Tools

Classification of LIDAR points by Intensity

B S A U | A W G

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Summary: LIDAR data often contains many attributes in addition to the simple positional information for the individual returns. One useful attribute in the classification of LIDAR points is the intensity. The intensity represents the magnitude of the return pulse and is recorded as an integer value within the LAS format. The intensity information is what is commonly used to produce a gray scale pseudo-ortho (See figure 3) from just the LIDAR data itself.

As seen in figure 1 the roads and similar asphalt surfaces are in contrast to their surroundings. As such they should be in a fairly unique range of intensity values such that one may filter those points from their surrounding points based upon that attribute. In LP360 this is done by creating a point class task, see figure 2. Executing the intensity based filter on the point cloud will result in reclassified features as seen in figure 3. As with other LIDAR classification processes it may be necessary in some instances to clean the resulting feature classification using the manual classification tools available within LP360 as the intensity bands of the desired feature may not be entirely unique to the desired features.

Figure 1 - LIDAR Psuedo-ortho

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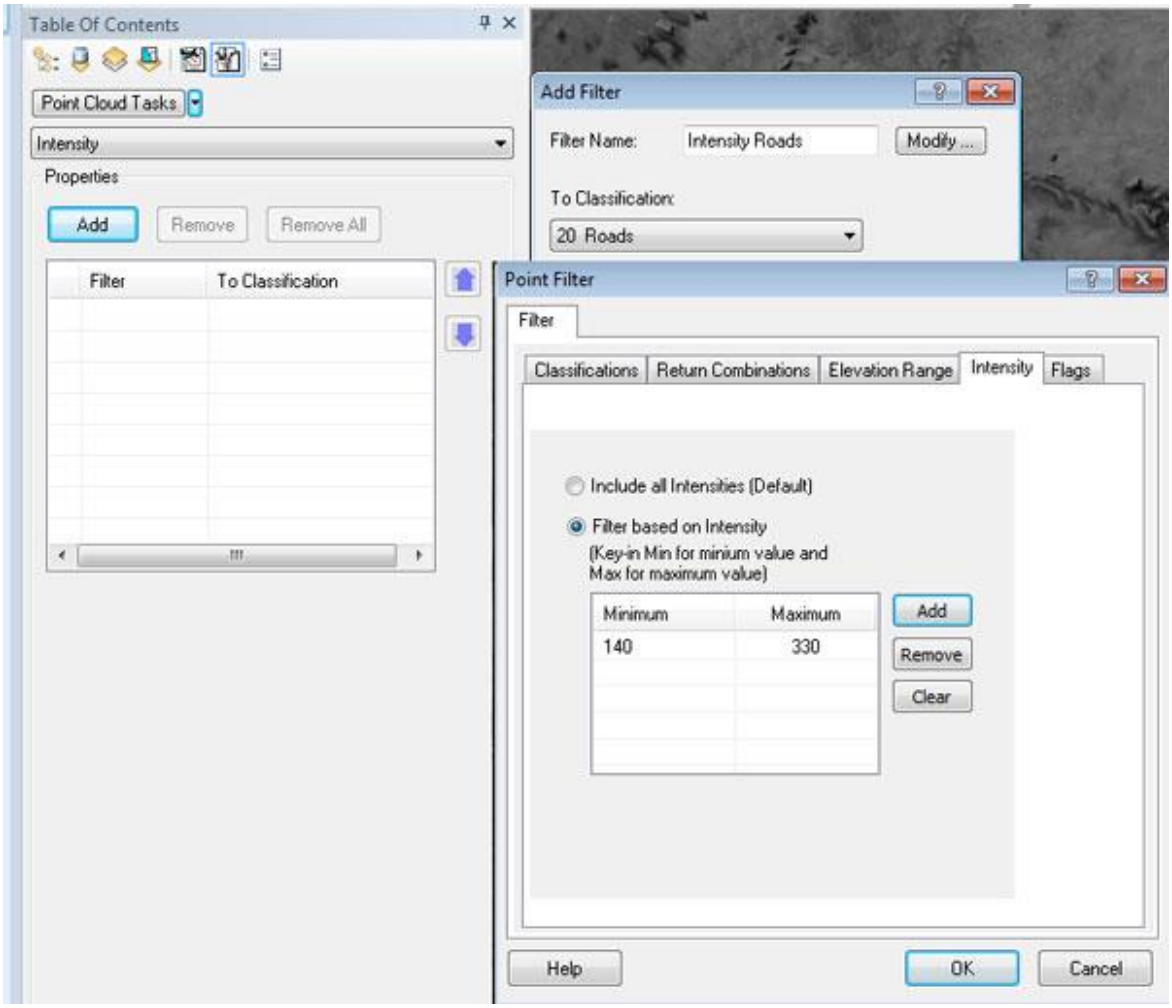

Figure 2 - Point Cloud task using the intensity filter.

Figure 3 - Reclassified Feature - Roads