

Department of Homeland Security (DHS)  
Science and Technology Directorate (S&T)  
Homeland Security Science and Technology Advisory Committee (HSSTAC)

*April 7-8, 2014*

*1120 Vermont Ave. NW*

*Washington D.C. 20005*

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*MEETING MINUTES*

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**SUMMARY:** This was a two-day meeting, and the second to focus primarily on S&T's relationship with DHS components. The December 2013 meeting focused on Customs and Border Protection (CBP). This meeting focused on Immigration and Customs Enforcement (ICE). Day 1 of this meeting was devoted exclusively to ICE and included briefings from ICE and S&T officials and feedback from HSSTAC members. Day 2 featured three informational S&T briefs and a closed session to discuss classified and industry-sensitive information. Attendees included all nine current members of HSSTAC, 10 members of ICE, about 50 other members of DHS, and three members of the public. (See attendee list at end.) Meeting materials, including the slides mentioned below, are posted at <http://www.dhs.gov/st-hsstac>.

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**April 7, 2014**

**1. CONVENE**

**DHS Under Secretary (Acting) for Science and Technology Daniel Gerstein** convened the meeting at 9 a.m.

**2. INTRODUCTIONS AND AGENDA REVIEW**

**Gerstein** summarized the agenda and made introductions.

**3. ICE OVERVIEW**

(For related slides, go to <http://www.dhs.gov/st-hsstac>. Scroll to “Past Meetings,” then “April 7-8, 2014.” Select “Meeting Briefs.” Then select “HSSTAC ICE Presentation, April 7.”)

**Immigration and Customs Enforcement (ICE) Deputy Director Daniel Ragsdale** gave an overview of the ICE organization, beginning with an explanation of three directorates: Homeland Security Investigations (HSI), Enforcement and Removal Operations (ERO) and Management and Administration (M&A). He described a “Day in the Life” of HSI and ERO and the organization of M&A. He emphasized the need to need to increase efficiency, automate, and put technology into the hands of operators. He described ICE’s focus areas for R&D and innovation in 2013/2014. He described the Cybercrimes Center (C3) and the emphasis on cyber forensics. He described the entity called Technical Operations (TechOps) and how it works with S&T, including the recently-completed low-light camera and Encrypted Video Encoder System. He emphasized the importance of tunnel detection and child exploitation. Regarding HSI, he emphasized its operational bent, and the fact that it focuses on both physical and cyber borders.

A discussion followed with committee members concerning jurisdictions; the role of intelligence; the Nogales tunnel in Arizona (and how the DHS Science and Technology Directorate (DHS S&T) is working on the technical aspects); international cooperation (Immigration and Customs Enforcement (ICE) has the largest international footprint within DHS); public-private partnerships (which could be more robust); and links with other agencies (for example, the U.S. Secret Service). Ragsdale commented on the importance of working with S&T to ensure that ICE requirements are sound.

#### 4. **ICE Homeland Security Investigations (HSI): Cyberforensics, Technical Operations, Surveillance, and Tracking**

**Eric Feldman, Unit Chief, Cyber Crimes Investigations**, commented that ICE’s Cybercrimes Center (C3) relies heavily on S&T, especially regarding the technical aspects of cybercrime. He described C3’s origins within Immigration and Naturalization Service (INS) and its general strategy to “follow the money.” He identified HSI’s three units: child exploitation, cybercrimes, and computer forensics. He emphasized its Emerging Technologies Program, which began 18 months ago. He identified key Research and Development (R&D) gaps: the Silk Road (and the free software called Tor, which enables online anonymity); cyber training; and image analysis related to child exploitation, which is enabled by Tor. He emphasized the international nature of cybercrime and ICE’s relationships with foreign partners. He mentioned the move from prosecutorial focus to victim focus. He described ongoing work with DHS S&T, primarily the Cyber Security Division (CSD) and the Small Business Innovative Research (SBIR) program. He identified as a capability gap the ability to ingest large amounts of data. He also mentioned digital theft of intellectual property (a center in DC focuses on this) and digital theft of export of data (a more recent effort).

A discussion followed with committee members regarding responsibilities to prevent or respond to cybercrimes; the rapid development of malware; the role of social media in cybercrimes and its constant evolution; and C3’s frequent interaction with S&T’s CSD.

**Kelly Oliver, Section Chief, Technical Operations (ICE HSI Tech Ops)** described the role of Tech Ops to provide the latest technology to investigators in field. He discussed the role of the Technical Enforcement Officers (TEOs) as “investigative force multipliers” and the success of the cross-agency Covert Video Working Group (CVWG), which involves 20 federal agencies and is facilitated by HSI Tech Ops. He presented a video demo of the low light camera (which was vendor-led vs. requirements-led) and the Internet Protocol (IP) encoder. He identified future emphases for S&T collaboration: integrate sensors, decrease band-width, miniaturize systems, and energy consumption. He added that a tie to biometrics is still on the wish list.

## 5. ICE - Tools and Safety

**Bert Medina, Assistant Director, Office of Firearms and Tactical Programs (OFTP),** described OFTP’s mission to serve 62,000 armed officers at DHS and to ensure that ICE can conduct its law enforcement responsibilities. He emphasized that as budgets get tighter, it’s more important than ever to leverage technology. One advantage of OFTP, he said, is its robust laboratory which does testing. He described the virtual shooter program, developed as a Small Business Innovative Research (SBIR) program in cooperation with S&T’s First Responder Group (FRG) and now going to SBIR Phase II, with delivery planned in spring 2015. The focus is officer safety; the goal is to quantify design characteristics in handguns that make it easier to shoot, and ultimate commercialization. Immigration and Customs Enforcement (ICE) wants to drive the design but wants the commercial sector to develop it.

A discussion followed with committee members regarding whether this is a defensible focus in a time of diminished resources (Immigration and Customs Enforcement (ICE) feels it is, because it saves time and money, improves officer safety, and is requirements-driven), and whether the technology has been shared (it has been shared with Department of Defense (DoD), which is working on a similar project). In response to a question about what keeps him up at night, Ragsdale responded that he is concerned about resources, the various forms of fraud, and detention/immigration (i.e., the need to be humane and detain as briefly as possible).

## 6. S&T OVERVIEW

(For related slides, go to <http://www.dhs.gov/st-hsstac>. Scroll to “Past Meetings,” then “April 7-8, 2014.” Select “Meeting Briefs.” Then select “HSSTAC Day 1 Brief - April 7, 2014.”)

**Gerstein** explained the four groups that comprise DHS S&T. He pointed out that two technical divisions work closely with ICE: the Cyber Security Division (CSD) and the Borders and Maritime Division (BMD). He added that DHS S&T also works with ICE on Big Data. He described the value-added proposition which aims to align S&T more closely with operators. He emphasized the importance of innovation and the importance of assessing technical risk. He also emphasized the importance of partnerships to save money (for example, with DoD). He then asked the four group leads to summarize their responsibilities.

**Adam Cox, Acting Director, Homeland Security Advanced Research Projects Agency (HSARPA), DHS S&T** explained the five divisions that comprise HSARPA. (Slide #8)

**Greg Price, Program Manager, Responder Solutions, First Responders Group (FRG)**, explained FRG's mission and focus areas, emphasizing that FRG partners with first responders representing 70,000 agencies nationwide, and it issues an annual report on first responder needs. (Slide #9) **Jim Tuttle, Chief Systems Engineer, Office of Systems Engineering, Acquisition Support and Operations Analysis Group (ASOA)**, described ASOA's six capabilities. (Slide # 10) **Keith Holtermann, Director, Research and Development Partnerships Group (RDP)**, explained that RDP supports the other internal groups and also does external outreach to extend the reach of S&T. (Slides # 11, 12.) A brief discussion followed with committee members about DHS' approach to systems engineering and the appropriate balance between research and development. Gerstein commented that 21 roadmaps should be in final form by June 2014.

## 7. HOW S&T SUPPORTS ICE: BORDER ENFORCEMENT ANALYTICS PROGRAM

(For related slides, go to <http://www.dhs.gov/st-hsstac>, "Past Meetings," "April 7-8, 2014." Select "Meeting Briefs," then "HSSTAC Day 1 Brief - April 7." Go to slides #13-15.)

**Steve Dennis (Apex Program Manager, Homeland Security Advanced Research Projects Agency, DHS S&T)** and **Thariq Kara (Program Manager, Office of Chief Information Officer, Immigration and Customs Enforcement)** described the Border Enforcement Analytics Program (BEAP), which is one year old, and its three primary deliverables: a "big data" test enclave, operational testing, and deployment of big data tools to the customer. They emphasized that Big Data is a wide-open field, and transition to operational can be very difficult. They identified geo-coding and language translation as two important needs.

A discussion with committee members followed concerning analytics, storage systems, and the implications of this program for other DHS entities.

## 8. HOW S&T SUPPORTS ICE: CYBERFORENSICS

(For related slides, go to <http://www.dhs.gov/st-hsstac>, "Past Meetings," "April 7-8, 2014." Select "Meeting Briefs," then "HSSTAC Day 1 Brief - April 7." Go to slides # 16-27.)

**Megan Mahle (DHS S&T Cyber Security Division)** described the Cyber Security Forensics Project, which began in 2009 to fund specific law enforcement requirements. She described the Cyber Forensics Working Group (CFWG), comprised of about 100 members -- including ICE Homeland Security Investigations (HSI) Cybercrimes Center (C3) -- which identifies needs based on actual casework. She emphasized that S&T is trying to do extensive testing with law enforcement; however, law enforcement is a small piece of the market for technology developers. She gave some examples of funded requirements and described a forensics project called Blackhorn3, a tool to analyze evidence from handheld and maritime Global Positioning System devices which is now available commercially. As other examples of S&T projects that involve or may impact ICE, she described a triage field kit for first responders; a vulnerability assessment of the Wireshark high-speed data capture tool; disposable cell phone forensics; flash memory chip analysis, which is an Small Business Innovative Research (SBIR) project; open source acquisition and analysis tools;

solid state storage forensics, also an SBIR project; the National Institute of Standards and Technology Computer Forensic Tool Testing project and the National Software Reference Library; a cyberforensics electronic technology clearinghouse called CyberFETCH, which is broadly accessible; and a global cyber security law enforcement technical symposium called GCSLETS, which is by invitation only.

A discussion with HSSTAC members followed concerning standards, testing, access, the challenge of remaining current, and the value of the open-source community (CyberFETCH).

## **9. HOW S&T SUPPORTS ICE: BORDERS AND MARITIME SECURITY**

(For related slides, go to <http://www.dhs.gov/st-hsstac>, “Past Meetings,” “April 7-8, 2014.” Select “Meeting Briefs,” then “HSSTAC Day 1 Brief - April 7.” Go to slides # 29-36.)

**Jon McEntee, Acting Deputy Director, Borders and Maritime Security Division (BMD), Homeland Security Advanced Research Projects Agency (HSARPA), DHS S&T** gave an overview of BMD mission and portfolio and listed projects in three areas; land borders, maritime borders and cargo. He explained that among DHS components, BMD primarily supports the United States Coast Guard (USCG), Customs and Border Patrol (CBP) and Immigration and Customs Enforcement (ICE). He mentioned efforts that currently support or may interest ICE: robotic aircraft for public safety (with a focus on first responders); small dark aircraft detection (to detect, track and classify low-observable aircraft entering the U.S.); tunnel age determination (through soil analysis and testing); clandestine tunnel detection (using modeling and simulation tools); in-the-mouth tactical communications (transmits sounds through bone conduction); coastal surveillance system (fusing nodes to provide more situational awareness); underwater remote operated vehicle, or BIOswimmer (for underwater surveillance and vessel inspection); counterfeit goods detection (using vapor signatures); bulk currency detection (seeking better screening capabilities); hand-held backscatter X-ray scanner (for vessels and conveyances); and general aviation aircraft scanner (a mobile unit to quickly scan the inner voids of an aircraft).

Discussion with committee members focused on the detection of small dark aircraft (whether the threat is increasing and if so, how this project may help address the threat given declining resources); the diversity and challenges of land border security, including geography; and the large number of containers (32,000) that arrive in U.S. ports every day. Further discussion followed about how to determine priorities during steady-state or declining resources, and the need for trade-off analysis.

## **10. HOW S&T SUPPORTS ICE: LOW-LIGHT CAMERA**

(For related slides, go to <http://www.dhs.gov/st-hsstac>, “Past Meetings,” “April 7-8, 2014.” Select “Meeting Briefs,” then “HSSTAC Day 1 Brief - April 7.” Go to slides # 37-40.)

**Greg Price, Program Manager, Responder Solutions, First Responders Group (FRG), DHS S&T**, re-reviewed the Low Light Camera and Internet Protocol (IP) Encoder Project mentioned in the morning session, which responded to a requirement from ICE Homeland Security Investigations (HSI). The encoder will be available June 2014; further work is being

discussed. Kelly Oliver (ICE) interjected that ICE had a clear vision of what they wanted, and called it a successful collaboration.

## 11. HOW S&T SUPPORTS ICE: CBP-ICE ALIEN PROCESSING SYSTEMS ANALYSIS

(For related slides, go to <http://www.dhs.gov/st-hsstac>, “Past Meetings,” “April 7-8, 2014.” Select “Meeting Briefs,” then “HSSTAC Day 1 Brief - April 7.” Go to slides #41-42)

**John Dargan, Director, Research and Development Analysis and Assessment Office, Acquisition Support and Operations Analysis Group (ASOA), DHS S&T**, discussed a project, worked jointly with CBP and ICE, to make the alien process flow more efficient and effective. He also discussed the Port Isabel Detention Center Systems Analysis Project, which will enable ICE to make analytically-informed decisions regarding operations and acquisitions. He discussed the project sequence: define the problem, establish vision and success criteria, describe the current process, and determine requirements. He pointed out that CBP undertook two reforms identified by this project, resulting in financial and time savings (about 2,000 hours per month) for CBP. The project is focusing now on seamless custody transfer between CBP and ICE. ICE is assessing about 30 recommendations received under this project to determine which will be most beneficial.

## 12. HOW S&T SUPPORTS ICE: CENTERS OF EXCELLENCE

(For related slides, go to <http://www.dhs.gov/st-hsstac>, “Past Meetings,” “April 7-8, 2014.” Select “Meeting Briefs,” then “HSSTAC Day 1 Brief - April 7.” Go to slides #43-48.)

**Matt Clark, Director, Office of University Programs (OUP), Research and Development Partnerships (RDP), DHS S&T** gave a summary of OUP’s programs, nine centers of excellence (COEs), and current projects with ICE. He emphasized the National Center for Border Security and Immigration (NCBSI) as the COE most directly serving ICE. He also emphasized the Center for Visualization and Data Analytics (CVADA) and its project for automatic recognition and interpretation of gang graffiti (GARI), which analyzes graffiti from mobile devices. He described two joint efforts supporting ICE: one addresses unaccompanied alien children and involves three COEs; the other seeks to analyze transnational criminals’ use of social media in the El Paso Region and involving two COEs. He encouraged more ICE involvement in the COEs and suggested three possible areas: resource optimization (following a successful model with USCG); economic impact analysis (following a study for CBP regarding the impact of staffing on wait times); and data and visualization (using a visual analytics tool developed by CVADA).

Discussion followed with committee members regarding how COEs are evaluated, the use of peer review, funding of COEs, component engagement, and measures of success. Clark pointed out that one measure of COE value is how much money they receive; currently \$28-30 million per year from S&T and at least \$75 million from other sources. He emphasized the need for a clear end state; after two years, a COE must transfer results to an end user or face cancellation.

## 13. HOW S&T SUPPORTS ICE: ENGAGEMENT WITH DOE LABS

(For related slides, go to <http://www.dhs.gov/st-hsstac>, “Past Meetings,” “April 7-8, 2014.” Select “Meeting Briefs,” then “HSSTAC Day 1 Brief - April 7.” Go to slides # 49-52.)

**Jamie Johnson, Director, Office of National Labs (ONL), RDP, DHS S&T** gave an overview of the five internal Science and Technology (S&T) labs and the 17 Department of Energy (DOE) labs, of which 13 conduct homeland security (HS)-related research. He commented that ICE would benefit most from the Department of Energy (DOE) labs which do HS research, focus on long-range technology development, and also provide “rapid response” during national emergencies. He reviewed the agreements and authorities of the DOE national labs and how to access their services. He then summarized the capabilities of the DOE national labs, citing cyber analytics and big data in particular. He then reviewed two projects of interest to ICE: Trade Enforcement Technology Solutions (to identify, develop and integrate an advanced suit of cyber analytics tools which enhance the ability to disrupt smuggling networks) and a Tagging Tracking and Locating (TTL) Feasibility Study (involving cell phone applications, state-of-the-art identification technology, and tools to identify smuggling networks). He emphasized that it’s not hard to do business with the labs, but Department of Energy (DOE) has not done much with Immigration and Customs Enforcement (ICE) so far.

#### **14. HOW S&T SUPPORTS ICE: OPERATIONAL EXPERIMENTATION PROGRAM**

(For related slides, go to <http://www.dhs.gov/st-hsstac>, “Past Meetings,” “April 7-8, 2014.” Select “Meeting Briefs,” then “HSSTAC Day 1 Brief - April 7.” Go to slides # 53- 54.)

**Charles Edwards, Director, Interagency Office, Research and Development Partnerships (RDP), DHS S&T** provided an overview of the Operational Experimentation (OpEx) Program. He described ICE involvement in Joint Interagency Field Exploration (JIFX) events, in which ICE identified 10 potential technologies. He discussed current collaboration with ICE involving tunnel mapping and robots, and highlighted upcoming OpEx events. Gerstein invited ICE to attend the OpEx events and to nominate topics.

15. **PUBLIC COMMENT:** There were no comments from the public.

#### **16. HSSTAC FEEDBACK AND INITIAL RECOMMENDATIONS**

Gerstein left committee members alone to discuss what they had heard. He returned an hour later and asked members for their perspective.

**Homeland Security Science and Technology Advisory Committee (HSSTAC) Chairman Phil DePoy** commented that the meeting structure, especially the focus on components, was successful; however, the focus remains mostly tactical. He also suggested that the role of the centers of excellence (COE) should be reexamined for possible re-focus on the future.

- Gerstein responded that the dialogue is shifting toward a long-term focus. Two components have asked for help thinking about the future (10 years out), and he plans a year-long, \$1-million-dollar “futures” study. He added that this was the main purpose of the recent focus on broader roadmaps (vs. a “project-by-project” focus).

- ICE Liaison to S&T Cloe Vincent commented that today’s discussion was limited due to the open forum. She added that ICE does not have a “Research and Development (R&D)” office; however, it does have a R&D advisory group.

Committee Comments About S&T-ICE Relationship:

- There is no unified, integrated strategy with ICE (same thing as last meeting with Customs and Border Protection (CBP)).
- Briefs should begin with a focus on ICE needs in future, at least five years from now.
- ICE’s problems center on the human element and social networks, but DHS S&T is focused largely on the technologies. The balance is not quite right.
- We heard too many sales pitches from S&T to ICE. Next time, include failures too.
- The strategic value of the virtual shooter isn’t clear.

General Committee Comments:

- DHS S&T should clarify what it wants from its advisory committee.
- The meeting exceeded my expectations regarding the deep knowledge and range of activities.
- The meetings have improved regarding useful information communicated.
- DHS S&T is better linked with components; now it’s time to go beyond tactical to strategic.
  - Gerstein commented that DHS S&T is the lead for the DHS Joint Requirements Council which addresses several topics, including cyber, biodefense, common vetting, borders, and multi-role mission aircraft.
- Components seem to be working with each other more—and DHS S&T is working across components more. This is a positive direction.
- You may need a different type of systems analysis.
  - Gerstein commented that DHS S&T is moving in that direction and is trying to build a workforce that can handle a “systems” approach.
- Operational security may be limiting what is shared with the committee, impeding the members’ ability to understand the issues and give its best advice.
  - Gerstein reminded members of Federal Advisory Committee Act (FACA) requirement for openness and reminded them of the closed session on Day 2.
- It isn’t clear that you have the right centers of excellence (COEs) or that they are being leveraged as well as they could be; consider a scientific evaluation of the COEs.

- You need a threat roadmap. This seems to be a DHS-wide issue.
- Drones may be the biggest problem of the 2nd half of 21st century.
- Social media issues will increase, and a lot of threats come through social media. You may need a unified strategy, including threat tracking. Consider doing an analysis of the social infrastructure and how it impacts components. S&T could step into this space for DHS.
  - Gerstein acknowledged that other organizations are ahead of DHS in this area. DHS S&T is leading Big Data for the department but could do more with social media.
- Every component has a human infrastructure outcome. In a law enforcement culture, it can be very hard to understand how the human element affects them.
- Share your busts too. If you don't have busts, you're not pushing the envelope enough.
- Let's hear what you have learned from mistakes. You need the luxury to make mistakes. Encourage truth-telling and don't penalize people for it.
  - Gerstein mentioned Secure Transit Corridor is an example of this success/failure issue. Customs and Border Protection (CBP) decided not to pick it up, and it lacked a systems approach. He added that DHS S&T is moving toward more technical risk, but it requires component buy-in.

## 17. HSSTAC WAY AHEAD

**Gerstein** gave an overview of the Integrated Investment Life Cycle Threat (IILCM), indicating a number of projects failed due to the lack of process. He discussed the proposed stand-up of the Joint Requirements Council (JRC), Resource Allocation Decisions, and the Department of Defense (DoD) process known as "DOTMLPF" (Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities). He added "R/G/S" (Regulations, Grants, and Standards) to the DOTMLPF as part of the necessary process. He emphasized he does not want to build a DoD-like acquisition process, but rather wants a process that is agile and nimble.

**ADJOURN:** **Gerstein** adjourned the meeting at 4:13 PM.

**April 8, 2014**

### 1. CONVENE/OPENING COMMENTS

**DHS S&T Under Secretary (Acting) Daniel Gerstein** reconvened the meeting at 9 a.m. and reviewed the agenda.

### 2. UPDATE AND DISCUSSION: CYBER SECURITY DIVISION

(For related slides, go to <http://www.dhs.gov/st-hsstac>. Scroll to "Past Meetings," then "April 7-8, 2014." Select "Meeting Briefs." Then select "HSSTAC Cyber Brief - April 08.")

**Doug Maughan, Director, Cyber Security Division (CSD), Homeland Security Advanced Research Projects Agency (HSARPA), DHS S&T** reviewed the history of cyber security, including the creation of the division in 2010, and the interaction with the Homeland Security Science and Technology Advisory Committee (HSSTAC) from July 2008 to today. He showed how the cyber security budget at S&T has grown from \$3 million in FY03 to \$70 million in FY14. He reviewed HSSTAC's report on cyber security (December 2008), including its findings and recommendations. He also reviewed briefs that he previously shared with HSSTAC members -- in 2008, 2010, 2011 and 2013. He discussed the current state and future projections for CSD, including current cyber threats and sources, White House priorities, the organization of the U.S. Federal Cybersecurity Operations Team, a recent Executive Order and Presidential Policy Directive, and current cyber security thrust areas. He reviewed resource allocations and key partnerships. He described the transition goals and cyber-physical systems. He then listed ideas for new programs, described 2014 plans for Broad Agency Announcements (BAAs), and described the execution model for cyber security R&D. He summarized by emphasizing S&T's aggressive cyber security research agenda, continued emphasis on technology transfer and experimental deployments, and workforce concerns. Regarding HSSTAC's interactions with CSD over six years, he commented that the quality has been excellent and helpful—but the interactions have been too few. In future, he prefers more frequent interactions and deeper cybersecurity knowledge. He suggested that the Homeland Security Science and Technology Advisory Committee (HSSTAC) consider re-establishing topic-specific subcommittees or working groups in order to enable better technical interactions. He added that another written report from HSSTAC on this topic may be useful.

A discussion followed regarding organizational resilience to cyber attacks, the nexus of social media with federal cyber security, lanes of responsibility, the difficulty of attracting industry proposals, and how HSSTAC can best support CSD in the future.

Committee member comments:

- HSSTAC needs a true cyber expert as a member.
- HSSTAC should create a standing subcommittee or task force of cyber experts.
- The former HSSTAC Subcommittee on Cyber Security supported the division, but never briefed the full committee or the Under Secretary.
- CSD invites formal feedback, but S&T has steered away from formal HSSTAC reports.
- Consider creating a center of excellence specifically for cyber security.
- Consider creating a federal advisory committee just for this subject.
  - Maughan explained that DHS's National Protection and Programs Directorate (NPPD) asked for a committee focused on cybersecurity, but it was not approved.

### **3. S&T PROJECT BRIEFS: APEX AIR ENTRY/EXIT RE-ENGINEERING PROJECT**

(For related slides, go to <http://www.dhs.gov/st-hsstac>. Scroll to "Past Meetings," then "April 7-8, 2014." Select "Meeting Briefs." Then select "HSSTAC Apex AEER Brief - April 08.")

**Bob Burns, Apex Program Manager, Homeland Security Advanced Research Projects Agency (HSARPA), DHS S&T** explained that Apex is a concept, not a division, and that

Apex projects are hard-hitting, fast-moving, and based on component input. The Air Entry/Exit Re-Engineering Project (AEER) is the 4<sup>th</sup> Apex project. AEER is a joint effort between Customs and Border Patrol (CBP) and DHS S&T to more efficiently identify travelers entering the U.S. while biometrically confirming the departure of non-U.S. citizens. He explained its goals and objectives, framework, drivers, and timeline. He described the Maryland Test Facility (MdTF) to test biometric technologies and other processes. An open house at MdTF is planned for June, and the public will be invited, he said. He listed results so far, next steps, and challenges. He invited committee input during project execution.

A discussion followed with HSSTAC members concerning the driver for this project (biometric identity is required by Congress beginning in 2019); whether other countries' entry records could serve as U.S. exit records, and how privacy laws may limit such sharing; Singapore's and Malaysia's success in this area; how conditions in the U.S. differ from those in other countries (for example, the U.S. has more international airports); the potential economic impact on airlines and airports; the human factors inherent in this program; the business case and trade-offs; and the balance between convenience and security.

#### **S&T PROJECT BRIEFS: PROJECT RESPONDER 4**

(For related slides, go to <http://www.dhs.gov/st-hsstac>. Scroll to "Past Meetings," then "April 7-8, 2014." Select "Meeting Briefs." Then select "HSSTAC PR4 Brief - April 08.")

**Jose Vazquez, Director, Responder Technologies, First Responder Group (FRG), DHS S&T** explained why a project focused on first responder needs is necessary, described the predecessors for Project Responder 4 (PR4), and explained its purpose and objectives, terminology, methodology, and phases. He explained three ways that PR4 identifies capability needs and listed capability priorities. He then explained PR4's response technology objectives (RTOs) and the four-step process to identify them. He explained the expected products and showed an initial roadmap for the developing the RTOs. He emphasized that FRG works with first responders from beginning to end to clarify conditions and requirements, and acknowledged the need to better integrate different technologies. He added that he is now addressing the role of social media and the need to assess its usefulness.

A discussion followed with committee members concerning the balance between long-term and short-term needs; public safety broad band; how FRG works with the Federal Emergency Management Agency (FEMA); the need for science to back resource requests; how to determine the right standards (driven by industry); and how to balance safety and efficiency.

4. **PUBLIC COMMENT:** David Oliver (Catalyst Partners) commented that at a time of low employee morale, it might help if the committee recognized successes at DHS S&T, in addition to recommending improvements.

#### **5. CLOSED SESSION: EMERGING AND DISRUPTIVE TECHNOLOGIES AND TRENDS**

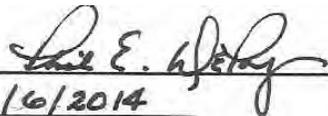
**Joel Wall, Director, Special Projects Office, DHS S&T** described the mission of his office to provide programmatic and technical expertise and knowledge in emerging and disruptive

technologies, Intelligence Surveillance and Reconnaissance (ISR), and other applicable areas that are especially sensitive, classified, or deserve extraordinary security protection; and how he accomplishes these objectives through close collaboration and leveraging with the Intelligence Community (IC) and other government agencies. He described related technology trends and special projects. (This session included classified information. Closure justification: 5 U.S.C 552b(c)(1))

**6. CLOSED SESSION: HSSTAC TASK FORCE ON THIRD PARTY PRE-SCREENING**

**Homeland Security Science and Technology Advisory Committee (HSSTAC) Chairman Phil DePoy** updated the committee on the progress of the task force which was created in July 2013 at the request of the Transportation Security Administration (TSA) to help TSA explore ways to expedite physical screening through the use of third-party (private sector) entities. Task force members were asked to help evaluate the feasibility of such an approach by reviewing testing and evaluation plans, and to provide input on evaluation criteria. DePoy emphasized that the goal is to improve air passenger through-put and lessen disruption to the public. He described responses to TSA's Request for Information (RFI). Discussion followed regarding privacy issues, databases, and risk classifications. (This session included sensitive security information (SSI) and confidential business information. Closure justification: 5 U.S.C 552b(c)(3) and 5 U.S.C. 552b(c)(4))

**7. ADJOURN.** Designated Federal Officer Mary Hanson adjourned the meeting at 3:00 p.m.

Signed :  (HSSTAC Chairman Phil DePoy)  
Date: 6/6/2014

## MEETING ATTENDEES

### HSSTAC Members (April 7, 8):

Steven Bellovin  
Kathleen Carley  
Julie Casani  
Phil DePoy  
Dean Kamen (by phone, April 8 only)  
Alex Levis  
Mark Lister  
John Parow  
Yossi Sheffi

### Members of Public:

Diana Fossett –Noblis, Inc. (April 7, 8)  
David Oliver – Catalyst Partners (April 7, 8)  
Jason VanSice - MorphoTrust (April 8)

### DHS/ICE (April 7):

Daniel Ragsdale – ICE Deputy Director  
Eric Feldman - Unit Chief, Cyber Crimes Investigations (C3), Homeland Security Institute (HSI)  
Kelly Oliver - Section Chief, Technical Operations, HSI  
Joshua Archer - Technical Operations, HSI  
Bert Medina - Assistant Director, Office of Firearms and Tactical Programs  
Thariq Kara - Program Manager, Office of Chief Information Office (OCIO)  
Simona Flores - Deputy Asst. Dir. for Field Operations, Enforcement and Removal Ops (ERO)  
Megan Davis - Deputy Chief of Staff, Deputy Director's Office (also April 8)  
Cloe Vincent - ICE-S&T liaison (also April 8)  
Jeremy Shein – HSI

### DHS/S&T (except where noted):

#### April 7, 8

Mary Pickering (OCIO)  
Mary Ellen Hynes  
Alexandra Waggoner  
Craig Chambers  
Christopher Featherston  
Mila Kennett  
Joe Kowalski

#### April 7

Cecilia Grillo (NPPD)  
Scott Tousley  
Adam Cox  
Jim Tuttle  
Stephen Hancock  
Stan Cunningham  
Sonja Rodriguez  
Christopher Lee  
Joel Wall  
Kathleen Kenyon  
Jonathan MacEntee  
Heidi Whiteree  
Scott Pugh  
Richard Williams  
Doug Lane  
Marck Kaczmarek  
Douglas Maughan  
Ryan Haddad  
Christopher Lee  
Steve Dennis  
Jamie Johnson  
Joseph Scott  
Keith Holtermann  
Susan Law  
Greg Price  
David Throckmorton  
Linda Vasta  
Jessica Augustine  
Megan Mahl  
Phil Waters  
Rolf Dietrich  
Brendan Gibbons  
Bruce Swlc (signature intelligible)  
April 8  
Kentia Elbaum (DNDO)  
Craig Chambers  
Meredith Lee  
Colette Bryant  
Arun Vemury  
Dayo Simms  
Anneke Baran  
Hyuen (signature intelligible)  
Mark Cal (?) (signature intelligible)  
Siddha Horer (?) (signature intelligible)