

TRB 2013 ANNUAL MEETING

January 16, 2013

2:30PM – 6:00PM

Mariott, Washington B1

Attendees: Patricia Hu, Michael Pack, Frank Broen, Zenobia Fields, Thomas Furlani, Kevin Gilson, Charles Hixon, Rob Hranac, Lance Parve, Carl Springer, Mark Taylor, Jason Williams, Mark Yedlin, Stephanie Camay

Members

Friends Barbara Ostrom, Maria Chau, Noah Goodall, Nabeel Khwaja, Joe Moyer, Alex Gilman, Jarklio Sireeni, David Gerstle, Heikki Halttula, Wu Yao-Jan, Dongxi Zheng, Barry Wallick, Yelda Turkan, Ben Stabler, Tom Clemens, Jonathan Porter, Mark Sarmiento, Tom Roff, Justin Clarke, Burr Stewart, Paul Minnice, John Handley, Jenny Guarino, Bill Chadwick, Don Chen, Guohui Zhang, David Gerstle, Mike Wallace, Robert Knisely, Eunsu Lee, Ho-Ling Hwang, Daniel Wilson, Francesco Moraes, Sam Tignor, Jeff Shelton, Joni Graves, Michale Kennerly, Charles Jahern, Nimish Dharmadhikari, Jean Doig, Alex Kiheri, Chris Johnson, Kevin Stewart

Agenda item: Minutes

Highlights of meeting:

- Welcome & TRB report
- Potential ABJ95 Work Items
 - Glossary of visualization terms
 - Visualization examples for our website
 - Monthly Webinars
 - List of visualization resources
 - Update 2003 AASHTO Visualization Guide
 - Research Needs/Papers/Synthesis Topics
- 2013 7th International Visualization in Transportation Symposium
 - Beckman Center, Irvine, California on October 23-25, 2013
- Rick Pain suggested ABJ95 consider submitting for blue ribbon committee
 - Bernardo B. Kleiner will replace Rick Pain
- Subcommittee Reports (see summary)
- FHWA Visualization Working Group efforts
- Must rotate 1/3 of committee in 2013
- 2013 Mid-Year Meeting:
 - June 10-12 Joint Mid-Year Meeting for TRB and AASHTO Committees Washington DC
- Research Needs Statements online:
 - <https://teachamerica-trbvis.pbworks.com/>
- Submit draft RNS Statements to Carl Springer by March 15
- Attached:
 - Detailed notes included in Mind Map
 - VDC Subcommittee Report
 - Attendees – Survey XLSX
 - Greg Harrington Award
 - FHWA Working Group Briefing
 - Midyear/Symposium announcements

Agenda item: Subcommittee Report on Accomplishments, Planned Activities

- Symposium - Stewart and Hranac
 - Oct 23-25 Irvine
 - put program together
 - outreach to other groups
 - meeting with other committees
 - exhibitor event
- Outreach – Broen and Camay
 - Survey of interest and other committees (TRB Visualization in Transportation Member and Friend Survey.xlsx)
- Research – Springer
 - Current Research Needs not well vetted
 - State DOTs are interested
 - Submit statements for full NCHRP research
 - Update RNS
- Virtual Design & Construction – Hixon and Gibson
 - See attached
 - Identify 4-5 major categories
 - Organize VDC track for Symposium
- Operations & Preservation – Ostrom
 - Subcommittee in concept
- Greg Harrington Award – Furlani
 - 2013 Award – “Treeversity: Interactive Visualizations for comparing hierachicl datasets
 - John Alexis Guerra-Gomez
 - Audra Buck-Coleman
 - Michael L. Pack
 - Catherine Plaisant
 - Ben Shneiderman
- Computational Transportation & Society (Joint Subcommittee ABJ20, ABJ60, ABJ95) – Miller
 - Very good workshop on Sunday
 - Mining data
 - Big data

Agenda item: Collaborations

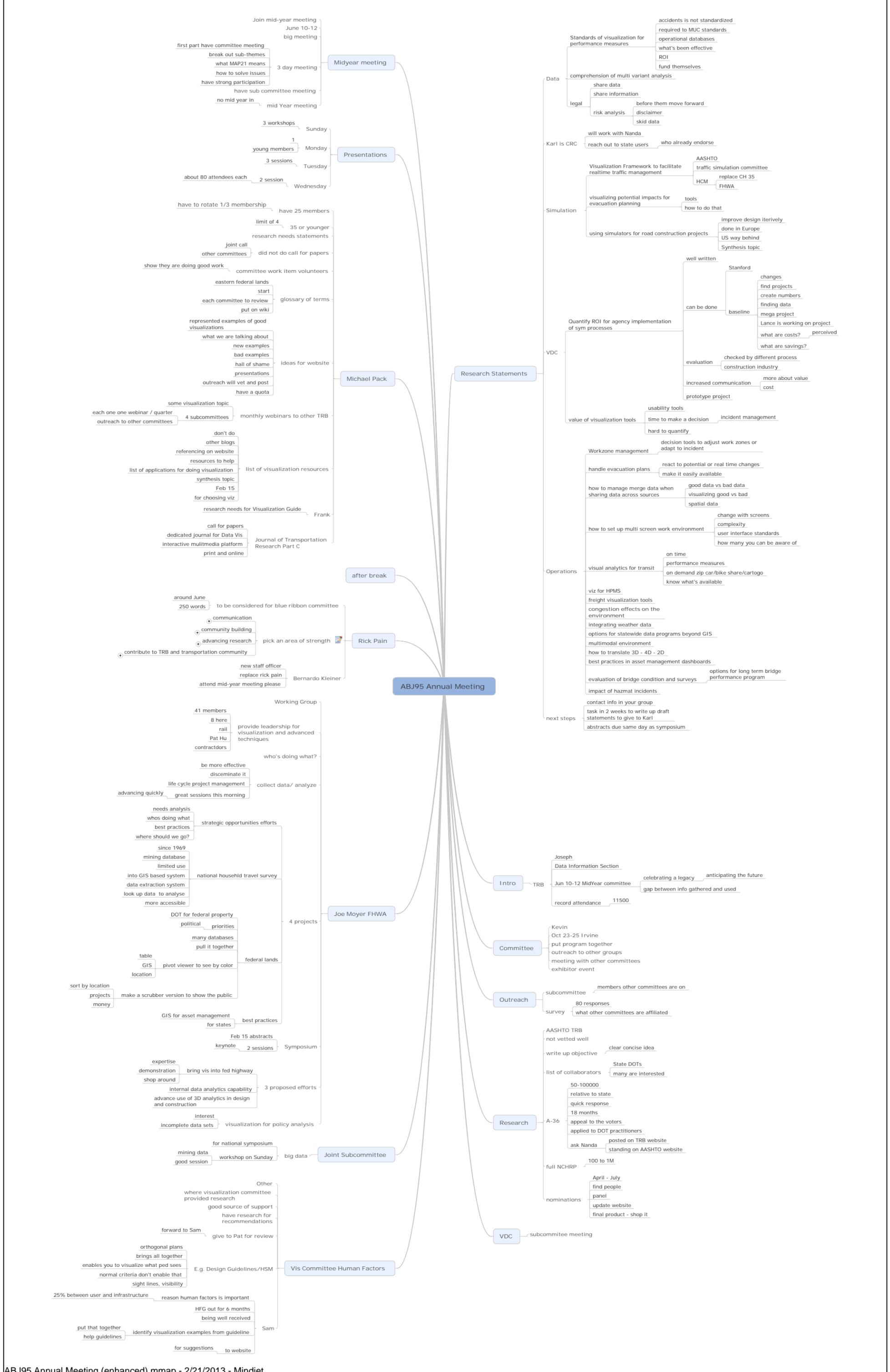
- **FHWA Working Group**
 - 41 members – 8 attending ABJ95
 - How to be more effective and disseminate info
- 4 projects include:
 - Strategic opportunities efforts
 - National household travel survey
 - Federal lands
 - Best practices for GIS asset management
- 3 proposed efforts
 - bring vis into fed highway
 - internal data analytics capability
 - advance use of 3D analytics in design and construction
- **Committee Human Factors**
 - where visualization committee provided research
 - good source of support
 - have research for recommendations
- **Human Factors Guide**
 - HFG out for 6 months
 - being well received
 - identify visualization examples from guideline
- **Journal of Transportation Research Part C**
 - call for papers
 - dedicated journal for Data Vis
 - interactive multimedia platform print & online

Agenda item: RNS Statements to be developed

- | | | | |
|--|---|---|---|
| <p>Data</p> <ul style="list-style-type: none"> • Standards of visualization for performance measures <ul style="list-style-type: none"> ○ accidents not standardized ○ required to MUC standards ○ operational databases ○ what's been effective ○ ROI ○ fund themselves • Comprehension of multi variant analysis • Legal <ul style="list-style-type: none"> ○ share data ○ share information ○ risk analysis | <p>Simulation</p> <ul style="list-style-type: none"> • Visualization framework to facilitate real time traffic management <ul style="list-style-type: none"> ○ AASHTO ○ traffic simulation committee ○ HCM ○ replace CH 35 ○ FHWA • Visualizing potential impacts for evacuation planning <ul style="list-style-type: none"> ○ tools ○ how to do that • Using simulators for road construction projects <ul style="list-style-type: none"> ○ improve design iteratively ○ done in Europe ○ US way behind ○ Synthesis topic | <p>VDC</p> <ul style="list-style-type: none"> • Quantify ROI for agency implementation of sym processes
well written
It can be done - Stanford
baseline
changes
find projects
create numbers
finding data
mega project
Lance is working on project
what are costs?
perceived
what are savings?
evaluation
checked by different
process
construction industry
increased communication
more about value
cost
prototype project • Value of visualization tools
usability tools
time to make a decision
incident management
hard to quantify | <p>Operations</p> <ul style="list-style-type: none"> • Workzone management • Handle evacuation plans • How to manage merge data when sharing data across sources • How to set up multi screen work environment • Visual analytics for transit • Viz for HPMS • Freight visualization tools • Congestion effects on the environment • Integrating weather data • Options for statewide data programs beyond GIS • Multimodal environment • How to translate 3D - 4D - 2D • Best practices in asset management dashboards • Evaluation of bridge condition and surveys • impact of hazmat incidents |
|--|---|---|---|

Action Items:

- Meeting Adjourned



ABJ95 VDC Subcommittee Meeting

General Notes

27-attendees (5-DOT, 5-consultants, 8-university, 9-vendors)

Interests (in no particular order)

- Survey Technologies (Lidar)
- Construction Administration & Management
- Understand the complete process of VDC-CIM
- Connection between design and construction
- Linking construction to a 4D model
- Design Data
- Modernizing Civil Engineering practices
- Human Factors (Safety)
- Augmented Reality
- Driving Simulators
- Asset Management
- Real-time Environments
- Operations and Management
- Return on Investment
 - Tom Clemons referenced Bentley's on-line ROI site; <http://www.bentley.com/en-US/Subscriptions/Enterprise+License+Subscriptions/ROI/>
- Lifecycle Benefits
- Model Fidelity Specifications
- Utilities
- Best Practices for VDC-CIM
- Outreach to other committees and organizations (i.e. AASHTO)
- Legal
 - Someone referenced John (Jeffrey) Hannon, CEP, University of Southern Mississippi, john.hannon@usm.edu
- VDC-CIM Deliverables
- Looking for precedent in the use of VDC-CIM at state agencies.

Action Items

- Distill this list into 4 or 5 major categories and divide the group to tackle each of these categories.
 - What are the primary categories? Please provide your thoughts.
- Joint Midyear Meeting for TRB and AASHTO Committees, June 10-12, 2013, <http://www.trb.org/Calendar/Blurbs/168310.aspx>
 - ABJ95 is participating
 - VDC-CIM sub-committee should participate
 - There will be a mid-year sub-committee meeting
- 7th International Symposium for Visualization in Transportation October 23-25
 - Call for presentations due February 15, 2013 (*see attachment*)
 - There is a VDC track, we need to organize it
 - Need volunteers to take on this task.
 - Do we want to have a sub-committee meeting during this event?

End of Report

ABJ95 VDC-CIM Subcommittee Member List

First Name	Last Name	Organization/Company	email Address	Telephone
Kevin	Gilson	Parsons Brinckerhoff	gilson@pbworld.com	(303) 390-5932
Charles	Hixon	Bergmann Associates	chixon@bergmannpc.com	(585) 232-5135
Lance	Parve	Wisconsin DOT	lance.parve@dot.wisconsin.gov	(262) 548-8702
Cesar	Quiroga	Texas A&M Transportaiton Institute	cquiroga@tamu.edu	(210) 979-9411
Tristan	Randall	Autodesk	tristan.randall@autodesk.com	(903) 570-2029
Danny	Kahler	Kahler Engineering Group	danny.kahler@kahlerengineering.com	(572) 983-3453
Mark	Taylor	Highway Design & Safety Solutions	marktaylor@msn.com	(303) 250-4340
Wolfgang	Kuehn	University of Westsachsische Hochschule	wolfgang.kuehn@fh-zwickau.de	
Don	Chen	University of North Carolina - Charlotte	dchen9@unccl.edu	(704) 806-0335
Charles	Jahren	Iowa State University	cjahren@iastate.edu	(515) 294-3829
Cameron	Schmeits	UT-Austin	cameron.schmeits@gmail.com	(817) 797-3113
Nabeel	Khwaja	UT-Austin	khwaja@mail.utexas.edu	(214) 683-0444
Yelda	Turkan	Iowa State University	yturkan@iastate.edu	(515) 231-3005
Alex	Gilman	Parsons Transportation	alex.gilman@parsons.com	(312) 339-3281
Heikki	Halttula	ViasysVDC	heikki.halttula@viasys.com	358-40-5472440
Jani	Myllymaa	ViasysVDC	jani.myllymaa.viasys.com	
Jarkko	Sireeni	ViasysVDC	jarkko.sireeni@viasys.com	
Dave	Body	Bentley Systems	dave.body@bentley.com	
Kevin	Stewart	RDV Systems	kevin.stewart@rdvsystems.com	(813) 785-5869
Amin	Hammad	Concordia University	hammad@ciise.concordia.ca	(514) 848-2424
Jesse	Kadekawa	HNTB Corporation	jmiquel@hntb.com	(816) 527-2534
Guangyan	Griffin	Alaska DOT	guab.griffin@alaska.gov	(907) 451-5087
David	Unkefer	FHWA	david.unkefer@dot.gov	(404) 562-3699
Douglas	Townes	FHWA	douglas.townes@dot.gov	(404) 562-3914
Barry	Wallick	AAI	wallicbl@aai.textron.com	(410) 628-3837
Nathan	Vaughn	RA Smith National	nathan.vaughn@rasmithnational.com	(262) 518-6582
Jason	Williams	AAI	jason.williams@dot.gov	(202) 493-3391
Frank	Broen	Teach America	fbroen@teachamerica.com	(850) 528-6056

ABJ95 Members

Name	email	Org	Title	
Patricia Hu	patricia.hu@dot.gov	Federal	U.S. Department of	Director
Mr. Michael L. Pack	packml@umd.edu	Univ	University of Maryland	Director, Center for Advanced Transportation
Mr. Michael Anthony Manore	michael.manore@gmail.com		Consulting, LLC	Principal and Founder
Dr. Richard F. Pain	rpain@nas.edu		Board	Senior Program Officer - Transportation
Mr. R. Wade Allen	rwallen@systemstech.com	Private	Systems Technology, Inc.	President and Technical Director
Mr. Patrick Anater	panater@gfnet.com	Private	Gannett Fleming, Inc.	Senior Transportation Planner/Associate
Prof. Francesco Bella	bella@vniroma3.it	Univ	Roma TRE University	Associate Professor
Mr. Jamie Mac Bridges	jbridges@baltometro.org	MPO	Council (BMC)	Senior Planner
Mr. Frank C. Broen	fbroen@teachamerica.com	Private	Teach America Corporation	President
Dr. Mashrur A. Chowdhury		Univ	Clemson University	Associate Professor
Ms. Amanda K. Emo		Federal	Administration (FRA)	
Ms. Zenobia L. Fields		State	Planning Authority (NJTPA)	Manager, Mobility Programs & Planning
Dr. Thomas R. Furlani	furlani@buffalo.edu	Univ	State University of New York	Director
Mr. Kevin J. Gilson	gilson@pbworld.com	Private	Parsons Brinckerhoff	Director, Design Visualization
Dr. Ted Grossardt	tgrossardt@uky.edu	Univ	University of Kentucky	Research Program Manager
Mr. Charles L. Hixon, III	chixon@bergmannpc.com	Private	Bergmann Associates	Buisness Development Director
Mr. Rob C. Hranac	rhc@iteris.com	Private	Systems, Inc. (BTS)	Vice President
Ms. Sowmya Karthikeyan	skarthikeyan@alk.com	Private	ALK Technologies, Inc.	Senior Transportation Systems Consultant
Prof. Dr. Wolfgang Kuehn	wolfgang.kuehn@fh-zwickau.de	Univ	Applied University of Zwickau	Professor
Mr. Richard E. McDaniel	richard.mcdaniel@dot.gov	Federal	Administration (FHWA)	Senior Transportation Specialist / Design
Mrs. Shitij Mehta		Private	Research Institute (ESRI)	Product Specialist
Dr. Harvey J. Miller	harvey.miller@geog.utah.edu	Univ	University of Utah	Professor
Mr. Lance Parve	lance.parve@dot.wi.gov	State	Transportation	Senior Project Engineer
Dr. Laxmi Ramasubramanian	laxmi.hunter@cuny.edu	Univ	Hunter College	Associate Professor
Mr. Carl D. Springer	cgs@dksassociates.com	Private	DKS Associates, Inc.	Principal
Mr. Mark B. Taylor	marktaylor@msn.com	Federal	Administration (FHWA)	Safety/Geometric Design Engineer
Mr. Jason R. Williams	jason.r.williams@dot.gov	Private	AAI Services	Highway Driving Simulator, Team Leader
Mr. Mark B. Yedlin	myedlin@gpinet.com	Private	KLD Associates, Inc.	President
Ms. Stephanie Camay	stephanie.camay@urs.com	Private	URS Corporation	Transportation Planner
Mr. Jonathan S. Muckell		Univ	Albany	PhD Student

Friends

Barbara	Ostrom	AMECEAI	barbara.ostrom@amec.com	202 193-3310
Maria	Chau	FHWA-NY Div	maria.chau@dot.gov	
Noah	Goodall	Virginia Dept of Transportation	noah.goodall@vdot.virginia.gov	434 293-1905
Nabeel	Khawaja	University of Texas - Austin	khawaja@mail.utexas.edu	214 320-6188
Joe	Moyer	FHWA/RD&T	joe.moyer@dot.gov	
Alex	Gilman	Parsons	alex.gilman@parsons.com	
Jarklio	Sireeni	Viasys VDC		
David	Gerstle	Caliper Corporation	david@caliper.com	(617) 527-4700
Heikki	Halttula	Viasys VDC	heiklei.halttula@viasys.com	
Wu	Yao-Jan	Saint Louis University	yaojan@slu.edu	
Dongxi	Zheng	University of Wisconsin-Madisc	dzheng3@wisc.edu	
Barry	Wallick	AAI Corp	wallick@aai.textron.com	410 628-3837
Yelda	Turkan	Iowa State University	yturkan@iastate.edu	515 231-3005
Ben	Stabler	Parsons Brinckerhoff	stabler@pbworld.com	
Tom	Clemens	Bentley Systems	tom.clemens@bentley.com	512 826-0050
Jonathan	Porter	FHWA	jonathan.porter@dot.gov	
Mark	Sarmiento	FHWA	mark.sarmiento@dot.gov	
Tom	Roff	FHWA	thomas.roff@dot.gov	
Justin	Clarke	FHWA	justin.clarke@dot.gov	
Burr	Stewart	BURRST	burtst@hotmail.com	206 660-1145
Paul	Minnice	Volpe Center (US DOT)	paul.minnice@dot.gov	
John	Handley	Xerox	john.handley@xerox.com	
Jenny	Guarino	USDOT/RITA/BTS	jenny.guarino@dot.gov	202 366-4143
Bill	Chadwick	USDOT/OAI	william.chadwick@dot.gov	
Don	Chen	Univ of North Carolina Charlott	deheng@uncc.edu	
Guohui	Zhang	University of New Mexico	guohui@unm.edu	505 277-0767
David	Gerstle	Caliper Corporation	david@caliper.com	
Mike	Wallace	Fehr & Peers	m.wallace@fehrandpeers.com	925 930-7100
Robert	Knisely	(former) BTS, USDOT	bob@knisely.info	
Eunsu	Lee	Upper Great Plains Transportat	eunsu.lee@ndsu.edu	701 205-1525
Ho-Ling	Hwang	ORNL	hwanghl@ornc.gov	865 946-0281
Daniel	Wilson	ORNL	wilsondn@ornl.gov	865 806-0281

Francesco	Moraes	ORNL	olivera@ornl.gov	865 851-0060
Sam?	Tignor	Va Tech adjunct Prof. CEE	stignor@aol.com	
Jeff	Shelton	Texas A&M Transportation Inst	j-shelton@tamu.edu	
Joni	Graves	Wisconsin LTAP/Univ of WI-Mac	graves@epd.engr.wisc.edu	
Michale	Kennerly	Iowa DOT	miachal.kennerly@dot.iowa.gov	515 239-1243
Charles	Jahren	Iowa State University	cjahren@iastate.edu	
Nimish	Dharmadhikari	North Dakota State University	nimish.dharmadhikari@ndsu.edu	
Jean	Doig	UC Berkley	jcdoig@berkeley.edu	510-423-3550
Alex	Kiheri	Kittelson and Assoc. Inc.	akiheri@kittelson.com	503 535-7431
Chris	Johnson	CH2M Hill	cjohnso3@ch2m.com	
Kevin	Stewart	Infrabim Services; RDV System	kevin.stewart@infrabim.com	603 935-8128

Greg Herrington – Utah DOT

His Vision

Virgin River Arch Bridge

Bentley Award for Excellence in Civil Visualization - 2004

Greg Herrington Award

Excellence in Visualization Applied to Transportation

- An award in memory of Greg Herrington honoring his many contributions toward advancing the application of visualization to problems in transportation.

Transportation Research Board
of the National Academies

Visualization in Transportation Committee (AB995)

Presents:
2013 Greg Herrington Award for Excellence in Visualization Research

To:

- John Alexis Guerra-Gomez
- Audra Buck-Coleman
- Michael L. Pack
- Catherine Plaisant
- Ben Shneiderman

For Their Paper:
"TreeVersity: Interactive Visualizations for Comparing Hierarchical Datasets"

January 16, 2013

Setting up a Formal Process

- What is the award for?
 - Best Paper?
 - Best Presentation?
- Proposed Award Categories:
 - Research
 - Demonstration/Implementation
 - Innovative Technology Development
 - Engineering Education
 - Is this too many?
- Do we always make an award in each category?
- How often should the award be given?
 - Yearly at the annual TRB Meeting?
 - Every 2 years at the International Visualization in Transportation Symposium?

Formal Process (cont' d)

- How should the award be given?
 - At the conference luncheon?
 - At the Visualization Committee Meeting?
- How are potential candidates selected?
 - Recommendation of session chairs?
 - Do we solicit applications (papers)?
- How are winners determined?
 - Standing committee?
- Type of Award?
 - Plaque?
 - Certificate?
 - Should definitely be visually appealing.
- Form a committee to oversee all aspects of award

Federal Highway Administration Visualization Working Group

Our Objective

Provide leadership and advocate for visualization and innovative data analysis and to promote initiatives to advance the practice and application of these rapidly maturing and powerful tools to accomplish the mission of FHWA.

Membership

41 members representing numerous offices within FHWA / DOT

Chair: Michael Trentacoste, FHWA / RD&T
Co-Chair: Jonathan Porter, FHWA / RD&T

Partner

ABJ95 : Visualization in Transportation Committee

TRB, 7th International Visualization in Transportation Symposium

Topics of Interest

3D Engineered Models for Construction

3D Modeling in Roadway Safety Audits

Data Visualization in Transportation Operations

Virtual Design and Construction

Lifecycle Project Management

Completed Efforts

Visualize National Household Travel Survey Data with on-line GIS

Best Practices in GIS-Based Transportation Asset Management

Identify Strategic Opportunities for the use of Innovative Visualization Techniques

Visualize Federal Lands Project Management, Agency Management Systems Data

Proposed Future Efforts

3-D Digital Engineering Models for Highway Project Delivery

Develop Internal Advanced Data Analysis and Visuatization Capability for FHWA

Develop Performance Data Analytic Tools to Support Agency Objectives

For further information contact:

Program Chair
Richard E. McDaniel
FHWA / EFLHD
richard.mcdaniel@dot.gov

Joe Moyer
FHWA / RD&T
joe.moyer@dot.gov



© 2012 Maxwell Mackenzie

Meeting State and MPO Information Needs in a Constrained Fiscal Environment

Joint Midyear Meeting for TRB and AASHTO Committees

June 10–12, 2013

National Academy of Sciences Building
2101 Constitution Avenue NW
Washington, D.C.

Organized by
Transportation Research Board

www.trb.org/conferences/InfoNeeds2013.aspx

This unique TRB conference will blend the traditional midyear business meetings of more than a dozen standing committees with a theme dominating decision making in all transportation agencies today—Meeting State and MPO Information Needs in a Constrained Fiscal Environment. Doing more—and better—with less is the transportation challenge for today and tomorrow.

The conference begins with a review of the key sessions and workshops from the 2013 Annual Meeting that identified guideposts for navigating an era of constrained resources, including a review of the state of performance measurement mandates in the Moving Ahead for Progress in the 21st Century Act (MAP-21).

The agenda will alternate between committee meetings and plenary discussions where challenges and ideas will be shared, ending in a town hall session in which participants will focus on action opportunities for TRB committees—and the professional as a whole—for the coming years.

Smaller and more collaborative than the TRB Annual Meeting, this midyear conference will provide opportunities for information exchange and ideation that will help define the agenda for committees and their members in these interesting times.

Not a committee member? You can still join us and find opportunities to contribute to and learn from this gathering. All committee meetings are open. Come to explore sessions and committee meetings for ideas and connections.

Committees Interested Participating

- Special Task Force on Data for Decisions and Performance Measures (A0030T)
- Policy and Organization Group (AB000)
- Management and Leadership Section (ABC00)
- Strategic Management Committee (ABC10)
- Management and Productivity Committee (ABC20)
- Performance Measurement Committee (ABC30)
- Transportation Asset Management Committee (ABC40)
- Data and Information Systems Section (ABJ00)
- National Transportation Data Requirements and Programs Committee (ABJ10)
- Statewide Transportation Data and Information Systems Committee (ABJ20)
- Urban Transportation Data and Information Systems Committee (ABJ30)
- Highway Traffic Monitoring Committee (ABJ35)
- Travel Survey Methods Committee (ABJ40)
- Task Force on Understanding New Directions for the National Household Travel Survey (ABJ45T)
- Information Systems and Technology Committee (ABJ50)
- Geographic Information Science and Applications Committee (ABJ60)
- Visualization in Transportation Committee (ABJ95)
- American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on Planning Subcommittee on Data

Registration Fees

	Early Bird <i>by</i> <i>April 10, 2013</i>	Advance <i>by</i> <i>May 10, 2013</i>	On Site <i>after</i> <i>May 10, 2013</i>
General	\$225	\$275	\$325
Speaker and TRB Sponsor	\$185	\$235	\$285
Student	\$45	\$95	\$145

Hotel Information

Melrose Hotel
2430 Pennsylvania Avenue, NW
Washington, DC 20037

Rate: \$224/\$249 S/D (prevailing government per diem) plus taxes and fees. Group block expires May 9, 2013. Event Name: State and MPO Information Needs Meeting

Online Reservation

<https://gc.synxis.com/rez.aspx?Hotel=15333&Chain=5415&arrive=6/8/2013&depart=6/15/2013&adult=1&child=0&group=1306NASSTA>

For more information, contact:

Thomas M. Palmerlee, TRB, tpalmerlee@nas.edu
Mai Le, TRB, MQLe@nas.edu

Planning Team

Joseph L. Schofer, Northwestern University, *Chair*
Thomas G. Bolle, Research and Innovative Technology Administration
Matthew H. Hardy, AASHTO
Charles E. Howard, Puget Sound Regional Council
Catherine T. Lawson, State University of New York Albany
Michael L. Pack, University of Maryland
Hyun-A Park, Spy Pond Partners, LLC
Reginald R. Souleyrette, University of Kentucky
Jack Stickel, Alaska Department of Transportation and Public Facilities
Kathryn A. Zimmerman, Applied Pavement Technology, Inc.

THE NATIONAL ACADEMIES™

Advisers to the Nation on Science, Engineering, and Medicine

The nation turns to the National Academies—National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council—for independent, objective advice on issues that affect people's lives worldwide.
www.national-academies.org

TRANSPORTATION RESEARCH BOARD

OF THE NATIONAL ACADEMIES

500 Fifth Street, NW
Washington, DC 20001
www.TRB.org

Visualization for **Big** Data



Call for Presentations

7th International Symposium on Visualization in Transportation

Irvine, California **October 23-25, 2013**

The conference planning committee is seeking input on session and presentation topics from visualization experts, transportation professionals, and researchers in all modes and domains. A wide variety of sessions and speakers will be pursued including moderated sessions, panel discussions, interactive poster sessions, and application/technology demonstrations.

Submission Process:

Please submit session abstracts, ideas, and speaker names to <http://www.trb.org/Main/Blurbs/167315.aspx>

Submission Deadline:

March 15, 2013 (earlier submissions preferred)

Potential Visualization Topics:

- Collaborative Visualization Techniques
- Performance Measurement Visualization
- Decision Support Systems
- Visual Analytics
- Transportation Operations Visualization
- Augmented Reality Applications
- Multivariate/high dimensionality visualization
- Categorizing and clustering categorical data
- Resolution issues for large datasets
- Quantifying "good" visualization
- Automating and simplifying visualization
- Interactive trees, node-network graphs, 3D, and comparisons of datasets

Questions should be submitted to Symposium

Co-Chairs Rob Hranac <rch@iteris.com> and Kevin Stewart <kevin.stewart@infrabim.com>