

Applications of LIDAR Technology in Mapping Hydro Transmission Assets

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Advancements in Light Detection and Ranging (LIDAR) technology allow for the cost effective collection of high density, high accuracy DEM data from an airborne platform. This paper gives an overview of the Terrain Scanning Laser System developed by Terra Remote Sensing Inc. (TRSI) and its applications related to hydro transmission assets. British Columbia Hydro, one of the largest electrical utilities company in North America, provided three tests sites in their network of transmission assets. These sites offered a variety of challenging conditions in relation to terrain, vegetation, and transmission asset configuration. The data was analyzed for its usefulness in accurately determining hang points of wires, wire catenaries, proximity of vegetation to wires, tower positions and under-built information. The results of the survey were compared to data captured photogrammetrically and supplemented with site inspections. The results provide an indication of the accuracy and usefulness of capturing hydro transmission asset data with LIDAR technology.