Minutes PDAD Meeting Spring 2010

Topics

1. Reviewed PDAD special sessions
2. Discussed Lidar issues being worked across multiple ASPRS sessions
3. Three Committees
   1. Digital Imagery Guidelines
   2. Unmanned Aircraft Systems
   3. Ten Year Forecast
4. Updates on ASPRS Accuracy Standards for Large Scale Mapping
   1. Identified USDA similar effort working to coordinate with
   2. Working to get something in the next several weeks for PDAD internal review
5. Digital Imager Definitions
6. Calibration
   1. Lidar calibration white paper
   2. Aerial Digital Camera Calibration Ranges Update
   3. Spec and Check Tool
7. Policy issues associated with trying to get Remote Sensing Federal Agencies to try to get ASPRS identified research and issues funded to improve the response on activities over ASPRS volunteers
   1. Digital camera image quality standards
      1. Spatial resolution definitions
      2. Colorimetry
8. Worldview II additional bands. What are they good for

Potential PDAD Sessions

Milwaukee

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| Topic | Purpose | Potential Moderators |
| Machine Control | Short range Photogrammetry , terrestrial lidars, and remote sensing techniques applied to robotics, manufacturing and quality control | TBD |

Orlando

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| --- | --- | --- |
| Topic | Purpose | Potential Moderators |
| Datum Issues for Lidar and Fine Scale Imaging | Datums are improving and changing over time leading to confusion and errors | NGS, Qassim Abdullah, [qabdullah@earthdata.com](mailto:qabdullah@earthdata.com) |
| Direct Georeference Thermal Imagery | Multiple digital system providers are providing thermal imagers in conjunction with visible-infrared high resolution imagers that open up opportunities in energy storage, irrigation management, disaster response and homeland security (Possibly joint with RSAD) | Chuck Olsen/ Robert Ryan/(RSAD) |
| Full Waveform Lidar Technologies and applications | Multiple providers are now providing full waveform lidars. What is available and what is good for? (Possibly joint with RSAD) | TBD |
| Hyperspectral | Although hyperspectral imagers have been around for a few decades this technology is not widely used. The session would focus on the sensor and processing technologies that are currently available. | TBD |
| Radar | High resolution radar systems are becoming more available. The session would focus on the systems available |  |

04/27/10 - ASPRS PDAD Meeting Minutes

-Attendees requested to revie previous meeting minutes.

-Introductions and Sign In

-Highlighted the special sessions related to PDAD planned for this ASPRS conference.

-Investigating a new joint ISPRS/ASPRS (PDAD) working group.

-Add session on page 48 (TS27) to the PDAD working status agenda.

-Discussion about mixing formats.  Industry wants ASPRS PDAD to classify small, medium, and large format. (Array size more appropriate?)  Need to move from film to digital terminology. (Spectral, hyperspectral, etc.)  Manufactures want specifications based on size. (<80 MPixel, 80 - 100 MPixel, and >100 MPixel)  Cameras can be ganged together ... how is that addressed?  AI1) ASPRS PDAD to start a classification white paper.  No one has the full engineering specification for user needs. (SNR, MTF, edge response, ect.)  Need a large R&D effort to fully identify & define.  Need benchmarks to test systems.  AI2) Track down related areas being worked on in classification & application of sensors in all other groups. (ISPRS, ASPRS, etc.)

-Digital image range and product validation requirements vetted by NGA and USGS.  All posted on USGS RST web site.

-USGS RST DAQA implementation plan progress reviewed. (4 key areas discussed)  
-Nationa ranges.  Sioux Falls, SD in place and Pueblo, CO and Rolla, MO to follow soon.  2 more ranges to be selected on east and west coasts.  Working with NGA.  USDA currently has the lead on the national ground control point DB.

-Spec and Check tool developed to phase I (spec).  Phase II check and phase III knowledge base to follow.

-OSL update.  Film rolling off @~10% per year.  Report to be published including historical data.

-Accuracy specification & guideline update in process including terminology update.  AI3)  NGS to writeup and educate users and data providers on WGS84 and NAD83.  This needs a special session at the next ASPRS conference.

-Sessions for the next ASPRS confernce ...

  -Datum updates and changes

  -Camera manufacture certification

  -Machine control and short range photogrammetry

  -Full spectral technology demonstration

    -Radar, hyperspectral, thermal, LIDAR

  -Waveform LIDAR Workshop

-Need funding and a vision to push further R&D across the board in the PDAD areas.  AI4)  All to provide feedback on special sessions or workshops for next ASPRS.

