

Issue 2

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Newsletter of the Rocky Mountain Region of ASPRS, serving Montana, Wyoming, Colorado, and New Mexico

President's Message

Dear Rocky Mountain Region Members of ASPRS,

Our goal is to advance knowledge of the mapping sciences and promote the responsible application of geospatial sciences and technologies in the Rocky Mountain Region of ASPRS, which encompasses the states of Montana, Wyoming, Colorado, and New Mexico. We try to meet this goal by providing informative quarterly newsletters such as this one and by organizing an annual dinner, planning a special track at the GIS in the Rockies Conference, offering student scholarships, announcing events on our website and Facebook page, and more. However, our level of success varies greatly across the region. The majority of conference and annual dinner participants is from Colorado, for example, while the most active student chapters are in New Mexico. With this brief message, I would like to reach out to you—all of our members—for feedback and ideas. Independent of whether you are a student, a faculty member, an employee or employer in the public and private sectors, what can we do to serve you better? We'd like to hear from you. Please email us (asprs.rmr@gmail.com) your thoughts!

With best wishes,

Dr. Michaela Buenemann
ASPRS Rocky Mountain Region President

National Director's Report

The discussion below is excerpted from my recent GIS in the Rockies co-presentation this year under the ASPRS Track with Bill Timmins of GIS Services based in Tucson, Arizona. This newsletter contribution focuses on who can benefit from the

explosive and ever-expanding UAS technology as opposed to collection platforms and processing software applied.

UAS: The Peoples' Technology

Varied UAS User Communities are forming at a rapid pace. Many UAS users and prospects are bound by their geographies of responsibilities, geographies of interest (see Figure 1), or geographies of observation. UAS, as a Peoples' technology, provides user communities with an emancipating opportunity to control and apply geospatial collection technology, without third party dependencies, in ways never before available. We are now free to roam in our personal and professional geographies, to enhance our understanding of places and to plan future missions, at will.

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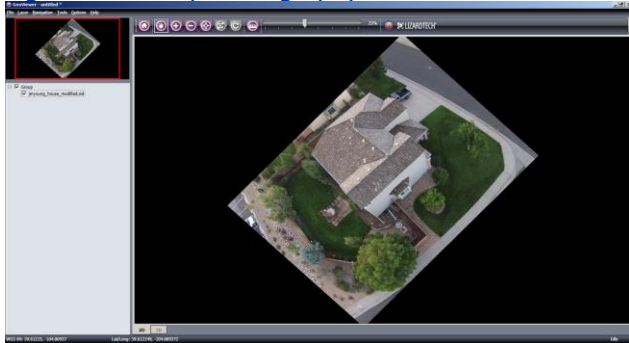
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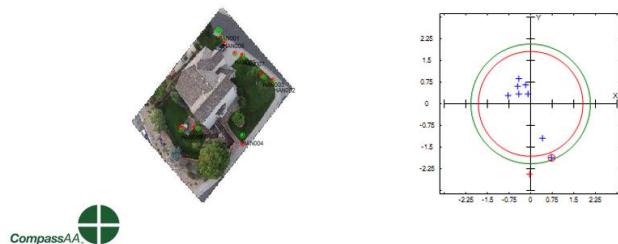
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Figure 1. Example Geography of Interest



We do live in exciting times as geospatial professionals. American Society of Photogrammetry and Remote Sensing (ASPRS) members provide great value to UAS user communities with well-vetted Guidelines, Standards and Certifications. As with other geospatial endeavors the need to capture precise position remains essential (see Figure 2). Understanding location characteristics and conditions are of particular concern especially for collection logistics associated with low ceiling acquisitions and certainly for the agencies regulating such collects. UAS content surely provides unique points of view of places for casual and professional UAS practitioners and end user communities.

Figure 2. Precise Position Measurements



Comprehensive understanding of local geography is paramount for user communities. Some, driven by regulatory mandates, acquire image and point clouds of their respective geographies of regulatory responsibilities such as a stream basin or a protected natural resource area. Highest economic use of land and water resources dictate collections of geographies of interest for speculative computations of yield, for example, a cultivated field, a mining site or other revenue-based land management endeavor. Finally, geographies of observation may be subject to short-term acquisitions or long-term, persistent and sustained missions to detect changes in land use and related surface conditions over time.

Framing a discrete UAS value proposition implores us to clearly articulate regulatory and/or as

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applicable, business mandates; to understand pre-UAS technical solutions; to define measures of success; visualize UAS value in terms of being better, faster and cost sensitive; and, to finally conceive a technical response which improves daily operations.

A suggested model for UAS user communities segmentation includes municipalities; metropolitan areas and counties; state and province governments; regional and multi-state authorities based on political or physiographic boundaries; and national and multi-national enterprises, across the Globe.

Simply stated, UAS User Sectors served include:

- National Government and National Security Agencies
- Infrastructure Authorities
- Energy Providers
- Regional and Local Governments
- Emerging Communities including Heritage, Cultural, Architectural, Construction, Real Estate, Broadcast, Media, Business, Financial Sector, Education and Entertainment special interest groups.

Alternatively expressed as UAS User Communities served include:

- Municipalities
- Metropolitan Areas /Counties
- State/Province
- Region/Multi-State based on political or physiographic boundaries
- National and Tribal Communities
- Multi-National/Enterprise
- Global Mission organizations

There is, of course, a little "Big Data" dimension to UAS technology integration into daily workflows due in large part to the collection altitude, sensor resolution, spectral capacity and multi-collection /re-visit aspects of many requirements. UAS like other technologies cannot escape the myriad of image asset handling requirements including: compression, management such as color balancing and mosaicking, distribution to end users, integration into other software product image stores and archives, and, of course, deployment of images and point clouds to remote, mobile and disconnected tactical users.

As geospatial professionals there are geographic imperatives before us to more effectively monitor and measure borders, boundaries, and area of

bounty around us. These are best of times for geospatial practitioners...Now is the time to jump into UAS technology headfirst.

Jeffrey M. Young 30 September 2016:
jyoung@lizardtech.com

IGTF 2017 – Call for Abstracts

Abstracts are now being accepted for our upcoming 2017 conference. This year's IGTF is being held in Baltimore on March 11 – 17th. Act fast, the abstract deadline is coming up quickly on September 26.

ASPRS Board Members

Please join us in welcoming the newest board members of ASPRS.

President: Charles K. Toth, OSU

Charles K. Toth is a Research Professor in the Department of Civil, Environmental and Geodetic Engineering at OSU. He received his MSc in Electrical Engineering and a PhD in Electrical Engineering and Geo-Information Sciences from the Technical University of Budapest, Hungary. He has published over 300 peer-reviewed journal and proceedings papers, and he is the co-editor of the widely popular book LiDAR: Topographic Ranging and Scanning Principles and Processing. Toth joined ASPRS in 1988. From 2004-2008 he served as Assistant Director, then Director of the Photogrammetric Applications Division (PAD). Since 2008 he has served as the ASPRS Eastern Great Lakes Region National Director. He is also President for the 2012-2016 Congress Period of Technical Commission I for the International Society for Photogrammetry and Remote Sensing (ISPRS).

President-Elect: Rebecca (Becky) Morton, CP, CMS, GeoWing

Becky Morton is President and CEO of GeoWing Mapping, Inc. (GeoWing), based in San Francisco, California. She founded the company in January of 2015 with the goal of offering both traditional photogrammetric mapping services as well as services related to unmanned aircraft systems (UAS). Her fascination with UAS photogrammetry

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began several years before she started her company. She was impressed by the accessibility of the new technology. For the first time, she could consider integrating and flying her own mapping cameras!

Vice President: Anne Hillyer, US Department of Energy

Anne Hillyer is a Cartographer in the Geospatial Services section of Bonneville Power Administration (US Dept. of Energy), a federal electrical utility serving Oregon, Washington, Idaho and Montana. She has worked in photogrammetry and GIS since 1999. She currently leads a remote monitoring program that detects changes in habitat conservation areas using GIS data, sub-meter satellite and aerial photography. She serves as a Contracting Officer's Technical Representative for geospatial products. She developed a program for collecting 4-cm resolution orthoimagery of BPA facilities. She researched, tested and implemented the first digital photogrammetry production system at Bonneville Power Administration.

Immediate Past President: E. Lynn Usery

E. Lynn Usery is a Research Physical Scientist and Director of the Center of Excellence for Geospatial Information Science (CEGIS) with the U.S. Geological Survey (USGS). He worked as a cartographer and geographer for the USGS (1977-1988) researching and developing automated cartographic and geographic information systems. He was a professor of geography at the University of Wisconsin-Madison and the University of Georgia, where he taught and conducted research in remote sensing, cartography, and geographic information systems (GIS) and led the establishment of undergraduate and graduate certificates in GIS. He returned to the USGS in 1999 and established a program of cartographic and geographic information science (GIScience) research that evolved into CEGIS. Usery also currently teaches remote sensing at the Missouri University of Science and Technology.

Secretary: Roberta E. (Bobbi) Lenczowski

Roberta E. (Bobbi) Lenczowski is an independent geospatial information-intelligence consultant. In addition, she is outside Board Director for TechniGraphics, GeoEye, Fugro EarthData Inc, and the non-profit Leonard Wood Institute, and supports the Academic Advisory Group of Sanborn.

Treasurer: Donald T. Lauer

Donald T. Lauer retired from the United States Geological Survey (USGS) on June 1, 2001 and is now a volunteer Scientist Emeritus. His last assignment with USGS was Chief of the Earth Resources Observation Systems (EROS) Data Center in Sioux Falls, South Dakota. He was responsible for a workforce of over 600 employees (government and contractor) that preserves and safeguards the world's largest civilian archive of remotely sensed land data; ensures that scientists, businesses and the public have ready access to this archive of land information; and promotes new uses and new users of remotely sensed and other types of geospatial data.

Executive Director: Michael Hauck

Michael Hauck has over 20 years of experience in the creation and application of remote sensing and geospatial information technologies. Reflecting the diverse membership of ASPRS, he has practiced in academic, government, Fortune 500, and start-up settings; and in industries that include transportation, energy, telecommunications, and defense. In addition to technical breadth, he is a versatile, collaborative, and adaptive leader with over a decade of general management experience that includes both board and executive positions in not-for-profit organizations. His volunteer work includes service on local, State, and National boards, e.g. the Venture West Network of entrepreneurs, the State of Wyoming Telecommunications Council, and the Transportation Research Board of the National Academies. His key scientific accomplishment has been the acquisition, processing, and interpretation of the first-ever deep seismic reflection profiles through the Himalayas, which were part of his PhD dissertation in Geological Sciences at Cornell University. Beyond training in science and engineering, Hauck is also a student of science and technology communications, and a graduate of the Leadership Wyoming trustee leadership development program.

Stay tuned for upcoming Technical Tours and Social Events! Check out new professional opportunities and upcoming events on the Rocky Mountain Region [Website](#) ...

Rocky Mountain Compiler**Upcoming ASPRS Webinars**

Registration and additional information can be found on the [ASPRS website](#). For those seeking ASPRS Certification: ASPRS Training Webinars are a great way to gain Professional Development Hours!

Student Rebate Offer

ASPRS Rocky Mountain Region will reimburse \$25 of the \$50 cost of student membership, so your net cost is only \$25 for all the benefits of membership in the Society!

Download the Student Membership Rebate Form at <http://www.asprs-rmr.org> (on the News & Events page). Here's the best part: ***This offer from the Region is good for every year you are a full-time student!***

Welcome New Members!

Nick Broyles
Daniel Carter
Brian Daniel Connolly
Rachel S. Hixson
Joe Hutton
Jenna Kendall
Manuel K. Lopez
Steven R. Miller
Stephanie Mundis
Dianne Osborne
Muthukumaran Sampath
Daniel N. Shorb
Jerry Skaw
Carl Smith
Debbie Smith
Jennie Sturm

New ASPRS.org!

As you have noticed recently, our website www.asprs.org has a new look! We have many new exciting features that have now been rolled out. You should have received an email from registrar@asprs.org containing your login

credentials. If have not yet logged in, users are encouraged to do so. if you did not receive your credentials, please contact members@asprs.org for support.

Annual Dinner Meeting Report

Our Annual Dinner Meeting was held later than usual this year, which allowed more of our presenters and honored guests to attend. We gathered on Saturday, May 21st at a cozy, British-style pub, restaurant, tea-house and inn called [The Burns](#), right next to Rocky Mountain Metro Airport in Broomfield, CO. The Burns serves authentic British fare and spirits. Both food and service were excellent. After a lively social hour, we sat down to dinner. The program began with a welcome by our National Director and always entertaining Master of Ceremonies, **Jeff Young**. **Brant Howard**, cofounder and CEO of CompassData, Inc., was our keynote speaker for the evening. Brant co-founded CompassCom as a self-funded startup in 1994 and has grown it into three successful businesses based on GIS, GPS and wireless technology, including CompassData. He developed the innovative idea of owning and licensing Ground Control Points, and created the Archive. Prior to being an entrepreneur, Brant was a hydrogeologist with the US Geological Survey, Water Resources Division. He supervised well drilling and completion, pump tests and field inventory efforts. Brant holds Bachelor's and Master's degrees in Geology with a specialty in hydrology from Indiana University, Bloomington. Memberships include APCO, APWA, ASPRS, CSIA, GITA, and MAPPS. A former board member of MAPPS National, he has been instrumental in founding the new Colorado MAPPS chapter. Brant entertained us with stories from his past, the development of his businesses, and words of wisdom for us as professionals in the geospatial sciences.



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One of our scholarship winners, Ph.D. Candidate **Matt Cross**, gave a presentation on his use of remote sensing for forestry research in Costa Rica, with many colorful slides.

We also heard from Regional Director **Harold Schuch**, President of GeoCounsel, Inc., who shared slides documenting his photogrammetric ortho-mapping project for Dinosaur Ridge in Morrison, CO.

Former National ASPRS Presidents, Dr. Roger Hoffer and Dr. Tina Cary, were on hand to share their reflections and words of wisdom with the group. They also conducted the induction ceremony for those Region officers who were able to attend.

PE&RS Digital Submissions

You asked and we listened!

ASPRS is pleased to announce that paper submission to *PE&RS* just got easier. Authors can submit papers to PE&RS via the Allen Press site. The new all-digital submission method for PE&RS is hosted by Allen Press Peer-Track system. [Click here to submit a paper to PE&RS \(requires free login\)](#). Anyone interested in submitting a paper to *PE&RS* can go to our site to learn more, and from there access our digital submission page.

GeoBytes

In addition to the ASPRS Webinars, our organization also offers free online seminars presented by ASPRS and sponsored by the ASPRS GIS Division, in cooperation with AAGS and CaGIS

Attention those seeking ASPRS Certification: ASPRS Online Seminars are a great way to gain Professional Development Hours!

[Click here to learn more](#)