**Quality Control Assessment and Reporting for Large Scale LiDAR-based Elevation Products**

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**Abstract:** Light Detection and Ranging (LiDAR) Remote Sensing technology has been extensively used in the Philippines to capture the subtlety of the terrain in the floodplain areas on the critical river systems in the country. The targeted accuracy of the flood hazard maps necessitates a high-accuracy elevation dataset, which can only be ensured through rigorous internal and external DEM quality checks. LiDAR quality checking is an important process used to verify the quality of the acquired data which would affect the final positional accuracy of points. This paper describes a comprehensive quality assessment of airborne LiDAR data and recommended workflow on LiDAR quality checking. Different methods are examined as part of this quality assessment: visualizing the data, determining the boundaries gaps of the acquired LiDAR datasets, computation of the point density and spacing of points, and checking the horizontal and vertical alignments of adjacent strips where they overlap. Surveyed control points are used to the absolute accuracy of the LiDAR data. The quality control prescribes a 20cm-accuracy after following the standard workflow.

**Keywords:** LiDAR, Quality Assessment, Quality Checking, Mapping

**Suggested Topic:** LiDAR Quality Checking when Mapping at a National Scale

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