MINETA TRANSPORTATION INSTITUTE

The Norman Y. Mineta International Institute for Surface Transportation Policy Studies was established by Congress in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The Institute’s Board of Trustees revised the name to Mineta Transportation Institute (MTI) in 1996. Reauthorized in 1998, MTI was selected by the U.S. Department of Transportation through a competitive process in 2002 as a national “Center of Excellence.” The Institute is funded by Congress through the United States Department of Transportation’s Research and Innovative Technology Administration, the California Legislature through the Department of Transportation (Caltrans), and by private grants and donations.

The Institute receives oversight from an internationally respected Board of Trustees whose members represent all major surface transportation modes. MTI’s focus on policy and management resulted from a Board assessment of the industry’s unmet needs and led directly to the choice of the San José State University College of Business as the Institute’s home. The Board provides policy direction, assists with needs assessment, and connects the Institute and its programs with the international transportation community.

MTI’s transportation policy work is centered on three primary responsibilities:

Research
MTI works to provide policy-oriented research for all levels of government and the private sector to foster the development of optimum surface transportation systems. Research areas include: transportation security; planning and policy development; interrelationships among transportation, land use, and the environment; transportation finance; and collaborative labor-management relations. Certified Research Associates conduct the research. Certification requires an advanced degree, generally a Ph.D., a record of academic publications, and professional references. Research projects culminate in a peer-reviewed publication, available both in hardcopy and on TransWeb, the MTI website (http://transweb.sjsu.edu).

Information and Technology Transfer
MTI promotes the availability of completed research to professional organizations and journals and works to integrate the research findings into the graduate education program. In addition to publishing the studies, the Institute also sponsors symposia to disseminate research results to transportation professionals and encourages Research Associates to present their findings at conferences. The World in Motion, MTI’s quarterly newsletter, covers innovation in the Institute’s research and education programs. MTI’s extensive collection of transportation-related publications is integrated into San José State University’s world-class Martin Luther King, Jr. Library.

DISCLAIMER
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About the Mineta Transportation Institute

The Mineta Transportation Institute (MTI) was originally designated by Congress as a non-technical, policy research and education center in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 and reaffirmed by the Institute’s Board of Trustees after reauthorization in the Transportation Equity Act for the 21st Century (TEA-21) in 1998. MTI undertakes research, education, and information/technology transfer programs relative to the policy control and management of all surface transportation modes. Within those parameters, MTI produces studies of the best examples of surface transportation policy and management activities in the world, accumulates those into peer-reviewed publications, and communicates best practices to MTI’s professors, students, and the nation’s transportation leaders.

During the 1991 ISTEA, 1998 TEA-21 and 2005 SAFETEA-LU debates, Congress strongly expressed the desire to assure the international competitiveness of the nation’s transportation systems. Because much larger motor vehicle fuel taxes are available in other industrialized countries, the US will not be able to outspend so it must outsmart the competition. Therefore, MTI’s objective is to identify through research, to teach through education, and to broadly disseminate through information/technology transfer programs the best transportation practices in use throughout the world. MTI’s work encompasses all modes of surface transportation, including the interface between those modes.

MTI is organized by function, with directors operating in each of three departments – Research (including the National Transportation Finance Center, the National Transportation Security Center of Excellence for both US DOT and DHS, and the National High-Speed Rail Policy Center), Education, and Communications and Technology Transfer.
NATIONAL TRANSPORTATION SECURITY CENTER
Brian Michael Jenkins was appointed in 2008 to lead MTI’s National Transportation Security Center of Excellence and its continuing research on protecting surface transportation against terrorist attacks. As a leading authority on terrorism and sophisticated crime, he works with government agencies, international organizations and multinational corporations. He is also a senior advisor to the president of RAND. Mr. Jenkins was deputy chairman of Kroll Associates, an international investigative and consulting firm, and he was chair of RAND’s political science department, where he directed research on political violence.

Mr. Jenkins has a BA in fine arts and a master’s degree in history, both from UCLA. He studied at the University of Guanajuato, Mexico and at the University of San Carlos, Guatemala where he was a Fulbright Fellow and received a fellowship from the Organization of American States.

Mr. Jenkins was a paratrooper and a captain in the Green Berets. He is a decorated combat veteran, serving in the Special Forces in the Dominican Republic and Vietnam. He returned to Vietnam as a member of the Long Range Planning Task Group, receiving the Department of the Army’s highest award for his service.

Since then, he has served on numerous US and international task forces investigating terrorist attacks. In 1996, President Clinton appointed Mr. Jenkins to the White House Commission on Aviation Safety and Security. He was an advisor to the National Commission on Terrorism and served on the US Comptroller General’s Advisory Board. Mr. Jenkins is the author of several articles, reports and books, including *International Terrorism: A New Mode of Conflict* and *Will Terrorists Go Nuclear?*
Dr. Frances L. Edwards is the Deputy Director of MTI’s National Transportation Security Center and a professor and director of the Master of Public Administration program at San José State University. She is a research associate of the Mineta Transportation Institute and an editorial board member of the Public Administration Review (PAR). Dr. Edwards is co-author with Friedrich Steinhausler of two books in the NATO Science Series on terrorism threats and response, and with Brian Jenkins on 9/11. She also authored numerous chapters for text and professional books.

She has written more than 30 professional journal articles, most recently on climate change for The Public Manager, cross border disaster response issues in Journal of Contingency and Crisis Management, and on federal homeland security grants in State and Local Government Review. She serves on the ASPA Hurricane Katrina Task Force, and was a member of the Executive Session on Domestic Preparedness at Harvard, the Bioterrorism Working Group at Stanford, three NATO expert workshop panels on terrorism, and the California Seismic Safety Commission. For 25 years Dr. Edwards was a practitioner, including 14 years as the Director of Emergency Preparedness for San José, California, the nation’s tenth largest city. She has a PhD and MUP from New York University, an MA from Drew University, and a Certificate in Hazardous Materials Management from the University of California, Irvine.

The New York Times, Washington Post and other national media have identified Dr. Edwards as one of the nation’s leading experts on disaster response and recovery planning and training.
There are four MTI NTSCOE Research Associates who are integral to the completion of all research projects and it is with pleasure that we present their biographies.

Bruce R. Butterworth
NTSCOE Research Associate

Bruce Butterworth has had a distinguished government career working at congressional, senior policy and operational levels. Between 1975 and 1980, he was a professional staff member for the House Government Operations Committee, running investigations and hearings on many transportation safety issues, particularly in aviation. Between 1980 and 1991, he worked at the Department of Transportation, 8 of them in the Office of the Secretary. He managed negotiations on air and maritime services in the GATT (now WTO), chaired US delegations to United Nations Committees, and was part of the response to Pan Am 103. Between 1991 and 2000, he held two executive posts in aviation security, as the Director of Policy and Planning, and then as the Director of Operations. Among other things, he was responsible for planning and rulemaking and for regulatory compliance, managing 900 field agents. He worked hard to improve security and the performance of security measures by US airlines and airports. He was also responsible for federal air marshals and ran the FAA’s aviation command center, successfully managing the resolution of hijackings and security emergencies. He launched a successful program of dangerous goods regulation and cargo security after the 1995 ValuJet crash, was a key player in the response to the ValuJet and TWA 800 accidents, and worked closely with the Congress, the National Security Council staff and the intelligence community and law enforcement community.

Between 2000 and 2003, he was an Associate Director at the US Holocaust Memorial Museum (responsible for security and building operations). Finally, between January of 2003 and September of 2007, he was one of two Deputy Directors in a 1,300 person Engineering Directorate at NASA’s Goddard Space Flight Center, and instituted a successful laboratory safety program. He retired from Federal Service in 2007.

As an MTI/NTSCOE Research Associate, he has co-authored seven major publications along with Brian Michael Jenkins. He also co-authored a May 2007 study for the Center for American Progress on cargo Security entitled: Keeping Bombs off Planes: Securing Air Cargo, Aviation’s Soft Underbelly. In February of 2009 he published with Mr. Jenkins an opinion piece on information sharing entitled: “A campaign the Secretary must win” and on March 23, 2010 an opinion piece on intelligence and aviation security in the Washington Post entitled “What we can learn from the Christmas Day Bombing Attempt.”

Mr. Butterworth was awarded a Master of Science degree from the London School of Economics in 1974.
Daniel C. Goodrich

NTSCOE Research Associate

Daniel C. Goodrich, MPA, CEM is a research associate with the Mineta Transportation Institute at the College of Business, San José State University. He is also the instructor for “Security for Transportation Professionals” in the Master of Science in Transportation Management program at MTI.

Dan was a 2006 Fellow of the Foundation for Defence of Democracies, studying terrorism at University of Tel Aviv. He has delivered ten professional papers, including Campus Emergency Management at the FEMA Higher Education Conference in 2010, employee emergency preparedness at the Natural Hazards Conference in 2009, police in disaster response at the 2nd Istanbul Conference on Democracy and Global Security in 2007, maritime security at the American Society for Public Administration in 2007, and “Fourth Generation Warfare” at the 2006 NATO STS-CNAD meeting in Portugal. In 2004 he chaired a session on “First Responders” at the NATO Advanced Research Workshop in Germany, and in 2003 he was a member of the NATO Expert Panel on Nuclear Security and Terrorism.


Dan has been an emergency management coordinator for Lockheed Martin Space Systems, and an analyst in the Santa Clara County Department of Public Health emergency management organization, working on hospital exercises, strategic national stockpile planning and Metropolitan Medical Response System planning, training and exercise development and implementation. He has been the director for eight exercises for the San José Metropolitan Medical Task Force, where he created facilitated exercises, from which Harvard University’s Kennedy School of Government created a case study. Dan served in the United States Marine Corps for ten years, including leadership positions in Security Forces; and in the Army Reserve as a small arms instructor, including service in Iraqi Freedom. He is a consultant to the California Department of Transportation, and has trained NASA/Ames Research Center staff in emergency management.

Dan has a masters degree in public administration from San José State University, and is a Certified Emergency Manager.
Renee Haider joined MTI as a Research Associate in May 2010. She brings to the MTI team over eighteen years of experience in training, education, and project management in the surface transportation sector. Prior to joining MTI she served as an Associate Director of the National Transit Institute (NTI) in the Edward J. Bloustein School of Planning and Public Policy at Rutgers, The State University of New Jersey. Ms. Haider had been with NTI since its formation in 1992. As the Associate Director she was involved in both development and delivery of NTI programs in all of its focus areas. Prior to this position, she served as an Assistant Director for Workplace Safety and Security Programs.

Ms. Haider has developed, directed, and managed a wide range of transportation training programs targeted at transit management, professional trainers and front-line employees. She has served as a project manager or key team member on an array of research and training projects for FTA, FMCSA, FHWA, TCRP, NCHRP and TSA and worked with several University Transportation Centers (UTCs) to jointly develop and deliver training programs. In addition, she has consulted with transit organizations across the US and Canada to customize programs to meet their unique needs.

Ms. Haider continually works with transit associations, state departments of transportation, and public transit agencies to identify and respond to their safety and security training, research, and professional development needs. She served on the course development team for the joint FHWA/NHI/FTA/NTI course on Transportation Safety Planning; integrated discussions of intelligent transportation systems safety applications into NTI’s Implementing Rural Transit Technology and Transit ITS Regional Workshop offerings; and developed a wide variety of safety and security courses including Advanced Mobility Device Securement Skills Development Workshop, Building Diversity Skills in the Transit Workplace, Harassment Prevention for Transit Employees and Supervisors, Musculoskeletal Disorder Awareness and Prevention, Toolbox for Transit Operator Fatigue, Violence in the Transit Workplace, System Security Awareness, and Terrorist Recognition and Response.

At MTI, she continues to focus on safety and security in the surface transportation sector by conducting relevant research projects and concentrating on the application of results to practice. Current projects include a Bus Operator Behavior Awareness Research and Development Program, Security Best Practices for High-Speed Rail, and a project on public outreach efforts to underrepresented populations sponsored by TSA.
Christopher Kozub
NTSCOE Research Associate

Christopher Kozub joined MTI’s growing team of internationally recognized transportation experts as a Research Associate in May 2010 and brings a unique background encompassing over 30 years of experience in the emergency services, transportation safety and security, and training fields.

Before coming to MTI, Mr. Kozub served for the past ten years as an Associate Director at Rutgers University where he worked with the National Transit Institute, the Voorhees Transportation Center, and the newly formed Center for Transportation Safety, Security, and Risk. During his time at Rutgers, he was the principle investigator on a number of federally sponsored surface transportation research, training, and outreach projects addressing system safety, emergency management, system security, and terrorism awareness and response.

Prior to joining Rutgers, Mr. Kozub served as the Director of Training for the Operation Respond Institute (ORI) in Washington, DC where he developed and delivered specialized emergency response training on behalf of the FRA and FHWA as well as Amtrak, VIA Rail, Conrail, and other railroads and transit systems. While at ORI he worked closely with Amtrak to develop and deliver security, safety and tactical training to emergency responders along the northeast corridor in connection with the infrastructure improvements, operational changes, and new equipment acquisitions associated with Acela high speed rail service implementation.

Mr. Kozub has also held senior management positions at emergency services training centers for New Jersey’s Hunterdon and Middlesex counties where he worked with the Association of American Railroads and Conrail to bring specialized hazardous materials training to the northeast part of the country. He also worked with the Port Authority of New York and New Jersey to develop and deliver fire, rescue, and hazardous materials training for their police and emergency services’ departments, including the development of a specialized WMD program following the 1995 Tokyo subway attacks.

Kozub works with key stakeholders in the federal agencies, surface transportation trade associations, and labor organizations to develop and implement safety and security training programs for front-line employees, supervisors and emergency responders in the public transit, highway, rail, and maritime modes. He has also testified before Congress, providing a broad industry perspective on current issues in public transit operational and infrastructure security.
MTI Team Members

Several MTI team members contribute to the successful completion of NTSCOE activities.

Honorable Rod Diridon, Sr.
Executive Director
Rod.Diridon@sjtu.edu

MTI Executive Director Rod Diridon is considered the father of modern transit in California’s Silicon Valley. His political career began in 1971 on the Saratoga City Council. He retired, because of term limits, in 1994 after five terms and six times as chair of both the Santa Clara County Board of Supervisors and Transit Agency Board. He is the only person to chair the nine-county, 119-city, 27-transit-district San Francisco Bay Area’s three regional governments: Metropolitan Transportation Commission, Bay Area Air Quality Management District, and Association of Bay Area Governments.

Mr. Diridon chaired more than 100 international, national, state, and local activities, most regarding transportation and the environment. He is chair emeritus and former governors’ (Davis and Schwarzenegger) appointee to the California High Speed Rail Authority Board and a founding chair of the American Public Transportation Association’s High Speed and Intercity Rail Committee. He chaired the American Public Transit Association in Washington DC in 1994, was vice chair of the International Transit Association in Brussels for a decade, and continues as a director of both. Mr. Diridon chaired the National Association of Counties’ Transit and Railroads Committee, advised the Federal Transit Administration, and chaired the Transportation Research Board’s Transit Cooperative Research Program.

In 2007-08 Mr. Diridon chaired the national Council of University Transportation Centers Board. He also serves on the corporate advisory board of Wells Fargo Bank and the corporate board of Empire Broadcasting Company. From 1969 to 1976, he served as founder and president of the Decision Research Institute, which developed a “shared survey” research procedure adopted by UNICEF. He frequently provides testimony to Congress and speaks throughout the world on sustainable transportation. Mr. Diridon earned an Accounting BS and an MSBA with a statistics emphasis at San José State University, served two combat tours as a US Navy officer in Vietnam, has been listed in Who’s Who in America since 1974, and was recently cited by International Metro Magazine as one of the 50 who most influenced mass transit in North America in the past century. He has received top awards from the American Public Transportation Association, the national High Speed Ground Transportation Association, and others. San José’s main railroad station was rededicated the San José Diridon Station upon his retirement from elected office.
Karen E. Philbrick, PhD  
Deputy Executive Director and Director of Research  
Karen.Philbrick@sjsu.edu

Dr. Philbrick was appointed the Director of Research for the Mineta Transportation Institute in May 2009. In June of 2011, MTI Executive Director Rod Diridon, at the direction of the MTI Board of Trustees, promoted her to the position of Deputy Executive Director.

Before joining MTI, Dr. Philbrick served as the Assistant Director of the National Center for Intermodal Transportation, a Title III University Transportation Center based at the University of Denver in Denver, Colorado. During her tenure at that Center, her work focused on the assessment, design, and development of planning methodologies and tools, technology, and human resources needed to improve intermodal connectivity. Dr. Philbrick has also been extensively involved in studies investigating Fatigue Management Planning and Best Practices in Responding to Critical Incidents in the Transportation Industry. As part of her research, she interviewed thousands of locomotive engineers and conductors as well as airline pilots, maritime industry representatives, and truck drivers. In addition, she interviewed New York City firefighters directly affected by the events of 9/11. This laid the groundwork for the successful completion of her dissertation, which examined a mathematical model for understanding Emotional Distress in Emergency Workers Following a Terrorist Attack.

On an international level, Dr. Philbrick has contributed to the development of educational and training materials for intermodal specialists. Her work has formed a key portion of an international training effort and seminar, Innovations and Challenges in Intermodal Transportation, which has been delivered in the Philippines, Indonesia, and most recently Vietnam. She has been a member of the US delegation to the Asian Pacific Economic Cooperation (APEC) Transportation Working Group since 2000.

With the highest honors, Dr. Philbrick earned a BA from California State University, Fresno, an MA from Columbia University, an EdM from Columbia University, and a PhD from the University of Denver.
Donna Maurillo  
*Director of Communications and Tech Transfer*  
Donna.Maurillo@sjsu.edu

Donna Maurillo joined MTI in 2007, managing communications and technology transfer, such as symposia, forums, and public meetings. She also manages MTI’s communications vehicles such as the web site, annual report, media relations, social media, and other public outreach, and she manages special projects.

Ms. Maurillo managed corporate communications for Silicon Valley technology companies. She also managed venture capital and technology accounts for Hill & Knowlton and other PR agencies, and she was an instructor and consultant in corporate communications for many years.

She has published more than 50 articles on business, politics, and current issues, she co-authored two books on self-employment, and she writes a weekly newspaper column. Her Rotary Club named her Rotarian of the Year, she was twice listed in *Outstanding Young Women of America*, and she presided over several non-profit boards, primarily in the arts and social services. She served on staff for former California Secretary of State Bruce McPherson, and she earned an outstanding service award from UCSC after serving ten years as its alumni association president.

She earned her BA from the University of California and delivered the commencement address. Most recently, she earned her Master of Science in Transportation Management, with an emphasis in Transportation Security. She is a member of the Phi Kappa Phi academic honor society, and she achieved her 30 minutes of fame as a contestant on *Jeopardy*.

Jill Carter  
*Executive Assistant*  
Jill.Carter@sjsu.edu

Jill Carter applies her business skills to MTI office management, where she also oversees the student staff and financial records. Ms. Carter also is executive assistant to Rod Diridon. She and her husband own an automobile repair facility, where she managed office operations, accounting, staffing, sales and general administration. At the Campbell School District library, Ms. Carter purchased books and equipment, instructed library skills, and organized the book fair. At Bank of America, she was a bookkeeper and teller.

She is involved with the activities of her five children, including sports, fundraisers, PTA and classroom support. She attended San José State University, where she studied liberal arts.
Overview

In 2004, with the approval of its Trustees, MTI established the National Transportation Security Center funded jointly by US DOT and Caltrans grants. In 2007, MTI became part of the new Transportation Security Center of Excellence (a consortium of seven universities and research centers) created by the Department of Homeland Security. Funding was initiated in 2008. The new designation provides more stable support for research overall and permits projects jointly funded by DHS and DOT, thereby ensuring that research will consider transportation and security needs.

Brian Michael Jenkins, a former member of the White House Commission on Aviation Safety and Security and advisor to the National Commission on Terrorism, has led MTI’s research on terrorism and surface transportation since its inception in 1996. He continues to serve as the NTSCOE director. Mr. Jenkins is assisted by Dr. Frances Edwards, who serves as deputy director, and administratively by Dr. Karen Philbrick.

The primary NTSCOE staff includes Bruce Butterworth, whose career on Capitol Hill, in the US Department of Transportation (DOT), and as a former Director of Operations for Security at the Federal Aviation Administration (FAA) encompasses three decades of government experience. Renee Haider, a former Associate Director at the National Transit Institute, joined MTI in 2010, bringing to the NTSCOE more than 19 years of experience in training, education, and project management focusing on transportation industry. Chris Kozub, a former Associate Director at the Rutgers University’s Center for Transportation Safety, Security and Risk, also joined MTI in 2010, bringing 30 years of experience in emergency services and transportation safety and security. The primary team is assisted by a team of specialist consultants recruited worldwide.

MTI NTSCOE focuses its research on five main areas: threat analysis; security policy and procedures; disaster planning and emergency management; safety policy and procedures; and developing training programs and materials for security, safety, and emergency-response activities.

The NTSCOE’s research focuses on examining actual events through detailed case studies and quantitative analysis of its unique and expanding computerized database to identify terrorist targeting, tactics, and methods; to distill lessons learned; and to identify best practices. Its research is empirical, that is, based on real data, quantitative where possible. Its findings are intended to be pragmatic and impact ful—producing applicable results that can be used by stakeholders to evaluate and sometimes change their practices. The NTSCOE is international in outlook, learning lessons from worldwide experience, and it makes its research readily available to users through reports, summit meetings, briefings, training programs, and outreach materials.

This past year, the NTSCOE’s priorities were to make its computerized database — a compendium of just under 3,500 attacks on surface transportation targets — more rapidly responsive, more powerful, and web based accessible to DHS users. This enabled even more detailed analyses to help stakeholders decide key policy and operational issues; to complete the NTSCOE’s blueprint for supporting a DHS-sponsored consortium project aimed at refining methods of threat and security analyses; to expand its work in safety analysis and training; and to support urban transit systems and new high-speed-rail projects in the United States with up-to-date research results. The NTSCOE places great emphasis on delivering usable reports, along with training products, as projects or phases of projects are completed.
Activities

In this past year, the NTSCOE team has made 12 presentations at academic and professional meetings. These included presentations to the Department of Homeland Security (DHS), the Federal Transit Administration (FTA), and at Transportation Research Board (TRB) meetings. It also provided briefings through the Public Transportation and Surface Transportation Information Sharing and Analysis Centers (PT/ST-ISACs) and provided information for seven Congressional Testimonies.

In August, Mr. Jenkins represented MTI’s NTSCOE at the TRB Transportation Hazards and Security Summit in Irvine, CA. This summit’s theme was “Looking Beyond the 10th Anniversary of 9/11” and it featured Mr. Jenkins as the plenary speaker and as the person to address “Terrorist Threats to Passenger Rail and Rail Infrastructure.”

At the 2011 University Programs Summit, the MTI’s NTSCOE received the Science and Technology Directorate’s “Impact Award” – “for analytical Support to TSA Explosives Training.” The citation on the award read:

“MTI transitioned research and analytical findings into training for TSA Explosive Operators deployed in mass transit, passenger rail and freight rail environments. MTI’s analysts gave TSA officers an operational understanding of the unique threats, hazards and challenges of performing counter-IED operations in the surface transportation domain, including critical situational awareness of comparative lethality among attack vectors, adversary strategies in the use of multiple explosive device, and safe mitigation techniques.”

Team member Bruce Butterworth hosted a last training session in Ft. Worth, TX in August of 2011.

Dr. Edwards, Dan Goodrich, Bill Medigovich, and Waseem Iqbal completed their work with Caltrans Headquarters Emergency Management staff in the creation of a new Continuity of Operations/Continuity of Government Plan that conforms to new direction from federal and state guidance. This plan is finalized and was the basis for the updated checklist being prepared for the CAAIEMA review this fall. They delivered ICS/SEMS/NIMS training by video-teleconference to all Caltrans districts and headquarters four times; and emergency operations center training in eleven of Caltrans’ twelve districts, and provided the training for Headquarters staff three times. In May of 2012, Edwards and Goodrich, in conjunction with the leadership of the Federal Emergency Management Agency’s (FEMA) Region I in Boston, offered the COOP ERG training that had been done for Caltrans to COOP personnel on the east coast. Specifically, FEMA Region I organized a presentation for the MTI staff at the Volpe Center in Cambridge, Massachusetts and invited interested personnel from FEMA and from departments of transportation and federal partner agencies in the Region.

Their research and development of this training and plan led to the creation of a set of emergency relocation group (ERG) job descriptions as well as an in-person COOP/COG training for the ERG members. Their work has led to the completion of a generic COOOP/COG plan that was published by MTI in August 2011 that can be used by state-level transportation agencies nationwide. Their training materials and a handbook for state-level transportation agencies to use in developing a COOP/COG team was completed and published in September of 2011.

Dr. Edwards and Mr. Goodrich were, once again, asked to present their research at several conferences this past year. These included the Natural Hazards Conference in Colorado; the TRB Transportation Hazards and Security Summit “Looking Beyond the 10th Anniversary of 9/11”; and the FEMA Higher Education Conference in Maryland.

MTI Research Associate Renee Haider conducted a webinar with the staff of the TSA Mass Transit and Passenger Rail
Surface Division to present the EMCAPS Phase II research conclusions and recommendations. Moreover, the findings from this research were presented to the APTA Standards Development Program Security Risk Management Sub-Committee who are in the process of developing a recommended practice on public awareness programs and to the Maryland Transit Administration (MTA).
Although terrorists remain obsessed with attacking commercial airliners, as evidenced by the attempt in December 2009 to sabotage a Northwest airliner flying between Amsterdam and Detroit, and the November 2010 attempt to detonate bombs in an all-cargo aircraft flying to the United States, public surface transportation is a more accessible killing field, and actively targeted by terrorists. As of July 3, 2012, terrorists had carried out 157 attacks on airliners and airports (outside of the war zones in Iraq, Afghanistan and Somalia) since 9/11. A good many of these caused no casualties and were, for example, rocket, mortar or small arms attacks against commuter airports in Southwest Asia. There were only six attacks that resulted in any fatalities, resulting in a total of 157 killed and 357 injured, yielding an average lethality per attack of just over 2.0 deaths. Taking the two most lethal attacks – twin suicide bombings of Russian airliners in 2004, lethality per attack was 44 deaths.

Although there have been some airline attacks, attacks on transit systems have been extensive. During the same period, (from 9/11 to present) terrorists have carried out close to 2,000 attacks resulting in over 3,900 deaths and more than 14,000 injuries. The average lethality per attack was proportionately higher than in aviation. For passenger trains it was approximately 3.3 deaths, and for buses it was 3.3 deaths. Thus, there were proportionately more attacks on transit systems, which yielded a higher lethality rate than the attacks on airlines. In discussing the quantity of people killed, there were also 11 attacks in which 50 or more people were killed, and in 3 of these attacks, the death toll climbed to just below 200. If one were to translate these 11 attacks into transport category hull losses, it would translate into 7 airliners lost since 9/11 – a startling finding.

Many of the attacks on surface transportation (including some of the most spectacular) were carried out by individuals and groups connected with the global jihadist terrorist campaign. These include the March 2004 bombing of commuter trains in Madrid, which killed 191 people; the July 2005 bombing of three London subway trains and a bus, which killed 52; and the July 2006 attack on commuter trains in Mumbai, which killed 207. However, other groups, from Palestinian resistance factions in the Middle East to Tamil separatists in Sri Lanka, have also carried out devastating attacks. For example, in May 2010, Maoist guerrillas in India derailed a passenger train onto the tracks of an oncoming freight train, killing 148 people.

**NTSCOE Analysis of Jihad versus Non-Jihad Attacks**

A recent analysis using the MTI database compared jihadist to non-jihadist attacks, and also to all attacks (jihadist or not) that occurred in Western or analogous cities. The analysis revealed just how lethal jihadist attacks have been. The report identified that seventy-one % of non-jihadist attacks resulted in zero deaths and only 1.8 % killed 25 people or more. In attacks on Western or Analogous Cities, 85 % resulted in zero deaths and 2.7 % killed 25 people or more, a factor attributable to the inclusion of jihadist attacks in Madrid, London and Moscow.

In contrast, only 38.5% of jihadist attacks resulted in zero deaths, 8.3% killed 25 or more people and 5.2% killed 50 or more people. Even more interesting, this lethality is high even when compared to attacks in Israel and Sri Lanka, the scenes of very deadly campaigns (54.2% killed zero people, 2.2% killed 25 or more and only 1.1% killed 50 or more). Finally, compared to attacks in Sri Lanka, which are probably the most bloody in MTI’s database, jihadist attacks are still more lethal. 43.9% of attacks (compared to 38.5% for jihadist attacks) resulted in zero deaths, 7.3% killed 25 or more (compared to 8.3% for jihadist attacks), and 3.7% killed 50 or more (compared to 5.2% for jihadist attacks).
Continued Investigation of Terrorist Behavior against Transit (July 2011-June 2012)

The statistics of attacks against transit systems have been organized, monitored, updated, and analyzed through the NTSCOE/MTI Database on Terrorist and Serious Criminal Attacks Against Public Surface Transportation. This database has the capability to monitor trending in terrorist activity against transit systems. This information has been organized to aide in the decision-making process related to suitable security responses. Findings from the database were recently quoted in the United States House of Representatives Homeland Security Subcommittee on Transportation Security Administration’s Surface Inspection Program, May 31, 2012, and in other prominent research.

Discussing general trends in terror activity between July 2011 and June 2012, there have been 136 recorded incidents of terrorism. These attacks have resulted in approximately 1,917 total casualties, 547 fatalities, and 1,370 injured. In 2012, the two largest attacks resulting in highest death rate occurred in Jamrud, Pakistan, and Kaduna, Northern Nigeria. The attack in Pakistan was assumed to be conducted by known terrorist group Tehrik-i-Taliban on 1/10/2012, which targeted a bus station, killing 30. In Nigeria, Boko Haram was suspected of carrying out activity on a bus station on 4/8/2012 that killed 30. There has also been notable activity in various regions in Syria and Pakistan, in which buses have been predominately targeted for attack.

The MTI database provides both up-to-date and historical information on terror activity against transit systems. Most recently, information from the database has been organized to assess characteristics of the attacks, such as the time of day and most common day of the week.

Terrorist Plots

NTSCOE also actively analyzes patterns pertaining to terrorist plots against transit systems. Terrorist plots abroad include a plot to attack London’s Heathrow Express in April 2005; a failed attempt in July 2005 to replicate the deadly July 7 bombings; an August 2005 plot to release toxic chemicals on London’s Tube; a November 2005 plot to bomb train stations in Melbourne or Sydney; an April 2006 plot to blow up a commuter train in Milan; a failed attempt to bomb German trains in August 2006; and a January 2008 plot to bomb the Barcelona Metro.

Since 9/11, public surface transportation systems in the United States have also been the targets of a number of terrorist plots, including a January 2003 plot to release cyanide on New York subways; an August 2004 plot to blow up a subway station in midtown Manhattan; a July 2006 plot to blow up subway tunnels under the Hudson River; a 2008 plot to attack the Long Island Railroad; and a September 2009 plot to blow up New York subways.

MTI was one of the first research centers to address this trend. Its research on transportation security issues began in 1996 with case studies, a chronology of terrorist attacks, and security summits that brought together operators and government authorities. That focus continued through 2008 as MTI began to assemble its database, starting with its own seminal chronologies, and then maturing more with the help of NTSCOE funding.
Security Projects Completed in Fiscal Years 2009-10 and 2010-11

The following projects were described in more detail in prior annual reports. They are listed here in order of project number to ensure that all completed projects are acknowledged.

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Project Number</th>
<th>Publication Number</th>
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<td>Emergency Management Supplemental Report</td>
<td>#2727-2</td>
<td>WP #10-01</td>
<td>Frances Edwards, Ph.D. and Daniel Goodrich</td>
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<td>Handbook of Emergency Management For State-Level Transportation Agencies</td>
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<td>WP #09-02</td>
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<td>Supplement to MTI Study on Selective Passenger Screening in the Mass Transit Rail Environment</td>
<td>#2876</td>
<td>#09-05</td>
<td>Brian Michael Jenkins, Bruce Butterworth, and Larry Gerston</td>
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<td>The 1995 Attempted Derailing of the French TGV (High-Speed Train) and a Quantitative Analysis of 181 Rail Sabotage Attempts</td>
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<td>Emergency Management Training and Exercises for Transportation Agency Operations</td>
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<td>Exploring the Effectiveness of Transit Security Awareness Campaigns in the San Francisco Bay Area</td>
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<td>Nina Rohlich, Peter Haas, Ph.D., and Frances Edwards, Ph.D.</td>
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<td>Potential Terrorist Uses of Highway-Borne Hazardous Materials</td>
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<td>#09-03</td>
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<td>Terrorist Attacks on Public Bus Transportation: A Preliminary Empirical Analysis</td>
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<td>Brian Michael Jenkins</td>
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<tr>
<td>Mass Transit Bus Operator Behavioral Awareness Training Program</td>
<td>#2982-II</td>
<td>N/A</td>
<td>Brian Michael Jenkins</td>
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<tr>
<td>Implementation and Development of Vehicle Tracking and Immobilization Technologies</td>
<td>#2983</td>
<td>#09-04</td>
<td>Brian Michael Jenkins, Bruce Butterworth, and Frances Edwards, Ph.D.</td>
</tr>
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Projects Completed in the Past Year

Bus Operator Awareness Research and Development Training Program: Phase II
Project #2875
http://www.transweb.sjsu.edu/project/2875-2.html
Investigators: Brian Michael Jenkins and Chris Kozub

This phase of the BOARD project resulted in a 15-minute summary of the BOARD course material previously developed and distributed by DHS/TSA to transit systems and displayed in operator break rooms, at safety briefings, during annual refresher training sessions, or in other similar settings. This briefing is an auto-run PowerPoint presentation with an audio overlay of narration and music. The relevant visual material, sources, and storyboard were approved by DHS prior to the creation of the PowerPoint.

Continuity of Operations/Continuity of Government for State-Level Transportation Organizations
(Former title: MTI NTSCOE: NIMS/COOP/COG Applications and Implementation for State Transportation Agencies: Best Practices)
Project #2976
Publication #11-02
Principal Investigator: Frances Edwards, Ph.D.

The Homeland Security Presidential Directive 20 (HSPD-20) requires all local, state, tribal and territorial government agencies, and private sector owners of critical infrastructure and key resources (CI/KR) to create a Continuity of Operations/Continuity of Government Plan (COOP/COG). There is planning and training guidance for generic transportation agency COOP/COG work, and the Transportation Research Board has offered guidance for transportation organizations. However, the special concerns of the state-level transportation agency’s (State DOT’s) plan development are not included, notably the responsibilities for the entire State Highway System and the responsibility to support specific essential functions related to the State DOT Director’s role in the Governor’s cabinet. There is also no guidance on where the COOP/COG planning and organizing fits into the National Incident Management System (NIMS) at the local or state-level department or agency. This report covers the research conducted to determine how to integrate COOP/COG into the overall NIMS approach to emergency management, including a connection between the emergency operations center (EOC) and the COOP/COG activity. The first section is a presentation of the research and its findings and analysis. The second section provides training for the EOC staff of a state-level transportation agency, using a hybrid model of FEMA’s ICS and ESF approaches, including a complete set of EOC position checklists, and other training support material. The third section provides training for the COOP/COG Branch staff of a state-level transportation agency, including a set of personnel position descriptions for the COOP/COG Branch members.
Security Awareness for Public Bus Transportation: Case Studies of Attacks Against the Israeli Public Bus System
(Former title: Mineta Transportation Institute Data Base of Terrorists Attacks against Public Surface Transportation: Chronologies)
Project #2978
Publication #11-07
Investigators: Bruce Butterworth, Shalom Dolev, and Brian Michael Jenkins

This report presents 16 case studies of attacks planned or carried out against Israeli bus targets, along with statistical data on the number, frequency, and lethality of attacks against bus targets that have taken place in Israel since 1970 and during the Second Intifada, which occurred between September 2000 and the end of 2006. The statistical data come from MTI's Database on Terrorist and Serious Criminal Attacks Against Public Surface Transportation. The report also includes an analysis of the effectiveness of different improvised explosive devices and methods of delivering them and raises questions for future discussion.

The case studies of bus attacks were selected not because they are statistically representative, but because they provide a variety of interesting observations. They include both lethal and nonlethal attacks, attacks in which security measures were effective or were not followed or were ineffective, and attacks in which the attackers' tactics and/or devices were lethal or failed or reduced the lethality of the attack.

It is hoped that the cases presented in this report and the accompanying analysis will increase understanding of what can happen and of what can deter, prevent, and/or mitigate the occurrence of terrorist attacks against public bus systems.

Carnage Interrupted: An Analysis of Fifteen Terrorist Plots Against Public Surface Transportation
(Former title: Terrorist Attack Annual Trends Analysis)
Project #2979
Publication #11-20
Investigators: Brian Michael Jenkins and Joseph Trella

This report examines 13 terrorist plots against public surface transportation that were uncovered and foiled by authorities between 1997 and 2010 and two failed attempts to carry out attacks. Certainly, this is not the total universe of foiled or failed terrorist plots in these years, but they were selected on the basis of what is known about them and the accessibility of information. The report focuses on terrorist plots in the West. Seven of the 15 plots took place in the United States, and four occurred in the United Kingdom. These two countries figure prominently as targets of terrorism, and in addition, American and British officials have dealt with terrorist plots through publicized arrests and trials, which provide additional information. Although motive was not a criterion in the selection of the plots, all but one involve individuals or groups inspired by al Qaeda's ideology of violent global jihad against the West. The exception is the 1997 Flatbush plot, in which two terrorists, both of whom had connections with Hamas,
angered by events in Palestine, simply wanted to kill as many Jews as possible to express their opposition to US support for Israel. Other sources suggest that the Flatbush plotters wanted to force the release of jailed Islamist terrorists in the United States, including Ramzi Yousef, who participated in the 1993 World Trade Center bombing, and Sheikh Omar Abdul-Rahman, who was convicted for his involvement in a plot to carry out additional bombings in New York.

**Engagement of Minority Communities in Public Awareness Programs (EMCAPS)**

**Project #1078**

**Publication #N/A**

**Investigator: Renee Haider**

In July 2010, the US Department of Homeland Security (DHS) launched a national If You See Something, Say Something™ public awareness campaign. The campaign seeks to raise public awareness about potential signs of terrorism with a strong emphasis on the importance of reporting suspicious activity to law enforcement. In support of this effort, the Transportation Security Administration (TSA) reached out to the National Transportation Security Center of Excellence (NTSCOE) to identify opportunities to enhance the effectiveness of public security awareness campaigns in the mass transit sector. A review of existing programs raised questions about whether security awareness messages were reaching all riders, or if specific strategies and tactics were needed to attract the attention of certain market segments, particularly minority communities.

The Engagement of Minority Communities in Awareness Programs (EMCAPS) research project is a collaborative effort among three of the seven NTSCOE institutions: Tougaloo College; the Mineta Transportation Institute (MTI) at San José State University; and the Center for Transportation Safety, Security and Risk at Rutgers, The State University of New Jersey. It specifically explores the engagement of African Americans in public transit security awareness campaigns since African Americans comprise a significant percentage of mass transit ridership, especially in large urban areas.

The research was organized into two phases. Phase I was completed in August 2011 in collaboration with the Metropolitan Atlanta Rapid Transit Authority (MARTA). During Phase II, the research team worked with the National Capital Region’s (NCR) Transit Security Working Group (TSWG) to conduct field research involving its new regional public awareness campaign. The goal of the NCR campaign was to build on the successful If You See Something, Say Something™ initiative using both traditional and non-traditional communication tools. The design and structure of the campaign was consistent with many of the recommendations presented in Phase I findings. Key Phase II research tasks included NCR transit agency interviews, a quantitative analysis of raw data from MTA’s annual Customer Ridership Survey (CRS) over two years, and a series of customer focus groups. In addition, the research team explored alternative performance measures that could be applied by transit agencies to evaluate the effectiveness of public awareness programs.

This Phase II Final Report reviews the findings from each project task, documents the research team’s conclusions regarding the engagement of African Americans in public awareness programs, offers recommendations for improving campaign effectiveness, and identifies additional research topics.
Ongoing Research Projects

Safer at Higher Speeds: A Comparative Analysis of International High-Speed Rail Incidents
(Former title: Safety and Security Best Practices for High-Speed Rail Systems)

Project #1026
Investigators: Chris Kozub and Brian Michael Jenkins

The objective of this research project is to identify best practices for incorporating and addressing safety and security in the planning, infrastructure and equipment design and construction, operating policies and procedures, and training and customer outreach efforts for high-speed rail systems by studying and evaluating these elements of existing high-speed rail operations in Europe, Asia, and North America.

Task Description

1. Accident information gathering on six high-speed rail systems: Shinkansen (Japan), TGV (France), Eurostar (UK/France/Belgium), ICE (Germany), Nevsky Express (Russia), and Acela (US) – all dating back to the inception of revenue service on each system
2. Analysis of accidents on the aforementioned high-speed rail systems
3. Analysis of HSR security incidents cataloged within the MTI surface transportation security database (1970 to present)
4. Analysis of major Amtrak (non-HSR) accidents since 1980
5. Comparative analysis of HSR and non-HSR accident conditions and outcomes
6. Final report and briefing on empirical incident data
   a. Generate a report on the preliminary analysis of HSR accidents to identify past system weaknesses and lessons learned from existing HSR operations as well as incident outcomes that may be desirous of terrorist organizations. This report will include the basic data compiled in the research process
   b. Develop a summary briefing on the HSR security incidents within the MTI database
Understanding Terrorist Threat Analysis and the Unique Challenge of Terrorism to Security (U-CASS Study)
(Former Title: World Trade Center Commerce and Security Study (WTC-CAST))
Project #1076
Principal Investigator: Brian Michael Jenkins

The U-CASS project, a collaborative research effort by the Command, Control, and Interoperability Center for Advanced Data Analysis (CCICADA) at Rutgers University, the Center for Risk and Economic Analysis of Terrorism Events (CREATE) at the University of Southern California (USC), and the Mineta Transportation Institute (MTI), will examine the benefits and costs of counterterrorism security in urban commercial environments. It will attempt to estimate the economic consequences of successful terrorist attacks, including both the direct costs of security—capital investment, operations and maintenance—and the indirect costs—inconvenience, congestion, etc. It will also examine the collateral benefits of heightened security, such as enhanced protection against crime, the feeling of greater safety with regard to terrorism, and the contribution of good security to the avoidance of international crises. For example, if security had prevented the 9/11 attacks, the United States might have avoided a costly war in Afghanistan.

Calculating these diverse costs and benefits will require sophisticated economic modeling, which will be undertaken by CCICADA and CREATE. MTI will be responsible for threat analysis, which will include creating the terrorist scenarios to be incorporated into the models and a critical review of threat analysis methodology. MTI’s principal task will be to provide other participants in the U-CASS project with an overall analysis of the current terrorist threat in the United States. MTI will also describe the unique challenges of security against terrorism, current and potential future approaches to such security, and ways in which terrorists may try to overcome new security measures.
COMMUNICATIONS AND TECHNOLOGY TRANSFER
Overview

Communications and Technology Transfer at MTI has become a valuable resource for transportation researchers, policy makers, and professionals around the world, providing:

- Symposia and other events to collaborate with transportation leaders about key topics such as transportation security, workforce development, transportation finance, sustainable vehicles, high-speed rail, and other issues. These are typically organized as stand-alone events sponsored by MTI or in cooperation with other transportation organizations, or they are incorporated as part of larger transportation conferences and professional gatherings.

- Summaries and reports from those meetings, along with promotions for MTI research reports, which are published as hard copy, PDF and HTML documents. These may be downloaded at no cost from the MTI web site.

- Information resources for a broad variety of transportation topics – available on MTI’s web site, at libraries, or through our network of other transportation sites. These resources include periodicals, news articles, video clips, databases, research reports, and other materials.

- Educational resources to help students consider the math and science courses that may lead to careers in transportation, or to help future transportation leaders learn about MTI’s accredited Master of Science in Transportation Management program. These include classroom materials and workbooks, registration materials for MTI’s Summer Transportation Institute, the Garrett Morgan Sustainable Transportation Competition for middle-school students, and more.

- The latest news about MTI’s research, information about national transportation issues, opinion polls, insights about mobility trends, transportation funding forecasts, and other timely issues.

- Special research or other special projects funded outside of MTI’s usual grants. These may come by way of non-grant contracts with government agencies, non-profit organizations, and others.

- Graphics and technical support for MTI outreach, including web design, event planning, PowerPoints, photography, illustrations, charts, marketing materials, handbooks, and other products and services.

- Promotion of MTI and its products and services by way of social media such as the MTI Facebook page, the MSTM Alumni LinkedIn page, the MTI LinkedIn page, and the @MinetaTrans news dissemination by way of Twitter.
Forums and Summits

Each year MTI presents regional forums and state or national summits, either as stand-alone events or as part of larger gatherings of transportation professionals. These events accomplish multiple purposes, such as sharing recent research with practicing professionals, policy makers, other academics, and the larger community; exploring issues that may require further research (part of needs assessment); providing opportunities for networking and collaboration; and creating a record of proceedings that can be shared with a wider audience online and/or in print.

In the last fiscal year, these activities have included:

**Disaster Assistance Working Group: China & USA January 5-8, 2012 – San José CA, Project 1260 (formerly 1161)** This past January, MTI hosted government representatives from the United States Department of Transportation’s Office of Intelligence, Security and Emergency Response, and from the People’s Republic of China’s Ministry of Transportation. These high-level officials met for four days to work cooperatively on disaster planning as it relates to transportation infrastructure. The first two days included field trips to the California State Department of Transportation, the San Francisco Bay Bridge, the Golden Gate Bridge, the Water Emergency Transportation Authority, the USS Hornet, and other transportation infrastructure sites. Presentations were given at each site, and the visit included a ferry trip. The first day concluded with a welcoming banquet and evening presentation. The final two days featured classroom-style discussions in English and Mandarin (with UN-style interpretation). This event was part of the US & China Transportation Forum.

**2012 Transportation Research Board Annual Meeting January 22-26, 2012 – Washington DC, Project 1261 (formerly 1162)** The Transportation Research Board invited MTI to present a half-day workshop, “Rail Security: Critical Insights and Applications,” at its annual meeting. This workshop provided a valuable forum for researchers and practitioners who are engaged in this field. It also explored current research and identified promising directions for future research. The keynote was given by Nuria Fernandez, COO of the New York State Metropolitan Transportation Authority, who spoke about the challenges of safely transporting millions of people each day.

A panel presentation followed, moderated by Brian Michael Jenkins, director of MTI’s National Transportation Security Center of Excellence. Panelists included Ms. Fernandez; Robert Pryor, Director, Intermodal Division, Transportation Security Administration, US Department of Homeland Security; Tom Farmer, CEO, Association of American Railroads; and Christopher Budd, Consultant, National Infrastructure Security, United Kingdom.

**Continuity of Operations/Continuity of Government Training for Transportation Agencies – May 31, 2012 – Boston MA, Project 1264** The MTI research team worked with the California Department of Transportation (Caltrans) to create a model plan that can be adapted to any transportation
organization’s needs. That plan was presented during the morning session at a day-long workshop at the Volpe Center. It highlighted the structure and function of a COOP/COG plan, and it prepared transportation emergency managers to develop their own unique plans to meet community and organizational needs. Once the organization has a COOP/COG plan, an Emergency Relocation Team must be trained to implement the plan. This was the focus for the afternoon session. A two-year DHS-funded research program led by MTI’s team of experienced practitioners resulted in the creation of this model Emergency Relocation Group (ERG) Training course. Materials were provided to enable transportation agency emergency planners to create customized versions of these planning and training materials for use by their agencies. Trainers for this workshop were Dr. Frances Edwards, deputy director of MTI’s National Transportation Security Research Center of Excellence, and Dan Goodrich, MTI research associate and security expert.

MTI Web Site

Information and Technology Transfer also manages MTI’s web site, TransWeb (transweb.sjsu.edu), a transportation information site widely used by people and organizations outside of the Institute. The site provides information about MTI’s purpose, research reports (including downloadable publications in PDF and HTML formats), education programs from middle-school to graduate level, symposia and forums, news coverage, and links to national and international sites related to surface transportation security and policy.

The MTI website has become increasingly popular as a resource for cutting edge transportation research. By the end of this fiscal year, the web site was averaging 460,530 hits per month (up from 259,065 year-over-year) and 210,943 document downloads per month (up from 67,392 year-over-year).

Of note, one particular security report broke all records for a document download. Carnage Interrupted: An Analysis of Fifteen Terrorist Plots against Public Surface Transportation, generated 119,567 downloads in April 2012, representing 36% of all downloads for that month. Other security reports continued to bring in respectable numbers, as well, including 2010’s Explosives and Incendiaries Used in Terrorist Attacks on Public Surface Transportation: A Preliminary Empirical Analysis and Terrorist Attacks On Public Bus Transportation: A Preliminary Empirical Analysis, among others. These two examples prove that MTI security reports continue to attract downloads long after their publication dates.

The MTI brochure on its Master of Science in Transportation Management and Certificate in Transportation Security also proved popular, typically showing in the top downloads each month.
Media Coverage

By way of active media pitching, MTI has established a growing reputation as a resource for expert opinions about surface transportation safety and security issues. During this last fiscal year, MTI was an important part of many news stories in print, online, and broadcast media. NTSCOE Director Brian Michael Jenkins was often solicited for opinions on selective screening of rail passengers, terrorist threat, and designing and operating safe and secure transit systems among many other compelling issues. The media also picked up stories about the Institute’s symposia and other events.

Based only on actual interview placements, direct story placements, and media inquiries, MTI improved its media coverage over the last fiscal year by distributing 35 news releases and appearing in more than 230 original news stories (i.e., not reposts of MTI news releases). It is impossible to calculate actual metrics for every placement because news stories are customarily picked up by several other media, including blogs and local news services, and repeated into their own markets. Therefore, when all multiplying factors are taken into account, actual news coverage is reasonably assumed to be significantly higher.

Social Media

MTI has continued to expand its social media presence. The Institute’s Facebook fan page, “Mineta Transportation Institute,” has grown to more than 350 followers. Every weekday, MTI posts transportation news, copies of its news releases, commentary, photos, and other items relevant to its mission, including links to sister sites on Facebook, such as the Transportation Research Board, RITA, Secretary Ray LaHood’s page, and other sites. MTI also established its presence on LinkedIn and maintains an active Twitter account, @MinetaTrans. This is leveraged to post news and announcements that link back to the MTI web site, or to distribute news items in which MTI and its followers have an interest. In the 2011-2012 year, MTI posted 649 tweets and acquired 302 followers, including several government agencies and transportation organizations.
Education Program Goal

The Graduate Transportation Management Program was created to develop and administer a multidisciplinary, state-of-the-art program by way of videoconferencing and Internet technologies. It consists of coursework and experiential learning that provides students the skills and knowledge to manage and lead transportation systems.
Overview

Summer Transportation Institute
During July 2011, the Education Program again offered the “Summer Transportation Institute” (STI). The program, which is funded by the FHWA via the California Department of Transportation (Caltrans), is a national effort to provide career orientation and educational experiences to motivate secondary school students toward professions in the field of transportation. The transportation industry will continue to need individuals who are prepared to provide the leadership to build the nation’s transportation system for the next century. The primary aim of STI is to encourage high school students – particularly from tradition-ally underrepresented backgrounds – to seek professional careers in transportation through obtaining a college education. Participants were engaged in a variety of activities including emergency preparedness, a college-level environmental science class with an emphasis on transportation issues, field trips to a variety of area transportation centers, guest speakers from the industry, hands-on projects, and related enrichment activities.

Education Program Accomplishments

MTI's Graduate and Certificate Programs
The College of Business at San José State University, with support from the Mineta Transportation Institute, offers a Master of Science degree and three graduate Certificate programs.

The Certificate in Transportation Security (CTS) includes two required courses – Emergency Management for Transportation Professionals and Security Issues for Transportation Professionals – along with two core courses from the MSTM curriculum. Students may apply six credits earned from the Certificate program toward the MSTM, should they later wish to continue. The emergency management course is taught by MTI Research Associate Dr. Frances L. Edwards, a renowned disaster response expert. Dan Goodrich, a specialist in planning, training, and exercises for weapons of mass destruction, teaches the security class. The Certificate includes an option for SEMS certification.

MTM 226A: Emergency Management Issues for Transportation Professionals
This course emphasizes the role of emergency management within transportation agencies and the role of transportation and resources in the larger community-wide response to emergencies and disasters.

MTM 226B: Security Issues for Transportation Professionals
The purpose of this course is to enable the participant to critically analyze surface transportation security plans. Course reading is taken from a variety of sources to introduce concepts ranging from opposing force and theft to public confidence. DHS courses Incident Response to Terrorist Bombing, and Prevention and Response to Suicide Bombing Incidents will be presented as part of the curriculum.

For details about MTI's education program, please contact Dr. Peter Haas, MTI Education Director at 408-924-5691 or Peter.Haas@sjtu.edu.
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