

Twenty-First Advanced Development for Security Applications Workshop (ADSA21):

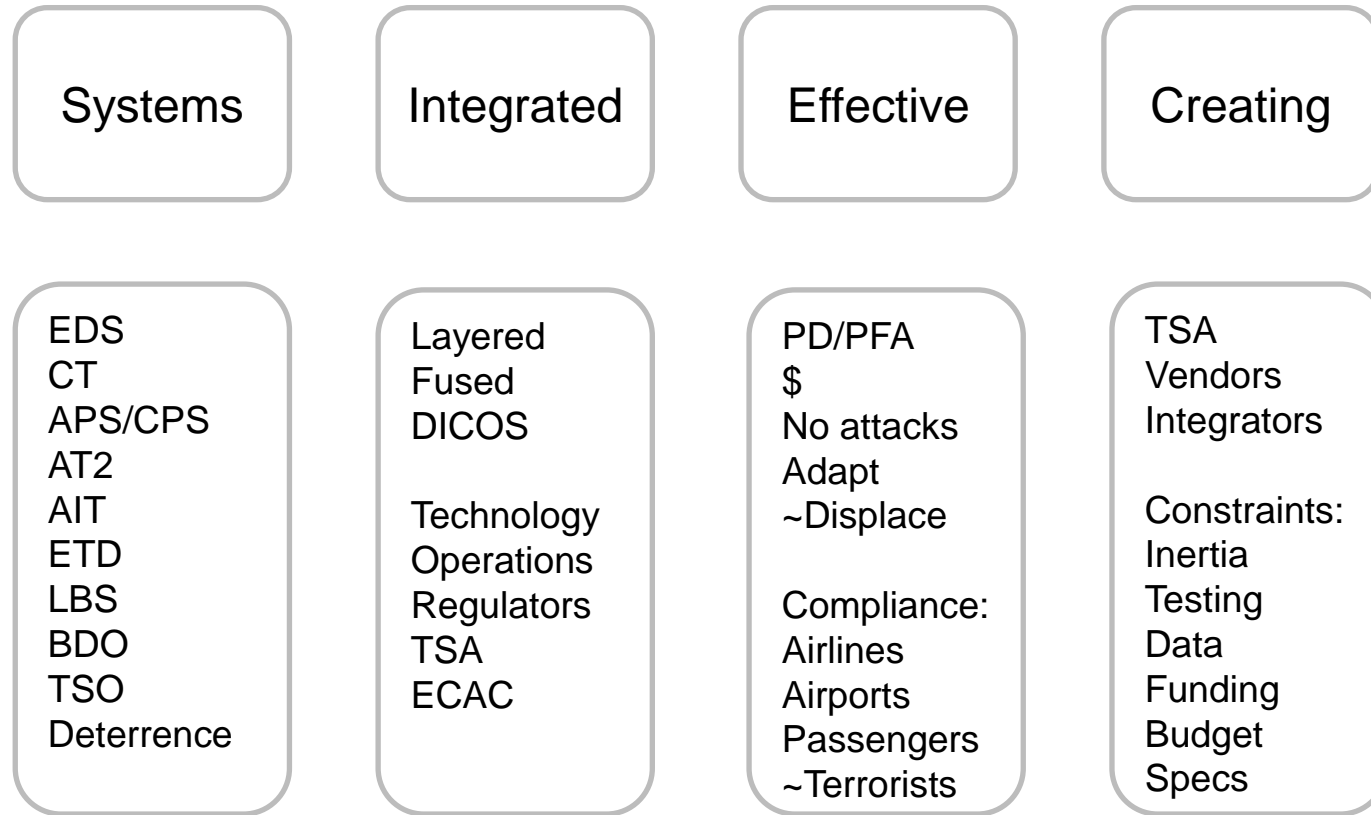
[Creating] Effective Integrated Systems

Workshop Objectives



Carl R. Crawford
Csuptwo, LLC

So What? Who Cares?



- Do we agree on the definitions of systems, integrated, effective and creating?
- [Very] Difficult problem
- ADSA21 purpose – discuss and solve

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
- Everyone participates (switch to this venue)
- No picture taking, recording

Problem - 1

- Intelligence says:
 - Terrorists will attach with explosives concealed in/as pencils
 - Two pencils will take down plane
- Possible solutions??
 - Divest all pencils, micro-CT scans
 - Ban pencils
- Your solutions???



Problem - 2

- Intelligence says:
 - Two pencils will take down plane
 - Pencils placed on ears
 - Terrorist
 - Bald, white males from Wisconsin
- Possible solutions?
 - Look for pencils in ears on bald, white males from Wisconsin
- Your solutions?



ADSA22 Process

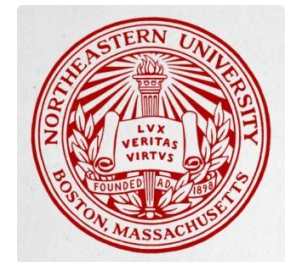
- TSA
 - What are definitions of systems, integrated, effective and creating?
 - What do you need?
 - How to fund?
- Vendors, inventors, etc.
 - What do you need from TSA?
 - What you can do for them?
- Extra agenda topics
 - Machine learning
 - Data desensitization
 - Perceptions of others

Save the Date

- ADSA22
 - May 6-7, 2020
 - Theme: TBD
- ADEPT03
 - ADSA for Customs and Border Protection (CBP)
 - July 8-9, 2020
 - Theme: Creating Effective Engagements with CBP

Acknowledgements

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

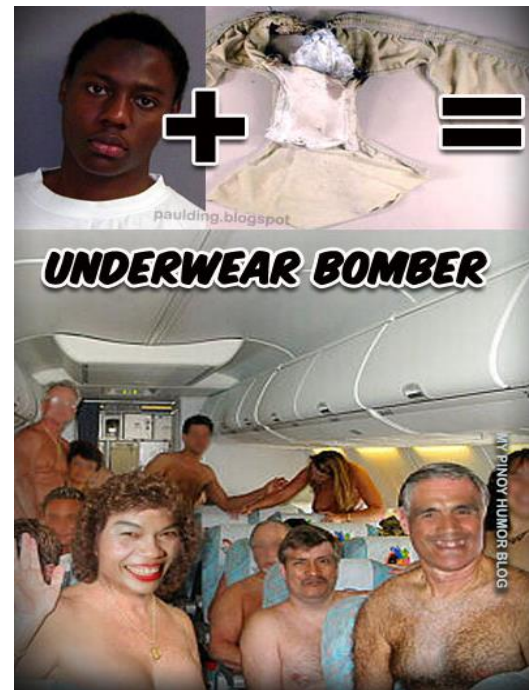


Logistics

- Tiffany Lam, lead
- Danielle Anderson
- Deanna Beirne
- Kristin Hicks
- Anne Magrath
- Pooja Ravichandran
- Olivia Sutton

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



BACKUP SLIDES

Effective?

- Working?
 - No incidents
 - Passengers getting on planes on time
- Possible issues?
 - Passengers: wait times, theft, divestiture
 - PD<100% (per Inspector General, AIT)
 - PFA>0% (per observation)
 - Adaptability slow (per GAO report)
 - Number of TSOs
 - Other vectors onto plane
 - Displacement to soft targets (Sri Lanka)
- Enhancements?
 - Purpose of ADS20
 - New technologies and procedures



More Possible Measures

- No incidents, no reports of failed attempts, passengers getting on planes, no profiling, all vectors protected
- #threats, min mass, PD, PFA, positive predictive value, footprint, weight, life-cycle costs, human-in-the-loop, adaptability to new threats, deterrence, third party support, networkable, displacement to soft targets
- Satisfy multiple stakeholders: passengers, airlines, airports, congress, TSA, lawyers, ACLU, tax payers

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

Archival Materials

- Final reports and presentations from previous ADSAs
 - CT segmentation, reconstruction, ATR
 - Adaptive ATR (AATR)
 - CLASP (video tracking of PAX/DVI)

https://myfiles.neu.edu/groups/ALERT/strategic_studies/