

POTOMAC PERSPECTIVES

ASPRS - Potomac Region Newsletter

Message from the President

Hello all Potomac Region members:

The goal of our newsletter is to promote ASPRS activity within our region, which has the largest membership among the 17 national regions in the society. Over the years, the professions and fields embodying 'photogrammetry and remote sensing' have continued to evolve and intersect with many other areas, such as GIS, geodesy, and computer vision, just to name a few. This diversification has been both necessary and tremendously beneficial for the continued advancement of our core disciplines, i.e., those with which we are most identified. Promoting our passions for our profession through service and support of ASPRS is one of the most effective ways to preserve that unique identity. Therefore, I would encourage all of us to service when the opportunities present themselves, i.e., GeoTech conference participation, Technical Tours, serving on the PR board, or simply encouraging new membership.

To that end, this issue of Potomac Perspectives will highlight some of our regions activities for 2010. In particular, I would like to draw your attention to our annual GeoTech conference that is being held September 27-28 at the George Mason University Fairfax campus. See page 2 for details, and page 7 for the full conference agenda. We're also hoping to have 2 more Tech Tours before the year is out. So please be on the lookout for announcements on these activities in the near future at www.asprspotomac.org, and hope to see there!

Best Regards,

Pete Doucette, ASPRS PR President

The 2010 PR Board of Directors

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Many thanks to our
editors of this issue:

- Sheri Muilenburg
- Pete Doucette

Preparation for GeoTech 2010 Conference

By Pete Doucette

This year's GeoTech conference is being held for the first time at George Mason University. The Department of Geoinformation Science and Geography has kindly offered to sponsor the venue. As past attendees are aware, GeoTech has been held at NOAA Silver Spring, MD for over 10 years. The region has enjoyed a strong relationship with NOAA, and certainly has every intention to return in the future with GeoTech. The long-term hope is that the GeoTech conference venue can be hosted by a good mix of organizations around the region to increase outreach to new members, as well as providing existing membership with a broader spectrum of venues and people.

The theme of this year's GeoTech conference is "Spectrum of Visions". The idea is to have technical talks and workshops from the region's experts that cover the spectrum of sub disciplines across our

profession, e.g., LIDAR, Photogrammetry, Hyperspectral, RADAR, and Human Terrain Analysis. For the technical session, each speaker will provide his or her vision of where a particular sub discipline is heading for future R&D (see page 7 for the full agenda).

To encourage attendance, we're offering new joining members a 50% discount on membership dues to ASPRS for the first year. Lapsed members who renew will be allowed to attend at regular membership rates. If you're a student forum member in the region, PR subsidies will be available for attendance.

We have a significant amount of exhibitor space available, so please contact this year's GeoTech Chair, Dr. Peter Doucette (pete_doucette_asprs@yahoo.com) if you wish to exhibit, or with any other questions, suggestions, or comments.

Registration is now open at www.asprspotomac.org/geotech2010, so please sign up and spread the word.

Keynote Speakers Announced for GeoTech 2010 Conference

Dr. Kevin Slocum

"LIDAR Applications: Yesterday, Today, and Tomorrow"

Biography-- For over 30-years, I have been designing, proposing, executing, and defending strategic Science and Technology investment programs in partnership with industry, academia, and related government agencies. My areas of professional interest include geospatial terrestrial, maritime, and environmental sciences. I have been the National Geospatial-Intelligence Agency's research and development LIDAR Program Manager for the past 3+ years, accelerating efforts to expand and transition processing, exploitation and dissemination capability. I was the Science and Technology program manager for Army's Engineer Research and Development Center in the mid-2000s championing battlespace-related basic and applied research initiatives. From early-1990 into the early-2000s, I was a principal investigator and team lead at the former Army Topographic Engineering Center on a variety of projects to include digital elevation model analysis, soil moisture modeling, habitat assessment, geostatistical performance, decision-tree analyses, and geospatial intelligence approaches. My career began in 1979 at the former Defense Mapping Agency Hydro Topographic Center where I contributed as a nautical cartographer generating, managing, and then training others in the compilation of myriad special naval products. I received my doctorate in Marine Science from the College of William and Mary's Virginia Institute of Marine Science, and have graduate and undergraduate degrees in applied geographic methods and tools from Southwest Texas State University and James Madison University, respectively.

Professor Edward Mikhail

"50-Year Journey and Participation in Photogrammetric Technology"

Biography-- Professor Mikhail received his BSCE from Cairo University, and his MS & PhD in Photogrammetry and Geodesy from Cornell University. Early in his career, he was an instructor at Cairo University, and spent 3 years in private industry as an analytical photogrammetry specialist. He then established the graduate program in Geomatics at Purdue University, where he developed and taught all the graduate courses in photogrammetry, and data adjustments (estimation). He's been a visiting professor at Stuttgart and Munich universities, Germany, and the ITC, the Netherlands. Professor Mikhail has supervised/graduated some three dozen PhDs, and several hundred Master's degrees. He has authored/co-authored seven books, seven book chapters, and many hundred articles, papers, presentations, and research reports. He also holds a U.S. Patent for the holographic stereomodel. He served as co-editor for the Manual of Photogrammetry and Civil Engineering Handbook. He is an Honorary Member of ASPRS, and has received several ASPRS awards that include, the Photogrammetric Award (Fairchild), Talbot Abrams (twice), and Wild Heerbrugg (twice); and the Senior Alexander von Humboldt (Germany), and NATO. He has been formally recognized for his work by USGS, NRO (twice), and ORD, among others. He has consulted, and continues to consult, with over 35 corporations and government agencies, and has served on many boards, both scientific and industrial.

Potomac Region's 2010 Annual Meeting & Dinner

By Pete Doucette

The Potomac Region's Annual Meeting & Dinner was held the evening of Feb 3, 2010 at the Dulles Marriott in Herndon.

There was a strong showing this year with 50 attendees representing academia, government, and industry. New and continuing board members and officers for 2010 were officially recognized and made effective to commence forthwith. The new officers are Dr. Pete Doucette (president), Dr. Chris Parrish (vice president), and Mr. John Manzer (secretary/treasurer). Dr. Barbara Eckstein was recognized as outgoing president for 2009, and assumes the advisory role of past president for the board for 2010. A newly



(left to right) Chris McGlone, Josh Sisskind, Allan Falconer, Barbara Eckstein, Yogendra Singh, Peter Doucette, John Manzer, and Chris Parrish

elected region director for 2010 was Mr. Josh Sisskind. Existing and continuing board members include Dr. Tony Stefanidis (region director), Dr. Allan Falconer (liason to National) Dr. Chris McGlone (technical advisor), Dr. Yong Wong (liason to NC Chapter), Mr. Yogendra Singh (historian) and Mr. Luiz Cortes (NC Chapter president). This year, the PR board gave special recognition to Dr. David Szmanski by selecting him as the 2009 "member of the year" for the Potomac Region. Dave is well known for going beyond the call of duty in donating his time and energy toward promoting and participating in ASPRS and Potomac Region events.

The evening concluded with a key note address provided by Professor Peggy Agouris of George Mason University (GMU). Peggy is the head of the newly formed (last year) Geoinformation and Geography Department at GMU. Peggy's key note provided an overview of R&D activities at GMU, including automated feature extraction and spatio-temporal analysis. She challenged the audience with coming up with new ways for identifying the evolving nature of our profession of 'Photogrammetry & Remote Sensing' to more effectively attract future members and practitioners.

ASPRS Potomac Region Co-Sponsors 2010 Federal Geospatial Summit

By Chris Parrish

As part of ASPRS Potomac Region's technical events series, the Region co-sponsored the 2010 Federal Geospatial Summit in the NOAA Auditorium and Science Center on May 11-12. At the summit, geodesists in NOAA's National Geodetic Survey (NGS) shared information on improvements to the National Spatial Reference System (NSRS) – the coordinate system that defines latitude, longitude, height, scale, gravity, and orientation throughout the United States. Mr. Joe Klimavicz, Chief Information Officer, NOAA, delivered the Keynote address.

Participants learned about the motivation for and challenges associated with replacement of the current geodetic datums used in the U.S.: the North

American Datum of 1983 (NAD 83) and the North American Vertical Datum of 1988 (NAVD 88). As the datum change will affect all producers and users of geospatial data in the U.S., the valuable input obtained from participants during the workshop will help guide NGS in the implementation.

The Summit drew over 300 participants from around the country, including over a dozen members of ASPRS Potomac Region. The ASPRS-PR Board of Directors was represented at the Summit by Yogendra Singh and Chris Parrish. ASPRS-PR's support was acknowledged at several points throughout the two-day event, including in the opening remarks by NGS Director, Ms. Juliana Blackwell.

ASPRS Potomac Region Tour of the NASA Goddard Space Flight Center

By Steve Barton

The Potomac Region of ASPRS organized a popular tour of the NASA Goddard Spaceflight Center in Greenbelt, MD on 12 March 2010.

The tour opened with a briefing presentation in the visitor's center on the Landsat Data Continuity Mission (LDCM) by Jim Irons, a project scientist with the Landsat Data Continuity Mission. He gave an overview of the history of the Landsat program and the planned capabilities for the next mission. The current Landsat constellation is overdue for a new spacecraft Landsat 7 is operating 6 years beyond its design life, and Landsat 5 is operating 23 years beyond its design life. Both have spacecraft hardware issues, and Landsat 7 has a well-documented scan line corrector problem. The initial plan for the next Landsat mission was to host an instrument on the NPOESS constellation, but that has been delayed, and a "free-flyer" satellite was authorized in 2005. The planned launch date is December 2012. The Landsat program is designed to provide systematic coverage of the Earth's surface on a seasonal basis via a Long Term Acquisition Plan that is managed by the USGS Earth Resource Observation and Science (EROS) Center. The EROS Center will collect 400 scenes per day and provide Level 1 (and other archived Landsat data) at no cost. NASA (Goddard) is responsible for developing the space segment, launch segment, and the mission operations element. The USGS is responsible for development of the ground system including the flight operations and data processing and archive segments.

The second presentation was also in the visitor's center and featured the new "Science on a Sphere" exhibit. Maurice Henderson of the visitor's center led the presentation. Science on a Sphere is a new projection technology that consists of a 6-foot white sphere in the middle of a room and four equidistant projectors at the edges of a room to seamlessly project satellite imagery and produce an

animated globe. A presentation was given on hurricane tracking and sea surface temperatures (including the El Nino phenomenon). Other presentations can be made on the 3-D surface of the Earth, nighttime lights, the Moon, Mars, and an X-ray map of the sun. NOAA recently developed the hardware and software technology for Science on a Sphere, and several museums now have these exhibits including the new Oceans exhibit hall at the Smithsonian Museum of Natural History.

The third presentation was held on the Goddard campus in the Spacecraft Systems Development & Integration Facility. This was a combined tour of the facility (a high bay clean room) and a presentation on the James Webb Space Telescope. The telescope was originally named the Next Generation Space Telescope, and it is designed to be a follow-on mission the Hubble and Spitzer space telescopes. The telescope will have a 6.5 meter diameter mirror with a 25 square meter aperture that will be constructed of 18 honeycombed beryllium segments that will be aligned with adaptive optics. The operating wavelength range will be 0.6 - 28 microns, and the focal length will be 131 meters. The telescope will host four instruments: a near-IR camera, a near-IR spectrometer, a mid-IR instrument, and a fine guidance sensor for the attitude control system. The planned launch date is 2014. Several integration and testing activities are being done at Goddard with various engineering test units and sub-assemblies of the telescope. One staff person discussed some photogrammetric tests that are being made on the Integrated Science Instrument Module which is being thermally cycled to ensure that the structure shrinks/expands within allowable tolerances. This module will host all of the telescope instruments. The tour also included a visit to the space environment simulator chamber that combines a vacuum and cryo-cooler to simulate the space environment on spacecraft.

Towson University GIS Conference

By Yogendra Singh

Once again as in the past years the Potomac Region took the outreach initiative to install and manage the Society's exhibit at the 23rd Annual TUgis 2010 held on May 24th and 25th at the Towson University campus in Maryland. The exhibit display managed by Charles Finley, Fellow ASPRS, and Yogendra Singh, Historian PR, was a great attraction among about 25 exhibits visited by over 350 attendees. The Region enrolled one new ASPRS student member at the conference.



The conference theme "*GIS in Budget Constrained Times: Doing More With Less*" was befitting under the current challenging economic environment which featured 2 plenary presentations, 33 concurrent sessions, 60 presentations and 13 mini-workshops on various topics. After conference workshops offered another excellent educational opportunity. The exhibit had an icebreaker social, a job mart, and a map design competition. The conference despite somewhat light attendance than previous years was a great success which provided excellent opportunity for information sharing, technology transfer, by anyone currently engaged in geospatial field and using or considering GIS. An interesting feature of the conference was focus on being a "green conference" by adapting recommendations included in the U.S. Environmental Protection Agency's *Guide to Planning and Conducting Environmentally Aware Meetings and Events*. In conjunction with recycling efforts the conference planned to purchase a "carbon offset" from Carbonfund.org.

The Region acknowledges with gratitude and thanks support of the Society HQ in providing the posters and other materials.

North Carolina Chapter Conference

By Luiz Cortes

The conference themes were the **North Carolina One Map** and the **Statewide Orthophotography Program** that is taking place this year. All the presenters were the key personnel from the State, coordinators and quality controller of the project, including the Director of NC Center for Geographic Information and Analysis (NCCGIA). The powerpoint presentation was provided to be posted in our website. Hope Morgan presented the current status of the Program and results of workflow adopted. Overall the project is going well, and on schedule. We had very good participation for this event: 36 people to include Surveyors, Photogrammetrists, mapping company owners, NCDOT personnel and County GIS personnel.

During this event people paid their membership fees for NC-ASPRS Chapter. We have now a balance of \$5,778.12 (\$7,453.38 total, \$1,675.26 this conference). 20 new members joined. Currently we have 36 members including membership waived in the Fall; 11 of which are PR ASPRS members. We have 3 corporate members to include IMC, AvioImage, Blue Mesa and 1 pending (Sanborn).

Awards from ASPRS 2010 National Conference

Former Potomac Region President Elected Chair of Remote Sensing Division at National: David Szymanski Installed as Remote Sensing Application Division Assistant Director

Potomac Region member Dave Szymanski was installed as the ASPRS Remote Sensing Application Division (RSAD) Assistant Director at the May's National Conference in San Diego, CA. ASPRS has five divisions, which provide leadership and the technical direction to the society. The RSAD mission focuses on identifying and marketing state-of-the-art ideas, advocating for the implementation of standards and best practices, and engaging members from a broad range of remote sensing background. Szymanski will lead the division in 2012. Szymanski is thrilled to have an opportunity to serve the membership in this capacity and is reaching out to Potomac Region members for issues that could be addressed by the RSAD.

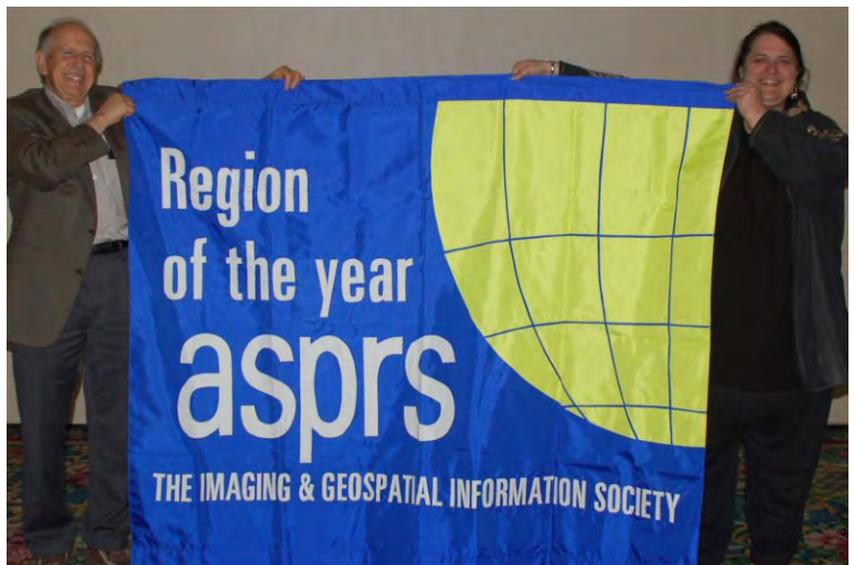
Chris McGlone Receives ASPRS Fellow Award

J. Chris McGlone is currently a photogrammetrist at SAIC, Inc. working on urban modeling from lidar and other sensors. He received his BS in Civil Engineering in 1974 from the University of Kentucky and his MS and PhD in Photogrammetry from Purdue in 1977 and 1980, respectively. McGlone is the Editor-in-chief of the Fifth Edition of the Manual of Photogrammetry, published by the ASPRS in 2004, and a co-author of the textbook Introduction to Modern Photogrammetry. He served as the chairman of an ASPRS Panel which made recommendations to the U.S. Geological Survey on their Digital Orthoimagery program. He is currently a co-chair of ISPRS WGIII/5, "Image Sequence Analysis," an affiliate faculty member in the Department of Geography and Geoinformation Science at George Mason University, and a member of the SAIC Technical Fellows Council.

McGlone has been an ASPRS member since 1976 and is currently the Technical Program Chairman for the Potomac Region, as well as a Certified Photogrammetrist. He is also a member of the IEEE Computer Society. McGlone was the recipient of the 2004 ASPRS Photogrammetric (Fairchild) Award given in recognition of contributions to the field of photogrammetry, as well as an ASPRS Outstanding Service Award in 2005 and a Certificate of Appreciation in 1994. While in graduate school he received the Wild-Heerbrugg ASPRS Fellowship in Photogrammetry.

PR Takes Region of the Year Award for 2009

The Potomac Region is The Region of the Year Award winner. This Region has been diligent in their efforts to maintain the high standards of the Society while hosting the 2009 National Annual Conference, had a successful GeoTech Conference, hosted several Technical Meetings/Technical Tours, had outstanding accomplishments in establishing three new Student Forums at three different universities, had a successful student membership campaign exceeding by 26% over the previous year, and were named the Region of the Month nine times during the year (January, February, March, April, May, July, August, September and December). Three Cheers for a job well done!



Dr. Allan Falconer and Dr. Barbara Eckstein of the PR Board proudly holding the winning banner!

Agenda for GeoTech 2010 (George Mason University)

Monday September 27th

Registration Opens 7:30am (lobby of <u>Dewberry Hall</u>)	
Workshops, Monday Morning, September 27, 2010 8:30am – 12:00pm Break 10:00am - 10:15am - Light refreshments available.	
<p>1 A Pragmatic Comparison of Image Classification Methods</p> <p><i>By <u>Harold Cline</u> <u>ITT Visual Information Solutions</u></i></p> <p>Workshop Level: Introductory</p>	<p>2 Assisted and Automated Feature Extraction (AFE) from LIDAR and Imagery</p> <p><i>By <u>Stuart Blundell</u> <u>Overwatch Systems</u></i></p> <p>Workshop Level: Introductory</p>
Lunch 12:00 noon - 1:00pm	
Workshops, Monday Afternoon, September 27, 2010 1:00pm – 4:30pm Break 2:30pm - 2:45pm - Light refreshments available.	
<p>3 Hyperspectral</p> <p><i>By <u>Dr. Ron Resmini</u>, <u>George Mason University</u> and <u>MITRE Corporation</u></i></p> <p>Workshop Level: Introductory</p>	<p>4 Synthetic Aperture Radar (SAR) and Application</p> <p><i>By <u>Dr. Yong Wang</u>, Department of Geography, <u>East Carolina University</u></i></p> <p>Workshop Level: Intermediate</p>

Registration

Good News! Early registration rates have been extended through September 15th, 2010.

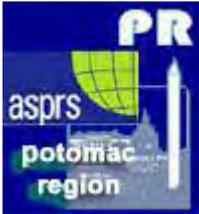
On-line registration ends noon EDT 20th September 2010. Onsite registrations will be accepted.

For registration and location information visit the full conference website, and register online:

<http://www.asprspotomac.org/geotech2010/index.html>

Tuesday September 28, 2010

Registration Opens 7:30am (lobby of <u>Dewberry Hall</u>)	
8:30am - Welcome	<u>Tony Stefanidis</u> & <u>Pete Doucette</u>
8:45am - State of the region	<u>Pete Doucette</u>
9:00am - (Title TBD)	<u>Professor Peggy Aqouris</u> , George Mason University
9:30am - ATR Technology: Why we need it, why we can't have it, and how we'll get it	<u>Dr. John Irvine</u> , Draper Labs
10:30am - KEYNOTE 1: LIDAR Applications: Yesterday, Today, and Tomorrow	<u>Dr. Kevin Slocum</u> , NGA
11:15am - The USGS EAARL: A Cross-Environment, Cross-Discipline Experimental Airborne Research Lidar	<u>Dr. John Brock</u> , USGS
Lunch 11:45am - 12:45pm, Exhibit Area	
12:45pm - Full-Waveform Lidar: Applications and Post-Processing Strategies	<u>Dr. Chris Parrish</u> , NOAA
1:15pm - Enabling location-based mass collaboration: are we there yet?	<u>Dr. Arie Croitu</u> , George Mason University
1:45pm - Current Trends and Future Directions in Computational Human Geography	<u>Dr. Devin White</u> , IAI
2:45pm - KEYNOTE 2: 50-Year Journey and Participation in Photogrammetric Technology	<u>Professor Edward Mikhail</u> , Purdue University
3:30pm - The Hyperspectral Imager for the Coastal Ocean (HICOTM): Viewing the Earth from the International Space Station	<u>Dr. Robert Lucke</u> , NRL
4:00pm - Future Directions in Urban Modeling	<u>Dr. Chris McGlone</u> , SAIC
4:30pm - Conflation: What is It, Why Should I Care, And Where Is It Going?	<u>Mr. Brian Graff</u> , Army Geospatial Center (AGC)
5:00pm - 7:00pm - Social (Exhibit Area)	



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Potomac Perspectives Spring/Summer 2010 ***ASPRS-Potomac Region Newsletter***

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Do you have news to share with the ASPRS-Potomac Region on upcoming events? Would you like to host a tour of your Geospatial workplace? Any ideas for an appropriate outing for your fellow ASPRS members? Do you have a short technical note of interest to the region? We would love to hear your ideas and we share your work interest. Visit our website <http://www.asprspotomac.org> and send us an email.

Don't forget to register for GeoTech 2010 (Sept 27-28, 2010 at George Mason University)

<http://www.asprspotomac.org/geotech2010/index.html>