

Fourteenth Advanced Development for Security Applications
Workshop (ADSA14):

Development and Deployment of Fusible Technologies for the
Checkpoint

What was heard?
What was not heard?
What's next?



Carl R. Crawford, Csuptwo, LLC
Suriyun Whitehead, Booz Allen Hamilton

Booz | Allen | Hamilton

What Did We Hear?

- Agreement: no silver bullet; fusing is required
- Funding (TSA/DHS) available through BAAs and prize competitions
- There is Subject Matter Expertise accessible at TSL.
- Equivalent problems can be setup
 - Precedent: ALERT task orders
- TSA embracing networked systems and third party involvement
- Systems should be integrated to aggregate data
- Simulation/modeling of checkpoint
- Upstream changes impacts downstream systems.
- Certification/testing requirements drive system design
 - Can changes in regulatory testing affect security effectiveness and throughput of checkpoint?

What Did We Hear? continued

- Tack and track would help CONOPs
 - Lot to learn from computer vision field
- Accessible Property Screening:
 - Phase contrast may help tier 2 inspection
 - CT at checkpoint – need study of CONOPs if OSARP done on tier 2
- AIT
 - Concerns about collecting AIT data
 - X-rays for AIT could come back; lots of issues
 - Privacy concerns with fusing to AIT
 - Dielectric effect could be useful for MMWave

What Did We Hear? continued

- Pushing screening out
 - Distant standoff screening
 - Not everyone will be scanned by every sensor
- Need to review past to design the present
 - Fused systems
 - DICOM
- Solutions need to be fit for purpose
 - Must consider the operator
 - Deploying to 450 US airports difficult
- Displacement happening – Brussels and other soft targets
- Covert detection
- What should P_D be?
- People miss things because they are told to hurry up.

What Did We Hear? continued

- You can do some pretty impressive advancements in the unclassified space.
- “I do weapons detection. I can get explosives detection from someone else.”
- Potential in standoff trace, chemical methods, optical methods.
 - These all have to be fused with other systems. None of these will solve the entire problem.
- Different ways to do MMWave
 - Standoff and Portal
- There are ways to improve behavior detection.
 - Ways to enhance the performance of a screener.
- Gamification and extracting insights.
- Lots of participation from the UK.

What Did We Hear? continued

- Thousands of unanswered questions.
 - Its still worth answering the questions.

What did we not hear?

- Financial models
- Role of risk based screening, deterrence
- Detailed requirements for fused system
- How fused systems will be specified, tested, deployed, maintained
- Effect of CONOPs++ on TSO costs and security effectiveness
- How third parties can access data
- How to avoid choke points, kill boxes.
- Exploitation of big data.
- Not enough about tiering, layering
- Case studies of other fused systems
- Other factors: Cargo, Pilots, Workers
- From TSOs

Additional Audience Comments on “What We Heard”

- Tangerines/oranges have different structure
 - Creating unclassified equivalent problems
- P_D of 98% is not enough.

What Can Be Done To Solve the Checkpoint Problem?

- Develop fused systems – need better requirement specs

ADSA15 Provisional Topics

- Soft targets
- Tag and track
- System architectures + networking + Conops
- Deterrence
- Adaptable ATRs
- Simulants – development and testing
- Data mining
- Improving statistical significance of testing
- Human in the loop and the complete loop
- Civil rights and privacy concerns
- Other customers (sports venues, federal buildings, mass transit)
- Prize competitions
- Wands
- Texture in explosives
- TSA deployment models/issues
- Financial implications of fusion
- Testing fusible systems