

Use of LiDAR Data in Cartography

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Abstract: The technology of aerial laser scanning (LiDAR) has importantly affected the principles of spatial acquisition of topographic and other physical data of the environment. The main results of airborne LiDAR survey are clouds of georeferenced points containing data of the reflection order and the intensity of the returned pulse. The first very important advantage of LiDAR capturing is its speed; it allows capturing large area in a short time with high density. The second one seems to be the fact that more reflections of every laser beam enable recognition and capturing different objects and phenomena, even vegetation density or terrain features in forest covered areas. Therefore LiDAR data can be used for creation and for updating both topographical and different thematic maps, like orienteering ones, morphologic ones, etc.

Keywords: LiDAR, map updating, terrain model, surface model, point cloud