Sixteenth Advanced Development for Security Applications Workshop (ADSA17):

Systems Engineering Of Aviation Security Systems

Workshop Objectives



So What? Who Cares?

- Competing goals for aviation security
 - Terrorist
 - Still trying to disrupt aviation security, smart adapting adversary
 - Displacement using cars/trucks
 - Las Vegas scary, even if not terrorist attack
 - Strengthen security: More threats, lower mass
 - Increase operational efficiency: Reduce costs, labor, footprint, deployment time/effort
 - Improve passenger experience: Reduce divesture, wait time
- Silver bullets are rare (said none at ADSA16)
- ADSA17 objectives
 - Begin looking at security as integration of systems/technologies
 - How to specify, integrate and deploy subsystems?
 - How to get more out of existing systems?
 - How to find the needle (broken) in hay stack?
 - How do find the hay instead of the needle?
 - How to deter needles? (But, worry about displacement)

ADSA Format

- 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
- Public domain no SSI or classified material
- No speaker introductions; read handouts

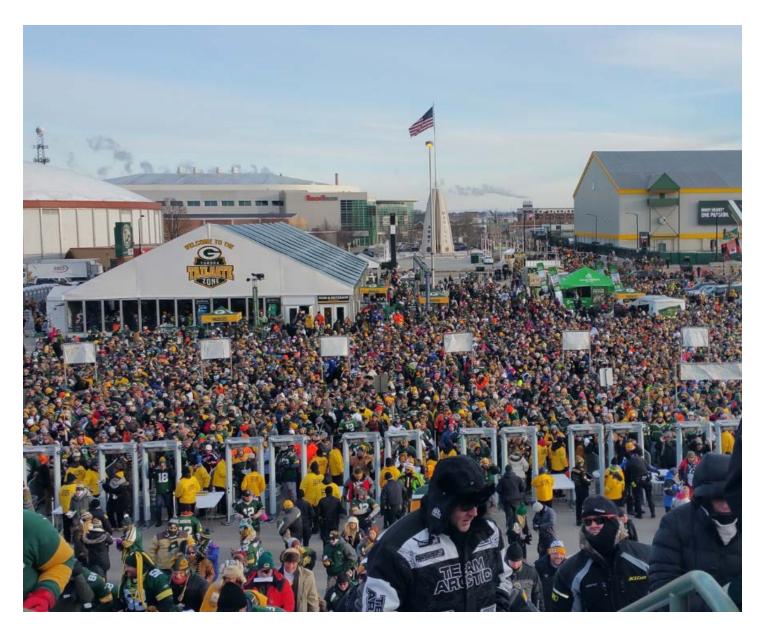
ADSA17 Changes

- "Speed dating" for emerging technologies and companies
 - ~5 minute presentations
 - May not have results (early stage company)
- Passenger "panel" of one passenger
 - Passenger experience
 - Identify verification
 - Risk based screening
- More microphones
 - Use for questions
 - Or, speak very loudly

Futures

- ADSA18: May 15-16, 2018
 - Title TBD
- ALERT program reviews: May 17, 2018
 - Adaptive ATR (AATR)
 - Video tracking of passengers and divested items (CLASP)
- ADAS-CBP: June 20-21, 2018
 - ADSA for DHS S&T on customs and border protection

BACKUP SLIDES



Does solving one problem lead to another?

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 riskbased 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/ADSA16



Minutes

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

Acknowledgements

- Northeastern University (NEU)
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- Department of Homeland Security (DHS)
- Presenters
- Participants







Logistics

- Melanie Smith, lead
- Tiffany Lam
- Deanna Beirne
- Kristin Hicks
- Anne Magrath

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

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

