



NSF Big Data PI Meeting

Data Analytics Engine (DA-E)

21 April 2016



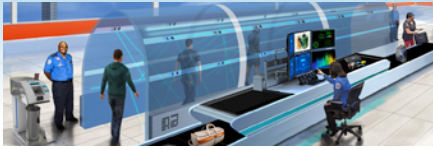
**Homeland
Security**

Science and Technology

Homeland Security Advanced Research Project Agency

Stephen Dennis

DHS S&T Visionary Goals



SCREENING AT SPEED:

Security that Matches the Pace of Life



A TRUSTED CYBER FUTURE:

Protecting Privacy, Commerce, and Community



ENABLE THE DECISION MAKER:

Actionable Information at the Speed of Thought



RESPONDER OF THE FUTURE:

Protected, Connected, and Fully Aware



RESILIENT COMMUNITIES:

Disaster-Proofing Society

Data Analytics is a Key Component of Each Goal



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DHS FY 2017 Strategic Priorities in Big Data

Data Driven Decisions for Homeland Security Missions *Define, Inform and Deliver Revolutionary Analytics for Homeland Security Decision Makers*

- Privacy Protected analytics for secure information systems
- Leverage Science and Technology from Industry, Academic, and Government programs to deliver cross cutting capabilities for homeland security enterprise research and development
- Exploit breakthrough computational analytics to characterize homeland security problems and deliver transformational solutions that drive mission success



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DHS FY 2017 Planned Activities

- DHS Data Framework
- Privacy Protecting Social Media Analytics
- Dynamic Risk Assessment
- Deep Learning Experiments
- “Progressive” Analytics for Mixed Latency Networks
- Blockchain based Data Management and Information Sharing



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DAE Funding Opportunities

- HSARPA DA-E
 - Partnership with NSF Big Data Program
 - Direct Discussions, Demos, Meetings with HSARPA
- DHS University Centers of Excellence
<https://www.dhs.gov/science-and-technology/centers-excellence>
- Long Range BAA
<https://www.dhs.gov/science-and-technology/st-lrbaa>
- Small Business Innovation Research Program
<https://www.dhs.gov/science-and-technology/sbir>
- Technology Transfer (e.g. CRADA)
<https://www.dhs.gov/science-and-technology/technology-transfer-mechanisms>



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QUESTIONS?

conditions
score extract
card interpreting
sets intentional
patients
disease
threat
start helped
dataset Security
driven understanding
genomic Perabstis probabilistic
important reverse computes relationships cause
free reverse computes relationships cause
patterns example predict networks
credit essential
studies forward
developed
fragments
want work
scale effect million
large figure reverse
apply
intended causal

occurred
looking
Hill
using
Bayesian simulation types

specifically
layers
database
goal

clinical
approaches
data
big

analytic
clinical
approaches
data
big