

CARGO SCREENING AND TUNNEL DETECTION IN ISRAEL

Risk-Based Cargo Screening at it's core

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So What? Why do we care?

Intel-based risk-driven cargo screening at the deepest core

• Upfront quality intel on shippers, freight forwarders drives more lenient screening measures (e.g. Israel defense industries).

Strict management of the entire supply chain

 From tightly regulated and audited shipper security plans, through electronic seals to shipment tracking systems to maintain chain-of-custody

Highly tailored RBS screening measures

- Risk analysis using documentation and interviews similar to TSA BDA and CBP/TSA ACAS pilot for inbound cargo screening.
- Tailored use of EDS, X-Ray, EMD, ETD, physical search, scales, pressure chamber.
- Growing cargo demand (est. 3% p.a.) coupled with industry and Gov budget and resource constraints in a highly competitive market requires us to rethink the use of RBS in Cargo screening!







Outbound Cargo Screening

Tight regulation of known shippers

- Many large shippers (e.g. defense industries) are already regulated under a strict and comprehensive security management plan.
- Compliance with security plan allows accepting physical search during manufacturing process for primary screening.
- Comprehensive shipper database regularly updated

Strict maintenance of chain-of-custody

• Examples: electronic seals, tracking of shipments, electronic manifests, use of scales.

Tailored screening measures

 EDS, X-Ray, EMD, ETD, physical search, scales, pressure chamber per cargo risk score and commodity type.

Challenges

Scalability and supply chain vulnerabilities







Inbound Cargo Screening (EL-AL Stations)

Less intel on shippers and consigners

- BDA-type of interviewing coupled with extensive documentation review for determination of suspicious signs.
- Stricter screening measures compared to outbound.
- Challenges to maintain chain-of-custody drive almost no screening measures at shippers locations.
- Tailored screening measures coupled with risk-reduction methods to refute suspicious signs:
 - EDS, X-Ray, EMD, ETD, physical search, scales, pressure chamber per risk score and commodity type.
 - Combination of orthogonal technologies
 - High-risk cargo can be transferred other modalities or refused.

Challenges

Scalability and privacy rights

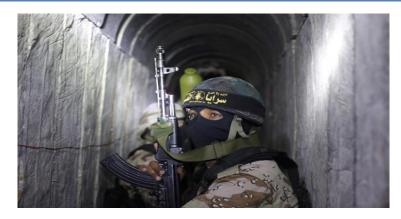




Tunnel Detection Mission

Hamas Tunnel Diggers Perspective

- During 2014, 32 tunnels between Gaza and Israel were detected and destroyed.
- Tunnel Detection—"Underground Iron Dome"
 - System components developed by over 100 Israeli Defense companies with a ~\$180M joint U.S.-Israeli R&D investment.
 - Goal was to develop anti-tunnel capabilities to detect, map, and neutralize underground tunnels that threaten the U.S. or Israel.
 - Sensor data (seismic, acoustic, etc.) fed to algorithms with output on location and length of tunnels^{*}.





- The highly classified system became operational in 2011
- In 2017 Israel started building an underground counter-tunnel barrier along the Israel-Gaza border (~37 miles long) at \$833M cost.
 - Above-ground fence, sensors, observation balloons, see-shoot systems, and an advanced below-ground protection system.

* Sources: <u>http://nocamels.com/2017/11/israel-anti-tunnel-technology-hammas/;</u> https://www.washingtonpost.com/news/checkpoint/wp/2018/03/06/israeli-official-bets-advances-in-anti-tunneltechnology-will-secure-gaza-border/?utm_term=.2daae6553a99

