

AGIC Education and Training Symposium Pre-conference Workshop

Unmanned Aircraft Systems Workshop for GIS Professionals

Tuesday, September 18, 2018

Prescott Resort and Conference Center

Granite Mountain Room

8:00-8:30a	Registration
8:30-10a	Welcome & Introductions Gene Trobia and Brian Brady
	Before - Planning, FAA Regulations, Resources
	Sarah Nilsson, Esq. Aviation and Drone Lawyer and Embry Riddle Aeronautical University Law Professor <i>FAA Regulations, Policy, State and Local Laws and Policies</i>
	Robert Davis, Quiet Creek <i>Small UAS Risk Management</i>
	Small UAS remote pilots in command (PIC) are expected to develop a risk assessment. PICs must identify, document, and control hazards in the sUAS and its operating environment. This risk assessment should use a conventional breakdown of risk by its two components: likelihood of occurrence and severity. A tool to evaluate a hazard is the risk matrix, whose definitions and construction are up to the PIC to design. This presentation gives a methodology and example of constructing a risk management matrix and how to incorporate that matrix into checklists and standard operating procedures.
10-10:30a	Networking Break - Sponsored by Arizona Aerospace
10:30a-12:00p	During - Operations & Resources
	Panel Discussion
	Matt Mintzmeyer, Yavapai College; Dan Cunningham, FAA Brian Brady, City of Yuma; Gene Trobia, ASU; Robert Davis, Quiet Creek <i>Getting started: UAS Options</i> <i>Contracting vs. DYI</i> <i>Investment requirements</i> <i>Mission planning considerations/limitations</i> <i>Conducting flights</i> <i>Types of UAS & Sensors - system & camera selection options</i> <i>Training overview, options & opportunities</i>
12:00-1:30p	Lunch - Sponsored by Quiet Creek
	Guest Speaker: Brian Sherman, AZ Commerce Authority <i>What's all the buzz about AZSkyTec?</i>
	You already know Arizona is the best place in the country for flying and testing drones. Brian Sherman from the Arizona Commerce Authority will drone on about AZSkyTech, Arizona's initiative to accelerate UAS development and advanced operations for industry, government and academia.
	Sponsor Lightning Round & Networking

1:30-3p	Project Based Processing & Resources
	Robert Davis, Quiet Creek <i>Small UAS data processing options and requirements</i>
	Most software designed to process imagery from small UAS uses a photogrammetry technique called Structure from Motion (SfM). Small UAS users can find SfM options either online or as a desktop standalone. Some online vendors include the option to upload images from the field. For SfM to work best, users should be completely familiar with requirements for the quality of the input images, sidelap and endlap, and any other input demanded by the SfM software. The presentation's goal is to give the audience a quick overview of options for processing sUAS imagery as well as some fundamental requirements for employing SfM.
	Joe Wagner, Maricopa County Flood Control
	Chris Gunter, Arizona Game and Fish Department <i>AZGFD sUAS Engineering Operations</i>
	Learn how Arizona Game and Fish Department's Engineering Branch uses sUAS for Department's use. How did AZGFD begin using sUAS, the types of uses they are using for sUAS, and lessons learned.
	Christian Fortunato, ASURE <i>ASURE Innovation Accelerator, sUAS Innovation Challenge</i>
	ASURE's Innovation Accelerator mission is to produce dual use technologies that accelerate the transition of disruptive technologies into the market. The UAS Innovation Challenge was a demonstration of this capability, student teams were challenged to develop capabilities that support the Search And Rescue teams in a post disaster urban environment.
3-3:30p	Networking Break - Sponsored by Arizona Aerospace
3:30-5p	Geospatial Data Output & Information Access
	<i>Standard Requirements for output, Data integration and format considerations</i>
	Jared Siegler, Surveyors Source Zachary Radel, CooperAerial <i>Geospatial Data Output & Information Access</i>
	This presentation will focus on workflow and best practices for data acquisition to achieve proper deliverables for GIS use. Datasets are provided via the use of a UAV. Conventional methods for acquiring datasets and gaining access to GIS information for the purpose of creating deliverables will also be covered.
	Jenna Straface, Arizona State Land Department Robert Davis, Quiet Creek <i>Perhaps you don't need a UAS! Data Discovery & Other Options</i>
	The expense of creating aerial imagery tends to motivate a desire for archiving and cataloging. As such, there is a large amount of available imagery, much of it free, available to the public. The USGS website <i>earthexplorer</i> , where there are images in various formats going back decades, is a good example. Other options include university libraries, state and local GIS clearinghouses (AZGEO, for instance), and private organizations that sell imagery. Our objective of this brief is to give the audience an overview of available imagery resources.
	Gene Trobia, ASU Brian Brady, City of Yuma Jenna Straface, Arizona State Land Department <i>Best Practice Resources</i>
	Wrap up & Questions
5-6:30p	No Host Networking Social in Prescott Resort Lounge