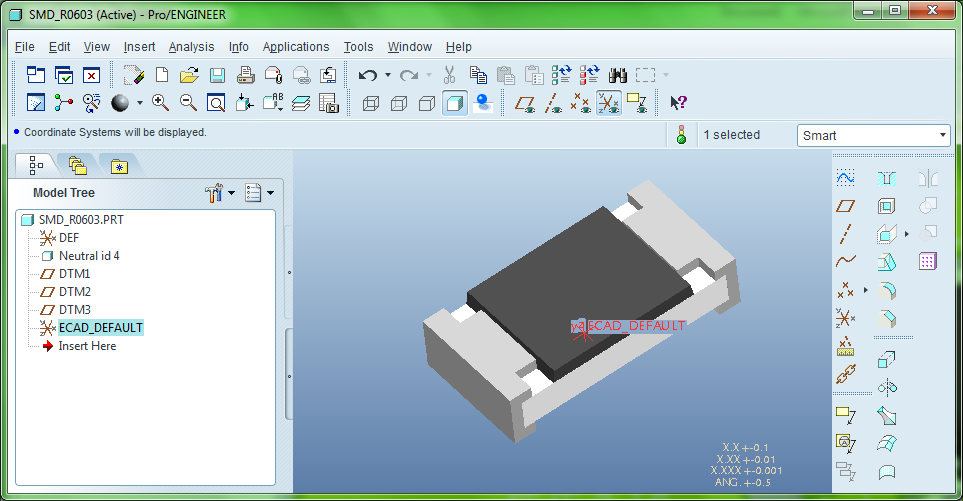
# 

# How to make Pro Engineer assembly from EAGLE

## Installation

1. First you must have your ProE prt files for the packages you want to use. These are not generated.

All prt files must have a ECAD\_DEFAULT coordinate system with same position and orientation as the EAGLE package.



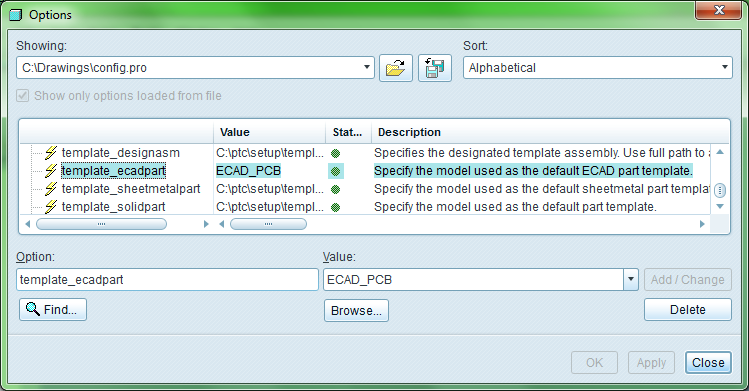
1. Now you must make a map file that maps all your EAGLE packages to your ProEngineer files. A map file looks like this:

Package=CADfile

C0603=SMD\_C0603

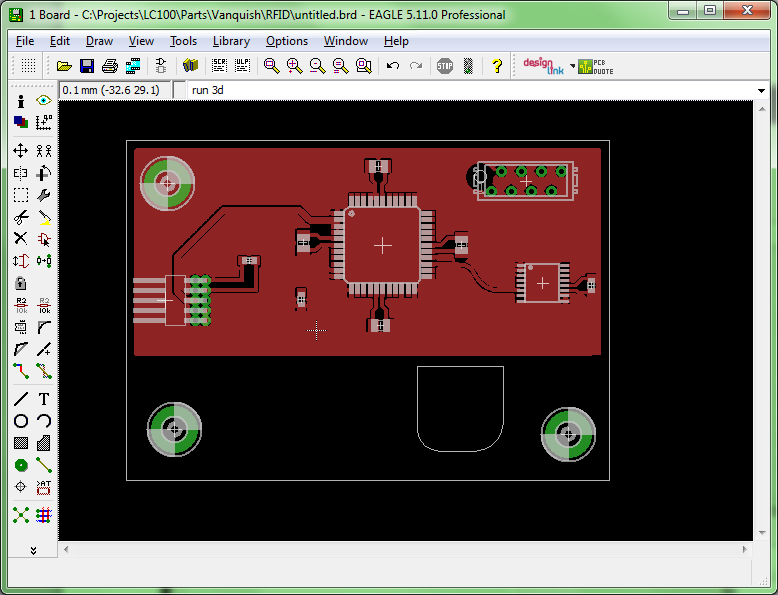
TQFP44=44\_pin\_tqfp\_ic\_package

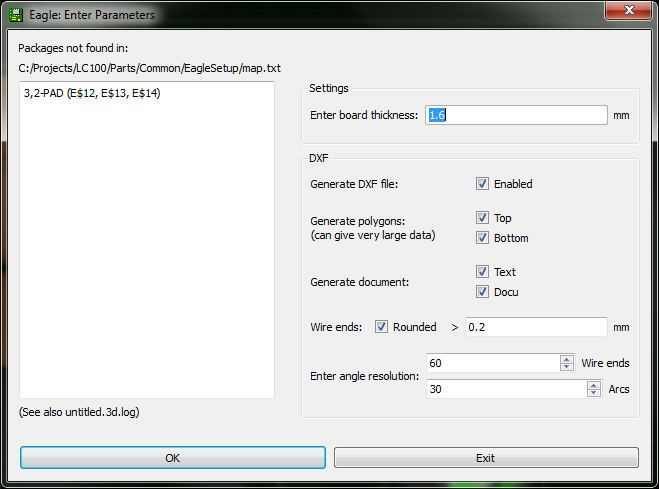
All CAFfiles must be within ProE’s search path.

1. Now you must have defined a template for the PCB generation. In ProE options set the option template\_ecadpart to a ecad\_pcb.prt file (just make an empty sheetmetal part)

## Usage

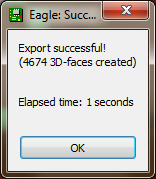
1. In EAGLE board editor, run the 3d.ulp





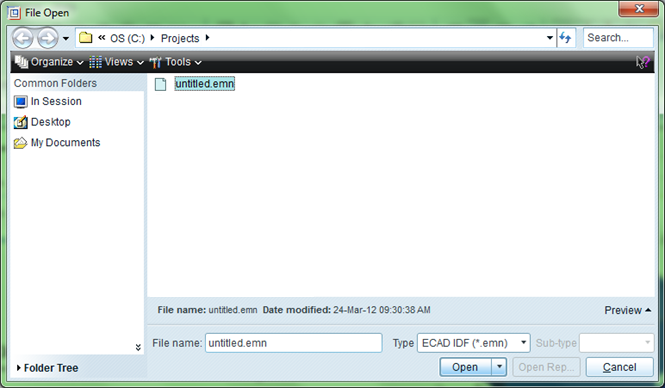
First investigate the left text output to the left. Here all the missing parts are shown (parts that are not defined in the map file). In this case only the 3,2mm PAD is not shown, so we are fine.

To the right you see options for generating the files. Leave them at default for now. Press OK and the files will be generated.

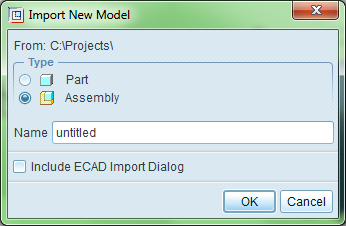


Here 4674 3D-faces were created in the DXF file. This is an okay number. Going beyond 50000 can be very time consuming (especially when importing to ProE).

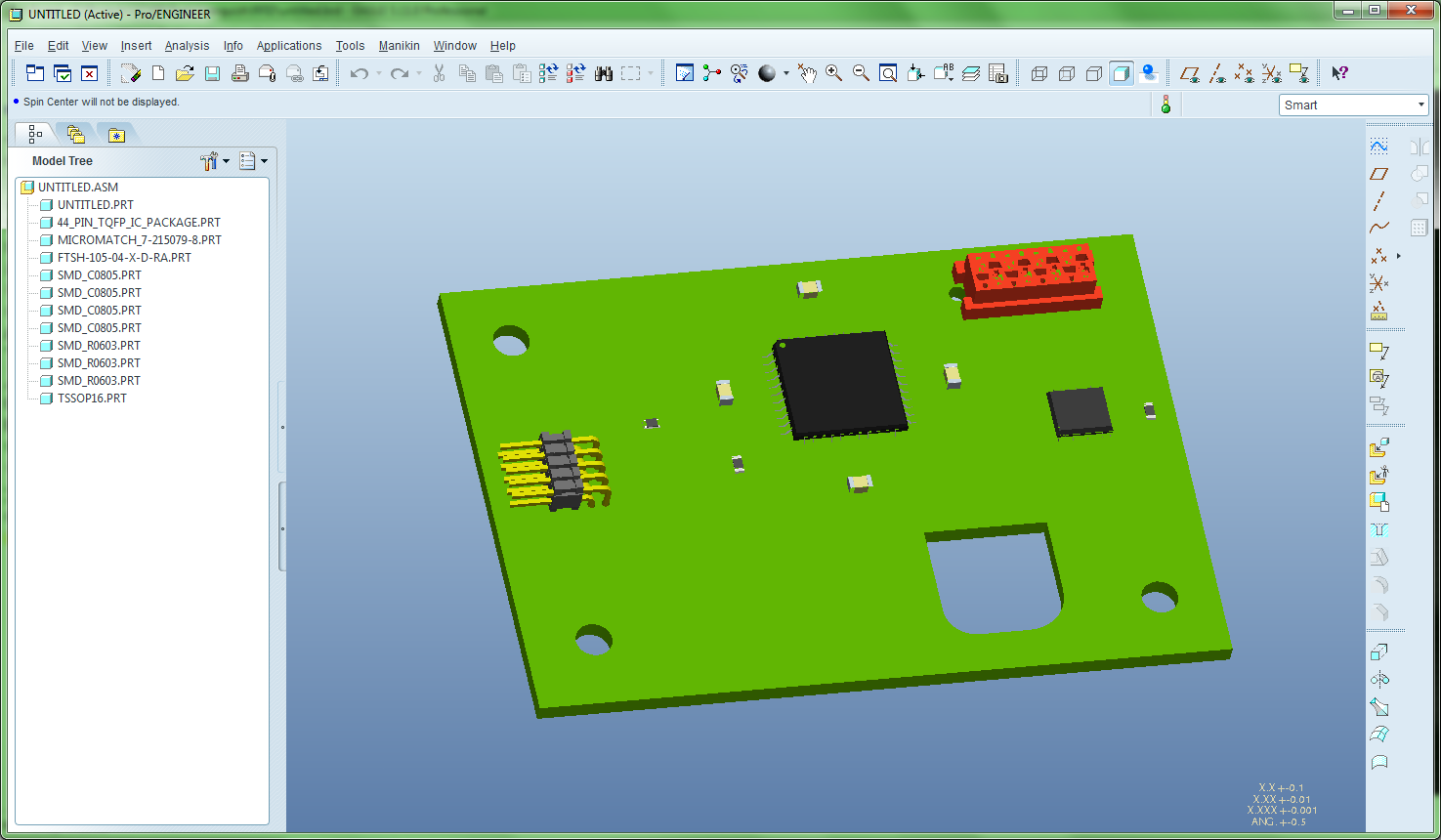
1. Now start up Pro Engineer and open the .emn file that was created.



Choose Assembly in the window that pops up:

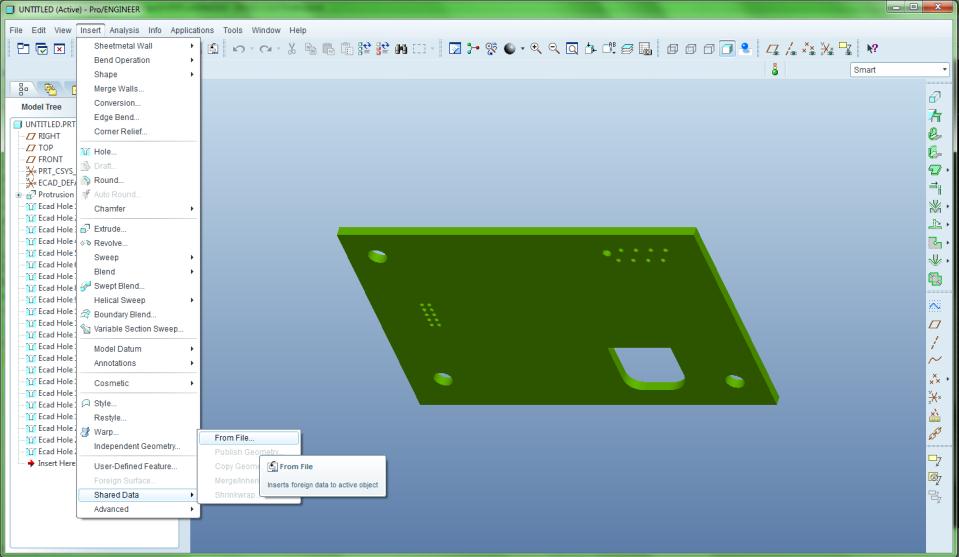


Now you should see something like this:

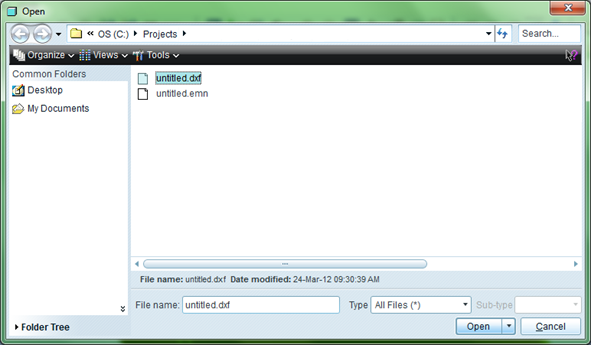


This is the assembly generated from the EMN file. If ProE complains or asks for something during import then probably there is something missing in the map file or ECAD\_DEFAULT was not present in a part file.

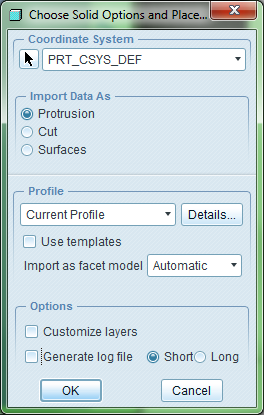
1. Now open the PCB file (in this case the file Untitled.prt)
2. Go to Insert->Shared Data->From File



Select the .dxf file that was created.

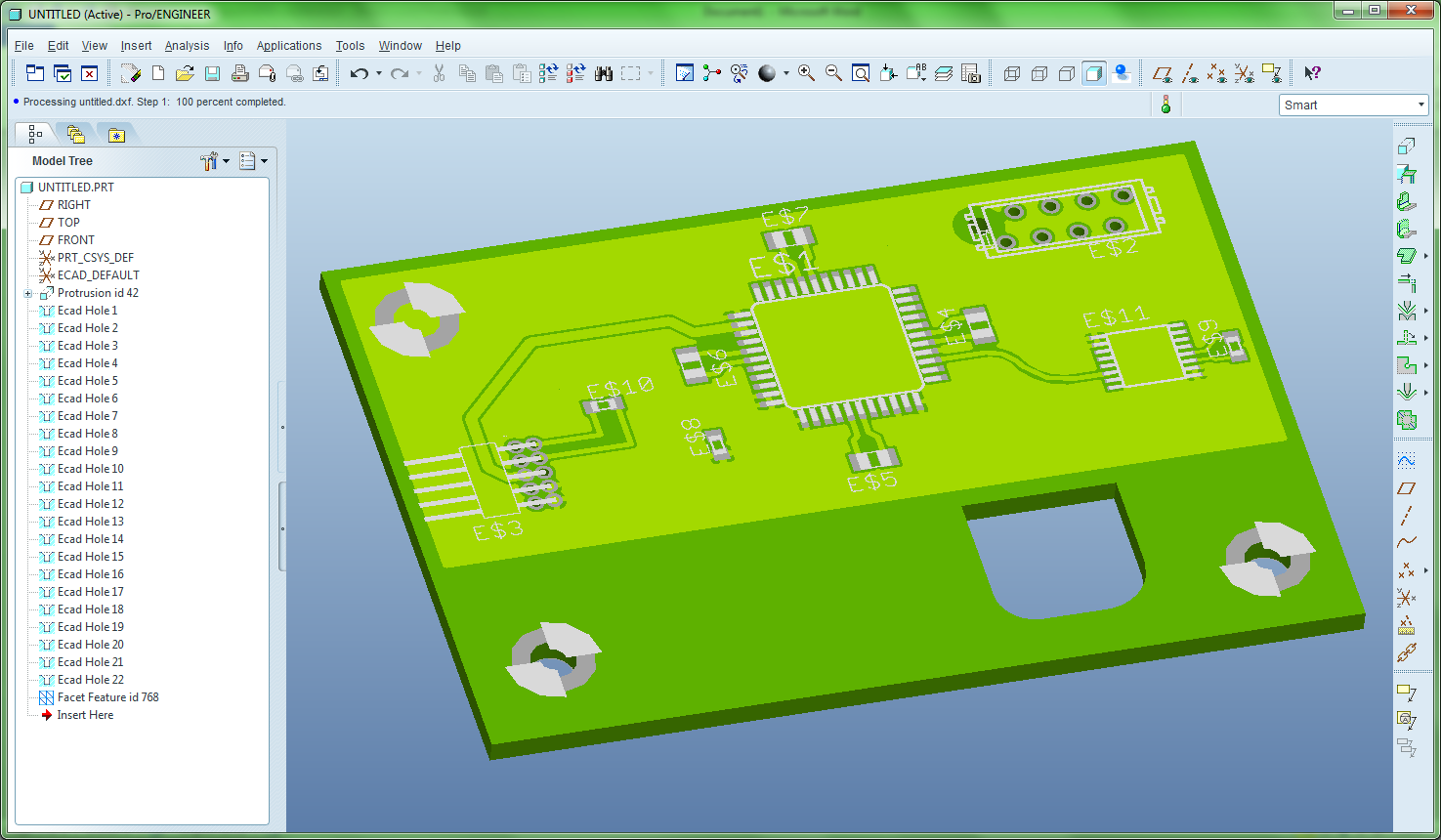


Press OK.

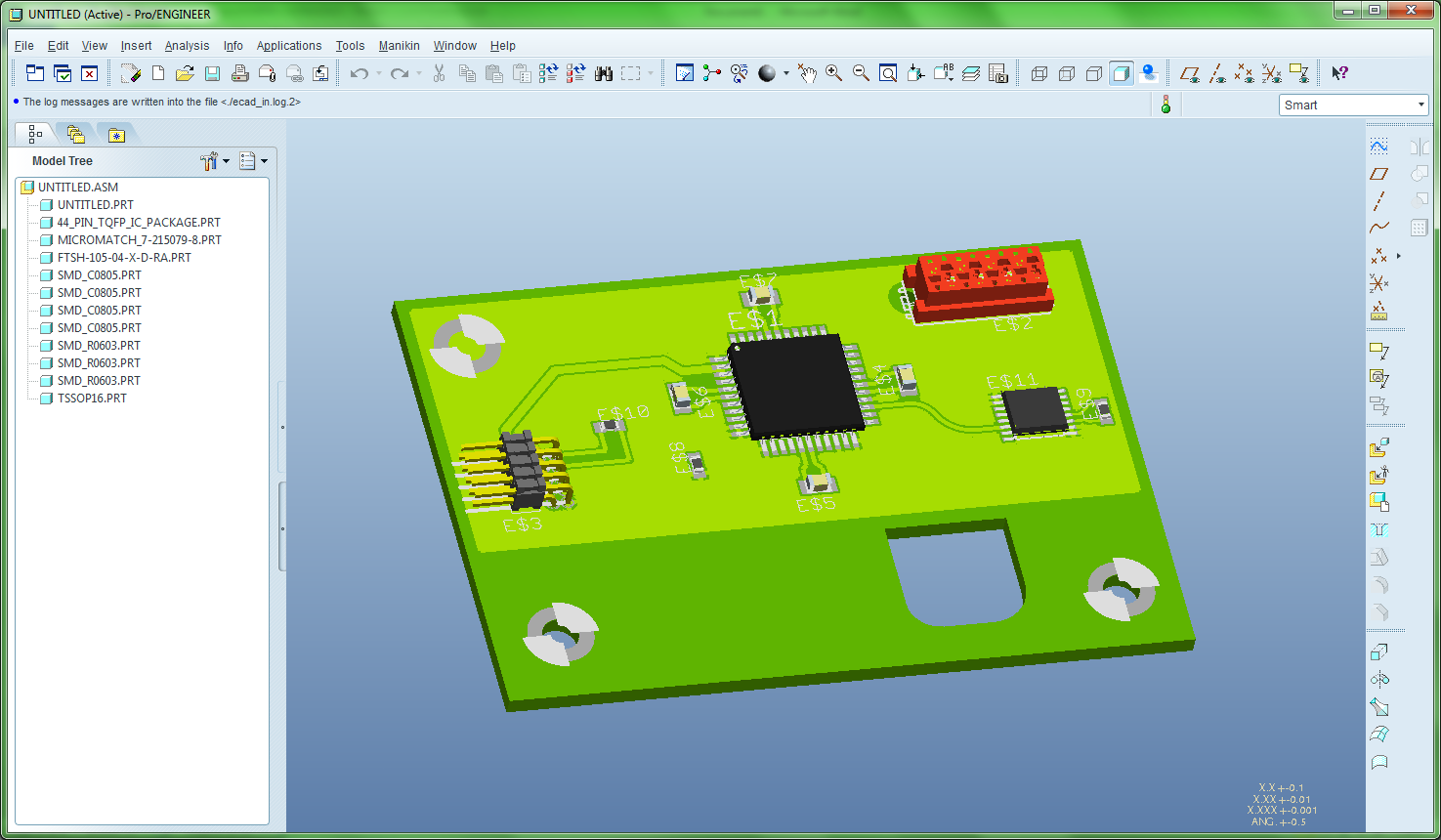


This can now take a while depending on the number of 3D faces that was created.

Now you have the PCB prt file with the copper layers, silk screen etc. Like this:



Save this and open the assembly again. It should look like this:



Arcs can be a little rough so you may want to decrease the angle resolution.

1. Save the Assembly and prt file and you are done ☺