

# First Advanced Development for Security Applications Workshop For CBP (ADSA-CBP-01):

Customs and Border Protection

## Workshop Objectives & Format



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# So What? Who Cares?

- Assume that CBP has challenges to meet its objectives
  - Ports of entry: mail, parcel, airports, ships, rails and land crossing
  - Transportation: aircraft, rail, cars, trucks, ships and pedestrians
  - Threats: contraband (narcotics, agriculture products and intellectual property), people
- ADSA-CBP-01 objectives
  - Hear CBP challenges and possible solutions
  - Increase involvement from third-parties
    - Academia, national labs, non-vendor industry
  - Brainstorm and apply scientific process
  - Create grand-challenges using problem sets/data in the public domain
- Precedent
  - 18 ADSAs for TSA
  - 100s of third parties involved in field
  - 100s of papers published based on ~10 grand challenges

# ADSA Format

- Public domain – no SSI or classified material
- No speaker introductions; read handouts.
- This is a workshop, not a conference
  - Speakers are instructed to begin with “So What? Who Cares?” (elevator speech)
    - Crawford bears responsibility for format (and agenda)
  - Conversation and questions are expected at all times, especially during presentations after first slide
  - Optimal presentation ends after first slide

# The Importance of Technology Innovation

In order to keep up with the changing shipping industry CBP must continue to leverage technology to protect the security and integrity of our borders



- Advancement in cargo handling – Unmanned Terminals
- Increases in cargo volume and concentration – ship TEU capacity; cargo volume increasing worldwide
- Changing this world with emergent technology will change our world

**ADSA-CBP more than cargo.**



Homeland  
Security

Science and Technology



# So What? Who Cares?

- Mission: *interdiction of prohibited items various ports of entry using various conveyances*
  - *Prohibited: Narcotics, currency, illegal immigrants, rad/nuke ...*
  - *Entry: borders, airports, shipping ports*
  - *Conveyances: Rail, car, ship, plane ...*
- Challenges that may need solutions
  - *Increased PD, decreased PFA, reduced secondary inspection times/cost*
  - *Detecting fentanyl, secondary inspection of cargo containers*
- Methods for people with solutions to work with CBP
  - *BAA*
  - *Whitepaper submissions*
  - *Contact me (email, phone) - I have money*

# So What? Who Cares?

- Space: *fentanyl detection in mail*
- Problem: *small quantities difficult to detect with high PD and low PFA*
- Solution: *trained monkeys licking mail*
- Results: *PD=90%, PFA=10% on >100 g*
- TRL: 8
- Contact me (*email, phone*)



# **BACKUP SLIDES**

# DHS Tactics

- Augment abilities of vendors with 3<sup>rd</sup> parties
  - Academia
  - National labs
  - Industry other than the vendors
- Create centers of excellence (COE) at universities
- Hold workshops to educate 3<sup>rd</sup> parties and discuss issues with involvement of 3<sup>rd</sup> parties
  - Algorithm Development for Security Applications (ADSA)
- Forage for technology in other fields



# Questionnaire

- Request for everyone to answer questions preferably during the workshop
- ~10 questions – 10 minutes
- Available via Survey Monkey

<https://www.surveymonkey.com/r/ADSA-CBP>



**SurveyMonkey.com**  
because knowledge is everything

# Minutes

- Minutes of discussion will be taken
  - Sensitive information to be redacted
- Please identify yourself and your institution first time you speak
- Vikki Pokrashevskaya, thank you for taking minutes

# Archival Materials

- Final reports and presentations from previous ADSAs
- Final reports from projects to CT-based EDS
  - Segmentation
  - Reconstruction
  - ATR

[https://myfiles.neu.edu/groups/ALERT/strategic\\_studies/](https://myfiles.neu.edu/groups/ALERT/strategic_studies/)

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- Participants



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