

Abstract Title: Commercial Geiger Mode LiDAR

Presenter: Mark E Romano

Employer: Harris Corporation

Email: mark.romano@harris.com

Introduction

Originally developed for US military applications Harris has developed the first commercially available LiDAR system built with Geiger Mode Avalanche Photodiode (GmAPD) technology. This new technology provides significant efficiency gains for airborne LiDAR mapping when compared with currently available linear mode sensors. This system can collect very high density data (>100 PPM) at instantaneous area of coverage rates greater than 1000 sq. km per hour providing lower cost with higher data quality.

Description

This presentation will describe the processes and technologies Harris has developed over the past 15 years for efficiently producing high density point clouds from GmAPD lidar data. Topics to be covered include: 1) GmAPD sensing fundamentals, 2) collection strategies for GmAPD collection, 3) automated, large volume data production systems. 4) Comparisons of existing vs. new technology project solutions. Examples of high density GmAPD commercial products will also be shown.