

DEPARTMENT OF HOMELAND SECURITY
Office of the Under Secretary for Science & Technology
FY 2007 Report of Closed Meeting of the
Homeland Security Science & Technology Advisory Committee
Under Section 10(d)
Federal Advisory Committee Act

The Homeland Security Science & Technology Advisory Committee (HSSTAC) met in closed session on August 27-29, 2007 in Newport, Rhode Island. The determination to close the meeting was based on the consideration that the briefings and discussions during the meeting would involve classified information sensitive to homeland security. Disclosure of the information discussed could potentially increase the risk to our nation's security due to the identification of vulnerabilities and the potential areas of focus for future research to mitigate our vulnerabilities. All sessions of the meeting were closed to the public pursuant to the provisions of 5 U.S.C. 552b(c)(1) National Security Information.

The objective of this quarterly meeting was to begin a study of the threat to society in the United States from the introduction of Improvised Explosive Devices (IEDs). This study was to lead to an assessment of recommendations for Department of Homeland Security, Science and Technology (S&T) investments that could lead to the initiation of new programs or modifications of existing efforts to detect, locate, and neutralize Improvised Explosive Devices (IEDs) in the United States.

Mr. Jay Cohen, the Under Secretary for Science and Technology (S&T), delivered prepared remarks to the Committee. He began his remarks with a brief on the Science and Technology (S&T) Directorate's three main goals: (1) To accelerate delivery of enhanced technological capabilities to meet requirements and fill capability gaps to support Department of Homeland Security (DHS) agencies in accomplishing their mission; (2) To establish a lean and agile GS-manned, world-class S&T management team to deliver the technological advantage necessary to ensure DHS agency mission success and prevent technology surprise; (3) To provide leadership, research and educational opportunities and resources to develop the necessary intellectual basis to enable a national S&T workforce to secure the homeland, and sustain the investment portfolio, organizational structure, and current programs.

Under Secretary Cohen concluded his presentation with a brief update on the evolving structure and programs of the S&T Directorate.

Dr. Starnes Walker, Director of Research for the Department of Homeland Security (DHS) Science and Technology Directorate (S&T), provided a brief overview of the S&T Directorate's Counter-Improvised Explosive Device (C-IED) Program. Dr. Walker's overview consisted of a brief discussion on the Counter-IED Program, IED threat chain, S&T Directorate investment gaps pertaining to IEDs, and the Counter-IED Program's focus and technology areas.

Mr. Jalal Mapar, Program Manager for the Department of Homeland Security (DHS) Science and Technology (S&T) Directorate, provided the committee with an overview of the Science and Technology Directorate's Infrastructure and Geophysical Division. The primary topic of discussion focused on the Preparedness and Response program element. In discussing preparedness and response, Mr. Mapar provided a brief overview of simulation-based training. His overview consisted of a review on the following: (1) simulation-based training goals, (2)

lessons learned from training and exercises, (3) simulation-based training flow, and (4) the state of training technologies.

Rear Admiral Tom Brooks, briefed the committee on terrorist attacks coming to America, “the most frightening versus the most likely.” Admiral Brooks provided the committee with situational awareness regarding the potential of a terrorist attack on the Nation. Admiral Brooks discussed the following topics: (1) possibility of future terrorist attacks, (2) potential terrorist attacks, and (3) possible terrorist attack weapons.

Mr. Norman Polmar provided the committee with an overview of their current task, to provide recommendations to the Under Secretary regarding programs to counter the improvised explosive device (IED) threat. Mr. Polmar explained to the group that the recommendations will be included in one unclassified report with two sections: (1) recommendations on countering the IED threat, specifically with respect to detection and neutralization, and (2) recommendations on responding to IEDs at other stages of the response kill chain, specifically in preparation (further to the left of the boom) and response. Recommendations are to be more than five years in the future, in preference to recommendations that are near-term or in the nature of “low hanging fruit.” The committee was divided into two panels. Panel One was to focus on detection and neutralization, and Panel Two was to deal with prediction, preparation, and response.

Dr. A. Michael Andrews, Panel One Chair, laid out the objectives, tasking and approach for the Panel. To support the committee’s objective, Panel One will look specifically at deterring and neutralizing the domestic IED threat.

It was suggested that to approach the problem, the group should:

- 1) Characterize the Threat (how an adversary prepares for an attack)
- 2) Identify CONOPS (what are our existing ones? what are theirs?)
- 3) Identify Capability Gaps that prevent the implementation of CONOPS
- 4) Identify technical initiatives to invest in.

Major General Tom Garrett, Panel Two Chair, provided the committee with a brief overview of his initial thoughts on the direction Panel Two should follow in regard to forming recommendations on preparing and responding to Improvised Explosive Devices (IEDs). The majority of his comments centered on identifying recommendations geared toward first responders by focusing on the following: (1) communication in regard to enhancing communication to first responders, (2) victim location and extraction, (3) medical support for massive casualties, and (4) interim infrastructure replacement. Major General Garrett also urged the panels to provide recommendations that focus on technology that is user friendly, durable, and universal enough to communicate with others. In addition to possible areas of interest, Major General Garrett suggested the group obtain a “ground truth” understanding of what first responders do or would do to prepare for and respond to IEDs.

Mr. Dave Masters, Deputy Director of Research for the Department of Homeland Security, Science and Technology Directorate, provided the committee with more of an in-depth overview of the Department’s program to develop technologies for countering improvised explosive devices (IEDs) appearing in the United States.

Colonel Raymond Nelson from the Joint Improvised Explosive Device Defeat Organization (JIEDDO) provided a classified brief.

Mr. Robert Mahoney, Port Authority, Operations and Emergency Management, Security Programs, provided the committee with a "Port Authority of New York and New Jersey Overview" brief. The brief outlined the risk situation and risk assessment process for the Port Authority (PA), as well as identifying some of the threats they are currently experiencing.

Dr. Edward Kaplan, Yale University, briefed the committee on "Countering the Threat of IED Devices: Basic Research Opportunities". Dr. Kaplan spoke about a recent National Research Council (NRC) study which identified basic research opportunities (specifically in physical sciences, social sciences, and engineering) that could lead to new methods of countering the use of IEDs. While their study was more focused on a campaign or insurgency than the HSSTAC's assignment was, he conveyed the NRC study's major findings and pointed out some relevant linkages to the HSSTAC panel and the domestic threat.

Norman Polmar, HSSTAC Chairman, briefed Under Secretary Cohen on the committee's progress during the week and their work moving forward.

The meeting concluded with comments from Under Secretary Cohen, discussing his specific requirements for results from the IED study. From this study, he needs:

- 1) An understanding of who the players are; whom we are supporting; what their focus is; what are we providing?
- 2) An understanding of what tactics, techniques, procedures, and experimentation are necessary to enable an effective use of solutions, programs, etc.
- 3) What are the measures of effectiveness? How will we know we are on the right track? We should know what we are getting for our investment and how it will make us safer.
- 4) Recommend new technology initiatives, the panel needs to focus on the deficiencies that customer currently has and wants filled. (i.e., the First Responder wants tools)

The next meeting of the HSSTAC will be on December 4-6, 2007 in Washington, DC.



Ervin Kapos

Designated Federal Officer