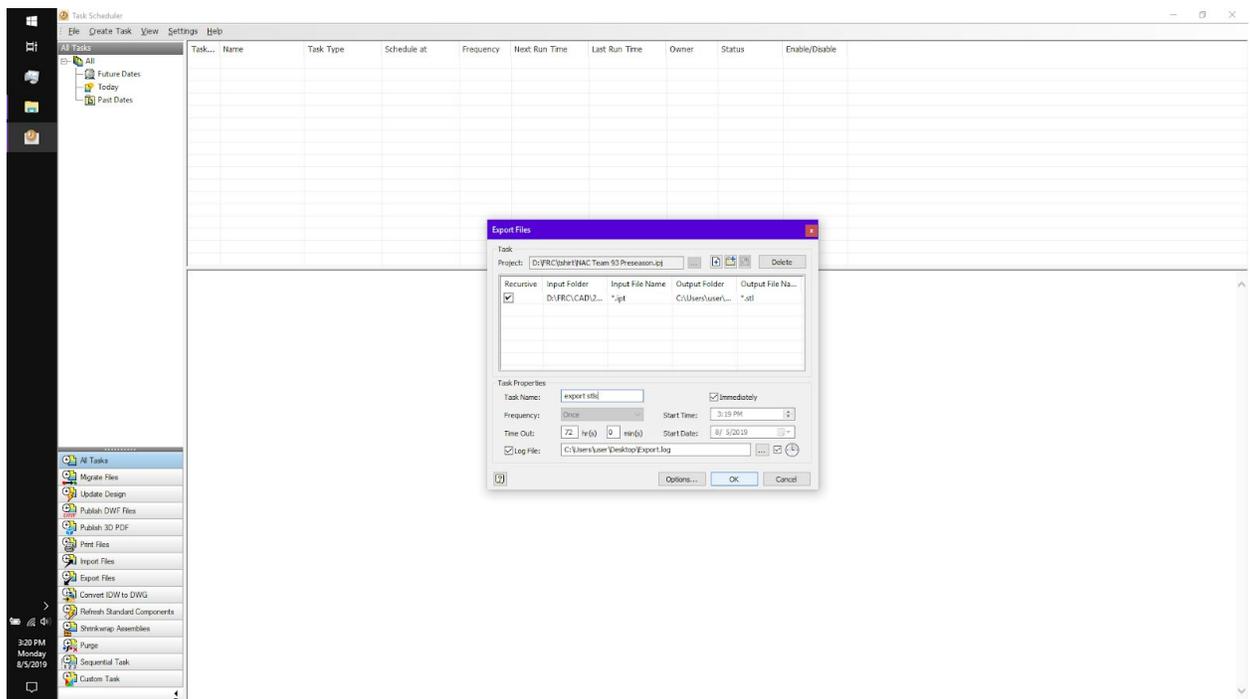
9. In the “Task Properties” section, check “Immediately”



10. I would recommend changing the “Log File” location to somewhere easy to find, such as the Desktop

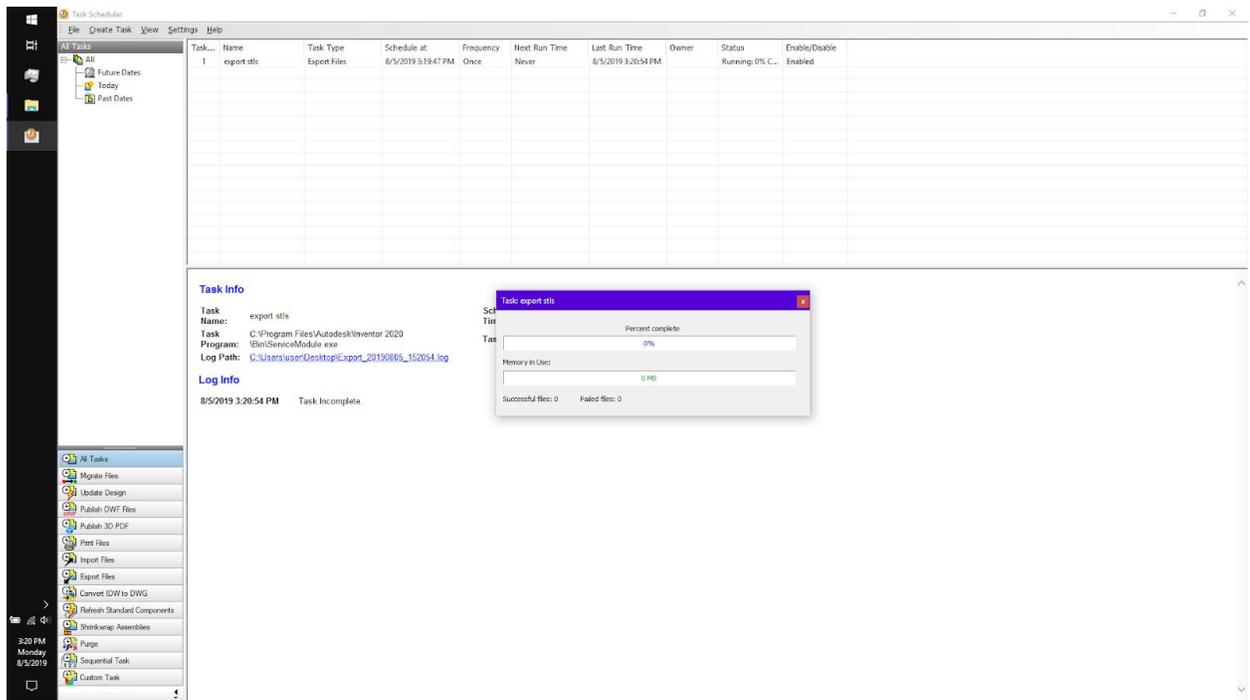


11. You may change the “Task Name”, or leave it the same; it doesn’t matter



12. When you are ready to export, click the “OK” button at the bottom of the dialog and it will begin exporting all of the files; this can take a while depending on how many files you

have and how fast your computer is



13. You can right click on the task and delete it when it is done if you like

Blender instructions:

1. Open Blender; I used 2.79b, but 2.8 should work fine if you want to use it. I recommend running blender from the command line so you see any output and errors that are generated.
(<https://download.blender.org/release/Blender2.79/blender-2.79b-windows64.zip> if you don't have it - it's free)
2. Hit control + O, or go to file -> open and navigate to wherever you saved the .blend file and open it
3. In the top right panel is the script. In the first few lines are the locations of the input and output. Replace the paths in quotes (keep the quotes) with the folder where your STL files are located and the folder where you want to save the resulting images. If you are on Windows, remember to use double backslashes. Also, remember to have a slash at the end of the path so it is treated like a folder.
4. At this point, you can click "Run Script", and it will render all of your files.
5. There are some settings you may want to change prior to rendering, but they are not necessary:
 - a. Change your compute device to GPU if you have one: "File" -> "User Preferences", "System" tab, bottom left, "Cycles Compute Device", "CUDA", "Save User Preferences". Close preferences. Look in the bottom right panel in "Render" section. In "Device" dropdown, change to "GPU Compute"

- b. Change from jpg to png: In the bottom right panel, in the “Output” section, change the dropdown that says “JPEG” to “PNG” or whatever other format you want. You may also want to change the compression.
- c. Change number of samples. In the bottom right panel, in the “Sampling” section, under “Samples”, change the render slider to another value. I used 16 because I think it gives the renders a nice “papery” look and has the nice side effect of rendering faster. Changing it to 64 should mostly get rid of noise and will also reduce file size by about 40% when using lossless compression.