ASPRS Update

Christopher Parrish
ASPRS Eastern Great Lakes Region 2022 Technical Meeting
Geospatial Trends and Applications
July 28, 2022
New Standards

• Updates to 2014 ASPRS Positional Accuracy Standards for Digital Geospatial Data
  • Group led by Dr. Qassim Abdullah (also a speaker in today’s event!), Josh Nimetz, Dr. Riadh Munjy, Mile Zoltek, and Colin Lee
  • Update standards wrt lidar point density (Josh Nimetz and Matt Bethel of the Lidar Division)
  • Consideration of requirement that checkpoints be 3X more accurate than the required accuracy of the geospatial data being tested
    • Impractical, especially with very high-resolution, high-accuracy, low-altitude UAS SfM photogrammetric products (Jacob Lopez, Director of the UAS Division)
  • Sensor-agnostic and data-driven
Revisiting the ASPRS Ten-Year Industry Forecast

- Remote Sensing forecast dating back to 1999
- Latest version completed in 2011
- Greg Stensaas and Charlie Mondello leading effort to issue the 3rd decadal update
- Focus areas: technology, sensors, data
- Survey of membership
Bathymetry – Growing Geospatial Subfield

• Quote from geospatial firm: “bathymetry is growing faster than any other segment of our industry right now”

• Drivers: shoreline mapping, nautical charting, sediment management, benthic habitat mapping, coastal resilience
ASPRS Bathymetry Working Group

• Co-Chairs: Xan Fredericks (USGS) and Nick Johnson (USACE)

• New Bathymetric Standards
  • Joint effort between ASPRS and JALBTCX

• Additional proposed activities:
  • Workshops and seminars on bathymetric lidar (building from the first ASPRS bathymetric lidar workshop, which was given at the 2022 ASPRS Annual Conference)
  • Satellite-derived bathymetry (SDB)
  • UAS-SfM photobathymetry
  • ICESat-2 bathymetry
Datum Modernization

• NOAA’s National Geodetic Survey (NGS) New Datums
  • Improving National Spatial Reference System
  • Will rely on GNSS and new gravimetric geoid model
    • North American Terrestrial Reference Frame of 2022 (NATRF2022)
    • Pacific Terrestrial Reference Frame of 2022 (PATRF2022)
    • Mariana Terrestrial Reference Frame of 2022 (MARTRF2022)
    • Caribbean Terrestrial Reference Frame of 2022 (CATRF2022)
    • North American-Pacific Geopotential Datum of 2022 (NAPGD2022)

• Will impact entire geospatial profession
  • ASPRS Working Group focusing on education and outreach to practitioners, equipment manufacturers, and software vendors
    • Announced during ASPRS 2022 in Denver
    • WG will keep up with NGS events and update ASPRS members
    • Led by Dr. Qassim Abdullah, Hope Morgan (ASPRS Professional Practice Division Director)
ASPRS Student Advisory Council (SAC)

SAC Chair: Lauren McKinney-Wise, Portland State University

SAC UPDATES:
Streamlining process of creating new student chapters:
• New templates for Student Chapter bylaws, operating procedures, petition to Region)
• Guidance to the officers and faculty advisor of new chapters

UPDATING DOCUMENTS!
ASPRS Student Advisory Council (SAC)

SAC UPDATES:

Student Chapters:

• Tracking 9 current student chapters. If you are aware of a student chapter in your region, reach out to the SAC at sac@asprs.org

• Working with three universities to start new student chapters - will move forward once documents are updated.
ASPRS Student Advisory Council (SAC)

SAC UPDATES:

2021 - 2022 Events:
- ASPRS Webinar: Why Join ASPRS?
- ASPRS Webinar: Scholarship Tips!
- SAC GIS Day Map Contest
- ASPRS Conference @ Geoweek
- ASPRS Virtual Conference Focus on Career Development: Spotlight on ASPRS Councils

Mentorship Project
- 6 student members paired with 6 mentors.
- Currently in Spring Cohort.
- Will match more students/mentors in Fall.

MAKING CONNECTIONS
Early Careers Professional Council (ECPC)

- ECPC Chair: Madeline Stewart, Woolpert
- Virtual Panel on Professional Preparation
- Future event
  - Monthly meeting of industry professionals in which we discuss a topic, e.g., work/life balance, workload burnout, pay, etc. in a space to share thoughts, ideas, and advice that is free from judgement
ASPRS Certification Program Updates

• Exams now administered through Prometric
  • Entirely electronic process (no more paper exams!)
    • No need to identify external proctors
    • Enables enhanced exam metrics and statistics
      • i. Broken out by exam (e.g. CP, CMS-Lidar, etc.)
      • ii. Broken out by individual questions
  • Working on psychometrician-approved test validation process
    • Will ensure compliance with accreditation requirements
• Application and initial certification process streamlined
  • Recertifications now being handled by the “front office”
• Leads
  • Mike Zoltek, Evaluation for Certification Committee Chair
  • Danielle Blanchard (P&N), manages certification records and documents
ASPRS Diversity, Equity, and Inclusion (DEI) Committee

• DEI Committee Chair: Amanda Aragón; Co-Chair: Anne Hillyer
• New ASPRS Committee (2021)
• Developed ASPRS Diversity Statement
• Wrote DEI section of the ASPRS Code of Ethics
• Survey ASPRS Community Understanding Climate and Culture
  • Learn about ASPRS demographics & the membership experience
    • Acquire baseline data
• Presented panels at GeoWeek and ASPRS Virtual 2022 Conferences; working with ISPRS
HD Road Networks for Autonomous Vehicles

• Rapid growth area in geospatial field
• Developing data layers to support self-driving cars requires coordination between mapping experts, vehicle navigation system experts, and auto manufacturers
• Also requires coordination with State DOTs and TRB has been the home of most of the discussion
• ASPRS involvement led by Dr. Qassim Abdullah

Image courtesy of Prof. Mike Olsen
Sustaining Members Council

• SMC Chair: Ryan Bowe
• 29 Sustaining Members support the Society
  • Members range from small (one or two staff) to large (thousands of staff) and in between
  • While mostly private companies, the USGS is included and educational institutes could also join to support the public, private, academia model ASPRS employs with the presidency
  • Sustaining Members support the society by helping to build future leaders and promoting the profession
  • Meetings are infrequent and informal. Our next meeting will discuss favorite benefits and thoughts on supporting early career professionals further
• Thanks to the many EGL members who are Sustaining Member representatives!!
Draft report for industry needs in *undergraduate photogrammetry education*

- What photogrammetric concepts and skills are most important for undergraduate learning to best prepare them for modern practice?
- Goal: provide guidance to university-level educators in topics and approaches to teaching photogrammetry
- More than 15 private industry and public agency representatives have agreed to participate, review, and comment
- Draft of report to be completed by end of 2022
- Leads: Prof Ben Wilkinson, Dr. Hank Theiss, and Dr. Orrin Thomas (ORNL)
UAS Division Updates

- Focused monthly working group efforts on UAS Addendum to Update of 2014 Accuracy Standards
  - Aiming toward completion of UAS lidar and photogrammetry by end of 2022

- Collaboration and coordination with Lidar Division Lidar Best Practices working group addressing overlapping and complementary material

- Lidar and photogrammetry Workshops scheduled with 2 presenters for 2022 UAV Expo
Other recent HQ updates

- New version of Bylaws approved on July 19
- Stewart Walker elected new ISPRS Treasurer
- John McCombs is new ASPRS Treasurer
- Recent/upcoming GeoBytes
  - 2022 Update of the USDoL Geospatial Technology Competency Model (GTCM)
  - Deep Fake geography? A humanistic GIS Reflection upon Geospatial Artificial Intelligence
- Higher Logic Communities
- Monthly ASPRS Brainstorming-to-Action (BAM!) Meetings
Upcoming Events

• Pecora – Oct 23-27
• GeoWeek/ASPRS Annual Conference 2023 – Feb 13-15
• UAV Expo – Sept 6-8
• ISPRS
• ASPRS Events page: https://my.asprs.org/ASPRSMember/ASPRS_Events/ASPRSMember/Events/Events_List.aspx
Conclusions and Future Vision

• Geospatial field expanding exponentially
  • Emerging areas: UAS, SfM, bathymetry, ML/AI, VR/AR, HD Road Networks, real time analysis, cloud-based computing, wide range of supported science disciplines, and many, many more...

• Please get involved!
  • Opportunities:
    • Regions, Councils, Divisions, Working Groups
    • Volunteering at conferences
    • National Board
Questions

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