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To get copies of these charts, pertinent reports and other reference information go to:
Central Desktop  http://www.centraldesktop.com/
to login to the USC site, get username and password from nlwalker@usc.edu

Revised 5/24/2013
The Federal Mission Agencies ProgramS (MAPS) websites:
• connects PIs with appropriate funding agency programs/program officers
• assists in development of white papers/charts/elevator speeches

What is on the Central Desktop website:
Under “Wiki” Tab - how to use the site

Under “Files/Discussion” Tab

- Mission Agency (DHS, DoD, DoE, DoEd, EPA, NASA, NIST, NOAA, USDA
  and cross agency programs in Adv Manuf, Sustainability, STEM-Ed)
- Guide to Agency Funding for FYXX
- Agency Research Program Charts
- Agency S&T Planning Documents
- Program Officer Data sheets (with contact info, biosketch, program descriptive, illustrative personal publications)
- Program Officer presentations (when available)
- Guides to Proposal Writing

Under “Database” Tab

- USC MAPS - searchable table of all program officers / programmatic interest

In addition to the more extensive Central Desktop site, there is a MAPS website that can be accessed using one’s USC NetID and Password:  http://web-app.usc.edu/web/ra_maps. At this website one can perform keyword searches to locate many Federal programs and program officers associated with the keywords.
S&T’s five goals are:

Rapidly develop and deliver knowledge, analyses, and innovative solutions that advance the mission of the Department.

Leverage technical expertise to assist DHS components’ efforts to establish operational requirements and select and acquire needed technologies.

Strengthen the Homeland Security Enterprise and first responders’ capabilities to protect the homeland and respond to disasters.

Conduct, catalyze, and survey scientific discoveries and inventions relevant to existing and emerging homeland security challenges.

Foster a culture of innovation and learning, in S&T and across DHS, that addresses the challenges with scientific, analytic, and technical rigor.
The U.S. Department of Homeland Security Science and Technology Directorate's (S&T) Support to the Homeland Security Enterprise and First Responders Group (FRG) strengthens the response community's abilities to protect the homeland and respond to disasters.

Mission

In close partnership with first responders at all levels, FRG identifies, validates, and facilitates the fulfillment of needs through the use of existing and emerging technologies, knowledge products, and standards. Prioritized areas of FRG focus and initiatives include:

- Making First Responders Safer.
- Helping First Responders Share Data and Critical Information.
- Helping First Responders Communicate Through Interoperability.
- Engaging, Communicating, and Partnering with First Responders.

National Urban Security Technology Laboratory (NUSTL): NUSTL tests, evaluates, and analyzes Homeland Security capabilities while serving as a technical authority to first responder, state and local entities in protecting our cities. NUSTL leads and provides independent Federal oversight for test programs, pilots, demonstrations, and other forms of evaluations of homeland security capabilities both in the field and in the laboratory.

Office for Interoperability and Compatibility (OIC): OIC provides local, tribal, state, and Federal stakeholders with the tools, technologies, methodologies, and guidance to enable improved communications interoperability at all levels of government. OIC manages a comprehensive research, development, testing, evaluation, and standards program to enhance emergency interoperable communications and improve alerts and warnings.

Technology Clearinghouse/R-Tech (TCR): TRC rapidly disseminates technology information on products and services to local, tribal, state, and Federal agencies and private sector entities in order to encourage technological innovation and facilitate the mission of the DHS. R-Tech provides information, resources, and technology solutions that address mission capability gaps identified by the emergency response community.
ASOA expands the Science and Technology Directorate's (S&T) analytic and systems engineering competencies in support of the Homeland Security Enterprise as they acquire operationally focused, best value solutions that can be successfully transitioned to operational use. To accomplish this, ASOA provides coordinated policy, guidance, processes, products, and outreach in four critical areas: standards development; systems analysis; research and development testing and assessment; and operational testing and evaluation. Specifically, ASOA applies its expertise in the following ways:

- Assist component research and development and acquisition programs to apply a systems analysis approach to develop high-fidelity, testable operational and capability requirements on the “front end.”
- Assist research and development and acquisition programs to apply a research and development test and assessment approach to support development, execution, and transition of technologies.
- Develop, promote, and facilitate a rigorous systems engineering process to institutionalize a “systems thinking” approach to programs and increase efficiency in transforming customer needs and requirements into operational capabilities.
- Through delegation by the Secretary act as the principal advisor on operational testing and evaluation and oversee Test and Evaluation (T&E) for DHS Major Acquisition Programs.
- Serve as the Executive Agent for the DHS’ Federally Funded Research and Development Centers (FFRDCs), Systems Engineering and Development Institute (HSSEDI) and Studies and Analysis Institute (HSSAI).
- Serve as the Standards Executive for the development and use of standards that meet DHS enterprise needs with reliable, interoperable and effective technologies and processes.
- ASOA's Transportation Security Lab provide expertise, specialized facilities and test protocols necessary to develop and evaluate explosive screening and contraband detection technologies.
- ASOA's System Assessment and Validation for Emergency Responders (SAVER) Program assists emergency responders in making procurement decisions by conducting objective assessments and validations on commercial equipment and systems.
- Serves as the Component Acquisition Executive for the S&T Directorate.
HSARPA uses innovation and modernization to push scientific limits and produce frontline products that support organizations like the Secret Service, bomb squads, first responders, Transportation Security Administration, and officers along our borders. HSARPA conducts analysis to understand these organizations’ current missions, systems, and processes and ultimately identifies operational gaps where new technologies can have the most impact. Program managers lead teams of national experts to develop, test, and evaluate these new homeland security technologies and capabilities.

HSARPA Divisions:

- **Borders and Maritime Security Division (BMD)** Ms Ahn Duong, Director
  Prevent contraband, criminals and terrorists from entering the U.S. while permitting the lawful flow of commerce and visitors.

- **Chemical and Biological Defense Division (CBD)** Dr. Donald Woodbury, Acting Director
  Detect, protect against, respond to, and recover from potential biological or chemical events.

- **Cyber Security Division (CSD)** Dr. Douglas Maughan, Director
  Create a safe, secure and resilient cyber environment.

- **Explosives Division (EXD)** Dr. Eric Houser, Director
  Detect, prevent and mitigate non-nuclear explosives attacks against people and infrastructure.

- **Resilient Systems Division (RSD)** Mr. Jalal Mapar, Director
  Human factors/identification, physical security systems, decision support systems
To maximize DHS' return on investment in university-based research and education, the OUP will:

- Build a stable community of homeland security researchers and educators at U.S. colleges and universities.
- Foster a homeland security culture within the academic community through research and educational programs.
- Strengthen U.S. scientific leadership in homeland security research and education.
- Generate and disseminate knowledge and technical advances to advance the homeland security mission.
- Integrate homeland security activities across agencies engaged in relevant academic research.
- Develop a permanent homeland security science and engineering workforce.

Programs:

- **Centers of Excellence** engage the academic community to deliver tools, technologies, knowledge products, training and talent to enhance the Department's homeland security capabilities.
- **OUP Education Programs** engage, educate and ultimately direct academically high performing individuals toward choosing Homeland Security-Science, Technology, Engineering, and Mathematics (HS-STEM) related careers.
- **Minority Serving Institutions (MSI) Programs** ensure that the face of America is reflected in the future of Homeland Security science and technology work force.
• The Center for Risk and Economic Analysis of Terrorism Events (CREATE), led by the University of Southern California, develops advanced tools to evaluate the risks, costs and consequences of terrorism.

• The Center for Advancing Microbial Risk Assessment (CAMRA), led by Michigan State University and Drexel University established jointly with the U.S. Environmental Protection Agency, fills critical gaps in risk assessments for mitigating microbial hazards.

• The Center of Excellence for Zoonotic and Animal Disease Defense (ZADD), led by Texas A&M University and Kansas State University, protects the nation's agricultural and public health sectors against high-consequence foreign animal, emerging and zoonotic disease threats.

• The National Center for Food Protection and Defense (NCFPD), led by the University of Minnesota, defends the safety and security of the food system by conducting research to protect vulnerabilities in the nation's food supply chain.

• The National Consortium for the Study of Terrorism and Responses to Terrorism (START), led by the University of Maryland, informs decisions on how to disrupt terrorists and terrorist groups through empirically-grounded findings on the human element of the terrorist threat.

• The National Center for the Study of Preparedness and Catastrophic Event Response (PACER), led by Johns Hopkins University, optimizes our nation's preparedness in the event of a high-consequence natural or man-made disaster.

• The Center of Excellence for Awareness & Location of Explosives-Related Threats (ALERT), led by Northeastern University and the University of Rhode Island will develop new means and methods to protect the nation from explosives-related threat.

• The National Center for Border Security and Immigration (NCBSI), led by the University of Arizona in Tucson (research co-lead) and the University of Texas at El Paso (education co-lead), are developing technologies, tools, and advanced methods to balance immigration and commerce with effective border security.

• The Center for Maritime, Island and Remotes and Extreme Environment Security (MIREES), led by the University of Hawaii and Stevens Institute of Technology focuses on developing robust research and education programs addressing maritime domain awareness to safeguard populations and properties in geographical areas that present significant security challenges.

• The Coastal Hazards Center of Excellence (CHC), led by the University of North Carolina at Chapel Hill and Jackson State University in Jackson, Miss., performs research and develops education programs to enhance the nation's ability to safeguard populations, properties, and economies from catastrophic natural disaster.

• The National Transportation Security Center of Excellence (NTSCOE) The NTSCOE will develop new technologies, tools and advanced methods to defend, protect and increase the resilience of the nation's multimodal transportation. It comprises seven institutions.

• The Center of Excellence in Command, Control and Interoperability (C2I) led by Purdue University (visualization sciences co-lead) and Rutgers University (data sciences co-lead) will create the scientific basis and enduring technologies needed to analyze massive amounts of information to detect security threats.
What: Within its Basic Research Portfolio, S&T generally funds quality research projects that meet at least one of these selection criteria:

- Addresses an important Department issue without a near-term solution.
- Pursues a creative solution that addresses a unique, long-term need, which is not addressed elsewhere.
- Exploits new scientific breakthroughs (for example, from universities, laboratories, or industry) that could strengthen homeland security.

Basic science ideas which hold promise for transformative performance improvements. Generic areas are identified in charts 11-14

A pre-submission inquiry is optional, but White Papers are required - full proposal only if invited

How Much: nothing specified

When: anytime up to 31 Dec 2018

Where: DHSST-LRBAA14-02 DHS S&T Long Range Broad Agency Announcement

Resources
DHS S&T Directorate Strategic Plan 2011
High Priority Technology Needs 2009
DHS S&T Long Range Broad Agency Announcement: Topics
DHSST-LRBAA-14-02 (open to 31 Dec 2018)

First Responder Group (FRP)

FRG.01 Identify Trends, Patterns and Content from Large Volumes of Data
FRG.02 Share Video from Incident Scene to Medical Services Personnel
FRG.03 Analyze the Performance of a Video Systems transport Component
FRG.04 Understand Public Response to Alert and Warning Messages
FRG.05 Determine when more Granular Geo-targeting is Appropriate
FRG.06 Respond and Recovery from Radological/Nuclear Incident
FRG.07 Monitor airborne radioactive fallout particles in Atmosphere

Chemical/Biological Division (CBD)

Chemical/Biological Detection

CBD.02 Rapid Diagnostic Tests
CBD.03 Facility Protection
CBD.04 CBRN Threat Characteriization

ARGO Defense

CBD.09 Diagnostics for Foreign Animal Disease
CBD.10 Scalable Architecture for Modeling and Analysis of Foreign Animal Diseases

Explosives Division (EXD)

EXD.01 Standoff Detection of Explosives
EXD.02 Trace Detection of Explosives
EXD.03 Cargo Security
EXD.04 Test and Evaluation Expertise and Facilities for Counter IED Detection
EXD.05 Data Fusion and Automated Detection for Aviation
EXD.06 Advanced Detection Technologies
DHS S&T Long Range Broad Agency Announcement: Topics
DHSST-LRBAA-14-02 (open to 31 December 2018)

Cyber Security Division (CSD)
  CSD.01  Internet Infrastructure Security
  CSD.02  National Research Infrastructure
  CSD.03  Homeland Open Security Technology
  CSD.04  Forensics Support to Law Enforcement
  CSD.05  Identity Management
  CSD.06  Data Privacy Technologies
  CSD.07  Software Assurance
  CSD.08  Cyber Security Education
  CSD.09  Cyber-physical control and Critical Infrastructure Systems and Security
  CSD.10  Internet Measurement and Attack Modeling Techniques
  CSD.11  Securing the Mobile Workforce
  CSD.12  Security in Cloud Based Systems
  CSD.13  Experiments and Pilots - test in operational environments
  CSD.14  Research Data Repository
  CSD.15  Cybersecurity Economic Incentives
  CSD.16  Data Analytics
  CSD.17  Tailored Trustworthy Spaces
DHS S&T Long Range Broad Agency Announcement: Topics
DHSST-LRBAA-14-02 (open to 31 December 2018)

Border and Maritime Security (BMD)
  BMD.01  Land Border Security
  BMD.02  Maritime Border Security

Resilient Systems Division (RSD)

Human Factors/Identification Systems
  RSD1.1  Behavior-based models/methods/training/technologies to enhance community resilience
  RSD1.2  Detection/analysis/understanding/mitigation of violent extremists
  RSD1.3  Non-invasively identifying deceptive and suspicious behavior
  RSD1.4  Biometrics

Physical Security Systems
  RSD2.1  Surveillance Systems
  RSD2.2  Resilient and Sustainable Critical Infrastructure Sectors

Decision Support Systems
  RSD3.1  Agile Decision Aid Analytics
  RSD3.2  Modeling, Simulation and Gaming Technologies
  RSD3.3  Geospatial and Remote Sensing
  RSD3.4  Emergency Management
  RSD3.5  Information Sharing
DHS S&T Long Range Broad Agency Announcement: Topics
DHSST-LRBAA-14-02 (open to 31 December 2018)

Office of Standards (STN) - in Acquisition Support and Operations Analysis

STN 1 Biological Countermeasure Systems
STN 2 Chemical Countermeasure Systems
STN 3 Explosives Detection Systems
STN 4 Robotics Systems
STN 5 Biometrics and Credentialing
STN 6 Cargo Security
STN 7 Infrastructure and Community Resilience
STN 8 Sensor Network and Alert Systems
STN 9 Geospatial Information Systems and Interoperability
STN 10 Personal Protective Equipment
What: Cybersecurity Research and Development - the BAA is generic, submission of proposals must wait for amendments to the BAA that will identify topics. Anticipated technical topic areas (TTA) of interest:
  • Security for Cloud-Based Systems
  • Data Privacy Technologies
  • Mobile Wireless Investigations
  • Mobile Device Security
  • Next-Generation DDOS Defenses
  • Cyber-Physical Systems
  • Application Security Threat Attack Modeling (ASTAM)
  • Static Tool Analysis Modernization Project (STAMP)
  • Network Reputation and Risk Analysis
  • Data Analytics Methods for Cyber Security
  • New Models for Cyber Security Learning
  • Designed-In Security
  • Finance Sector Cyber Security
  • Cyber Security Measures and Risk Management
  • Data Provenance for Cyber Security
  • Rapid Indicators for Cyber Threats
  • Domain Name System Security (DNSSEC) Applications
  • National Initiative for Cyber Security Education

Type I (New Technologies) Type II (Prototype Technologies) Type III (Mature Technologies)

When: Amendments will specify specific topics

How Much: it is anticipated that the CSD program will have a total of $95M over the next 5 years

Where: DHS BAA HSHQDC-14-R-B0005 and subsequent amendments
DSH / Science and Technology Directorate  
Explosives Division  
Advanced Trace Detection Instrumentation and Methodologies

**What:**

Technical Areas of Interest
- Retrofit of Current Explosive Trace Detection Systems
- Develop Advanced Desktop Explosive Trace Detection System
- Develop Portable Explosive Trace Detection System suitable for security screening
- Trace Explosives Detection Tools and Methods
- Advance Information Theoretical Analysis of Signatures
- Improved Trace Explosives Sampling Methods for cargo, checked baggage, or checkpoint

The work is not basic research, rather technology development. The funding will use a contract mechanism, not grants, and have test/evaluation deadlines.

White papers are required.

**How Much:** it is anticipated that DHS S&T will have approximately $10.5M for all awards

**When:** Full Proposal by 28 March 2014

**Where:** DHS BAA 13-03