Final Meeting Report
ANSI-HSSP Workshop on Transit Security Standardization
January 27-28, 2009
Executive Conference Center (ECC)
One Virginia Square
3601 Wilson Blvd, Suite 600
Arlington, VA 22201

Welcome / Call to Order & Background on the ANSI-HSSP and Workshop Process: Importance of YOUR Role to Contribute Knowledge

Ms. Fran Schrotter, Senior Vice President and Chief Operating Officer, American National Standards Institute (ANSI), opened the meeting. On behalf of the Board of Directors, members and staff, she welcomed participants to the third meeting of the ANSI-HSSP Workshop on Transit Security Standardization. Ms. Schrotter noted the ANSI-HSSP was formed in early 2003 as a private-public sector collaborative effort to address the nation's critical need for standards and compliance programs in the aftermath of the 9-11 attacks. She acknowledged the partnership that the ANSI-HSSP has developed with the U.S. Department of Homeland Security (DHS) to address priority areas, including transit security. She stated that continued transit security standardization efforts to be examined at this Workshop include transit security concept of operations, security surveillance, CCTV, video analytics, access control and intrusion detection and detection of explosives.

Ms. Schrotter concluded her remarks by expressing her appreciation to Mr. Colin Alter, subject matter expert and Workshop Co-Chair, and Mr. Ron Masciana, Deputy Chief of the New York Metropolitan Transit Authority Police and Workshop Co-Chair, for their leadership efforts and thanking all attendees for their participation. A complete list of Workshop attendees is attached at the end of this report (**Attachment 1**).

Mr. Alter (Workshop Co-Chair) and Mr. Masciana (Workshop Co-Chair), echoed Ms. Schrotter's sentiments in regards to the importance of a private-public partnership for successful transit security standardization. Mr. Alter referred back to prior ANSI-HSSP workshops on this topic and noted that resurged efforts will result in continued coordination, communication, and awareness. Mr. Masciana further elaborated by noting that we know what we want in regards to technology but would address how to reach these targets throughout the course of this two-day Workshop.

U.S. Transit Security: The Case for Standards Development – Operational, Technological, and Customer Service Challenges

Mr. John Paczkowski, Director, Emergency Management and Security, Port Authority of NY & NJ (PANYNJ), acknowledged the efforts of ANSI through two prior workshops on transit security, APTA through its formation of security committees, and ongoing efforts of other organizations to develop standardization resources essential in addressing this topic. Building upon this existing foundation, Mr. Paczkowski outlined four primary reasons that support standards development for the transit security community:

- **Financial and operation economy**:
  Lack of national attention and funding force agencies to spend their own capital to ensure federal requirements are met and security threats are addressed. Standards minimize redundant efforts in addition to wasted time and unnecessary spending.
- **Consensus on strategy requirements:**
  Open design and demanding operational constraints present obstacles and call for careful consideration for joining together both old and new security approaches to achieve integration in policy, tactics, and technology.

- **Defense-in-depth and systems integration:**
  Lack of diversification in complementary strategies inhibit real-time situational awareness related to detection, prevention, response, and recovery related to threats. Standards provide a solution to achieving an acceptable level of integration and performance.
- **Regional inter-modal and inter-agency networking:**
  Transit agencies operate as part of a larger inter-modal transportation network and require collaborative approaches to security and emergency response. Standards will encourage the establishment of partnerships for regional interagency integration and interoperability.

Mr. Paczkowski's complete **remarks** are available on the **Transit Security Workshop website.**

Sensitive Security Information – The Application of the Requirements in this Workshop and in the Development of Standards

Mr. John Pennella, U.S. Department of Homeland Security (DHS)/NATICK, introduced Ms. Deidre O'Sullivan, Transportation Security Administration (TSA).

Ms. O'Sullivan (TSA), delivered a **presentation** to help further understand security sensitive information (SSI) as it relates to surface transportation stakeholders. Ms. O'Sullivan defined SSI and explained the criteria by which data classifies as SSI. Data must be related to transportation security, the release of the information would be detrimental, and it must fall under one of the sixteen categories of SSI as outlined in the regulation. Ms. O'Sullivan highlighted four categories that pertain to surface transportation stakeholders:

- Security programs and contingency plans
- Vulnerability assessments
- Threat information
- Other information

Additionally, the presentation addressed SSI requirements, called attention to best practices related to the proper handling of, marking, and destruction of SSI, and identified potential consequences of its unauthorized disclosure. Ms. O'Sullivan directed participants to SSI Federal Regulation **49 CFR 1520** as an additional resource.

Transportation Infrastructure Protection, Transit Security Best Practices, and the Target Capabilities List – DHS Perspectives

Mr. Thomas Farmer, Deputy General Manager, Mass Transit, U.S. Department of Homeland Security (DHS), commented on current transportation infrastructure protection undertakings, specifically highlighting the Smart Practice Compilation assessment program. He noted the program's primary objectives, directly in line with TSA priorities, including the following six key areas:

- Regional partnerships and information sharing
- Use of random unpredictable deterrents
- Advancing/elevating the security baseline
- Counter-terrorism training and preparedness exercises
- Public awareness and preparedness campaigns
- Technology applications to mitigate high-consequence risks

Additionally, he stated that this dynamic product is aimed at significantly increasing performance by identifying and providing integrative management solutions and in doing so creates a networking forum for transit, federal, and grant agencies to identify appropriate resources and put them in the right place.

Mr. Robert Sullivan, U.S. Department of Homeland Security (DHS), delivered a **presentation** that provided an overview of the National Preparedness Guidelines (NPG) and the DHS/FEMA Target Capabilities List (TCL) Implementation Project. This presentation highlighted the goals for updating the

TCL and the need for development of target capabilities aimed at increased mass transit protection, as transit was not among the thirty seven capabilities included in the September 2007 release. He shared the document **"Project Capability Mass Transit Protection"**, a deliverable seeking measurable target based performance to help answer questions surrounding our current state of preparedness and the gaps that require attention. Additionally, he noted the role of the NPG and TCL in the all phases of the emergency preparedness lifecycle through various supporting examples. Mr. Sullivan concluded his remarks with an update on its next steps and noted that draft updates for six Target Capability Frameworks are being circulated for review and comment through FEMA regions. Also, at least twelve additional draft frameworks will be developed in 2009 and revisions for all thirty seven Target Capability Frameworks will be completed in 2010.

Panel #1 – Transit Security Concept of Operations – Defense in Depth

Mr. Louis Barani, General Manager, Security Programs, Port Authority of New York & New Jersey (PANYNJ), moderated this panel. He delivered a **presentation** that imparted an overview of the Port Authority of New York and New Jersey as well as its regional transit system. He reviewed possible attack scenarios and cited various security challenges that make transit systems a lucrative target. Furthermore, he discussed the conceptual framework for defense in mass transit (e.g. assessment, interdiction, and restriction) and in doing so he noted the following current needs related to transit security advancement:

- Comprehensive counter-surveillance programs
- Expanded development and application of BPR techniques
- More rapid evolution of passive stand-off screening systems
- Tactics, techniques, and procedures for bomber interdiction
- Less-than-lethal "render (the bomber) safe" technology

Mr. Barani's concluding remarks underscored the need for the development and refinement of best practices, standards, lessons learned and performance and design criteria and pointed out that they can all be applied across the transit sector.

Mr. Dan Hartwig, Manager of Security Programs, Bay Area Rapid Transit (BART), gave a **presentation** that provided a summary of his agency, its operations and make up of the transit police segment that offered insight related to transit security from the perspective of a modern operation. He concentrated on transit security from a progressive standpoint by noting the impact of their efforts in past disasters, present initiatives (e.g. infrastructure, training, sensitive security information, documentation, and electronic communications) and areas for future focus (protection of an open-access infrastructure, maintaining required security measures without removing the "rapid" from transit, and obtaining necessary funding). He concluded by noting the importance of leveraging the various partnerships BART fosters with local, state, and federal agencies and law enforcement as well as with employees and passengers to enhance the security of BART.

Mr. Lewis Best, Deputy Chief of Massachusetts Bay Transportation Security (MBTA), participated on this panel providing a perspective on transit security from a mature operation. He delivered a **presentation** that summarized the MBTA service area and infrastructure as well as emphasized the challenges this agency faces as a result of its aging infrastructure. He cited disruption of service as well as difficulty in implementing one standard security system resulting from various construction phases as primary infrastructure concerns. He noted current capabilities as well as operational issues and challenges related to video analytics, access control and intrusion detection, and explosive equipment detection. Mr. Best stated that the MBTA has expanded upon their CCTV capabilities and is exploring alternative explosive detection equipment such as the ROBGT, a small robot that can access confined spaces for optimal detection capabilities.

Mr. Terry Reinke, Manager of Security, Niagara Frontier Transportation Authority (NFTA), delivered a **presentation** narrowing in on transit security from the perspective of an LRT operation. He provided an overview of the NFTA and operating area calling attention to issues unique to his agency (e.g. location to an international border and limited staffing resources inhibiting the ability to adequately monitor, test, and measure) that create an overwhelming reliance on vendor direction. While pointing out how NFTA differs from larger transit agencies represented at this workshop, he emphasized that their needs share similarities as the same number of fatalities results in each attack. While addressing operational issues

and challenges related to video analytics and explosive detection, he presented a comparison of the airport environment vs. the transit environment and impact of environmental factors.

Panel #2 – Security Surveillance, CCTV, and Video Analytics

Mr. Masciana moderated this panel.

Mr. Joe Christian, Program Manager, MTA Capital Construction (MTACC), gave a **presentation** summarizing the MTACC security program and addressed the subject matter from the user community perspective. Specifically, he focused on the MTA Integrated Electronic Security System for Surveillance (IESS), an integrated security approach combining CCTV, access control, intrusion detection, as well as biological, chemical, and radiological detection. He stated that although the MTA is the largest transit system in North America, the challenges they face (e.g. environmental, operational, and technical) are no different than those of any other system. Mr. Christian concluded by citing needs for standards related to performance measurements, resolution and frame rate, housing, and communication.

Mr. Dan Heater, SPAWAR, provided a perspective from the testing and evaluation community and outlined key aspects of both the DHS SAVER program (System Assessment and Validation for Emergency Responders) as well as the Operation Validation Program. He noted existing efforts under CEDEP such as automated video surveillance (AVS). Additionally, he reviewed various surveillance methods and/or applications and their output noting that through test and evaluation a baseline can be created for performance measurement. Lastly, he concluded by stating that determination of which application is most appropriate for any given circumstance is driven by the intended target/focus which may present an opportunity for standards development related to those system requirements.

Ms. Monica Rigano, Director, Standards, Security Industry Association (SIA), delivered a **presentation** from the professional association perspective. She presented on the framework of SIA with a focus on its standards program and harmonization efforts with various standards developing organizations to address security, specifically related to video. She noted current SIA initiatives and standards under development including a digital video interface data model as well as a new video proposal for a security applications standard. Additionally, she included international efforts and noted that ISO/TC 223 is conducting work on a video surveillance format for interoperability. She concluded by providing a context for which participation proves critical and outlined industry changes impacting the future and creating opportunities. Additional information on SIA can be obtained at **www.siaonline.org**.

Panel #3 – Access Control/Intrusion Detection (excludes TWIC)

Dr. William Bilotte, SPAWAR, moderated this panel.

Mr. William Pitard, PSP, BSCP, CCO, Transit Security Specialist, Parsons-Brinckerhoff, delivered a **presentation** addressing APTA implementation Gaps. He began by identifying the key issues related to the use of technology such as lack of integration as well as applications and protocols. Additionally, he shared findings related to various systems, their characteristics, limitations, and performance expectations. Lastly, he emphasized that the proper application of various solutions enables transit systems to implement effective management processes resulting in optimal protection during both normal operations and emergency conditions.

Mr. Hartwig, Manager of Security Programs, Bay Area Rapid Transit (BART), gave a **presentation** focusing on the user community and operational challenges related to the panel subject. He focused on the current state of access control/intrusion detection and future opportunities. Specific improvements in the evolution of access control/intrusion detection include increased camera presence with various levels of alarms, additional canines, and the introduction of CCTV intelligent video. Included in his assessment was the identification of challenges related to access control/intrusion detection in addition to proposed solutions.

Mr. Rodney Rourk, USMC SEIWIG Representative, SPAWAR Atlantic, delivered a **presentation** on

access control/intrusion detection from the testing and evaluation standpoint. He provided an overview of the Security Equipment Information Working Group (SEIWG) and the role it plays in beneficial harmonization and joint work efforts related to standards. He addressed the need for standards based solutions related to this detection technique based on transit sector threats and challenges, citing integration as the key driver.

Mr. Howard Belfor, Regional Vice President, ASIS, delivered a **presentation** on perimeter intrusion detection from the perspective of professional associations. He provided an overview of various detection techniques such as fence mounted intrusion systems, exterior sensor technologies, ultra wide band radar, fiber optics, physical sensors and virtual sensors. He stated that none of these detection techniques successfully ensure security without being part of an integrated system. Mr. Belfor concluded by noting that ASIS maintains a library that can be found at **www.asisonline.org.**

Panel #4 – Detection of Explosives

Mr. Barani moderated this panel.

Mr. Owen Monaghan, Deputy Chief, New York City Police Department (NYPD), gave a **presentation** on explosive detection equipment representing the end user community. He provided an overview of the NYPD, the NYC Transit Bureau, multi-agency and regional efforts (e.g. Operation MASS Multi Agency Super Surge), and the NYC transit system. He focused on three key areas of explosive detection equipment: container/bag screening, portable explosives trace detection, and canine transit and in doing so outlined the performance criteria, functional requirements, and technology gaps. He concluded by emphasizing the need for an integrated effort related to all three areas identified throughout his presentation.

Mr. Conrad Sullivan, delivered a debriefing on the presidential inauguration noting the success of the Metro Transit Police Department (MTPD), combined with a force of out-of-state officers, in safeguarding over two million Metro passengers during the inaugural events. Additionally, Mr. Sullivan spoke to the challenges surrounding explosives detection, also from the perspective of the user community. He summarized current developments related to biological, chemical, and radiological threats, specifically noting the new security operations center, an offsite control center currently utilized for securing special events in the metro area. Mr. Sullivan concluded his remarks by addressing the immediate need for biological detection improvements as well as radiation detection with isotope identification and position triangulation.

Mr. Robert Pryor, Domain Manager for Surface Transportation Security Technology, DHS/Transportation Security Administration (TSA), gave a **presentation** on risk-based passenger screening techniques while addressing the matter of explosives detection from the perspective of the standards community. He referenced Executive Order 13416, to note the progress to date in collaborative efforts to develop, implement, and coordinate research related to surface transportation security. He stated that TSA's intention is not to develop related standards, but rather to collaborate with the public and private sector and leverage relationships with organizations such as ANSI and NIST to facilitate their development.

Standards Reviewers

Mr. Greg Gillen, Research Chemist, Group Leader, National Institute of Standards and Technology (NIST), delivered a **presentation** on the current status and future needs of trace explosives detection. After providing a brief background and related challenges on the subject matter, he reviewed sampling, equipment evaluation, quality control procedures, and standards work under development. He stated that NIST's goal is to build a comprehensive metrology and standards infrastructure to support existing and next generation explosives detection technologies. Mr. Gillen concluded by reminding the audience that the labs involved in the research currently being conducted for improvement, characterization, and standardization of both portal and swipe-based trace explosives detection instruments, such as NIST and TSL, are resources for this community.

Mr. Dave Gorshkov, American Public Transportation Association (APTA), gave a **presentation** focusing on the work of the APTA technical standards working group TSWG1 related to CCTV and video

analytics technical standards as well as recommendations for their use in transit related installations. While addressing the immediate standardization requisites, he noted the need for a focused effort to develop system requirement methods rather than relying on vendor-driven ventures. Additionally, he stressed the importance of avoiding taking a "one size fits all" approach and defining the purpose of each aspect of this technology in doing so. Mr. Gorshkov noted that additional information on the communications subcommittee can be found at **www.transitcommtech.com/cctv.htm.**

Mr. William MacGregor, Computer Security Division, National Institute of Standards and Technology (NIST), delivered a **presentation** on access control/intrusion detection, specifically narrowing in on the use of Personal Identification Verification (PIV) cards in physical access control systems. Presenting an overview of how PIV is standardized, he noted relevant policy documents, (e.g. Homeland Security Presidential Directive 12) standards (e.g. Federal Information Processing Standard 201), implementation guidelines, and test guidelines. He stated that trust does not come from standards alone, but from assurance processes and testing and discussed the necessity of credentialing and validation. Lastly, he detailed background on other works in progress and directed participants to **http://csrc.nist.gov** for additional information.

Break-out Session Moderator Reports

Throughout the course of the two-day Workshop, concurrent break-out sessions in conjunction with the panel topics of video analytics, access control/intrusion detection, and explosives detection equipment, were convened. Mr. Masciana, Mr. Billotte, and Mr. Barani moderated these sessions respectively. In efforts to determine the best way forward for the Workshop initiative, participants engaged in a dialogue that sought to identify the following (inclusive of concept of operations):

- Relevant standards currently published or under development (**Attachment 2**)
- Additional standards needed to aid in transit security
- Performance requirements for any proposed standard
- Relevant gaps in science and/or technology

Video Analytics

Mr. Masciana reported that the Video Analytics group discovered over the two days that, just like the other break out groups, we know what we do not know. We also know what we want. As several entities are currently working on videoanalytic standards, the break-out group recommended a thorough review of an all-inclusive data list on existing standards and those under development, to the extent possible. Once a comprehensive list has been identified, representatives from this group will conduct a review.

Assignments will be given to group members based on their area of expertise in order to continue work towards meeting standardization needs. It is imperative that the following areas be reviewed throughout the process: conduct a survey of current needs, prioritize those needs, determine the criteria of performance, survey what needs and criteria have been met, and where gaps remain. They will begin their work by listing the needs identified so far in the literature, send that list to the video group for rating and for its input on additional needs.

Access Control/Intrusion Detection

Dr. Billotte reported that the following areas require standards based on the break-out group findings:

- Video surveillance and support tools for this surveillance
- Perimeter security (open facilities and closed facilities). More challenging for open facilities, which should focus on performance based approach.
- Interoperability of systems for physical security particularly in operating environments of differing transit agency interfaces, especially access control.
- Standard for risk management and sharing of risks within the system.
- Lighting
- Intrusion detection systems
- Credentialing
- Identity management

Additionally, he identified the following gaps in the relevant science or technology:

- Intrusion Detection in open spaces/stations/waysides. In particular, the identification of objects in a rapid manner.
- Tunnel Communications
- Tunnel Monitoring
- Track Monitoring
- Measuring, Modeling and Simulation of Transit Facilities to facilitate security planning, training, exercising and execution

Explosives Detection Equipment

Mr. Barani reported that the following standards are needed based on the break-out group findings:

- Standards covering the scope of explosives detection devices in two areas: stand-off devices and scanning devices. Standards for detection technology need to integrate information at a higher level to allow for the end result of better decisions based on cost benefit analysis and produce ROI.
- Standards supporting interchange between technology and operations
- Canine detection standards and determination of actual testing objectives
- Service environment needs should be addressed in order to determine what makes sense from a functional requirement standpoint and use of a common platform is key.

Additionally, he stated that break-out group volunteers will start by first defining the operational environment and then the threat as there is concern that once definitions enter the classified realm it becomes an obstacle in the international environment. The focus should be on defining the environment over defining the actual explosive detection equipment.

Lastly, Mr. Barani reported that the next steps resulting from this break-out session include the following:

1. Review the "tactical interview template" from the NYPD as a source of information and best practice in the industry related to three categories of EDE: bulk, trace, and canine. Chief Owen Monaghan (NYPD) will investigate the possibility of sharing data and obtain approval from NYPD to provide to Bert Coursey (DHS) and Greg Gillan (NIST) for review.
   Note: ConOps may differ geographically (see Robert Sullivan's **presentation** on TCLs)
2. Identify list of performance criteria/detection criteria related to threat substances.
   Lena Kim (RedX Defense) will lead this effort with Robert Pryor with assistance from Tom Coleman (TSA) and Heather Shaver (Smiths Detection)
3. Conduct a gap analysis in relevant science and technology considering the ConOps.
   Greg Gillan (NIST) will lead this effort with support from Jon Neasham (Cubic).

Next Steps/Wrap-Up

Mr. Alter stated that the transit security standardization needs are evident as communicated over the course of the workshop. He noted that a final report summarizing the content of the workshop proceedings with a focus on progress made to date, identified gaps, and a plan of action for reaching the intended transit security standardization goals, will be produced by ANSI following the close of this session. This report will be used as a template to address and progress the standardization needs of the transit community through the ANSI-HSSP. Additionally, it will serve to demonstrate the significant progress that has been made over the past few months. Lastly, he stressed the importance of private-public sector partnerships for successful implementation of the workshop objectives and noted that outreach will be conducted to interested parties who were not present at this workshop.

Mr. Masciana, Deputy Chief, New York Metropolitan Transit Authority Police, acknowledged the important work of the ANSI-HSSP in providing a framework for collaboration and information sharing in addition to its commitment to facilitating the development of industry standards to enhance transit security. Mr. Masciana noted that successful prevention, response, and mitigation require a sustained effort, one that he remains dedicated to carrying out.

Ms. Schrotter, Senior Vice President & Chief Operating Officer, American National Standards Institute (ANSI), thanked all of the participants for their contributions to a productive workshop and stressed that 2009 is the year of action. In particular, she thanked Mr. Alter and Mr. Masciana for their leadership during the proceedings. The momentum gained will continue as ANSI remains committed to facilitating

on-going work related to the transit security needs identified by workshop participants. Ms. Schrotter noted that a report will be produced as a workshop deliverable within the upcoming weeks.

Concluding Remarks/Discussion

Mr. Farmer acknowledged the evident impressive commitment and the identified inspiring possibilities in transit security standardization resulting from the two-day Workshop. He thanked Mr. Alter, Mr. Masciana, Ms. Schrotter, and Ms. Hopkins for their efforts in bringing together this network of Workshop participants who are working towards producing standards and guidelines related to transit as well as maintaining a sustainable level of security posture. Furthermore, he applauded the participants' commitment to the cause of this community.

Mr. Farmer concluded his remarks by noting the attempt to identify a cross-nexus comprehensive analysis of technologies already in use or under investigation, unity of effort amongst organizations such as ANSI (through its HSSP), APTA, and TSA, and promotion of a centralized platform such as the HSIN or the ANSI HSSD, as key Workshop takeaways.

Dr. Bert Coursey, Standards Executive, U.S. DHS Science & Technology (S&T) Office of Standards, summarized the Workshop proceedings in regards to the stated objectives. Dr. Coursey cited the work of the DHS Standard Council for helping coordinate standards activity within the Department. He also cited the important work of the ANSI-HSSP in bringing together, not only the private sector as their main outreach, but the entire standards community and stakeholders to provide a venue for networking and making contacts for future collaboration. Furthermore, he stated that coordination is the central point of determining the specific needs of the transit community. Specifically, identifying technological needs as well as areas requiring potential standardization remain the primary focus in regards to securing transit.

Attachment 1 - Attendance List from the ANSI-HSSP Workshop Meeting on Transit Security Standardization (January 27-28, 2009)

Organization	First Name	Last Name
ANSI Volunteer	Colin	Alter
SPAWAR	Richard	Baker
Port Authority of New York and New Jersey (PANYNJ)	Louis	Barani
Transportation Security Administration (TSA)	Jane	Bass
DHS/S&T/EML	Raymond	Bath
ASIS	Howard	Belfor
ASIS	Larry	Berenson
MBTA	Lewis	Best
U.S. NAVY - SPAWAR	William	Billotte
Pelco	Jeff	Blackmer
U.S. DHS - Science & Technology (S&T) Directorate	Robert	Brainard
The M Companies	Milton	Bush
U.S. Department of Justice	Marc	Caplan
NFPA	Joe	Charlton
New York Metropolitan Transportation Authority (NYMTA)	Joseph	Christian
Transportation Security Administration (TSA)	Thomas	Coleman
U.S. DHS - Science & Technology (S&T) Directorate	Bert	Coursey
U.S. Department of Homeland Security	Suzy	Dixon
Smiths Detection-LiveWave	Jamie	Edgar
Transportation Security Administration (TSA)	Thomas	Farmer
Piper Pacific International	Sharyn	Fitzgerald
National Institute of Standards and Technology (NIST)	Greg	Gillen
National Institute of Standards and Technology (NIST)	Gordon	Gillerman
APTA	Dave	Gorshkov
U.S. Department of Homeland Security	Darryl	Grady
Bay Area Rapid Transit	Dan	Hartwig
U.S. NAVY - SPAWAR	Dan	Heater
Solutions for Standards	Diana	Hopkins
American National Standards Institute (ANSI)	Karen	Hughes
U.S. Department of Homeland Security	Bob	Johns
Frances Kernodle Associates, Inc.	Frances	Kernodle
RedX Defense	Lena	Kim
American National Standards Institute (ANSI)	Rena	Krumholz
Mind Spring	Tom	Kurihara
U.S. DHS - Science & Technology (S&T) Directorate	Valerie	Lively
National Institute of Standards and Technology (NIST)	William	MacGregor
New York Metropolitan Transportation Authority (NYMTA)	Ron	Masciana
NYPD Transit Bureau	Owen	Monaghan
Washington Metropolitan Area Transit Authority (WMATA)	Alan	Nabb
Cubic Defense Applications	Jon	Neasham
Scent Detection Technologies Inc.	Tom	Neugebauer
Thales Group	Francois	Neumann
Transportation Security Administration (TSA)	Deirdre	O'Sullivan
Port Authority of New York and New Jersey (PANYNJ)	John	Paczkowski
Port Authority of New York and New Jersey (PANYNJ)	D.	Parente
Transportation Research Board of The National	Stephan	Parker

Academies		
Standards Council of Canada	Henry	Parsons
Environmental Security International	Michael	Penders
U.S. Department of Homeland Security	John	Pennella
Institute of Terrorism Research and Response	Michael	Perelman
Parsons-Brinckerhoff	William	Pitard
Office of Security Technology, TSA	Robert	Pryor
NFTA	Terry	Reinke
Institute of Terrorism Research and Response	Aaron	Richman
Intelligent Transportation Society of America	David	Ridgley
Security Industry Association (SIA)	Monica	Rigano
U.S. NAVY - SPAWAR	Rodney	Rourk
American National Standards Institute (ANSI)	Fran	Schrotter
Smiths Detection Inc.	Heather	Shaver
U.S. DHS - Science & Technology (S&T) Directorate	Peter	Shebell
U.S. Department of Homeland Security - FEMA	James	Siwek
FEMA	Andrew	Snyder
Vidient Systems, Inc.	Mark	Steffler
U.S. Department of Homeland Security - FEMA	Robert	Sullivan
WMATA	Conrad	Sullivan
Washington Metropolitan Area Transit Authority (WMATA)	Bill	Taylor
National Electrical Manufacturers Association (NEMA)	Craig	Updyke
National Institute of Standards and Technology (NIST)	Christopher	White
APCO International	Stephen	Wisely
Federal Transit Administration	Bridget	Zamperini

Attachment 2 - • Relevant standards currently published or under development

Please note that this is not an all-inclusive list as additional SDOs may be carrying out standardization efforts that have not been captured at the January 2009 Workshop discussions

Equipment Performance Standards for Transit Security			
Stage	**Methodology**	**Organization**	**Current Standard/Recommended Practices**
Prevention/Awareness	CCTV	APTA	RP for CCTV Camera Coverage and Field of View Criteria for Passenger Facilities
			CCTV for non-passenger facilities
			Analytical Video - Stations
			CCTV Placement Maintenance
		SIA	ANSI/SIA OSIPS DVI-01-2008 - OSIPS - Digital Video Interface Model
CBRNE Detection	Chemical	ASTM	
	Biological	AOAC	
	Radiological/Nuclear	IEEE	
	Explosives	ASTM	
		NIST/DHS S&T	EDE Functional requirements & sensitivity adjustment to obtain accurate readings (Funding for work underway)
		IEEE	Bulk EDE - Series of standards related to the x-ray of cargo, luggage, etc. (soon to be complete)
		NIST	Canine EDE work underway on SWIG Dog - 5 SCs
		NIST	Calibration & common testing standards (work underway that began after 9/11)
Response/Mitigation	Bomb suits	NIJ	
	Bomb robots	NIJ	
	Blast resistant trash cans	ASTM	
		APTA	RP for Trash Container Placement to Mitigate the Effects of an Explosive Event
	Access control	INCITS	
		APTA	Access control standard (ACS)
			Barriers: Fencing, pop up barriers, fixed barriers (bollards),walls
			Intrusion Detection Systems - Tunnels, Portals

			Landscape Design Criteria
		NFPA	NFPA 730: Guide for Premises Security
			NFPA 731: Standard for the Installation of Electronic Premises Security Systems
		SIA	ANSI/SIA OSIPS APC-01-200x - OSIPS - Access Point Controller Data Model Interface Standard
			ANSI/SIA OSIPS ACR-01-200x-OSIPS - Access Control Ride Data Model Interface Standard
			ANSI/SIA OSIPS ACGO-01-200x-OSIPS - Access Control for Gate Operations
			ANSI/SIA CP-01-2007 - Control Panel Standard - Features for False Alarm Reduction
			ANSI/SIA PIR-01-2001 - Control Panel Standard - Features for False Alarm Reduction
			ANSI/SIA PIR-01-200x-OSIPS - Passive Infrared Motion Detector Standard - Features for Enhancing False Alarm Immunity
			SIA GB-01 Acoustic Glassbreak Detector Standard - Features for Optimizing False Alarm Reduction and Detection
		SIA	SIA GB-02 Acoustic Glassbreak Sensor Technical Report - False Alarm Sounds Recommendations for Testing False Alarm Rejection and Detection
Emergency Preparedness	Business continuity	NFPA	
	Credentialing	NIST	
		INCITS	
Integration	Sensor harmonization	IEEE	
	Data harmonization	NEMA	
		IEEE	
Misc		APTA	Recommended Practice for the Security Design of Bus Stops
		APTA	Lighting for Transit Facilities
		APTA	Variable Message Signs (placement)
		APTA	Signage
		APTA	Wayside Equipment: Interlockings, Communication rooms, Train control rooms, Traction power substations, Tie breaker rooms, Crossing gates, Signal bungalows, Train signals, Switches
		APTA	Locks

		APTA	Mail Room Security (infrastructure not process)
		SIA	ANSI/SIA OSIPS 01-2008 - OSIPS Framework Data Model
		SIA	ANSI/SIA OSIPS IDM-01-200x-OSIPS - Identity and Carrier Management Data Model Interface Standard
		SIA	OSIPS Binding for Fixed Format and XML Document Messages over TCP and UDP