3.1.1 Merging of Aerial and Mobile LIDAR Data

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The application of LiDAR (Light Detection and Ranging) technology within the Geospatial industry over the past decade has revolved around aerial applications, which have enabled creation of final products such as DTMs, DEMs, TINs, and contours using LIDAR data.

Today, technological advancements have facilitated accurate LiDAR capture from mobile terrestrial platforms, which are capable of producing survey/engineering grade accuracy on-the-fly, while blanketing areas with up to 1.6 million laser returns per second. By coupling the advantages of both proximity-to-target and ground-based viewing perspectives, mobile LiDAR delivers far greater accuracy and point-density than airborne platforms, and provides the framework for new applications and uses.

Capitalizing on the synergy between the two technologies has provided data fusion opportunities between the differing capture methodologies. When used in tandem, the resulting dataset(s) provides a comprehensive insight that is greater than the sum of the parts. The aerial LIDAR data provides foundation for the topographic information and the mobile LIDAR provides information about the infrastructure.

Fusion of Aerial and Mobile LiDAR technologies has opened up new vistas in mapping and management of geospatial information.

This presentation will provide a discussion on Aerial and Mobile LiDAR technology and outline the potential methods/advantages in combining the two.