



Western Great Lakes Region

American Society for Photogrammetry & Remote Sensing

ASPRS WGL “SPOTLIGHT EVENT”

TUESDAY, SEPTEMBER 22ND, 2015

2:30 p.m. – 4:45 p.m. at the UW Madison Pyle Center, 702 Langdon Street
Social hour to follow at the Kollege Klub on Lake Street

AGENDA:

WELCOME AND INTRODUCTIONS

JIM LACY, WGL BOARD OF DIRECTORS & STATE CARTOGRAPHER’S OFFICE

THE CHALLENGES AND OPPORTUNITIES OF UAS IMAGERY

PAUL BRAUN, CONTINENTAL MAPPING CONSULTANTS

REMOTE SENSING TO IDENTIFY ASH TREES IN URBAN FORESTS

JASON KRUEGER, AYRES ASSOCIATES

BREAK / DEMONSTRATION OF A STATIC LIDAR SCANNER

PAT SUESS, WISCONSIN DOT

MERGING LIDAR DATA WITH SOFTCOPY PHOTOGRAMMETRY DATA

CINDY MC CALLUM, WISCONSIN DOT

The Challenges and Opportunities Using UAS Imagery

Paul Braun, Vice President, Continental Mapping Consultants, Inc.

Unmanned Aerial Systems (UAS) are exploding as a cost effective solution for geospatial data collection. However, many people jumping into the UAS foray are finding that the production of accurate geospatial products, capable of effectively tying into their enterprise geospatial environments, is not as straight forward as they thought. Struggles arise with understanding data accuracies, knowing the limits of what content can be automatically extracted versus manually derived from the imagery, as well as the challenges around data management. To help attendees mitigate those struggles, Continental Mapping will present some best practices for deriving map products from UAS imagery as illustrated through several project examples.

Attendees will leave with a solid understanding of the accuracies that can be derived from UAS imagery as well as learn best practices for manipulating UAS imagery into geospatial data products.

Remote Sensing to Identify Ash Trees in Urban Forests

Jason Krueger, Ayres Associates

Midwestern communities have been deeply affected by the Emerald Ash Borer (EAB) – an invasive species that has done considerable damage to the urban forest canopy. Targeting ash trees, a common and aesthetically popular part of our suburban terrace landscapes, EAB has required a swift and costly response by many municipalities. With a variety of geospatial tools, including multispectral imagery, aerial LiDAR, and ground truthing information, we can create a full picture of an urban forest canopy and help target mitigation efforts. This discussion will focus on research efforts in a suburban community outside of Chicago and also relate this work to other applications for vegetation analysis.

Merging LiDAR data with Softcopy Aerial Photogrammetry

Cindy McCallum, WisDOT, Photogrammetry Unit Coordinator

WisDOT has partnered with consultants and used in-house resources to acquire LiDAR point clouds to merge the data extracted from the point cloud with data collected from softcopy Photogrammetry. Mobile mapping systems, aerial LiDAR sensors and static LiDAR instruments have been used to gather data for a variety of planning and design projects.

Three types of merged LiDAR data with Photogrammetry data will be presented.

This is a free event thanks to the generous financial sponsorships of Ayres Associates and Continental Mapping Consultants. Additional logistical support provided by the Wisconsin State Cartographer's Office and the ASPRS Western Great Lakes Region.