
TRB AFB80 2015
Summer Committee Meeting

**AFB80 Geospatial Data Acquisition
Technologies in Design and Construction**

July 26-29, 2015
INDIANAPOLIS, IN

Welcome to AFB80's 2015 Summer Meeting

- **Welcome of Members, Guests, Families**
newly elected chair - Brad Foltz
 - **General Announcements**
 - **Setting AFB80 Final Meeting Agenda**
 - **Preliminary AFB80 Committee Business**
 - **TRB Announcements**
-

TRB AFB80

**2014 Summer
Committee Meeting**

Williamsburg, Virginia

TRB

AFB80 COMMITTEE BUSINESS

- Election of committee secretary

Preliminary AFB80 Committee Business Items:

- **“Call for Paper” Write-up**
 - **Review of Committee Name and Scope**
 - **AFB80’s Synthesis Topic and RNS**
 - **Committee Membership**
-
- **AFB80 2016 Summer Meeting Location**

AFB80 Committee Business – 2015 “Call for Paper” Write Up

Positioning Requirements for Geospatial Tools and Technologies

- Best Practices to meet specific transportation requirements
- Studies that document the potential of new tools/technologies as well as their limitations and risks
- Guidelines that describe which tools can meet which DOT positioning requirement
- Visualization tools that enhance the users understanding of the positional accuracy of gridded data sets

Automated Machine Guidance (AMG) and Integration of 3-D models

- Best Practices and Guidelines to meet construction positioning requirements
- The latest advancements in 3-D integrated systems

Mobile Mapping Systems (MMS)

- Case studies that describe real MMS results as well as their limitations
- Best Practices to meet specific MMS collection scenarios
- Visualization tools that enhance the users understanding of the positional accuracy of MMS technologies

Positioning of Underground Utilities and the integration of subsurface coordinates with above-ground coordinates

- Best Practices to meet underground utilities positioning requirements
- Methods for positioning, storing, and retrieving underground utilities information
- Visualization tools that enhance the users understanding of the positional accuracy of underground utilities

From AFB80 2013 TSP PART 1: Committee Name and Scope

A proposed committee name and/or scope change must have the approval of 2/3 of the official members of the committee

Committee Code	AFB80
Committee Name	Geospatial Data Acquisition Technologies in Design and Construction
Date(s) reviewed	<u>The committee will address this topic during the AFB80 Summer meetings.</u>
Committee Scope	The committee is concerned with transportation applications of improved instrumentation, and new techniques, systems, and procedures in photogrammetry, remote sensing, and surveying. Committee focus includes production of high-accuracy geospatial data; global positioning systems (GPS); collection and analysis of remotely sensed data and imagery; and demonstrating the value of data accuracy standards for geographic information systems (GIS) in design and construction.
Date(s) reviewed	<u>The committee will address this topic during the AFB80 Summer meetings.</u>

From AFB80's 2013 TSP: Potential topics for synthesis suggestions to address emerging and cross-cutting issues

- **Current state of remote sensing products and services: stated estimate of precision versus actual accuracy value. What is the real accuracy of satellite-based imagery used to create maps? How important is it to know the accuracy level of derived products?**
- **A synthesis of specifications and guidelines of automated machine guidance procedures being used by DOTs across the Nation (Note: this work would build upon NCHRP 10-77.)**

NCHRP 10-77 [Active]

Use of Automated Machine Guidance (AMG) within the Transportation Industry

Project Data	
Funds:	\$350,000
Staff Responsibility:	David A. Reynaud
Research Agency:	Iowa State University
Principal Investigator:	David J. White
Effective Date:	7/24/2009
Completion Date:	2/20/2015
Comments:	Research in progress, Contractor's draft final report (PDFR) under review.

PROPOSE NEW NCHRP SYNTHESIS TOPICS for 2016

The file containing consultant letters of interest, resumes, and statements of compliance are to be submitted electronically by August 21, 2015.

Please submit to the Letters of Interest Web Portal

New topics for FY 2016 will be selected in May 2016. The following factors are considered in the selection process for synthesis topics:

TRB 2016 WINTER MEETING WORKSHOP

SUNDAY, JANUARY 10, 2016

ABJ95 & AFB80

VISUALIZATION IN TRANSPORTATION COMMITTEE

**Applied 3D Technologies, Tools, and Trends for Digital Project
Delivery of Transportation Infrastructure Projects**

Recent advances, developments, and deployments in 3D modeling and 3D technologies are transforming the way transportation and civil infrastructure projects are planned, designed, constructed, managed, and delivered. This workshop will focus on the technologies, tools, and trends including recent FHWA initiatives involved in this paradigm shift to 3D.

Your comment was submitted successfully!

The **Federal Aviation Administration (FAA)** Proposed Rule: **Operation and Certification of Small Unmanned Aircraft Systems**

For related information, [Open Docket Folder](#)

3 Your Receipt

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Your Comment Tracking Number: 1jz-8i73-7k88

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Comment:
We propose that the FAA allow sUAS operations within 500 feet vertically or horizontally of the surface. Specifically this proposal would be limited to allowing operations near natural features where the sUAS could be operating at more than the 500' agl limit, but still laterally within a few hundred feet of the surface. Examples of where this proposal would be applicable would be large pit mines and cliff faces. Assuming all the other operating rules were enforced, there would be no incremental risk to people, and in fact, such a rule would enable timely monitoring of potential rock fall and avalanche risks by commercial operators.

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Search Results

Record Type: RNS

Keywords: "AFB80"

Results 1 - 4 out of 4 [Page 1 of 1]



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- Accurate Heights for Automated Construction of Finished Surfaces**
Committee: AFB80, Geospatial Data Acquisition Technologies in Design and Construction
Date Posted: 3/5/2011
Date Modified: 7/18/2011
- Matching As-Built Infrastructure with As-Designed**
Committee: AFB80, Geospatial Data Acquisition Technologies in Design and Construction
Date Posted: 7/20/2008
Date Modified: 7/21/2008
- Common Paradigm for Survey, Imagery, CAD, GIS, and GIS Data**
Committee: AFB80, Geospatial Data Acquisition Technologies in Design and Construction
Date Posted: 7/20/2008
Date Modified: 7/21/2008
- Renewed Cost-Benefit Analysis of Accuracy & Precision in Location**
Committee: AFB80, Geospatial Data Acquisition Technologies in Design and Construction
Date Posted: 7/20/2008
Date Modified: 5/23/2012

From AFB80's 2013 TRIENNIAL STRATEGIC PLAN – Emerging Issues

Emerging critical and cross-cutting issues within the committee scope:

Short-Term:

- Integration of 3D technologies into surveying and mapping activities at DOTs
- Implementation of proper geospatial procedures in Automated Machine Guidance (AMG)
- Enhancement of geospatial technologies in transportation design and construction activities
- Improvement in positioning, representation, storing, and retrieving of underground utilities information
- Proper use and understanding of the accuracy of various geodetic and remote sensing technologies, and products for transportation activities
- Proper use of current scanning technologies and their application for DOT surveying activities such as surveying existing and damaged bridges, bridge construction and inspection, interstate roadway surfaces, and monitoring of rock slides

Long-Term:

- Investigate the use of small unmanned aerial systems and their application for DOT activities
- Collaborative development of a research plan for geospatial information technologies in transportation surveying agencies
- Enhancement of emerging scanning technologies and their application for DOT surveying

From AFB80's 2013 TSP: Potential topics and activities for developing new RNS to address emerging and cross-cutting issues

- **Discuss the merits of AFB80's RNS with DOT contacts and have DOT committee members submit the RNS to NCHRP through their DOT research offices**
- **Using AFB80's RNS, work with ABJ60, ABJ20 and ABJ95 committee chairs to incorporate their requirements to create three new RNS**
- **Working with ABJ60 and ABJ95 committees, incorporate the development of new visualization and GIS tools into AFB80s existing RNS proposals**
- **Tools and techniques to optimize use of Lidar point cloud data and auxiliary data to meet transportation activities**
- **Tools and techniques to translate geospatial/technical requirements into real-world resource efficiency and cost effectiveness**
- **How are new technologies helping DOTs to accomplish their mission? How are new technologies hindering DOTs in accomplishing their mission?**
- **What are the technical issues/requirements for using highway-speed ground imaging systems (vans) for replacing ground surveys to achieve as-built "drawings" for new construction and major rehabilitation projects?**
- **What are the future positioning requirements necessary to meet the increase demands on the transportation system because of trends in population growth, advancements in technology, and effects of climate change on infrastructure?**

From AFB80's 2013 TRIENNIAL STRATEGIC PLAN – Committee Membership

The committee has representatives from all regions of the country but needs more members from the NE, and NW regions. The committee also would like more representatives from minorities, women, younger members, and Federal agencies.

Action Plan to address deficiencies:

- Promote greater involvement by women, minorities, and young professionals
 - Explore establishing a special relationship with historically black college(s) or minority-serving institution(s), to bring AFB80's research focus to the institution(s) and facilitate increased participation
 - Involve the TRB Young Members Council (A0040T) and the Design and Construction Group Young Member Subcommittee in the development of communication material that describe AFB80's mission and goals, and highlight the benefits of participating in AFB80 meetings and activities
 - Explore creation of a program that provides monetary support for minority students and young professionals to attend AFB80's mid-year meeting (AFB80 would waive the registration fee)
 - Explore new measures and continue measures already in place to enhance diversity, such as sending call for papers and invitations to meetings to historically black college(s) or minority-serving institution(s), and inviting potential members to participate in conference calls and webinars
- Prepare a one-page informational sheet on AFB80 mission and goals and send to potential Federal agencies, state DOTs, and historically black college(s) or minority-serving institution(s)
- Pursue partnerships and joint activities with other organizations that have overlapping interests
- Establish closer ties with metropolitan planning organizations (MPO), local government, and county associations

CURRENT MEMBERS 2015

<u>Member</u>	<u>Role</u>	<u>Start</u>	<u>End</u>
Bespalko, Stephen/Exemplar Technology, LLC	Member	April 15, 2014	April 14, 2017
Brown, Charles/North Carolina Department of Transportation	Member	April 15, 2014	April 14, 2017
Clabaugh, Curtis/Wyoming Department of Transportation	Member	April 15, 2014	April 14, 2017
Evjen, Joseph/National Oceanic and Atmospheric Administration	Member	April 15, 2014	April 14, 2017
Farlow, Kelly/Kansas Department of Transportation	Young Member	April 15, 2014	April 14, 2017
Foltz, L. Bradley/Pennsylva nia Department of Transportation	Chair	April 15, 2015	April 14, 2018

<u>Member</u>	<u>Role</u>	<u>Start</u>	<u>End</u>
Graham, Lewis/GeoCue Corporation	Member	April 15, 2014	April 14, 2017
Hauck, Michael/ASPR S	Committee Research Coordinator	July 01, 2013	
Hauck, Michael/ASPR S	Member	April 15, 2014	April 14, 2017
Johnson, Wei/South Carolina Department of Transportation	Member	March 09, 2015	April 14, 2017
Lewis, Rachel/Ohio Department of Transportation	Member	April 15, 2014	April 14, 2017
Lowe, David/Fugro Roadware, Inc.	Member	April 15, 2014	April 14, 2017
McDaniel, Paul/Advanced Geodetic Applications (AGA)	Member	April 15, 2014	April 14, 2017

<u>Member</u>	<u>Role</u>	<u>Start</u>	<u>End</u>
Mitchell, Alexa/Missouri Department of Transportation	Member	April 15, 2014	April 14, 2017
Padgett, Jeff/Continental Mapping Consultants	Member	April 15, 2014	April 14, 2017
Roe, Gene/LiDAR News	Member	April 15, 2014	April 14, 2017
Singh, Ron/Oregon Department of Transportation	Member	April 15, 2014	April 14, 2017
Turkan, Yelda/Iowa State University	Member	April 15, 2014	April 14, 2017
Vonderohe, Alan/Vonderohe Consulting, LLC	Member	April 15, 2014	April 14, 2017
Waldemer, Jason/Maser Consulting	Member	April 15, 2014	April 14, 2017

<u>Member</u>	<u>Role</u>	<u>Start</u>	<u>End</u>
Zhang, Su/University of New Mexico	Young Member	March 09, 2015	April 14, 2017
Zilkoski, David/Geospatial Solutions by DBZ	Committee Communications Coordinator	July 01, 2013	
Zmuda, Michael/JMT	Member	April 15, 2014	April 14, 2017

Currently 22 members may have 25

Count of Committee Members

US Members – 22
Non-US Members – 3
Young Members - 2
Minority – 3
Female – 6

Membership Makeup

Northwest – 1, Southwest – 3 Central – 7, Northeast – 3, Southeast – 8

Federal – 1, State – 8, Academia – 2, Industry – 2, Consultant – 7, Other - 2

AFB80 Committee Business

Discussion on the AFB80 2016 Summer Meeting Location

2009 - Estes Park, Colorado

2010 - Huntsville, Alabama

2011 - Santa Fe, New Mexico

2012 - Philadelphia, Pennsylvania

2013 - Cheyenne, Wyoming

2014 – Williamsburg, Virginia

2015 - Indianapolis, Indiana

July 2016 - ????

Tasks To Complete Before We Leave On Wednesday

- **Select a Location for AFB80's 2016 Summer Meeting**
 - **Identify Topics that can be expanded into Research Needs Statements and/or Synthesis Topics**
 - **Prepare a potential list of topics for sessions at the January 2016 TRB Annual Meeting**
 - **Decide if the committee's name and scope needs to be updated**
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PENNDOT FY14/15 REPORT



- Act 89 \$2.3 billion annually in construction
- 25,000 bridges, P3 replacing 500 structurally deficient per year
- Performed seven mobile LIDAR projects
- Completed 103 photogrammetric projects
- Executed 18 work orders totaling \$1.3 million
- Spent \$250,000 in field survey gear upgrades
- Updated our construction survey AMG specs
- Replaced three 2D edit stations with 3D workstations