

# Converting CA06 terrain into a DXF file for use in CPG

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You will need 2 additional pieces of software to follow this tutorial. They are:

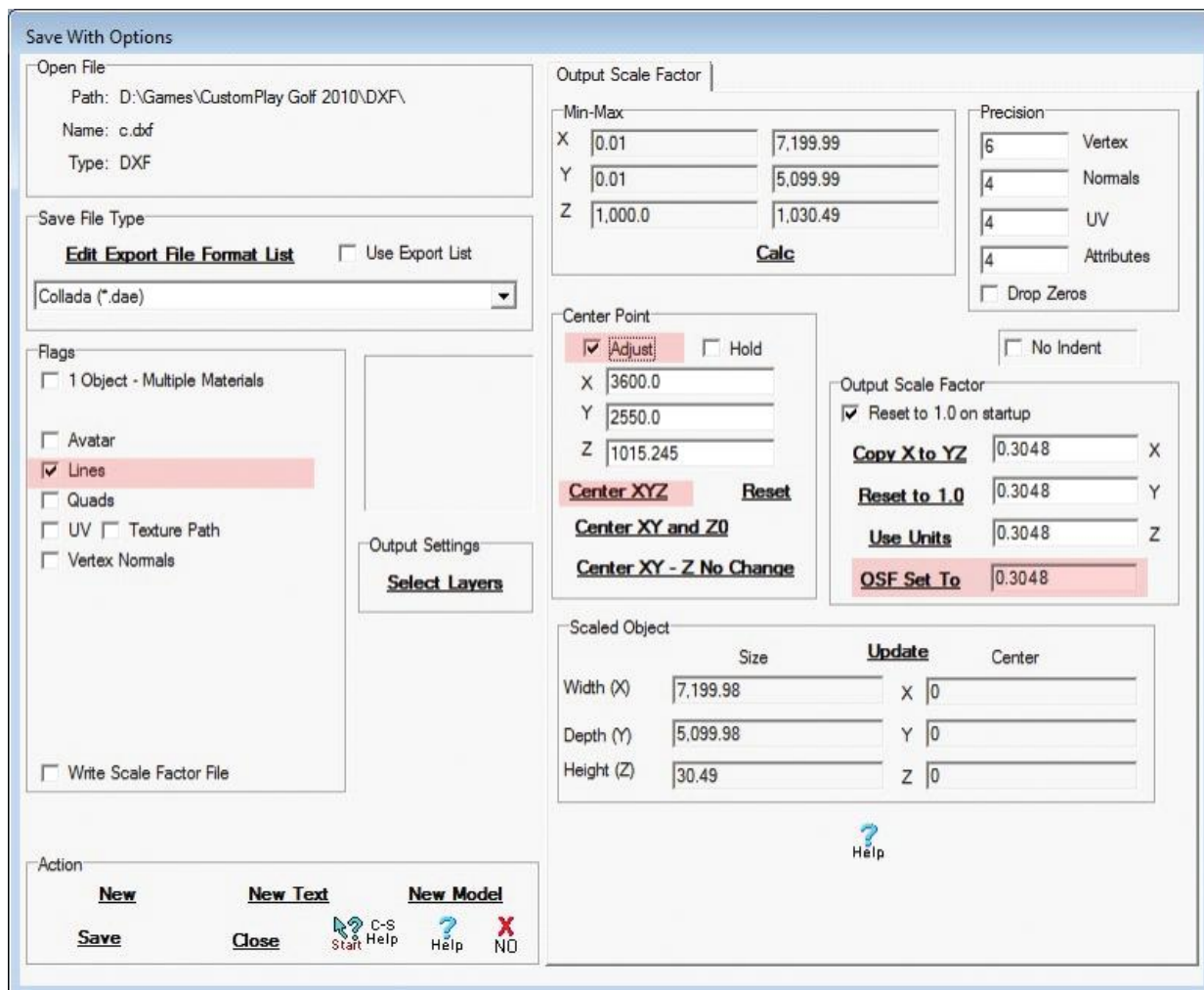
- 1) AccuTrans3D
- 2) MeshLab (v.1.0.3b or greater)

Google is your friend on finding these. Download and install both.

Step 1) There is an undocumented feature in the CA. With your .tca loaded, key-in Ctrl+Alt+W. This saves out the data as a “dumb” DXF file.

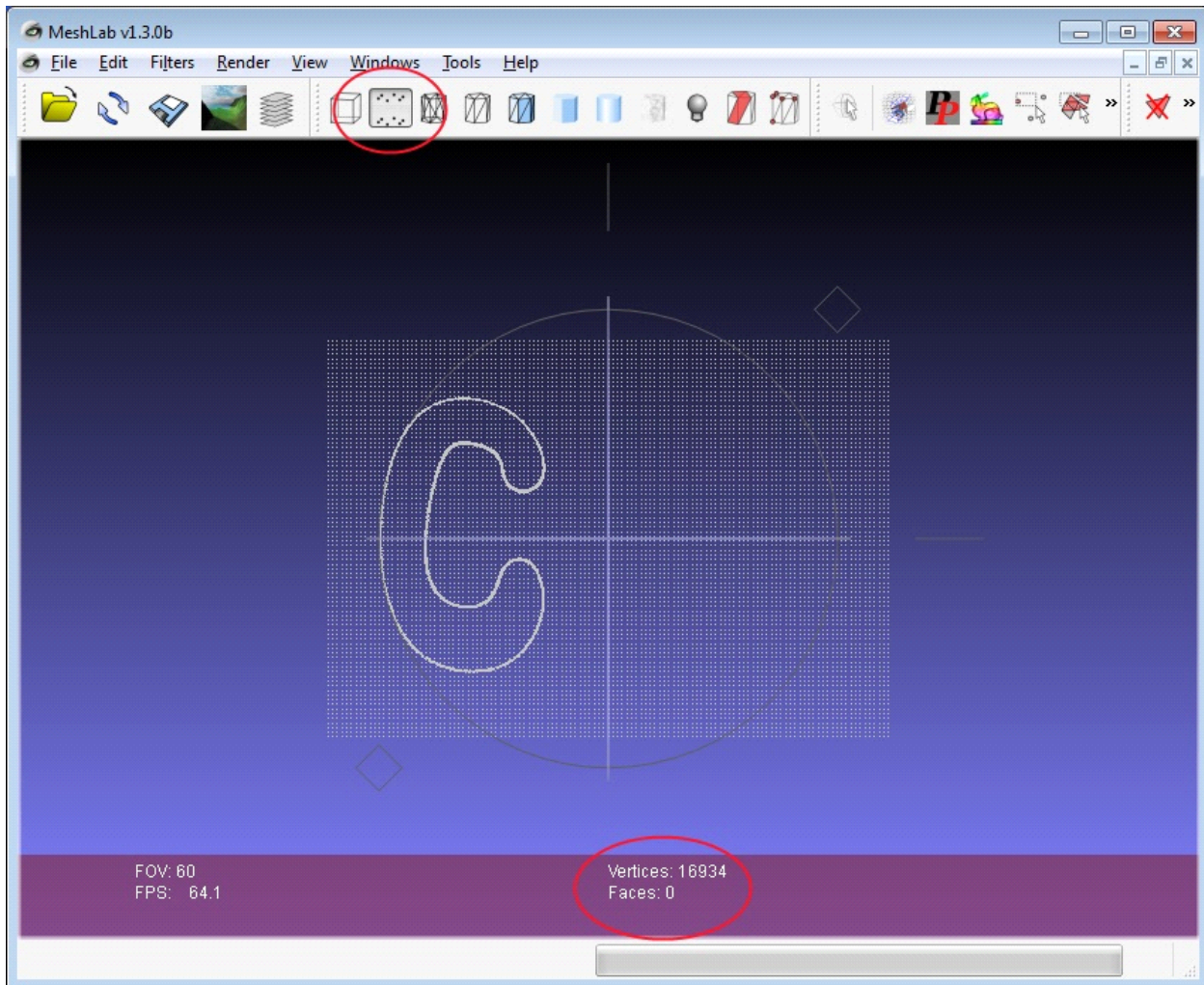
Step 2) Start AccuTrans3D and read in this DXF. Although it looks pretty, there actually is no mesh defined in the file, just points and lines.

Step 3) Use AccuTrans3D to “Save With Options...” as a Collada (\*.dae) file:



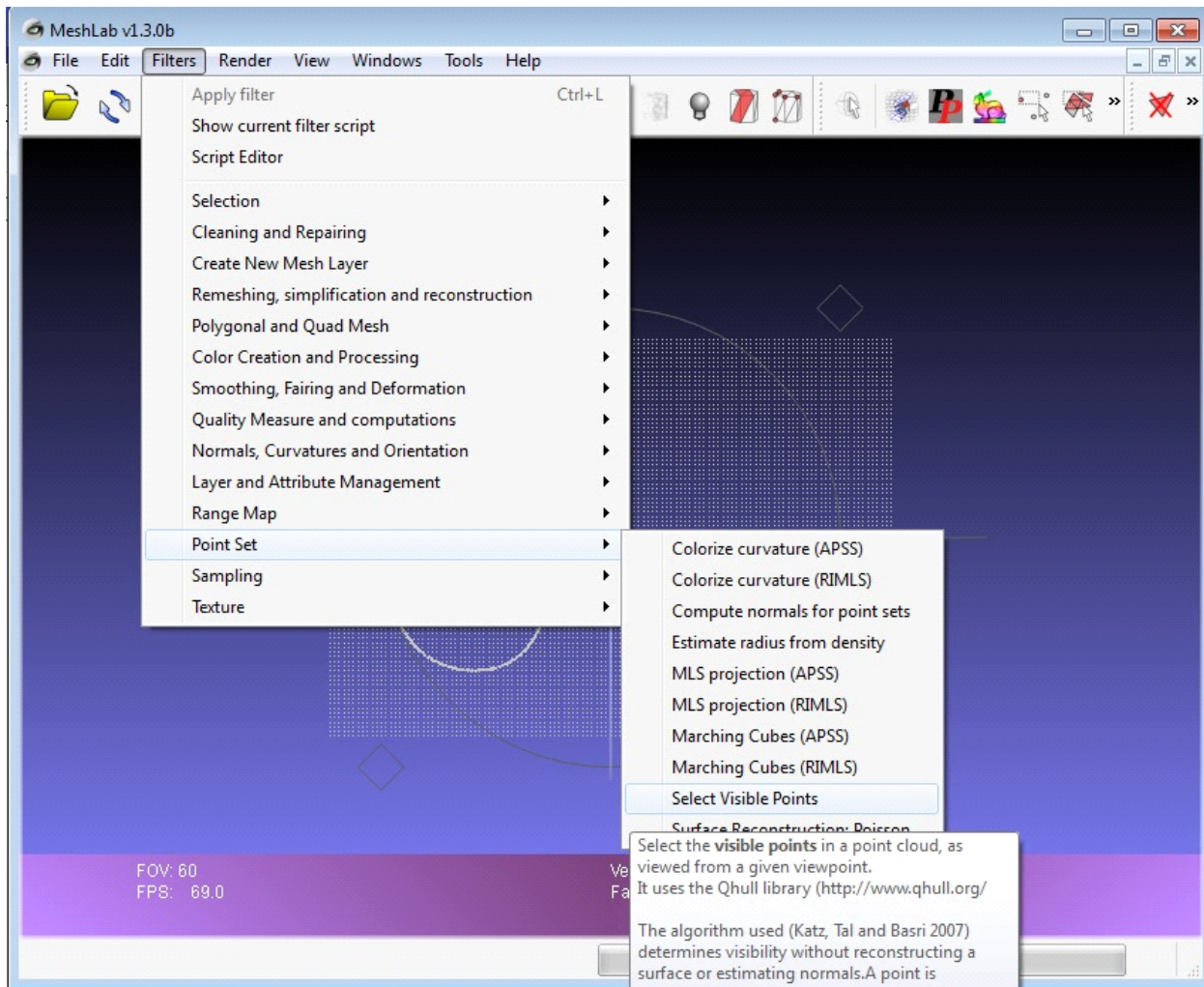
Make the selections as highlighted and pick Save from the Action section lower left.

Step 4) Start MeshLab and read in the DAE file. Pick the “Point Cloud” button from the menu-bar and you will see the data. The bottom purple info band will also show the vertex count (notice the face count is zero because of the dumb DXF that the CA spit out):



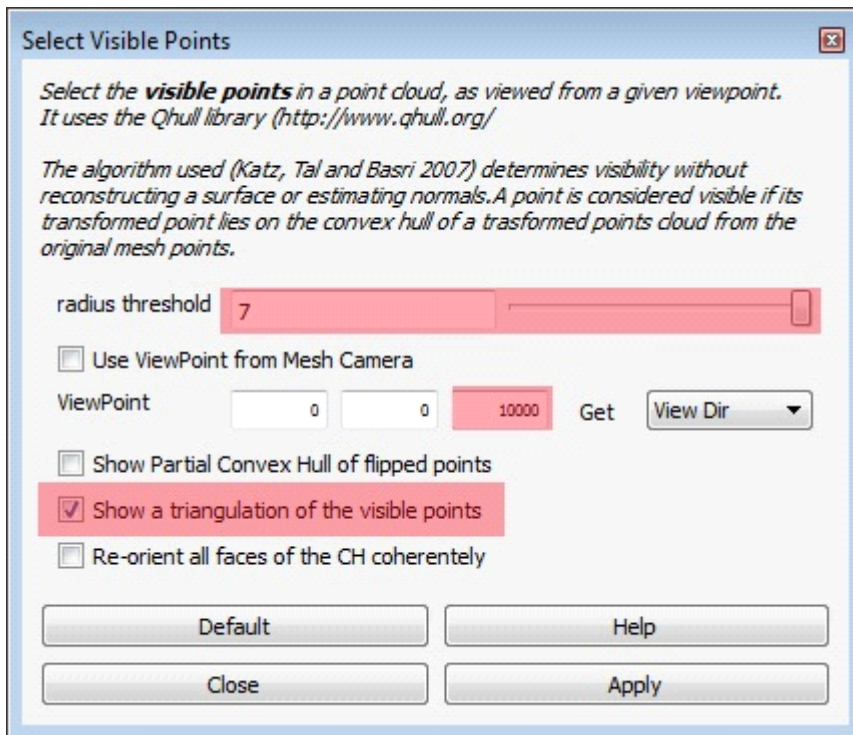
We are going to need to re-mesh these points for it to be usable.

Step 5) From the menu pick:



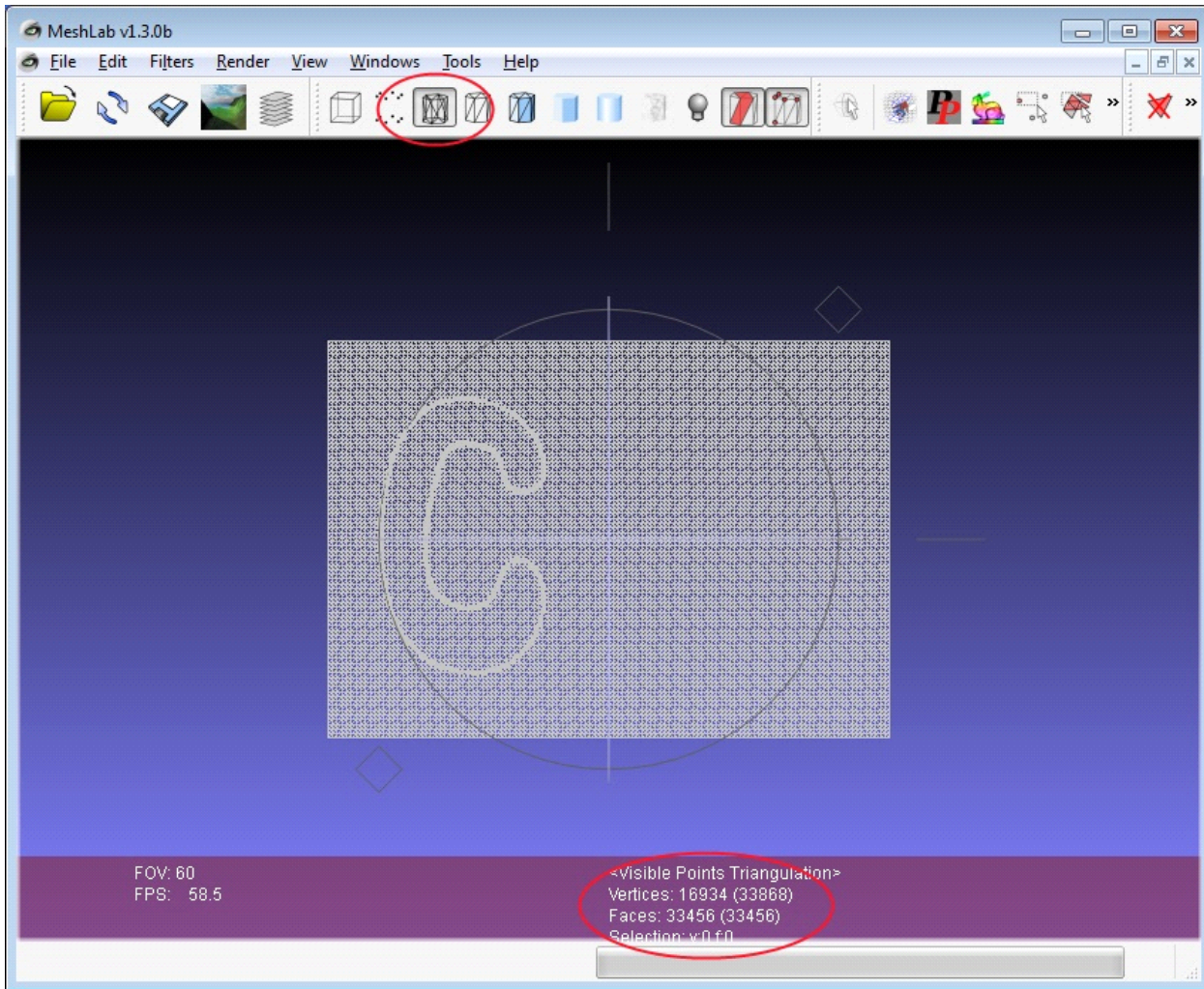
There may be other routes to a better mesh but I give you this one because I know it works. You can experiment with any of these others if you wish but Qhull is a very good algorithm.

This will bring up a new dialog box. Make the selections as highlighted. Again, you are free to experiment but these worked for me:



Because this is based on ray lines you need to move the ViewPoint high over the mesh so it will pick up any points on the backside of hills. If you get holes in the mesh there, or you have mountainous terrain, then I guess you should try increasing the z component above the 10,000 I used.

When you hit “Apply”, it will plug and chug and eventually you should be able to see that the purple status bar now shows a face count. You can also now see the mesh by picking the “Wireframe” button in the menu-bar:



If you were successful with making the mesh then just use MeshLab to save out a new “smart” DXF file. This one can be used in CPG.