



# Exporting TINs and CHNs to a 3D Printer

By Ken Aiken

For the 2015 release, I've been working on enabling the export of data from TIN MODEL, or channels from ADVANCED CHANNEL DESIGN, to a file that can be printed by a 3D printer.

**Tip:** If you don't have access to a 3D printer, there are companies that do 3D printing, so you don't need to buy an expensive printer and learn how to use them.

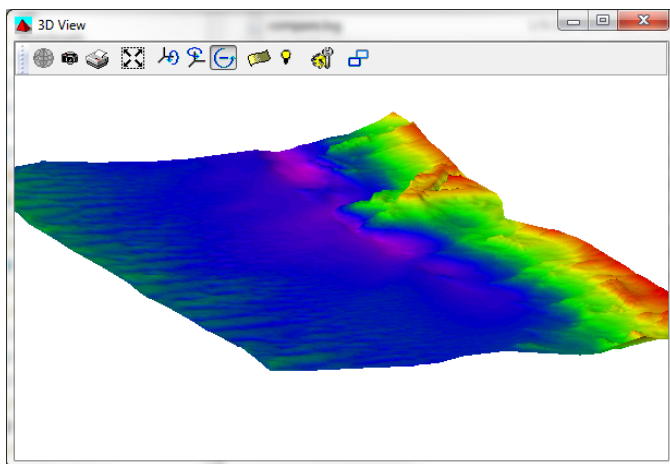
## TIN MODEL

In TIN MODEL, you want to work with sorted data. I've found MAPPER and CUBE work well for this. Large spikes tend not to print well, especially in smaller prints.

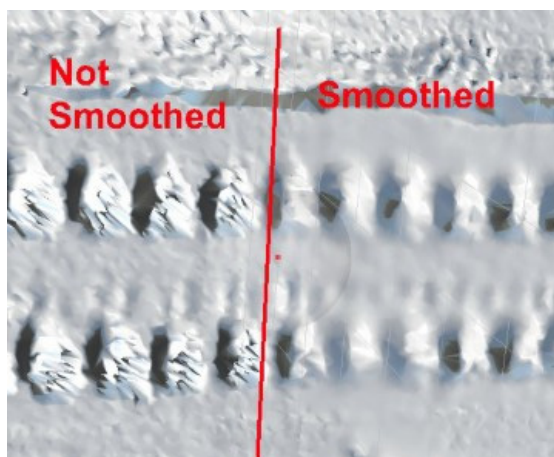
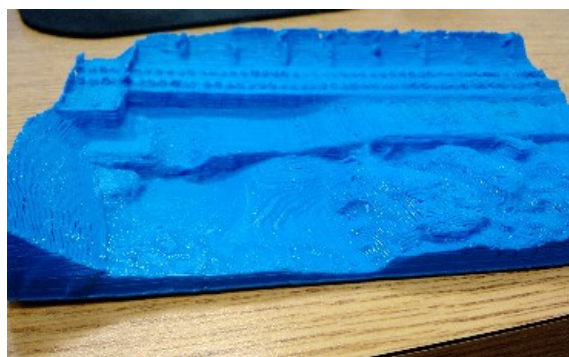
Once loaded into TIN MODEL, select EXPORT>STL FOR 3D PRINTING. It will ask you the print area dimensions, scale your model down and save it to an STL file supported by most 3D printer software.

At this point you can load it up with your 3D print software. I use a Makerbot 3D printer so I use MakerBot Desktop, but there are other printer models that work with our output files just as well.

Sometimes, if the data has difficult spikes in the data, I'll import it to Autodesk Meshmixer and use the sculpt tools RobustSmooth brush on any tricky bits. This will often print more nicely and the 3D printer will produce the model more quickly.



**FIGURE 1.** Sample 3D Prints from TIN MODEL



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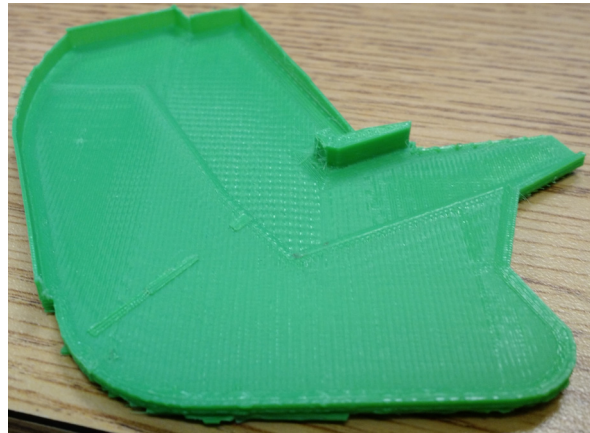
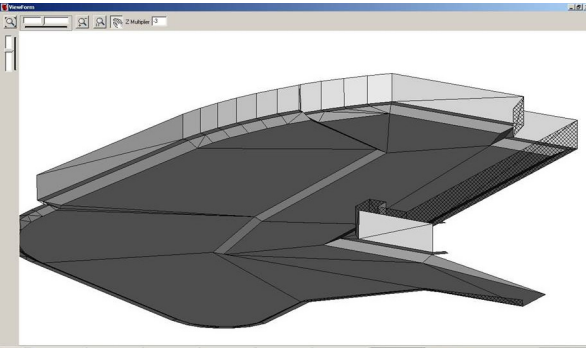
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## CHANNELS

To export from ADVANCED CHANNEL DESIGN every face must connect to the other faces so it is one object. Once designed you can click the export to STL button. A window similar to the one in TIN MODEL will open up for the print area dimensions and an STL file will be saved to be loaded by a 3D printer software.



**FIGURE 2.**



**FIGURE 3. More Channel Models**

