

Comparison of point cloud data sourced from airborne laser scanning and UAS photogrammetry – application to forest inventory

Irfan A. Iqbal^{1*}, Jon E. Osborn², and Arko Lucieer³

^{*}Discipline of Geography and Spatial Sciences, School of Land and Food, University of Tasmania, Hobart TAS 7001

¹Irfan.Iqbal@utas.edu.au, ²Jon.Osborn@utas.edu.au, ³Arko.Lucieer@utas.edu.au

Keywords: UAS photogrammetry, point cloud, Unmanned Aerial System

Abstract:

Airborne laser scanning is a proven technology for capturing canopy data in plantation forest, from which forest structural metrics can be derived and forest inventory estimated. Dense point cloud data derived from UAS aerial photography and SfM MVS photogrammetry is an alternative method of acquiring canopy data. This poster presents results from an investigation of ALS and SfM point clouds acquired over a pre-harvest forest plantation. Differences in the data, particularly due to the effects of occlusion, photo-geometry and variations in canopy illumination are described and recommendations for UAS flight planning are presented.