Agenda

Presented by Edwin “Chip” Simon

Commercial Small Unmanned Aircraft Systems (sUAS) Applications - FAA Part 107 Remote Pilot License
- Regulatory overview for commercial applications
- Preparing for the test
- Key topics - airspace, sectional charts METARs, TFRs, working with other agencies
- Operational safety - flight and maintenance logs

Overview of Commercial SUAS Systems for Surveying and Engineering Applications
- Benefits of SUAS vs traditional manned aircraft photogrammetry
- Aircraft types, fixed wing, quad, hex and octa copters
- Payload capacity, system redundancy, control and avionics
- Cameras: sensor sizes and types, dynamic range, lens specifications

Integration of GPS, Terrestrial and SUAS Data into CAD and GIS
- Introduction/refresher to map projections and coordinate systems
- Geodetic datums and coordinate systems
- Overview of the Transverse Mercator Projection
- Grid/ground coordinates and geod models
- Getting terrestrial and GPS data to match and work harmoniously

Mapping Using UAS - Preflight
- Capture software set-up - Pix4D Capture, DJI Ground Station Pro, Litchi
- Preflight planning, project control, GCP location and density
- Flight operations and considerations

Photogrammetry Demonstration/Case Study - Post-flight
- Pix4D software demonstration
- Pix4D - project setup, directory structure, camera optimization parameters
- Working with control points, aerial targets and photo ID points
- Output deliverables, LAS, DXF, GeoTIFFs

Introduction to Project Validation
- Analysis of the Pix4D quality report
- What to do when processing goes wrong
- Troubles associated with erroneous GCPs and more complex terrain

Going Forward
- Implementation of an SUAS program into your surveying company
- Questions and answers

Learning Objectives

You'll be able to:

Learn benefits of small unmanned aircraft systems (SUAS) vs traditional manned aircraft photogrammetry.

Discuss key topics in the FAA Part 107 Remote Pilot License test.

Understand how to get terrestrial and GPS data to match and work harmoniously.

Explore the preflight process of mapping using UAS.

Review a post-flight photogrammetry demonstration case study.

Get tips on implementing an SUAS program at your company.

Aerial Mapping Technologies and Procedures
Albuquerque, NM - Wednesday, November 20, 2019

Examine the regulation of commercial small unmanned aircraft systems (SUAS)

Explore commercial SUAS systems for surveying and engineering applications

Integrate GPS, terrestrial and SUAS data into CAD and GIS

Discuss issues associated with erroneous GCPs and more complex terrain

Consider adding a beneficial SUAS program into your surveying company

Continuing Education Credits
- Professional Engineers & Land Surveyors
  7.0 PDHS
- Floodplain Managers
  6.5 ASPFM CECs
Additional Learning

Webinar Series

Distributed Batteries for Solar PV Systems
• Distributed Batteries for Solar PV Systems, Part I
  Wed., Nov. 6, 2019, 11:00 AM - 2:15 PM CST
• Distributed Batteries for Solar PV Systems, Part II
  Thurs., Nov. 7, 2019, 11:00 AM - 2:15 PM CST

Complying with ADA Standards for Accessible Design
• Complying with State & Federal Accessibility Requirements
  Thurs., Nov. 7, 2019, 11:00 AM - 1:30 PM CST
• Applying the 2016 & ASIT.1 Accessibility Standards
  Fri., Nov. 8, 2019, 11:00 AM - 1:30 PM CST

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The Association of State Floodplain Managers has approved this event for 6.5 CECs.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

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Registration

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How to Register

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