

### Autodesk Products Tip & Tricks

**Product:** Civil 3D 2009  
**Topic:** Using Large Point Files and Simplify Surface  
**Written by:** Leo Lavayen, ISD Tech.  
**Date:** December 31, 2008

When bringing in large survey areas or LIDAR Data, surface models can become very large. In this example, the Surface being created is reading a text file of an entire quadrant from a county. The data amounts to roughly 100,000,000sqft area of Northing, Easting and Elevation data containing about 231,589 points. A quick glimpse into the Statistics Tab of the Surface properties reveals this.

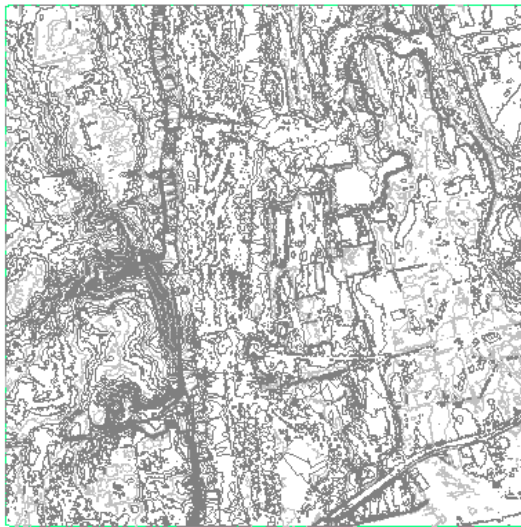


Figure 1

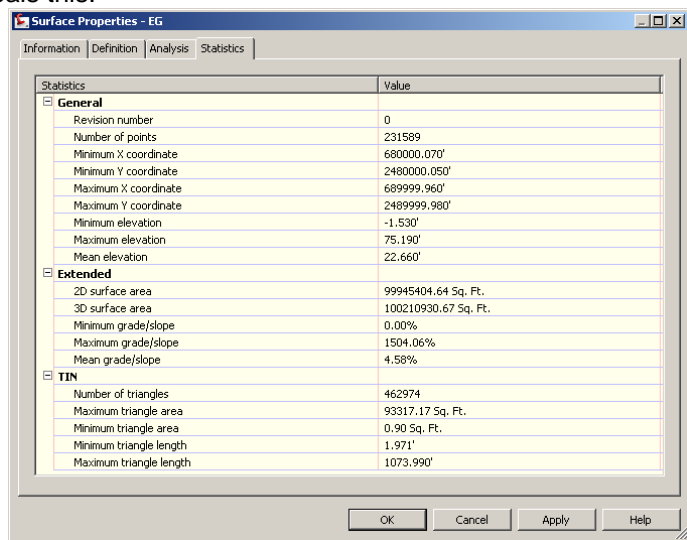


Figure 2

To minimize the number of created triangles and surface points, the existing surface will be simplified.

1. From the Prospector Tab, Expand the Surface, expand the **Definition** Category, right click on Edits and select **Simplify Surface...**
2. There are 2 options for the Surface clean up, Edge Contraction and Point Removal.

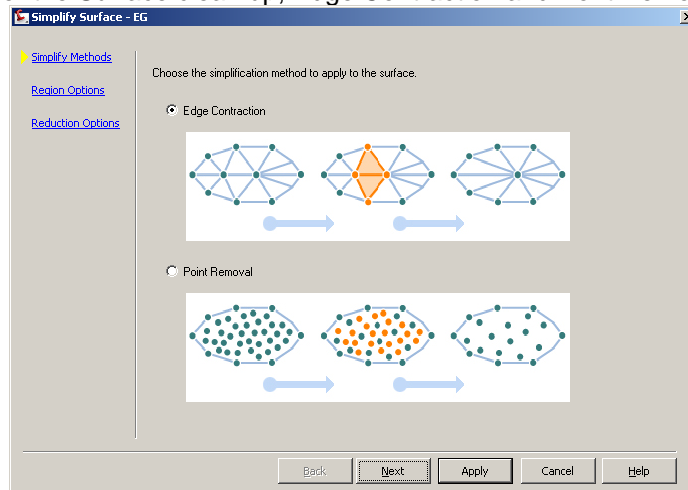


Figure 3

3. The process can be applied to the Entire Surface, a Window/Polygon can be specified on screen or an existing Polygon can be used.

## Autodesk Products Tip & Tricks

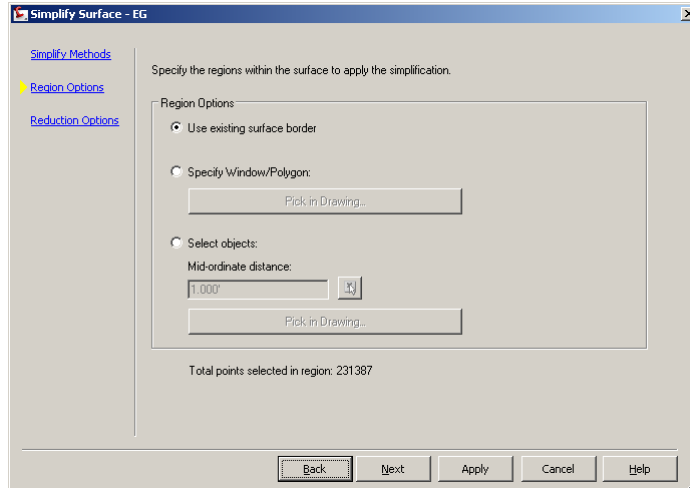


Figure 4

- The last step is to assign a Percentage of Points to be removed. If using the Point removal option a Maximum change in elevation is enabled. The Total of points removed is displayed according to the criteria. You should be aware here if you click on **Apply** and then click on **Finished** the command will be done twice.

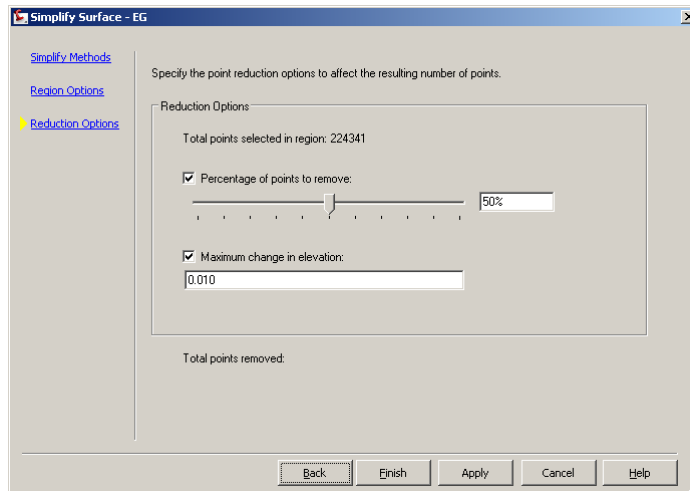


Figure 5

- The process will be listed in the surface edit area.

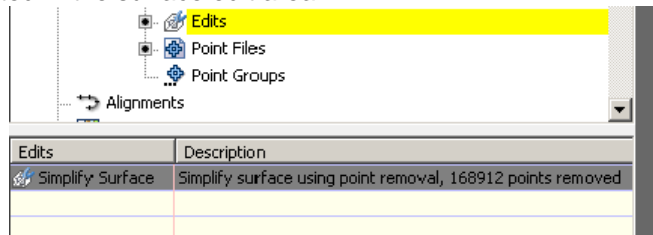


Figure 6