Transportation Hazards & Security Summit 2009: Progress Through Partnerships

\textit{ABE}_{40}

\textit{TRB Critical Transportation Infrastructure Committee}

...Welcome Transportation Partners...

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Agenda

• TRB Welcome / Thank You

• ABE 40, TRB Critical Transportation Infrastructure Protection Committee

• National Laboratories

• Cyber Security (TSA Cyber Security Working Group)
Scope: To consider issues relating to threats posed by potential physical, chemical, biological, and cyber attacks on critical transportation infrastructure in the United States. It will develop activities and provide a forum for discussion among the academic community, the private sector, and appropriate government agencies regarding transportation infrastructure assurance. The Committee will also be in a position to support outreach efforts of the USDOT and other federal agencies to the owners and operators of the nation's transportation system from states and municipalities to trucking companies, airlines, barge operators, ocean shipping companies, railroads, mass transit, port and airport authorities, pipelines, and shippers. Attention will be given to a full range of security issues including risk assessment, prevention, technology, procedures and applications, emergency preparedness and response, as well as the integration of security considerations in the planning and operation of the nation's transportation systems.

http://itri.tsu.edu/TRB_ABE40/home.htm
All-Hazards Approach

- In Transportation there is an All-Hazards approach in dealing with terrorism.
- Weather, traffic, geological, earthquakes, and terrorist incidents require the same response and recovery processes.
- Continuity of Operations (COOP) Plans are developed for All-Hazards incidents.
Cooperative Research Programs
National Cooperative Highway Research Program
Transit Cooperative Research Program
Airport Cooperative Research Program
National Cooperative Freight Research Program
Hazardous Materials Cooperative Research Program
Commercial Truck and Bus Safety Synthesis Program
1. TRB Committee on Critical Transportation Infrastructure Protection shares research results from all sources & identifies research needs

2. AASHTO Special Cmte on Transportation Security identifies and refers research needs

3. NCHRP 20-59 panel funds applied research or refers prioritized requests

10,000 TRB Annual Meeting Participants, 3,000 presentations
75 other technical meetings
TRB Annual Field Visits to DOTs and University Research Centers
State/Local Government
Non-Government Organizations
Federal Agencies
Private Sector
R&D Efforts: Identification of Gaps & Needs (2 of 2)

Transportation Research Information Services (TRIS) Database—World’s Largest

http://ntl.bts.gov/tris

Research In Progress (RiP) Database

Research Needs Statements Database http://rns trb.org/
ABE40 Committee
Critical Transportation Infrastructure Protection
Mid-Year Meeting

Tuesday, August 25, 2009
8:00 a.m. - 10:00 a.m. (Pacific Time)
Beckman Center, Irvine, CA

Jeff Western … Chair
Joyce Wenger … Vice Chair
Atri Sen … Secretary
Pat Bye … ABE40 Web Site
Joedy Cambridge … TRB Senior Staff

ABE40 Website: http://itri.tsu.edu/TRB_ABE40/home.htm
Invite to Participate in ABE40

I would like to invite you to participate in ABE40 Committee Activities as a committee friend or future member

Jeff Western … Chair, ABE 40
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Role of National Labs in Transportation Security
Origin of National Labs

National Labs emerged out of WWII weapons projects

Manhattan Project
- AMES
- Argonne
- Los Alamos
- Oak Ridge

Radar
- MIT Radiation Lab

Need was for a large-scale (expensive), concerted effort, with access to first-rate scientists

These labs efforts were a big success!
Why National Labs

85 Nobel prizes, 739 R&D 100 awards (total for DOE & predecessor agencies)

The DOE Labs conduct cutting edge R&D worth many $B’s annually and thus provide a high value leverage

Argonne National Laboratory
Brookhaven National Laboratory
Idaho National Laboratory
Lawrence Berkeley National Laboratory
Lawrence Livermore National Laboratory

Los Alamos National Laboratory
Oak Ridge National Laboratory
Pacific Northwest National Laboratory
Sandia National Laboratory

Primarily funded by DOE, but also NIH, DHS, DOD, DOT, NSF, NASA, Commerce, Agriculture, EPA ...
What do National Labs have to offer

Most all these labs also have a dual role as a DHS S&T lab

Particularly good for large, complex problems because

- Good at running large (expensive), 1-of-a-kind facilities
- Good at marshalling large, interdisciplinary research teams
- Have line-management organizations (thus can reconfigure to best support specific missions)
- Not bound by publish-or-parish reward system (accommodate proprietary or classified research)
- Not bound by academic three-year grant cycles (can thus take longer term perspective)
DHS utilizes DOE National Labs

DHS strategy: access expertise and associated infrastructure, wherever it lies

Homeland Security Act (2002) established and “Office of National Laboratories” (ONL) to enable DHS access to DOE national labs

DHS-S&T use this DOE infrastructure to conduct homeland security-related research, development, testing, and evaluation (RDT&E) activities
Want to know more about National Labs

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Cyber Security
TSA Transportation Systems-Sector Cyber Working Group

Becky West, Director
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Jeff Western, Principal
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Importance of Cyber Security

Probability / Extreme Events

Transportation System-Sector Cyber Risks can lead to a high impact threat:
- SCADA Failures: Metro system switching system failure in Washington, DC (July 2009) led to train collision and loss of life
- Misinformation: Zombie Signs, hacking of road-side information lead to disinformation

“Identified need for collaboration and increased visibility to the cyber risks to Critical Infrastructure”
- Over 50+ Members from both Private and Public Sector (National, State, Local and Tribal)
- Membership includes: Cross-Sector and Cross-Functional Teaming
- International and Academic participation crucial
- Private and Public (TSA) Co-chairs
- SME Members include recognized critical infrastructure and transportation experts
- Additional need identified to build strong representation within each Transportation mode and academia
Outreach

We want to hear from you!

Soliciting input for Strategic, Tactical, and Operational methods to protect the cyber infrastructure

Please reach out to me or committee at jason.gropper@associates.dhs.gov for membership and more information
A two day workshop where participants will learn from the experience and insight of well-known speakers involved in Infrastructure Security and Evacuation Planning.

The Catastrophic events of September 11, 2001 focused the attention of public and private entities on infrastructure safety and security especially in large metropolitan areas such as New York/New Jersey. Subsequent to the devastating impacts of Hurricane Katrina and the failure of the I-35W Bridge in Minnesota which caused both short and long term disruptions, the need for public awareness and education has become even more important.

addressing the needs of infrastructure security

A number of relatively natural and man-made catastrophes, some of which have been cited above, have been instrumental in allocating funds to several research and development projects throughout the USA. These and other “infrastructure security” projects are generating very valuable and potentially life-saving results. However, there is a need to communicate these results to public and private agencies as well to develop synergies among practitioners and researchers to share their results. This workshop provides a forum for the transfer of knowledge and experiences that can be used to improve evacuation planning, security and the safety of infrastructure facilities.

The objective of the two-day workshop is to provide a forum to disseminate information on infrastructure security and evacuation planning; assisting Engineers, Consultants, and Owners to:

1. Share the results of recent research findings with the public and private agencies with the goal of ensuring their implementation to minimize potential impacts of future events.

2. Create an information-sharing platform among researchers that are potentially working on complementary projects to maximize the impact of their findings through active information sharing and collaboration. A variety of topics related to security will be covered.

TENTATIVE AGENDA

The workshop will be in the form of formal presentations and panel discussions designed to update Engineers, Owners, Consultants, and Managers on the security and safety of bridges and other infrastructure facilities.

DAY 1 (October 13)

- Role of Security in Transportation
- Infrastructure Security: Bridge Security and Vulnerability Assessment
- Evacuation Planning
- Panel Discussion: Successful Implementation of Security Measures and Future Recommendations

DAY 2 (October 14)

- Role of Security in Transit
- Cyber-Infrastructure Security
- Design for Blast

DAY 3 (October 15 - By Invitation Only)

- TSA Exercises (details TBA)
My Contact Information

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