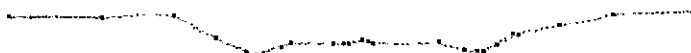


Model keypoints

Model keypoints routine classifies laser points which are needed to create a triangulated surface model of a given accuracy. This routine is normally used to create a thinned data set from points classified as ground hits.

You control the accuracy with elevation tolerance settings **Above model** and **Below model**. These settings determine the maximum allowed elevation differences from a ground laser point to a triangulated model. **Above model** determines how much laser points can be above the model. **Below model** determines how much laser points can be below the model.

The application will try to find a relatively small set of points (= keypoints) which would create a triangulated model of given accuracy. These keypoints will be classified into another class.



All other ground points are within the given elevation differences from a model that the keypoints would produce when triangulated. Some of the ground points are above the model, some ground points are below.

This classification is an iterative process similar to ground classification. The process starts by searching for initial points inside rectangular regions of a given size. The lowest and the highest source point inside each rectangle is classified as keypoint and those are used to create an initial triangulated model. During each iteration loop the routine searches for source points which are too far above or below the current model. If such points are found, the furthest points are classified and added to the model.

The **Use points every** setting provides a method for ensuring a minimum point density in the final model even in flat places. For example, if you want to have at least a point every 10 meters, you should set the **Use points every** setting to 10.0.

Setting:	Effect:
From class	Source class from which to search keypoints.
To class	Target class to put keypoints into.
Use points every	Rectangle size for searching initial points. The highest and the lowest point inside each rectangle will be classified.
Above model	Maximum allowed elevation difference to the triangulated model from a source point above the model.
Below model	Maximum allowed elevation difference to the triangulated model from a source point below the model.