Three-dimensional Visualization of LiDAR Point Cloud Data Using Structural Feature Extraction

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The LiDAR (Light Detection and Ranging) technology is used heavily for exploration of topographic data, which is procured through high speed airborne altimetry. Our motivation is to extract features of interest from processed LiDAR data given in .las files and use these features to reduce the point cloud. Our reduction is based on structural and geometric information which has been extracted using topological information of the data. Our work closely follows the work done by Keller et al.[1].

References

[1] P. Keller, O. Kreylos, M. Vanco, M. Hering-Bertram, E. S. Cowgill, L. H. Kellogg, B. Hamann, and H. Hagen, "Extracting and Visualizing Structural Features in Environmental Point Cloud LiDaR Data Sets." Heidelberg, Germany: Springer- Verlag, 2010, pp. 179–193.