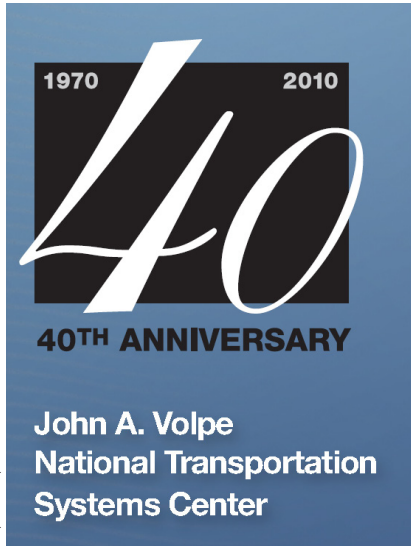


VOLPE HIGHLIGHTS

The Volpe Center Celebrates Its 40th Anniversary



Since 1970, the Volpe Center, in support of U.S. DOT and its modal administrations, has been at the forefront in assessing and responding to major transportation issues: safety, mobility, the environment, economic growth, energy, national security and most recently livable communities and sustainability. In order to respond to shifting priorities and challenges, the Volpe Center has developed a world recognized multimodal and multi-disciplinary transportation related expertise. The Volpe Center has been regularly called upon from its inception to play a key role in addressing the nation's most complex transportation challenges and enabling innovation.

The Volpe Center has remained flexible, adaptable and responsive to the needs of its sponsors. Today, the Volpe Center has more than seventy-five sponsors from the Federal, regional, state and local government, foreign

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Volpe Center to Exhibit at Transportation Research Board Annual Meeting

The Volpe Center will be well represented at the 89th Annual Meeting of the Transportation Research Board (TRB) in Washington DC, which will take place January 10-14, 2010 at the Connecticut Avenue Collection Hotels. The theme of this year's meeting is Investing in Our Transportation Future – BOLD Ideas to Meet BIG Challenges. More than 3,000 presentations are planned addressing a wide range of transportation research topics. Secretary of Transportation Ray LaHood will be the featured speaker at the Chairman's Luncheon.

If you are attending this year's meeting, please drop by the Volpe Center display and demonstrations, part of the Research and Innovative Technology Administration (RITA) booth in the Marriot Wardman Park Hotel Exhibit Hall. Volpe Center personnel will be on hand to answer questions and demonstrate Volpe's Vehicle Operator Impairment Monitoring technology and the Maritime Security and Safety Information System – winner of the Innovations in American in Government Award by Harvard's Ash Institute. The Volpe Center will also staff the Small Business Innovative Research program exhibit. The exhibit area is open Sunday, January 10 through Tuesday, January 12.

During TRB week, Volpe Center director Robert Johns will be chairing the TRB Technical Activities Council meeting, attending the TRB Executive Committee meeting, and presenting awards at the Thomas B. Deen Distinguished Lecture and at the Chairman's Luncheon. He will also be attending the ITS partnership meeting at the Royal Netherlands Embassy with colleagues from the Volpe Center and the Dutch Ministry of Transport's Centre for Transport and Navigation.



Director Robert Johns will participate in a number of sessions and workshops and will chair the Technical Activities Council meeting at TRB.

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Volpe Center Experts Review Rail Trespass in South Florida



Volpe Center photo

Volpe staff also participated in two West Palm Beach Police Department and South Florida Regional Transportation Authority enforcement blitzes at both a rail station and a geometrically complex highway rail grade crossing intersection.

Rail trespass is becoming an increasing problem around the United States. In the past few years, a number of deaths have occurred along a seven-mile stretch of rail in Florida's West Palm Beach. Hoping to learn solutions that can prevent rail trespass deaths, the U.S. DOT Federal Railroad Administration approached the Volpe Center to initiate a Trespass Prevention Guidance Demonstration project.

Volpe Center staff from the Physical Infrastructure Systems Center of Innovation are working closely with the South Florida Regional Transportation Authority and stakeholders in West Palm Beach, FL. They will review pedestrian safety at or near rail passenger stations; local, state, and Federal laws regarding trespass on railroad property; vandalism affecting railroad safety; and violations of highway-rail grade crossing warning devices.

The research will be conducted in an on-going two-year program, which will entail development

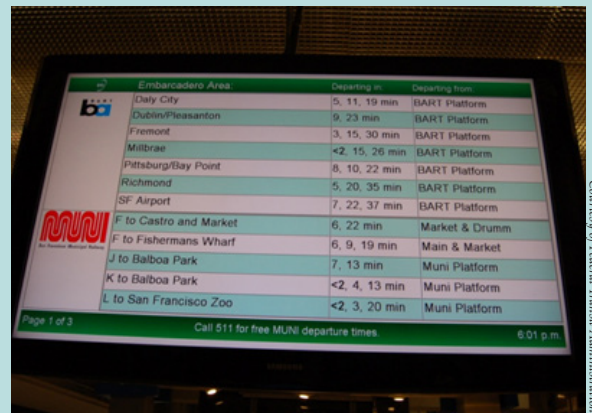
and periodic revisions of model prevention strategies. The Volpe Center anticipates that the results and lessons learned will provide nationwide guidance on the topic of railroad trespass prevention that will not only enhance safety but also increase efficiency.

Transit Wayfinding Technologies Assessment

The dramatic increase in portable information technology products -- including cell phones, PDAs and similar devices -- has created the capability of providing real-time traveler information directly to consumers as they are traveling. Recognizing the potential of this trend to increase transit ridership, the Federal Transit Administration (FTA) commissioned the Volpe Center to undertake a Transit Wayfinding Technologies Assessment.

This study, by a Volpe Center transit Intelligent Transportation Systems team, part of the Center of Innovation for Advanced Vehicle and Information Network Systems, includes a detailed literature and web search of potential applications; more than seventy telephone and on-site interviews of transit service providers and academic experts in nine cities; and development of an Operational Test Framework to study an assortment of deployed wayfinding technologies in California, Illinois, New York, Oregon, Texas, Washington and Washington, DC. The results of this effort will be presented to both FTA and transit agencies in reports and a variety of public forums.

Several interesting examples of wayfinding services have already been assessed. For example, the TriMet transit agency in Portland, OR has implemented a Trip Planner and Interactive Map application for the buses, light rail, commuter rail and streetcar services in that region. Trip Planner enables users to access boarding locations, fares and trip length information, while the Interactive Map feature enables users to click on a specific transit stop and retrieve the stop number, fare zone, bus services, next bus arrival time, and connections to other transit services. Seattle, WA's King County Metro agency provides route and schedule information to a third party which created "One Bus Away." This application allows users to enter a trip parameter and starting address, which the program then uses to create transit routes and estimated trip times. The system even connects to other databases, such as restaurant locations.



Courtesy of Federal Transit Administration

New dynamic message sign for San Francisco transit system provides real-time departure information for travelers.



UTC Program Initiates National Transportation Workforce Development Strategy

As new and innovative technologies and practices are introduced into our nation's transportation systems, the need to assure a well-trained and highly skilled workforce that can use these advances to their maximum potential becomes increasingly important. And as the sophistication of these innovations grows, the skills needed transcend the traditional engineering categories to incorporate such disciplines as financing and economics, operations research, project management, sustainability, livability and communications.

To help prepare for this dynamic future, RITA's University Transportation Centers (UTC) Program is putting together a cross-organizational team to develop and help implement a national transportation workforce development strategy that can meet these demands for creativity and innovation in transportation. Along with the Volpe Center and UTC Program, initial partners include the Federal Highway Administration, Federal Transit Administration, Federal Railroad Administration, Maritime Administration, RITA's Bureau of Transportation Statistics, and the Council of University Transportation Centers (CUTC), which represents more than 85 universities participating in the UTC Program. Over the coming months, the UTC Program Office will be engaging additional operating administrations within U. S. DOT and CUTC will reach out to potential outside partners.

Through a series of regional and state-level "summit" meetings, the team is creating a coordinated, national framework that incorporates new policy solutions and a roadmap to address the most pressing workforce issues in transportation. These issues include recruiting and retaining qualified transportation staff, filling key shortages, and defining the competencies needed and creating career pathways for staffing key positions. The Volpe Center supports this important effort through researching and analyzing the data needed to provide a strong foundation for the strategy development process; designing, facilitating and documenting key meetings; and helping to plan the specifics of both outreach to key partners and the national strategy.

Investigating Quieter Vehicles' Safety For Vision-Impaired Pedestrians

Innovations that bring benefits to one aspect of transportation can sometimes have a negative impact on other aspects. This situation has recently become evident as the number of hybrid-electric and all-electric vehicles has been growing. Even though these vehicles bring substantial benefits to the environment by significantly reducing greenhouse gas emissions, the concern that they can emit low sound, especially at low speeds, causes potential safety problems for vision-impaired pedestrians who rely substantially on hearing auditory cues from vehicles to know when it is safe to cross streets.

The Volpe Center has been assisting the National Highway Traffic Safety Administration (NHTSA) investigate this issue through the "Quieter Cars and the Safety of Blind Pedestrians" research program, which was initiated this past spring. The goals of this effort are: to characterize the specific safety problems for vision-impaired pedestrians; identify requirements for safe mobility; and review potential countermeasures that would support continued safe mobility. Staff from the Volpe Center's Human Factors Research and Systems Applications and Environment and Energy Systems Centers of Innovation worked with NHTSA to develop and implement the programs' research plan. The Volpe Center measured the acoustic characteristics of a representative sample of vehicles and ambient sounds; completed human-subject studies to examine the auditory detectability of vehicles; and reviewed countermeasure candidates. The Volpe Center worked with the Carroll Center for the Blind and the Perkins School for the Blind in Massachusetts. Organizations that are also working on the quieter cars issue include the National Federation of the Blind, the American Council of the Blind, the Alliance of Automotive Manufacturers, the Society of Automotive Engineers, and the Association of International Automobile Manufacturers. Results are expected to be available by the end of January 2010.



Volpe Center photo

The Volpe Center recorded the sounds of hybrid electric and internal combustion engine vehicles in various speed and operating modes. The recordings were used to examine the auditory detectability of vehicles by vision-impaired pedestrians.

NHTSA Leadership Visits Volpe



National Highway Traffic Safety Administration (NHTSA) officials recently visited the Volpe Center. From left to right: Associate Administrator of the National Center of Statistics and Analysis, Marilena Amoni; Acting Deputy Administrator Ronald Medford, Volpe Center Director Robert Johns, and Associate Administrator of Vehicle Safety Research, John Maddox. Volpe Center leadership and technical staff briefed them on the Center's capabilities and work in safety management systems, environmental and energy systems, human factors research and systems applications, multimodal systems research and analysis, and advanced vehicle information network systems.

40th Anniversary *continued*

nations, non-profit organizations, universities and the private sector.

The Volpe Center just wrapped up a very successful fiscal year, representing the second-largest amount of annual new work in its history. In the past year, Volpe recruited and hired 80 highly qualified staff members and co-op students in a range of technical disciplines spanning economics, community planning, operations research analysis, information technology, and aerospace, civil, and mechanical engineering.

The commitment of the Volpe Center to outstanding public service extends far beyond day-to-day work. Through long-standing outreach programs, Volpe Center staff volunteer their time in local schools, support Federal and local charitable giving initiatives, and cultivate environmental stewardship.

We look forward to updating you throughout 2010 on the specific events and products that will be part of our 40th Anniversary year, and we invite you to join us in this celebration. For more information, please check with <http://www.volpe.dot.gov> and refer to upcoming 2010 issues of Volpe Highlights.

Volpe at TRB *continued*

Many of our Center of Innovation (COI) Directors will also be in attendance:

- Anne Aylward, Director of our Multimodal Systems Research and Analysis COI, will participate in sessions on livability, ITS and climate change.
- Gregg Fleming, Director of our Environmental and Energy Systems COI and Chairman Emeritus of TRB's Committee on Transportation-Related Noise and Vibration, will attend sessions on noise, air quality and climate change.
- Michael Dinning, Director of our Freight Logistics and Transportation Systems COI, will attend sessions on security, logistics and emergency response.
- Robert Dorer, Director of our Physical Infrastructure Systems COI will participate in the TRB Technical Activity Council meeting, Rail Group related committee and subcommittee meetings and chair the Rail Group Executive Board meeting.
- Dr. Stephen Popkin, Director of our Human Factors Research and Systems Applications COI, will co-chair the Rail Operational Safety Committee meeting and attend the Rail Executive Committee Meeting as well as sessions on operator performance, distraction and fatigue, as well as other safety-related human factors sessions.
- Dr. Marc Mandler, Director of our Safety Management Systems COI, will attend sessions on motor carrier safety, data quality and safety management.

In addition, we have over 20 Volpe Center staff that will be chairing, presenting and attending sessions and workshops that cut across all aspects of transportation.

 U.S. Department of Transportation
Research and Innovative Technology Administration

Volpe National Transportation Systems Center
55 Broadway
Cambridge, MA 02142-1093

www.volpe.dot.gov

For general comments or questions, contact:
Volpe Center Information
617.494.2224 or askvolpe@dot.gov

Contributors to this issue:

Ellen Bell, Anya Carroll, Joyce Chen, Lisandra Garay-Vega, David Jackson, Richard John, Alison Kruger, David Damm Luhr, Mark Safford, Diane Wells