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Revision 1.0

Hillshading is a way to determine the hypothetical illumination of a surface based on a given light source position in the sky. Positions on the terrain that are most exposed to the light source have high illumination or brightness values, whereas terrain positions that are hidden or protected from the light source have low to no illumination or brightness. Hillshade values range from 255 (high illumination) to 0 (no illumination).

The position of the light source or sun is specified by the user in degrees altitude above the horizon and azimuth. The hillshade or brightness value for a single terrain position may differ significantly for different positions of the light source, such as the movement of the sun during the day and for different seasons of the year.

Below are examples of how hillshade illumination settings affect the display.



Illumination Settings: East at 25 degrees (left), West at 25 degrees (right)

The hillshade illumination can be adjusted for the Map and 3D Viewer windows. It can also be adjusted in the hillshade export process.

For the Map window, the illumination adjustment is located by right-clicking **Layers** in the Table Of Content/List By Drawing Order tab and selecting **Properties**. (Figure 1)

Tools, Tips, and Workflows

Adjusting Hillshade Illumination and Creating Hillshade Derivative

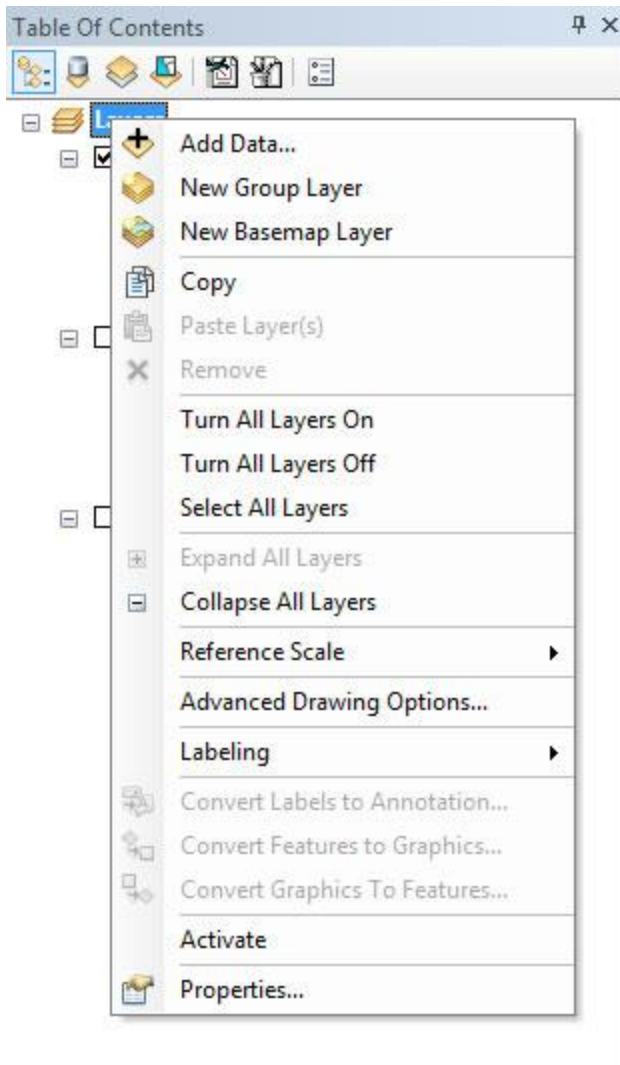


Figure 1: Select Properties

Select the **Illumination Tab**, adjust to desired settings and click OK. (Figure 2)

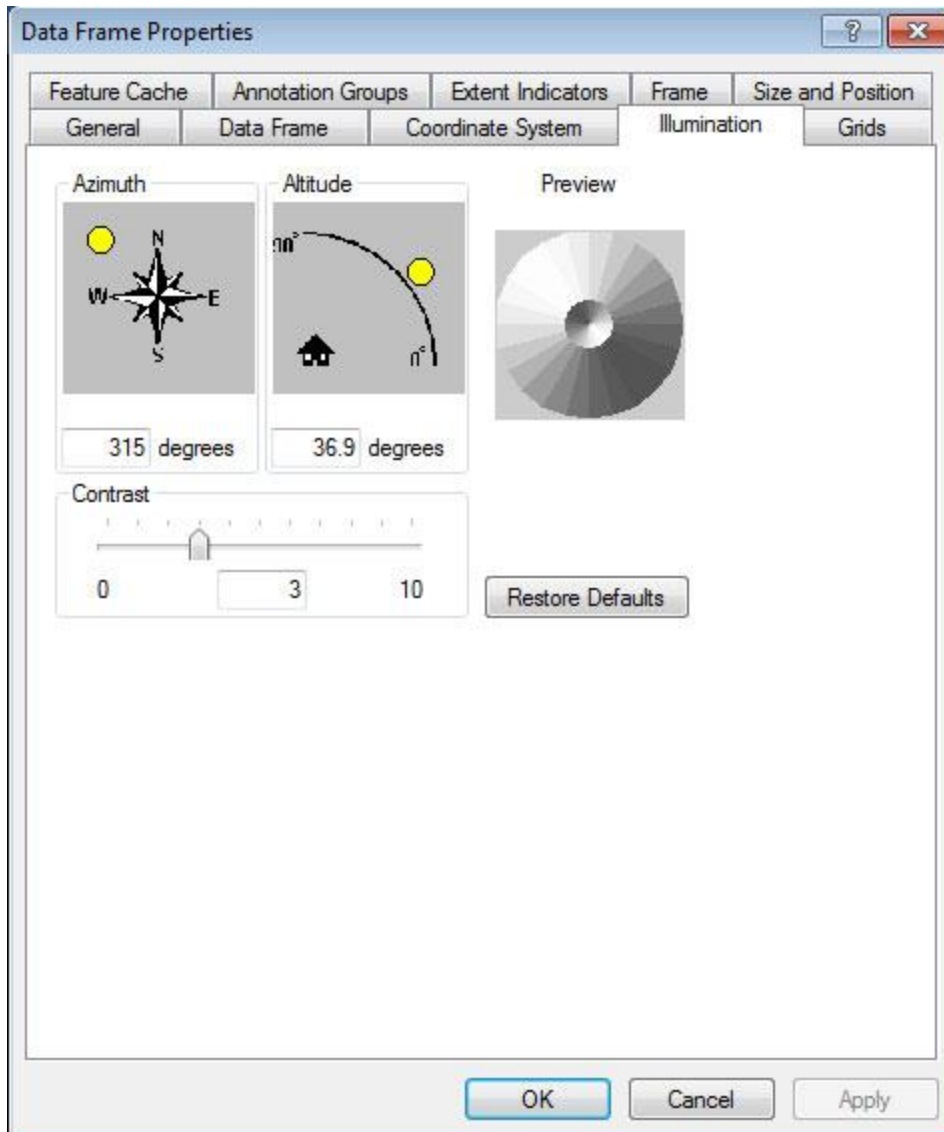



Figure 2: Illumination Tab

To set the illumination properties for the 3D Viewer Window, select the **3D Viewer Properties** button  and then select the **3D View** tab. In the Illumination Properties portion of the dialog input the desired settings. (Figure 3)

Note: Before the release of version 2012.1 the hillshade illumination in the LP360 Windows (Standalone version) Map view could not be adjusted. It is now adjusted by the 3D Window illumination properties as defined above.

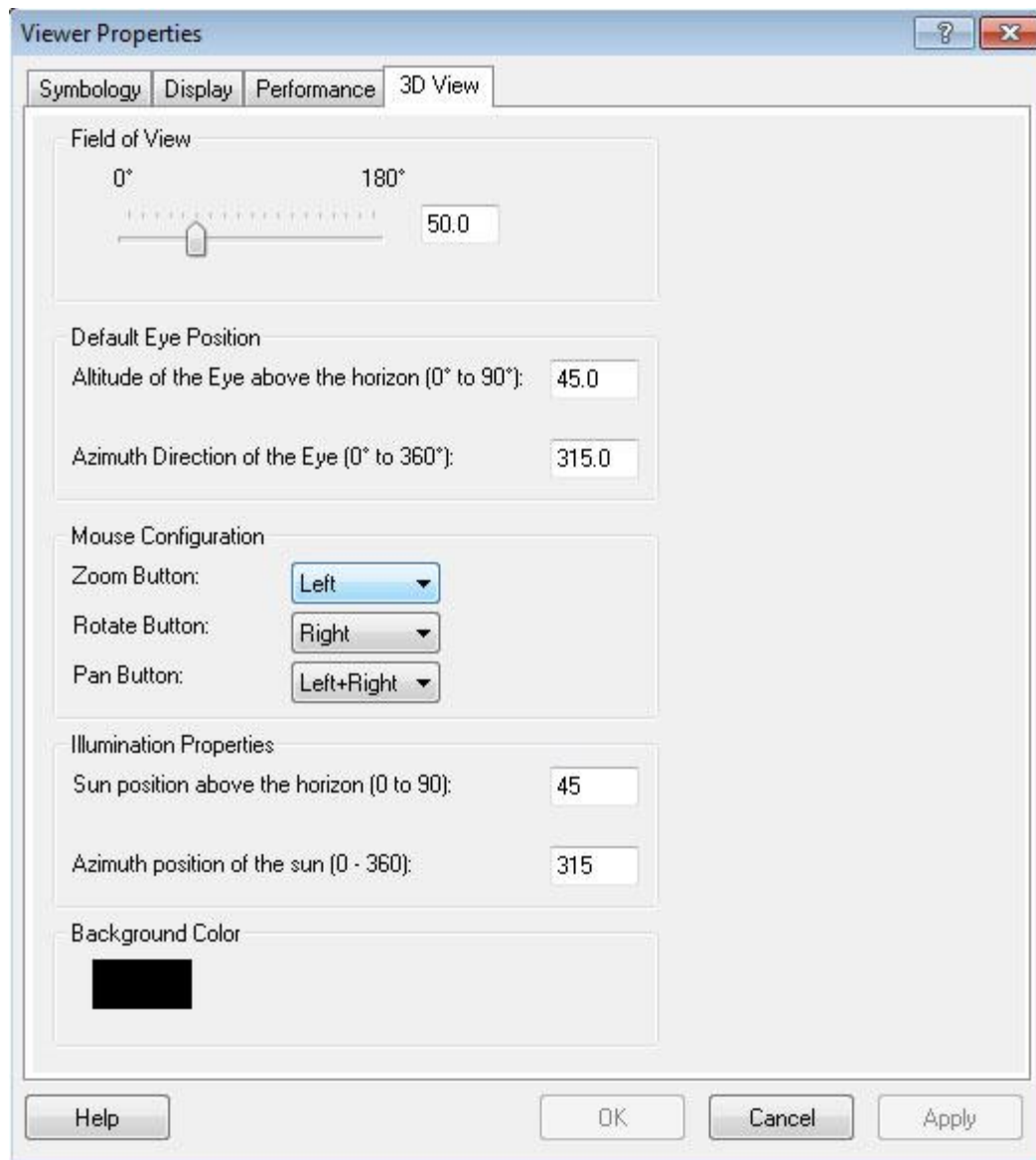


Figure 3

To set the illumination properties while exporting a Hillshade, in the Export LAS Files dialog, set the **Export Type** to Surface and the **Surface Attribute(s) to Export** to Hillshade. This will cause the Hillshade tab to be visible. (Figure 4)

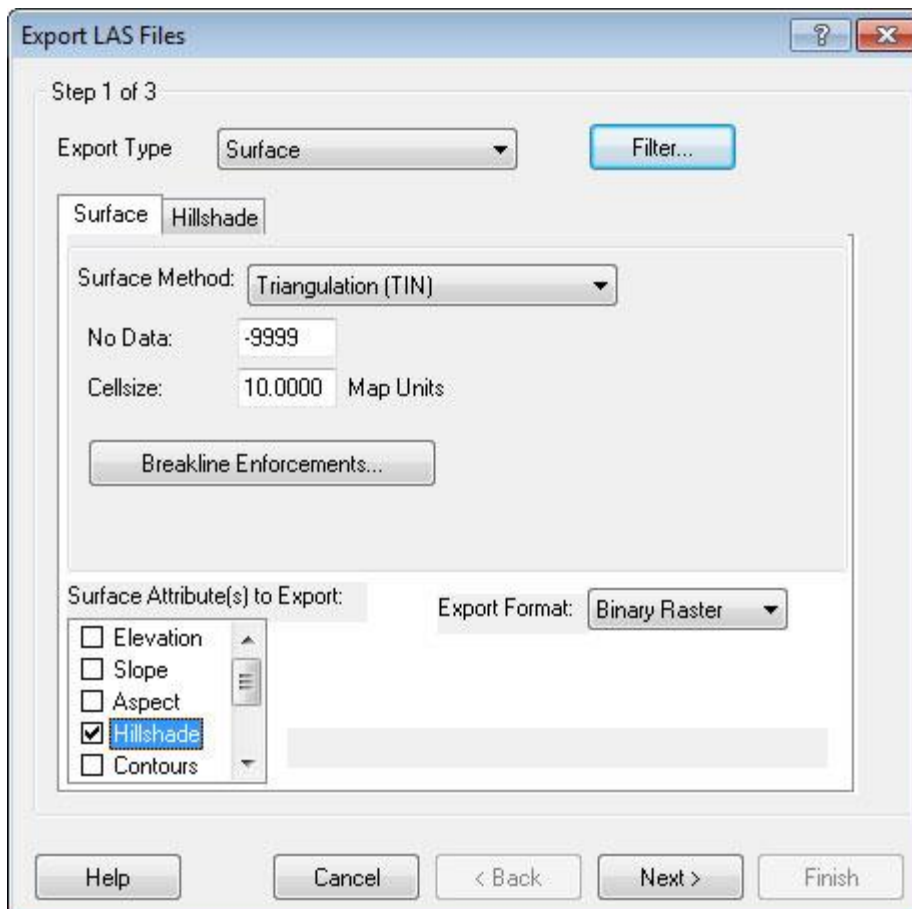


Figure 4

Select the **Hillshade** tab and input desired settings. (Figure 5)

Tools, Tips, and Workflows

Adjusting Hillshade Illumination and Creating Hillshade Derivative

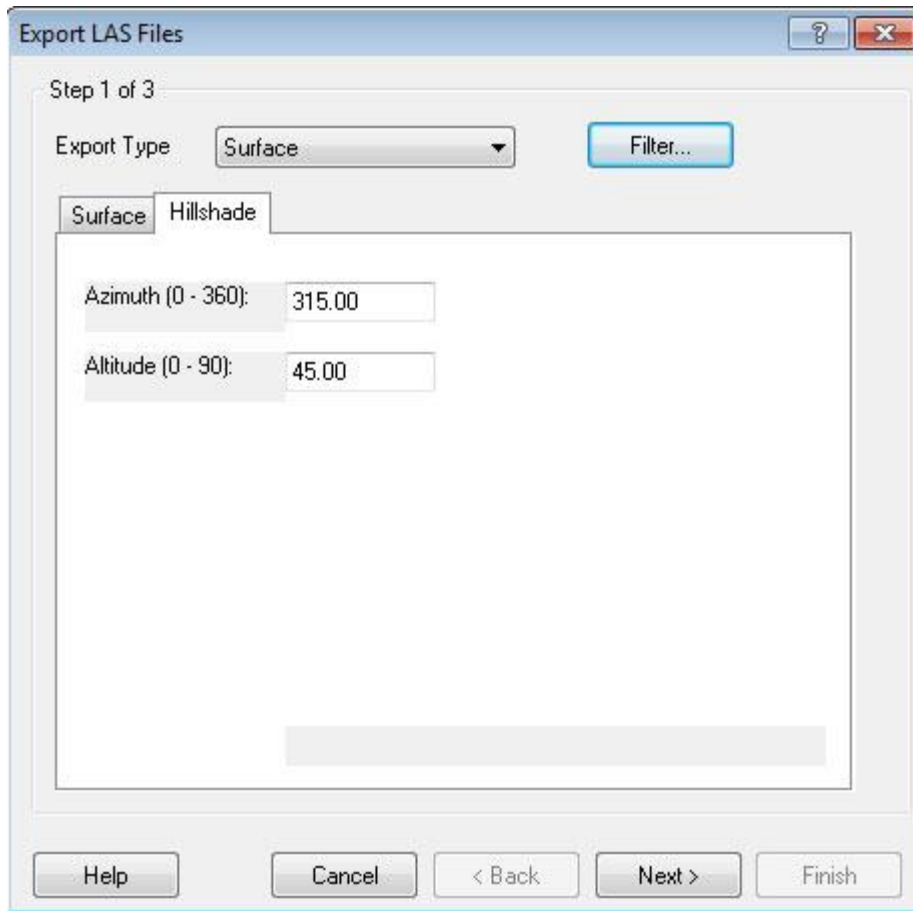


Figure 5