Twelfth Advanced Development for Security Applications Workshop (ADSA12):

Screening of Personnel and Divested Items at The Checkpoint

Workshop Objectives

Carl R. Crawford
Csuptwo, LLC

So What? Who Cares?

- Passengers (non-terrorist) perspective
  - Faster, predictable screening with reduced divestiture
  - Fewer pat-downs and bag opening
- Terrorists perspective
  - Deter: not worth trying
  - If try: detect all explosives on/in body, in divested items
- Airport/TSA perspective
  - Reduced total operating cost
  - Higher PD: more threats, lower minimum mass, implanted threats
  - Lower PFA: less secondary inspection especially pat-downs
- Solution: assemble very bright people and allow scientific method to work
  - People with problems: ask for solutions
  - People with solutions: propose solutions (funding available)

Rule #3 – Public Domain

- Do not present classified, SSI, FOUO or proprietary material
- Presentations, minutes and proceedings will be placed in the public domain
  - After review for SSI and classified material

Rule #2 – Speaker Instructions

- 2nd slide has to be "so what who cares"
  - State how technology will improve explosive detection
  - Optimum presentation: stop at 2nd slide
- Don't get trapped into developing the whole story before giving the bottom line.
- Move most slides into backup

Rule #1 – Open Discussions

- This is a workshop, not conference
- Conversation and questions expected at all times, especially during presentations
- Moderator responsible for keeping discussions initiating discussion
  - Will *try* to allow speakers to complete their introduction

BACKUP SLIDES

DHS Tactics

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

Equipment Requirements

- Probability of detection (PD)
- Probability of false alarm (PFA)
- FA resolution
- # types of threats
- Minimum mass
- Minimum sheet thickness
- Total cost of ownership
  - Purchase price
  - Siting
  - Labor
  - Maintenance

- Extensibility
- Ability to fuse
- Compatible with risk-based screening
- False alarm resolution methodologies
- Siting
- HVAC, space, weight shielding
- Throughput
- Safety

Questionnaire

- Request for everyone to answer questions preferably during the workshop

- ~10 questions – 10 minutes

- Available via Survey Monkey

https://www.surveymonkey.com/s/ADSA12

SurveyMonkey.com
because knowledge is everything

Minutes

- Minutes will be taken of discussion
  - Sensitive information to be redacted
- Please identify yourself and institution first time you speak

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/

Acknowledgements

- Northeastern University (NEU)
- Awareness and Localization of Explosives- Related Threats (ALERT) DHS Center of Excellence
- Department of Homeland Security (DHS)
- Presenters
- Participants

Acknowledgements

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  - Eric Crawford, Cream City Ribbon
  - Peter Harris, Yankee Foxtrot
  - Laura Parker, DHS
  - Luc Perron, Lpvision
  - Tim Rayner, Multix Detection
  - George Zarur, DHS/TSA (retired)
- Content
  - Doug Pearl, Inzight Consulting
  - Suriyun Whitehead, Booz Allen Hamilton

Logistics

- Melanie Smith, lead
- Deanna Beirne
- Kristin Hicks
- Teri Incampo
- Anne Magrath

Let them know if you need support during or after workshop.

ADSA13 Provisional Topics

- Risk-based screening & gaming theory
  - Hardening, deterrence
- Computer simulations
  - X-ray transmission, back-scatter, diffraction, MMW, neutrons
  - Standardized phantoms
- Improving statistical significance of testing

Final Remarks

- "Terrorism causes a loss of life and a loss of quality of life," Lisa Dolev, Qylur
- Need improved technology
- Thank you for participating

No Passengers if Cargo Onboard