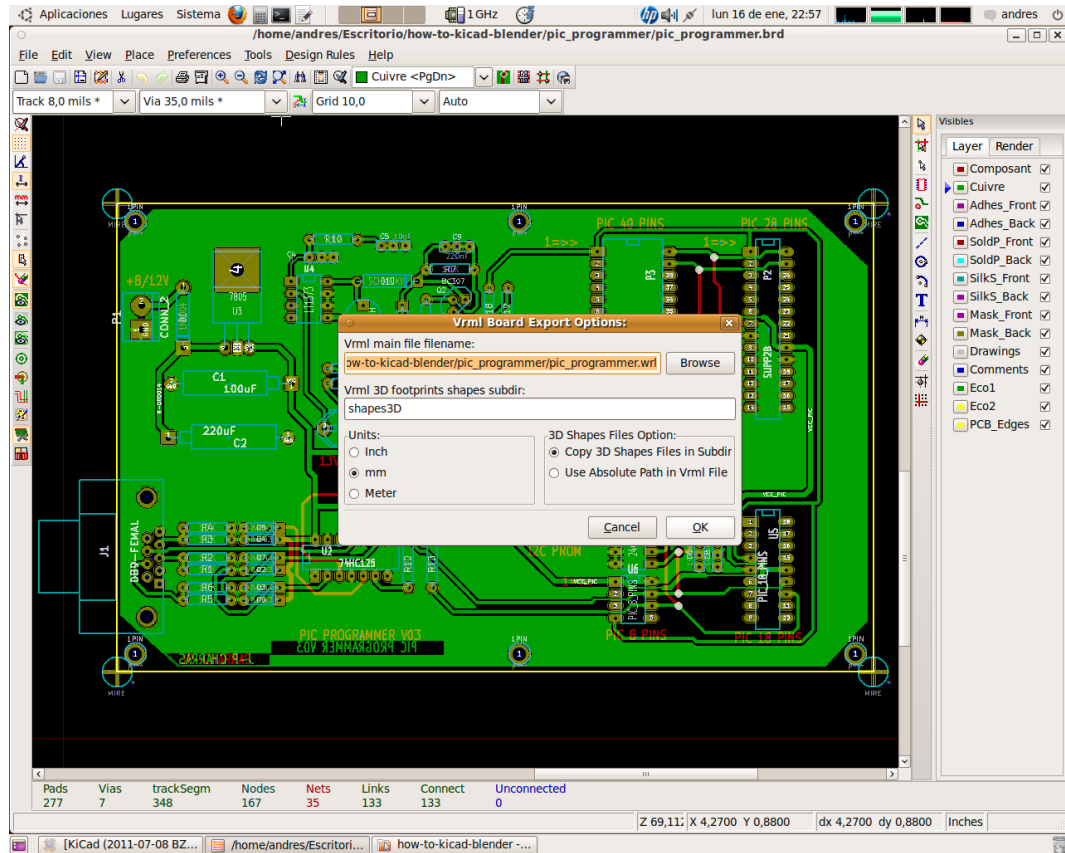


How to import kicad board in blender

I have used the pic_programmer demo that comes with kicad to show the procedure. The kicad version used is BZR3044

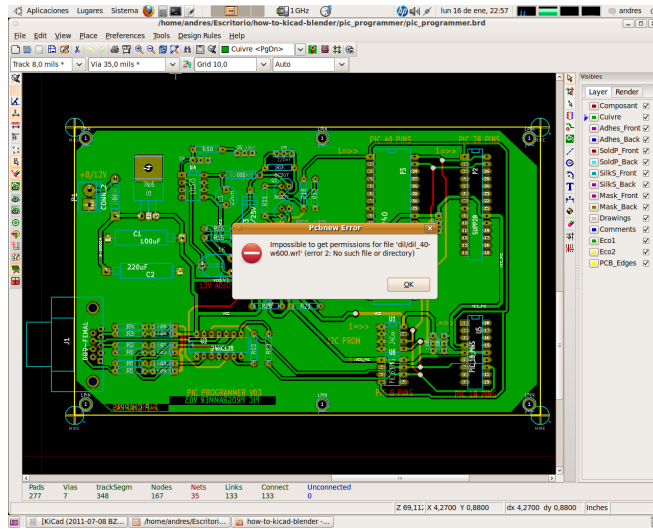
Open the board and select “File->Export->VRML”

After that a popup window is shown (see figure)

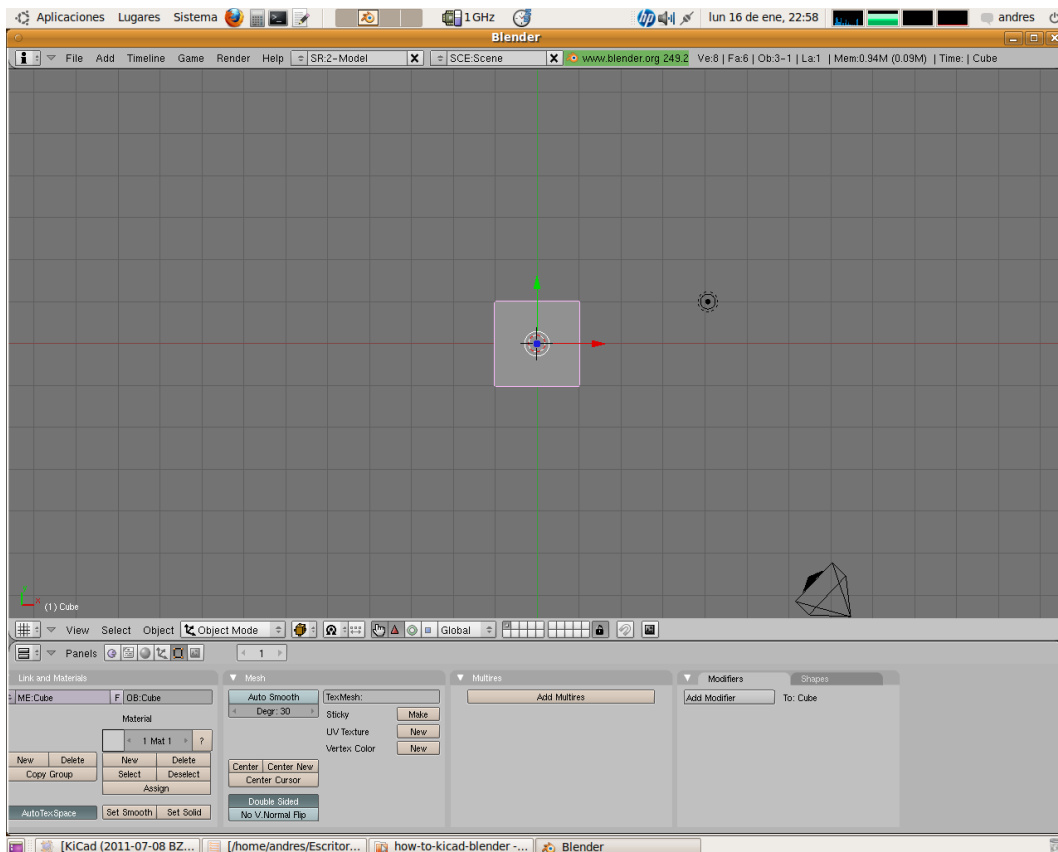


Select destination file. The file must be in the working directory (the folder where the brd file is). See 0.0.1. Select “Copy 3D Shapes Files in Subdir” and select mm as units. I use “1 Blender unit = 1mm”, so here you have to check the mm radiobutton.

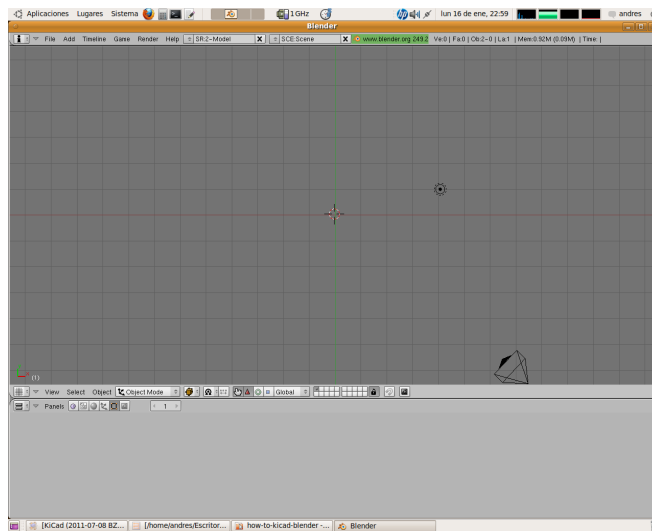
In my case, running this example in ubuntu, an error popup comes up (see below). Ignore it.



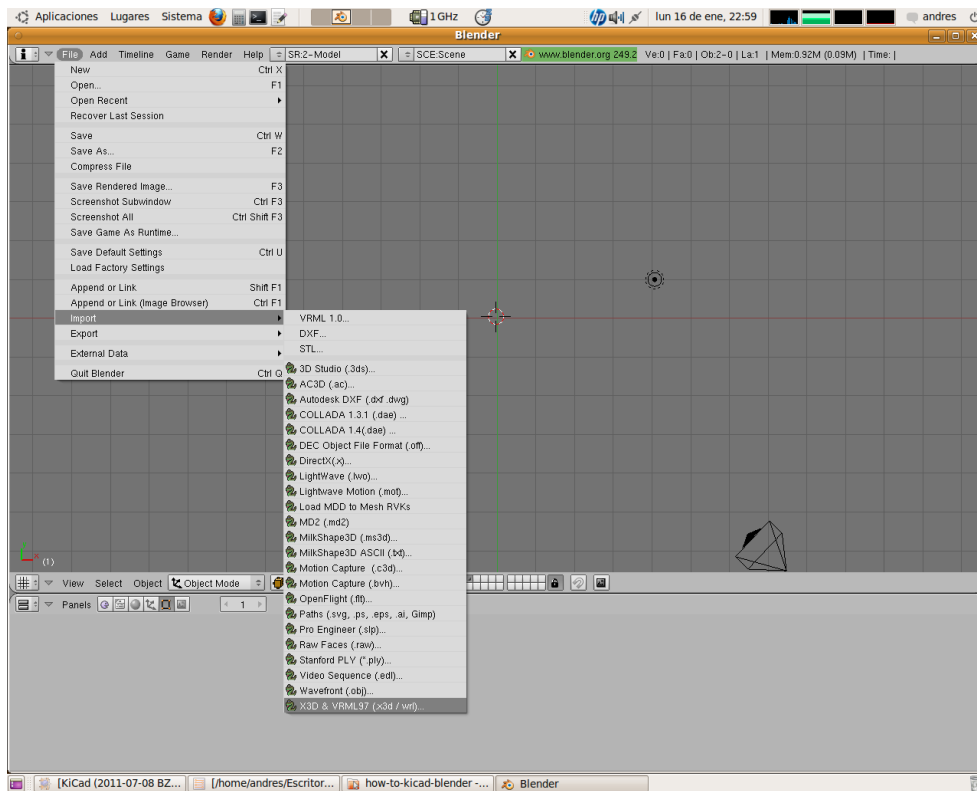
Open blender. A new document with a cube appears.



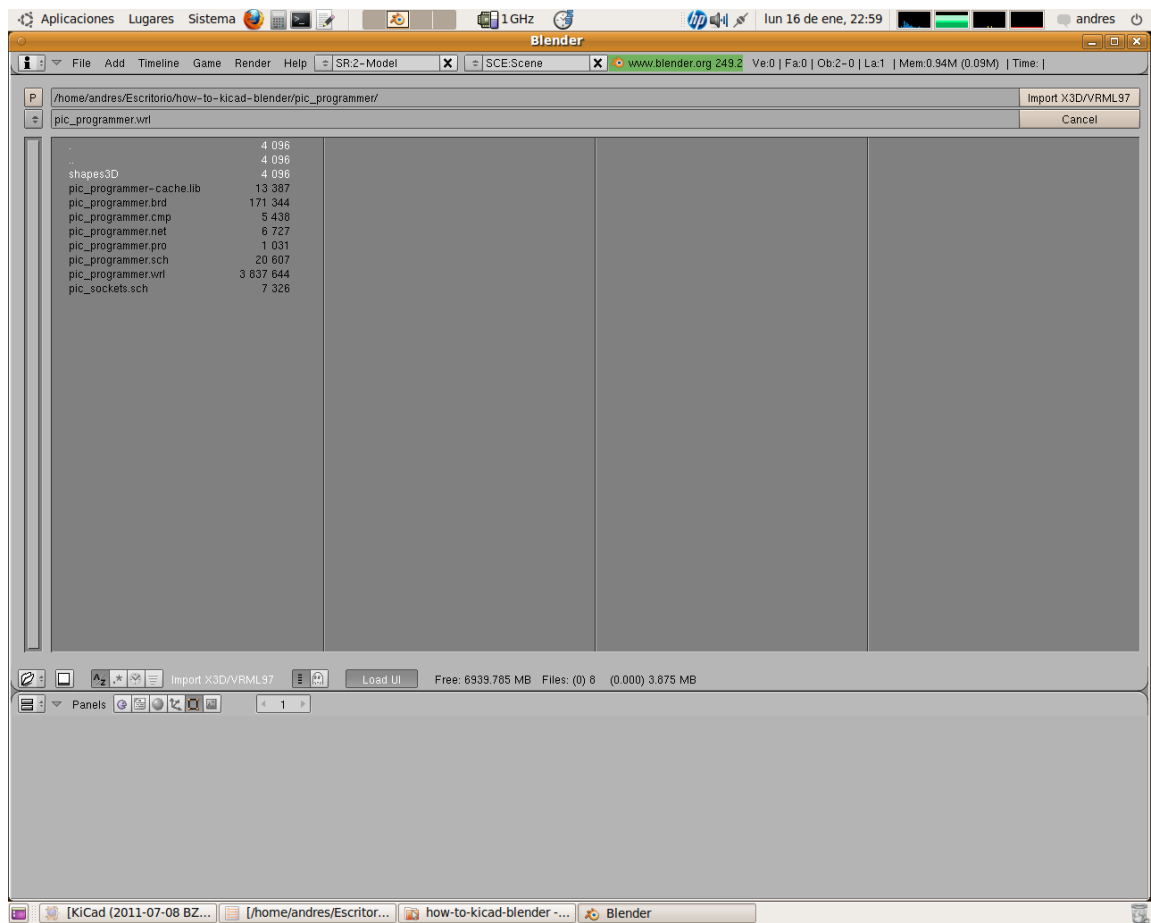
Delete the cube (press Del when selected)



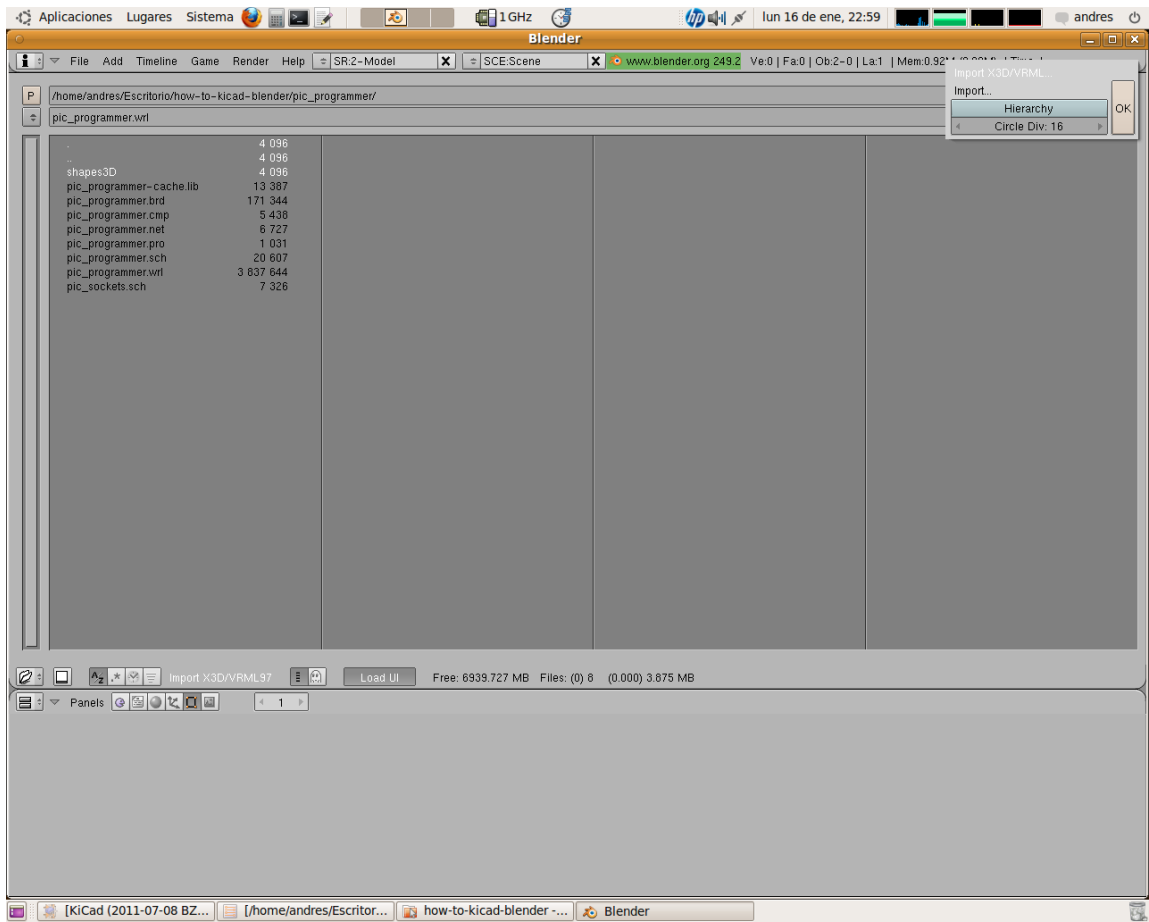
Go to “File->Import->X3D & VRML97”



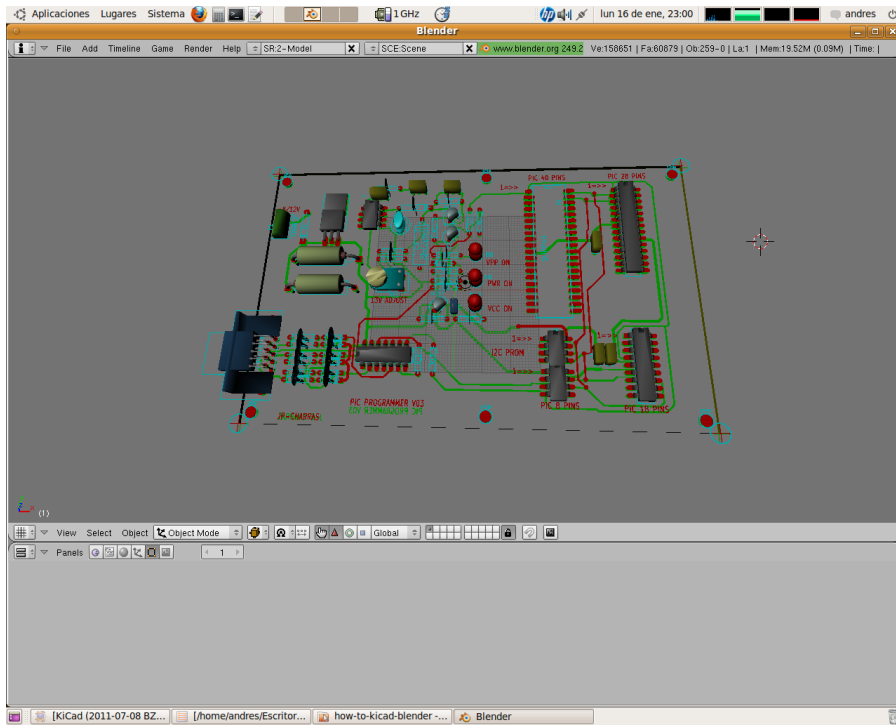
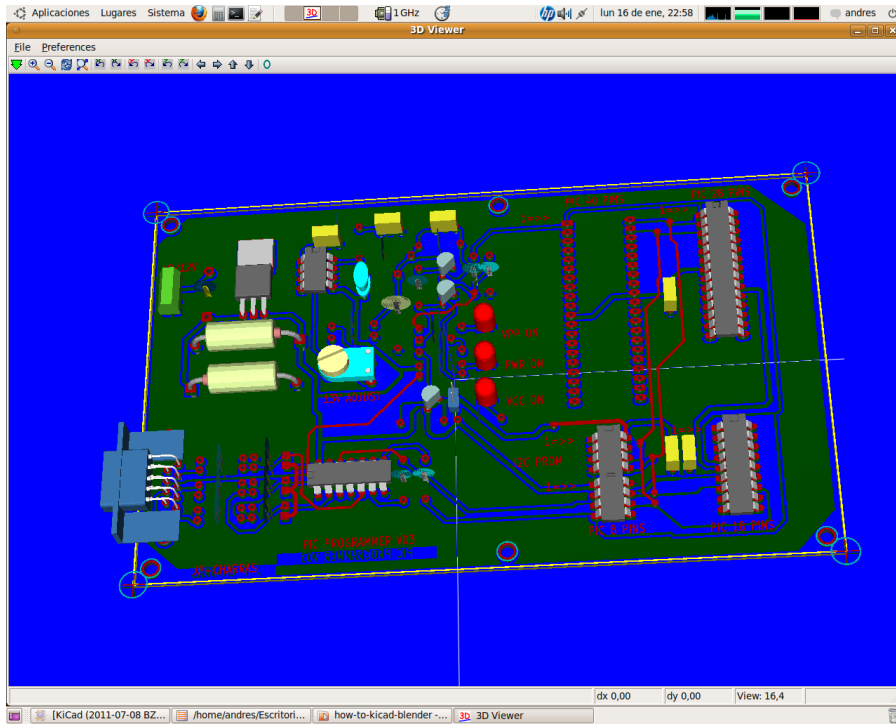
Navigate to the file and select it



Press "Import X3D/VRML97" and then Ok



The board is shown (with no PCB material nor fills)

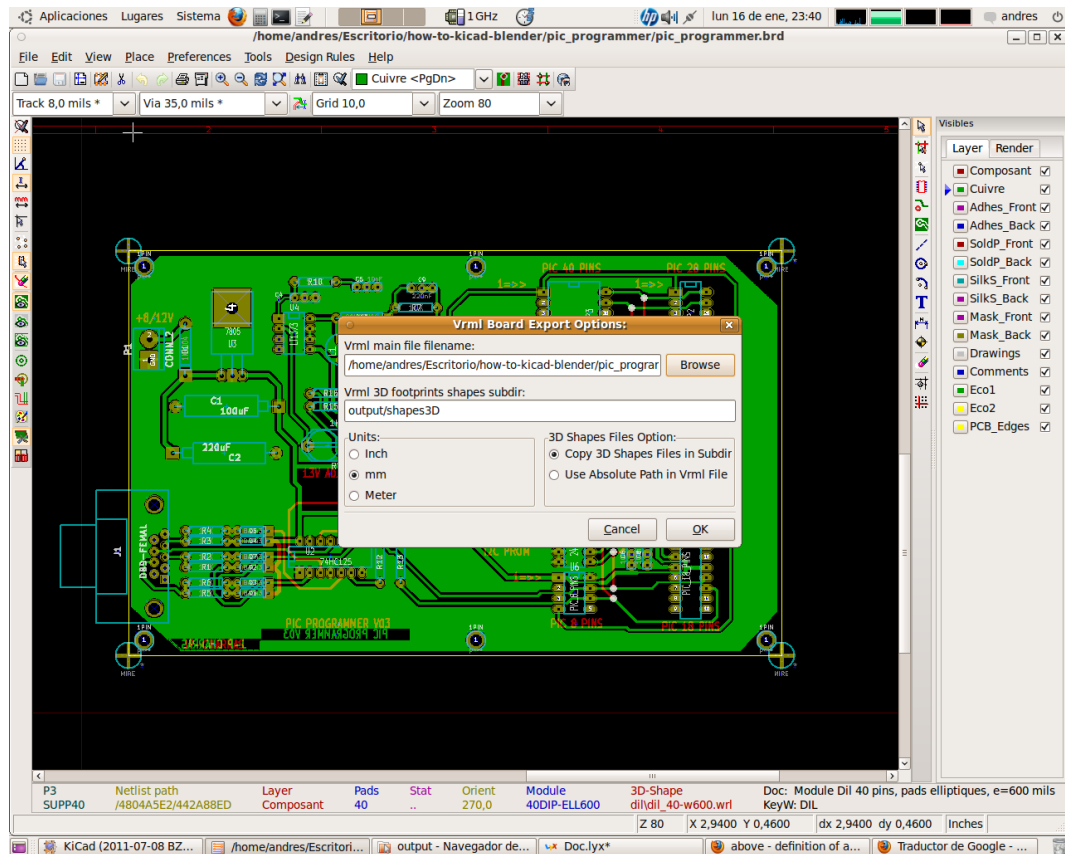


0.0.1. The problem with paths

In the VRML export options, if you choose to export to a subfolder, the file is somewhat malformed.

Example:

When selecting the output file, choose a wrl file in a subfolder of the board file. Edit the location in the “VRML 3D footprints shapes subdir” field. See the figure



In this example, I've selected the folder: “\$BOARD_PATH/output” as the output dir for the VRML file. When the output file is imported in Blender, no components are shown. So, to correct it, open the .wrl file in a text editor. Look at the “url” lines:


```
1 #VRML V2.0 utf8
2 WorldInfo {
3   title "/home/andres/Escritorio/how-to-kicad-blender/pic_programmer/output/pic_programmer.wrl - Generated by PCBNEW"
4 }
5 Transform {
6   scale 0.00254 0.00254 0.00254
7   translation -147.386 91.0768 0.0
8   children [
9     Transform {
10      scale 1000 1000 1000
11      translation 48500 -45500 315
12      children []
13      Inline {
14        url "output/shapes3D/_usr_local_kicad_share_modules_packages3d_dil_dil_14.wrl*"
15      }
16    }
17    Transform {
18      rotation 0 0 1 4.71239
19      scale 1000 1000 1000
20      translation 83250 -46500 315
21      children [
22        Inline {
23          url "output/shapes3D/_usr_local_kicad_share_modules_packages3d_dil_dil_18.wrl*"
24        }
25      ]
26    }
27    Transform {
28      rotation 0 0 1 4.71239
29      scale 1000 1000 1000
30      translation 72000 -44500 315
31      children [
32        Inline {
33          url "output/shapes3D/_usr_local_kicad_share_modules_packages3d_dil_dil_8.wrl*"
34        }
35      ]
36    }
37    Transform {
38      rotation 0 0 1 4.71239
39      scale 1000 1000 1000
40      translation 45000 -24000 315
41      children [
42        Inline {
43          url "output/shapes3D/_usr_local_kicad_share_modules_packages3d_dil_dil_8.wrl*"
44        }
45      ]
46    }
47    Transform {
48      rotation 0 0 1 4.71239
49      scale 1000 1000 1000
50      translation 72000 -49000 315
51      children [
52        Inline {
```

Note that an extra “output” is prefixed on every path. Compare with the file location in the third line. That is the problem. Use the Search&Replace tool to delete it (in this example, search for “output/shapes3D” and replaces with “shapes3D”). Then import this file in Blender and everything should be fine.

Alternatively, do not modify the text in the editbox named “VRML 3D footprints shapes subdir”. When export is done, move the shapes3D folder to the correct location.