

Department of Homeland Security (DHS)

**Science and Technology Directorate (S&T)  
Homeland Security Science and Technology Advisory Committee (HSSTAC)**

April 12, 2018

Committee Meeting

Location: 1120 Vermont Ave., NW, Washington, D.C. 20005

Washington, D.C. 20005

**Minutes**

Summary: About 36 people attended the meeting in-person and via webinar (please see list below).

**April 12, 2018**

**1. CONVENE AND OPENING**

The Homeland Security Science and Technology Advisory Committee (HSSTAC) Designated Federal Officer, **Michel Kareis**, convened the meeting at 9:30 a.m. **Kareis** welcomed the committee members to the HSSTAC Quarterly meeting. She provided the authorities under which the committee operates, an overview of the agenda and notification that the meeting was public. The HSSTAC members introduced themselves, starting with **Dr. Vincent Chan, HSSTAC Chair** and described their expertise.

**2. Overview of SOPDUSST Priorities**

The Senior Official Performing the Duties of the Under Secretary for Science and Technology (SOPDUSST), **Bill Bryan**, described the primary outcome of the S&T revitalization was to develop a capability to be more responsive to customers and change the way the organization responds to requests from years to days/weeks. He defined a need to focus more on existing or adaptable solutions before undertaking R&D efforts. Mr. Bryan emphasized the need to work with industry on Tech Foraging. He explained why he waited to engage the advisory committee. First he wanted to bring in front office staff as a priority one. Priority two was to emphasize to the HSSTAC that he delayed the meeting in order to better plan how to use the committee while waiting for the permanent Under Secretary. In addition, since the core function of the committee is to act as Science Advisors, **SOPDUSST** outlined the goals for S&T and explained the acronym CHAMPS:

- C – Component and customer driven
- H – Homeland security enterprise focused
- A – Agile and Responsive
- M – Make use of existing technologies
- P – Plan for commercialization
- S – Science and engineering for excellence

Mr. Bryan emphasized his desire to share R&D experience and resources with people to better benefit the homeland security enterprise. He would like to stand up a, “Five Eyes”

R&D activity with Canada, Australia, New Zealand, and the United Kingdom. S&T should be able to deliver sound scientific advice to the Secretary. Expanding on the technology forging responsibilities and other priority areas of interest, the SOPDUSST would like to leverage the HSSTAC's expertise in order to improve Tech Foraging activities. Part of the SOPDUSST's plan includes the involvement with industry during early stages of the process. There is a need for expertise internally, along with the ability to utilize outside resources when necessary.

Transparency, accountability, visibility, and adaptability are areas in need of improvement at S&T. The SOPDUSST decided to engage the workforce to get back on the right track. He was informed by the Secretary that requirements generation is extremely important. Thus, S&T is taking a greater role in developing requirements for the components. Enhancing customer engagement will allow S&T to remain informed regarding the work being done for the components and ensure that expectations are being met. Tech Scouting will be, "beefed up" as part of the new focus of S&T. SOPDUSST will be weighing and assessing the best methods to do so, along with commercialization.

SOPDUSST asked the committee what projects and activities S&T should consider. What new partnerships does S&T need? What new technologies should we be researching, and what is the best way for S&T to continue moving forward?

**Comments from the Committee:**

S&T needs to look both internally and externally. Creating simple reports about long range threats is something that HSSTAC does well. Intellectual Capital (IC) is the best way that the committee can help. However, IC is of no use without human capital. Relationships and networking are very important and beneficial in the R&D arena. The committee emphasized that its members could accomplish more if they were able to use their security clearances outside of S&T. They also suggested that S&T create better relationships with the public sector, and vice versa. HSSTAC could be a valuable tool to evaluate the complexity of issues. Working in subcommittees tends to be the best way to get information and reports from the committee and in this structure they can turn around reports in 60 days or so, as opposed to prolonging the process over one to two years.

**Kareis** paused the discussion due to SOPDUSST needing to depart to attend another meeting. The discussion continued amongst HSSTAC members so that they could develop topics to present to the SOPDUSST going forward. Technology topics included:

- Internet of Things
- Smart Cities
- Data Analytics
- Social Media
- Ground penetration and underground border protection
- Truck ramming of civilians
- Improving identification technology
- Emergency communications

**Meeting Open for Questions or Comments from the public:**

There were no questions or comments from the public at this time.

**3. RECAP OF MORNING SESSION**

**Kareis** reviewed the morning session highlights. The committee is going to continue to formulate recommendations and identify opportunities to support the SOPDUSST and the new direction of S&T. There were many comparisons to the Defense Science Board and ideas for pushing the HSSTAC in a similar direction.

**4. S&T HIGHLIGHTS**

**Mary McGinley**, Executive Program Manager of the Homeland Security Advanced Research Projects Agency (HSARPA), provided a briefing on Borders and Maritime security shedding light on how DHS prioritizes objectives. She noted that Integrated Product Teams (IPTs) are used to provide information for the DHS strategic review. IPTs are component-driven groups that identify and prioritize R&D technological capability gaps and corresponding DHS R&D activities to collaborate on solutions to address needs. The IPTs do not provide direct input to the strategic review but show whether DHS is on track to meet their goals and objectives.

DHS S&T uses a systematic approach to prioritize objectives. The priorities are ranked from high, medium and low priority. As part of the process S&T considers what technology is needed to address the threats. Once the goals and objectives are established, S&T develops plans in conjunction with the components to develop specific projects. The projects are then executed by a program manager and possibly a representative from the component. Technology scouting is used when there is a brand new requirement to scope out the key performers. Requests for Information (RFI), Long Range Broad Agency Announcements (LRBAAs) and the Small Business Innovation Research (SBIR) Program are all tools used to identify what exactly S&T needs and who can address those needs most efficiently.

**Questions from the Committee members:**

Has there been outreach to the other agencies regarding Unmanned Aircraft Systems (UAS)? Yes, DHS works with the Federal Aviation Administration (FAA), Department of Defense (DOD), Department of Transportation (DOT), amongst others to ensure S&T is in sync with its government partners.

Is S&T involved with the Automatic Dependent Surveillance (ADS-B) with the FAAs NextGen Program? Yes, we are heavily involved in conveying FAA's concerns so that the FAA will do the same for DHS.

Do you do red teaming in advance to determine which technologies are more resilient? We are working with the CBP Law Enforcement Lab for red teaming exercises.

**5. SUBCOMMITTEE UPDATES**

**Kareis** alerted the committee that the order of the subcommittee updates would be slightly altered. She provided an update on the Quadrennial Homeland Security Review (QHSR) subcommittee and reiterated the importance of the committee's work on the QHSR. She informed the committee that the QHSR is currently on a strategic pause.

Kareis stated that, although on strategic hold, the reports completed by the subcommittee for the QHSR are available on the HSSTAC website. Kareis also noted that the DHS SOPDUSST requested to put a pause on the formation of an HSSTAC Systems Engineering subcommittee for the time being.

**Social Media Working Group for Emergency Services and Disaster Management**

**Subcommittee update:** Sarah Perlstein presented the subcommittee update. She thanked the committee for helping to keep the work of the subcommittee going. The subcommittee has had virtual meetings in July, September, and November. They created a new platform to alert first responders through social media. CAUSE V was a successful experiment/ The report, “*Countering False Information on Social Media during Disasters*,” has gone out to many partners to increase its visibility. The subcommittee is looking forward to discussing new topics. Some future projects include:

- Preparing a report for the Information Security Risk Assessment Model (ISRAM)
- Working on the upcoming Federal Emergency Management Agency (FEMA) led national exercise
- Putting together a playbook for emergency management
- Look into existing and near term technology to flag false information on social media.

**Subcommittee on Technology Scouting and Forecasting:**

**Kareis** introduced the task and elaborated on the problem that S&T has been having with proactive Technology Scouting, which is also referred to as Technology Forecasting. This discussion provided context for the subcommittee discussion that will be held on Friday.

**6. TECHNOLOGY SCOUTING AND FORECASTING PRESENTATION**

**Dr. Larry Greene, Homeland Security Systems Engineering and Development Institute (HSSEDI)**, presented objectives of the Technology Scouting and Forecasting project to assist in defining an operating model for being more proactive in creating and using technology intelligence.

Questions from the committee included: How much Tech Forecasting is being conducted across the federal government? There are many different organizations that do Tech Forecasting, Tech Scouting, and Tech Foresight. Technology Intelligence or the combination of these activities is difficult to coordinate across the government, and there are currently attempts at sharing best practices.

**Meeting Open for Questions or Comments from the public:  
There were no questions or comments**

**ADJOURN: Kareis** adjourned the meeting at 4:22 p.m.



**20, June**

**2018**

**Signed: Vincent Chan, HSSTAC Chair**

**Date**

**MEETING ATTENDEES:**

**Vincent Chan  
Daniel Dubno  
Stephen Flynn  
Marian Greenspan  
Yacov Haimen  
James Hendler  
Eric Haseltine  
Kathie Olsen  
Gerry Parker  
Harry Raduege  
Gary Schenkel  
David Whelan  
Ted Willke**

**Others**

**Michel Kareis  
Gretchen Cullenberg  
Terri Saloy  
Bill Bryan (SOPDUSST)  
Matt Sarlouis  
Robert Perry  
Angie Stonebraker  
Sean Copeland  
Susan Dixon  
Tyler Newton**

**Randy Harris**  
**Sarah Pearlstein**  
**Tyeshia Roberson**  
**Francois P. Begin**  
**Natalie Baker**  
**Steven Dahms**  
**Alexander Guedert**  
**Rebecca McNaughton**  
**Tyeshia Roberson**  
**Michelle Rodrigues**  
**Bill Ruch**  
**Eric Traynor**  
**Tyler Wolford**

**NOTE:** All meeting materials are posted at <http://www.dhs.gov/st-hsstac>. The whitepaper, “Countering Misinformation, Rumors, and False Information on Social Media in Emergencies and Disasters,” is available upon request. Please email [HSSTAC@HQ.DHS.GOV](mailto:HSSTAC@HQ.DHS.GOV) for a copy. The final draft will be posted on the website.