

NCR NEWS

Northern California Region of ASPRS
www.asprs.org/a/norcal/

International LiDAR Mapping Forum (ILMF), 2014

By Matt Coleman

The 2014 International LiDAR Mapping Forum (ILMF) Conference in Denver, Colorado was a very informative and exciting industry event. There was a wealth of knowledge to be gained during the conference, especially on new LiDAR standards. The full breadth of the ILMF is too much to cover in a single article. The following are highlights of the ASPRS Hot Topics which have been included in ILMF for the last few years.

Lewis Graham from GeoCue Corporation opened the conference by kicking off the ASPRS Hot Topics sessions. Next, Dr. Michael Hauck was introduced as the new ASPRS Executive Director and gave his outlook on the future of the geospatial/geomatics industry, along with an entertaining reference to the Radiohead music video that was created with LiDAR and other technologies.

The ASPRS Hot Topics Session continued with David Maune, Dewberry Consultants LLC, discussing the draft for the new **ASPRS Accuracy Standards for Digital Geospatial Data**. The following is the abstract that Mr. Maune provided for his presentation. *With the rapid advancements in sensors and technologies, many if not all existing map accuracy standards are unable to represent the accuracies of digital geospatial data produced from today's LiDAR, IFSAR, and digital cameras. The American Society for Photogrammetry and Remote Sensing is developing new "ASPRS Accuracy Standards for Digital*

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Geospatial Data," intended to replace the existing "ASPRS Accuracy Standards for Large-Scale Maps" (1990) and the "ASPRS Guidelines, Vertical Accuracy Reporting for LiDAR Data" (2004). Intended to be finalized in 2014, the new standards include accuracy thresholds for digital orthophotos and digital elevation data, independent of published map scale or contour interval.

The new accuracy standards apply to LiDAR in two primary categories. The first is a modification to the definition of accuracy classes for elevation datasets. The new standards include ten proposed vertical accuracy classes; and will include the rationale for two new terms: Non-Vegetated Vertical Accuracy (NVA) and Vegetated Vertical Accuracy (VVA). The second application of the new standards to LiDAR data sets addresses relative accuracy swath-to-swath; including recommended minimum Nominal Pulse Density (NPD)/maximum Nominal Pulse Spacing (NPS) for the ten vertical accuracy classes; number and spatial distribution of QA/QC check points based on project area; and delineation of Low Confidence Areas. The presentation will conclude with accuracy testing and evaluation of a sample LiDAR dataset based on these new, draft standards.

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ILMF 2014 (Continued)

Furthermore, the ASPRS LiDAR Committee has partnered with the US Geological Survey to research developing **internal data quality metrics for LiDAR**. This Hot Topic was led by Ajit Sampath, Calibration Validation Engineer, Stinger Ghaffarian Technologies (SGT), a contractor to the US Geological Survey. Mr. Sampath discussed how the current LiDAR data quality assessment methods are inadequate in reporting a) the quality of calibration of a LiDAR system, which is an essential indicator of the overall quality of data, and b) the absolute horizontal accuracy of the data. The US Geological Survey partnered with the ASPRS aerial LiDAR committee to determine methods to address this fact. The quality of calibration most easily manifests itself in the overlapping regions of the adjacent swaths of data. The USGS led LiDAR committee has identified procedures to test the relative accuracy of LiDAR data within the overlapping swaths. Data Quality Measures (DQMs) were defined to provide a theoretical basis for accuracy assessment and software that creates the DQMs was developed. The DQM software was tested on a variety of aerial LiDAR data sets and the results were analyzed. A statistically robust set of thresholds are being developed to classify data sets into different categories based on their internal/relative accuracy. The ASPRS Hot Topics Session wrapped up with Q&A and further thoughts on the topics discussed by our fantastic host of presenters.

New President–Elect

Catherine Burton, President–Elect, has resigned her position on the Region’s Board of Directors since she is moving outside of our Region’s borders. The Northern California Region wishes Catherine Burton well as she moves to Southern California for a new chapter in her life.

David Ruiz of Quantum Spatial has been appointed as her replacement to the Region’s Board of Directors. Welcome David!

UAS Demonstration and Symposium

The ASPRS Northern California Region is hosting a 2–day symposium on Unmanned Aircraft Systems (UAS) in Reno, NV on October 21 and 22, 2014. The purpose of the event is to assemble academia, UAS developers, survey and mapping companies and government agencies with interests in UAS applications, to share information, showcase new technologies and demonstrate UAS systems in action (in flight).

The event will be held at the Reno Stead Airport, an FAA–designated UAS test site, and will include exhibitors and presenters. The mission of the event is to advance knowledge and improve the understanding of UAS technologies and their safe and efficient introduction into our national airspace, government programs and business.

If you are interested in helping with the even coordination, exhibiting, or offering a technical prestation, contact Conference Chair Becky Morton at becky.morton@towill.com.

2014 New Members

Northern California Region ASPRS Membership Committee offers a Big Welcome to the following NEW MEMBERS!

*Welcome to ASPRS and
the Northern California Region*

December

Yanlei Chen*

Biniam Mengisteab *

January

Dr. Indumathi Jeyachandran

Ashlee Llewellyn

Paul Sutphin *

February

Juliana Lo*

Dirk Tanoury*

* = Student Member

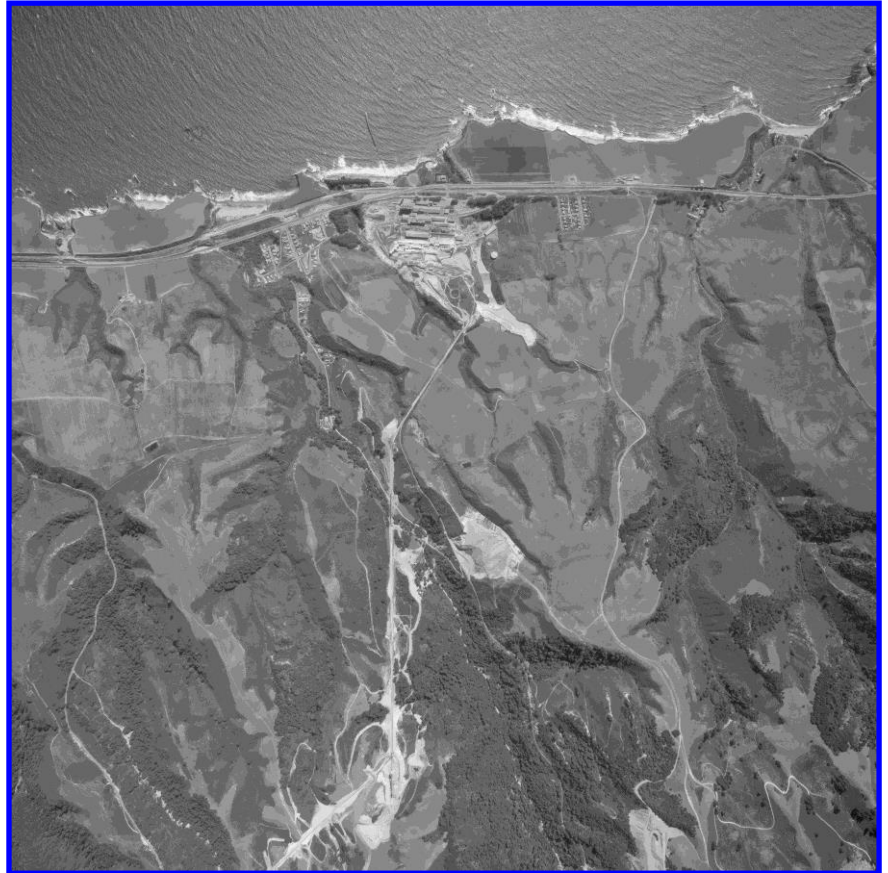
Identify an Historic Aerial Photo Contest

By Lorraine Amenda

If you can identify the area shown in the photo to the right, send an email to asprs.norcal@gmail.com and be entered into a drawing for an ASPRS hat, portfolio, or other similar item. Eligible entries must be received by April 15, 2014.

All who correctly identify the scene shown in the historic photo will be identified, along with the winner, in our next edition of the newsletter.

Hint: The site is within 55 miles of San Francisco City Hall.



Can you identify the area shown in this photo from the Towill, Inc., archives? Email your answer to asprs.norcal@gmail.com to qualify for the prize drawing.



Bill Calmes of Cartwright Aerial Surveys correctly identified this image as "That photo in the NCR News is of Tiburon and the rail yards of the Northwestern Pacific Railroad". His prize was an ASPRS crystal paperweight.

MRN-C1-4 Tiburon

May 14, 1958 - Tiburon was once a transfer point for raw materials, rail lines met barges with lumber, rock and other products which were shipped throughout the Bay Area.

Your NCR Officers

The officers for the Northern California Region are working hard to provide you with quality technical presentations near to home.

In the last few years we've offered technical sessions in Concord, Sacramento, Monterey, and Fresno. We are currently planning sessions for 2014. If you have suggestions for locations and topics for a session near where you live, please contact one of our officers or the region at asprs.norcal@gmail.com.

We welcome any suggestions that would allow us to better serve ASPRS membership in Northern California, Northern Nevada, Hawaii, and the Pacific Islands.

President:	Bill Zeman billzeman@gcsmapping.com
President-Elect	David Ruiz druiz@quantumspatial.com
Vice President:	Steve Barton Sbarton2001@gmail.com
Past President:	Devin Kelley dkelley@quantumspatial.com
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Webmaster:	Jason Barnes yooberjb@hotmail.com

Upcoming Technical Sessions

By Lorraine Amenda

NCR officers are busy planning technical sessions for 2014.

The planned reprise of the Remote Sensing for Wild Fire Suppression seminar had to be postponed due to the continuing demands of the 2013/2014 fire season. We hope to bring this session back next year.

The next Regional Technical Session is anticipated to focus on the use of remote sensing for drought monitoring and for agriculture. The session is scheduled for May 20 and will be held at U. C Davis. Look to your email for more detailed information.

We are also planning an Unmanned Aerial Systems (UAS) Symposium for early October, 2014. The symposium will be held at the recently designated UAS Test Area in Reno, NV. The Symposium will consist of both technical presentations and demonstrations.

If you can offer assistance to the planning of one of these events or offer a location, contact asprs.norcal@gmail.com.

Next Technical Session!

May 20, 2014 – U. C. Davis

Subsidence in the San Joaquin Valley

Michelle Sneed USGS

The Age of Drones – Remote Sensing and Agriculture

Jack Paris

Upcoming Events of Interest:

May 20, 2014 Davis, CA	Remote Sensing for Drought Monitoring and/or Agriculture
November 17–20 2014 Denver, CO	ASPRS/ISPRS Fall Conference Pecora 19 & ISPRS Commission I Symposium
October 21–22 2014, Reno, NV	UAS Symposium and Demonstration

NCR/SWUS Joint Tech Session and 53rd Annual CSUF Geomatics Conference

By Alan Mikuni

Dr. Stewart Walker, ASPRS President-Elect, provided a fascinating retrospective of photogrammetry and image processing using a variety of historical photographs. Dr. Walker was featured as part of the joint Northern California Region and Southwest US Region technical session held on the campus of California State University, Fresno, on Thursday January 23, 2014.

The two ASPRS Regions co-hosted refreshments and approximately 20 ASPRS members and non-members, many of them students at Fresno State, enjoyed the opportunity of the networking period to become acquainted or reacquainted. Following sandwiches and soft drinks, the meeting attendees enjoyed Dr. Walker's commentary about the history, trends, and opportunities for photogrammetry and image processing. Chris Gray, the Mollenhauer Group, was also scheduled to speak, but he had an unexpected business engagement that delayed his arrival in Fresno.

On Friday January 24 and Saturday, January 25, the students at Fresno State conducted their 53rd Annual Geomatics Engineering Conference at the Clovis Veterans Memorial facilities. Approximately 200 students and professionals in the geomatics engineering profession attended the conference.

Northern California Region had an exhibit at the conference, which allowed attendees to meet with ASPRS board members Bill Zeman, Becky Morton, Lorraine Amenda, Matt Coleman, and Alan Mikuni to learn about ASPRS membership, certification, and scholarships.

Also at the conference, ASPRS members Lorraine Amenda gave a technical presentation entitled *Issues with Digital Aerial Photogrammetry*, Matt Coleman gave a presentation entitled *LiDAR - Latest*

ASPRS National Conferences Will Start Looking Different

By Alan Mikuni

A sub-committee of the ASPRS Convention Policy and Planning Committee (CPPC), the National Technical Planning Committee (NTPC), has begun to look into all aspects of how ASPRS plans and conducts its annual conferences. ASPRS conferences are but one means that the organization uses to provide value to its membership, and internal reviews and feedback from the membership have indicated that conferences could be improved. The NTPC was established in 2013 and has been discussing constructive solutions, innovative ideas, and continuity for the planning of future ASPRS annual conferences. Beginning with the 2015 annual conference in Tampa, Florida, the overall planning for the conference, and specifically, the technical program, will be carried-out by the NTPC, and not the ASPRS Region within whose boundaries the conference happens to be held.

Three subgroups within NTPC have been established to address major components of conference planning:

Blue Sky – Future Conference Layout

This subgroup was tasked with thinking about future ASPRS conferences and what needs to change, a new layout for the conferences in general, how conferences should be focused to bring the largest possible number of attendees, what other conferences have done successfully and how ASPRS can incorporate those concepts, etc. This subgroup will be focusing on the conferences as a whole and the larger picture.

Business Track

The Business track is a new concept for ASPRS conferences and was formed to pull in various attendees looking for business application sessions at the conference. This subgroup was tasked with making the Business track come alive for the recently-held annual conference in Louisville, Kentucky. They reviewed the

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ASPRS National Conferences Will Start Looking Different (Cont.)

presentations submitted via the online submission process, proposed other topics that would enhance the overall track, invited specific speakers to give presentations, brainstormed new session layout ideas (e.g., panel discussions, roundtables, etc.) to be given during the technical sessions.

Exhibit Hall & Sponsorship

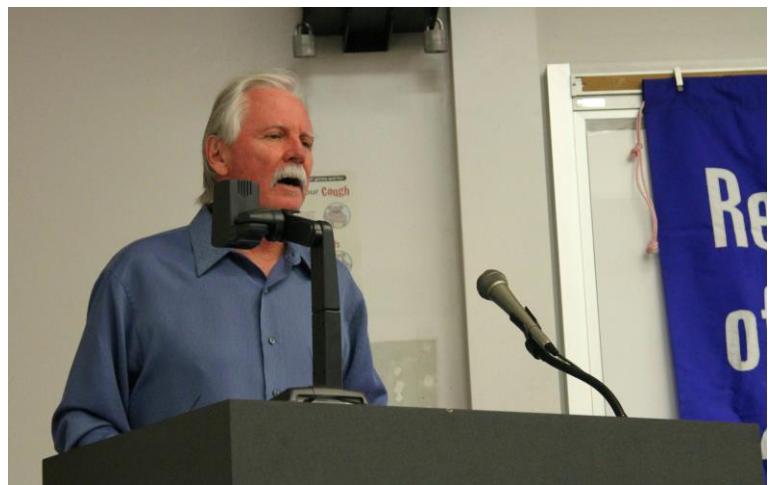
This subgroup was tasked with gathering ideas for a new exhibit hall experience for both attendees and exhibitors at ASPRS conferences. This subgroup will speak with current and past exhibitors to obtain opinions and ideas for potential future conference locations, what they would like to see in the exhibit hall experience as well as offerings for a revised sponsorship program. This subgroup can work with the Sustaining Members Council to obtain ideas and share the workings of the committee.

Additional sub-groups might address topics such as Marketing and areas of interest to Students and Young Professionals.

Jeff Lovin, Woolpert, is the current chair of NTPC, and Alan Mikuni, Northern California Region and Towill, Inc., is the current vice-chair of NTPC. If you have any ideas about improving the conference experience for ASPRS members and non-members, please contact Alan Mikuni at alan.mikuni@towill.com.

NCR/SWUS Joint Tech Session and 53rd Annual CSUF Geomatics Conference (Cont.)

Technological & Procedural Advancements, Vince Ambrosia gave a presentation on *UAV Remote Sensing Platforms*, Stewart Walker re-presented a condensed version of his presentation from the joint session on *Photogrammetry and Image Processing*, and Chris Gray provided his presentation on *Building Information Management* that he was unable to present at the joint session.



NCR President Bill Zeman Welcomes Attendees



ASPRS National President-Elect Stewart Walker