

# Officer Tools & Safety

David Throckmorton

DHS S&T

Program Manager

Border Officer Tools and Safety

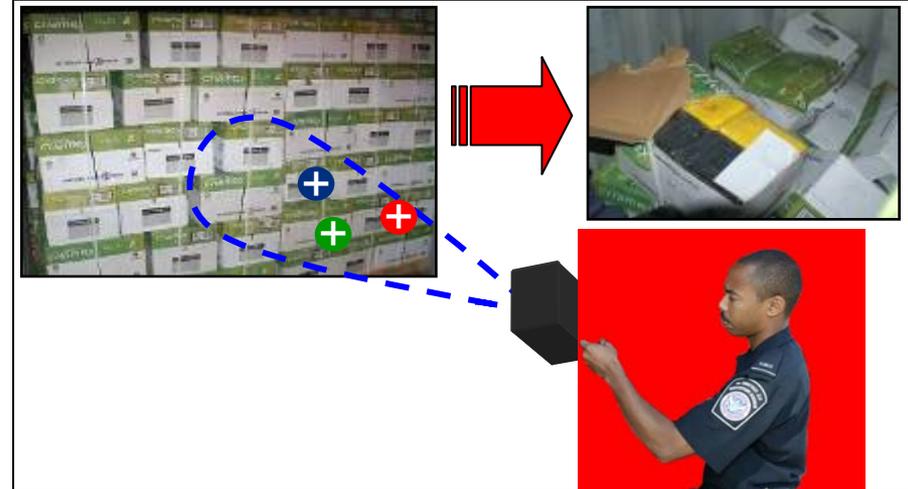
# Today's Briefing

- Where are we now → Where are we headed
- Topic Areas
  - Detectors
  - Trackers
  - Vessel Stopping
  - People Stopping
  - Other
- FOCUS
  - Safety of our Officers & Agents
  - Supporting Tools

# Detectors

# Multi-Mode Detection for Boarding Teams

Provide boarding teams or law enforcement personnel with tools to detect and identify contraband materials



## CURRENT

- Assess replacement for existing Contraband & Explosive Detector (current unit out-of-production)
- Acquire and assess dual-mode systems that can simultaneously detect narcotics and explosives
  - Same thing for handheld
- Certified Replacement for Out-of-Production Unit

## FUTURE

- Provide a non-contact method to sample contraband
- Identify multiple threats with one unit/one setup (chemical warfare agents, toxic industrial, explosive chemicals, drugs)
- Operate on portable power, is wearable, and is self contained

# Hidden Compartment Inspection Device

Non-destructive tools that allow inspection of hidden or closed compartments to find contraband or security threats



## CURRENT

- Develop a handheld through-the-wall imaging device to see through walls and false bottoms to detect
  - Humans
  - Contraband
- Device focuses and acquires backscattering photons from hidden objects irradiated by a cone beam from a low power X-ray generator

## FUTURE

- Thicker walls
- More standoff
- Better resolution

# Trackers

# Covert Illegal Contraband Tracker

Real-time tracking, identification, and classification of land, marine, and air targets and assets



## CURRENT

- N/A

## FUTURE

- Provide ability to track illegal contraband to its final location after being detected by law enforcement
- Link illegal shipments to the organizations that are smuggling them
- Place covertly in illegal contraband shipment
- Transmit through container holding illegal contraband, such as hulls of metal vessels and cargo shipments
- Reduce the probability of detecting law enforcement surveillance



Homeland  
Security

# Vessel Stopping

# Pursuit Termination – Vessel Stopping

Non-lethal compliance measures for vessels allowing safe interdiction by law enforcement



## CURRENT

- Mechanical (net)
- A non-lethal capability to compel a vessel to significantly slow down or stop
- Employed from an USCG rotary-wing aircraft
- Designed to target exploitable vessel characteristics such as the propulsion system, power plant, or steering surfaces.

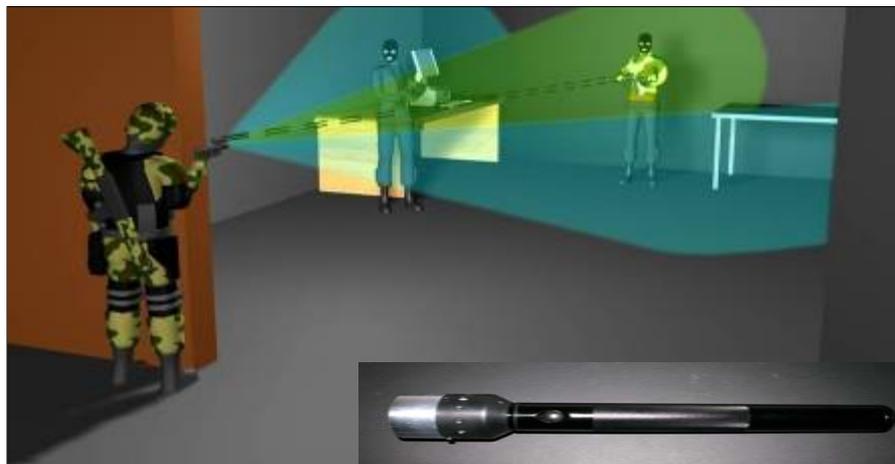
## FUTURE

- Microwave (or potentially EMP)
- Use targeted modulated microwave energy to disable uncooperative vessels
- Imparted energy will cause on-board vehicle computer controllers needed to maintain engine control to fail
- Deployable from vessels or aircraft
- Permit safe interdiction by law enforcement personnel
- Disable conveyance preventing it from inflicting harm to critical infrastructures and conveyances and allowing law enforcement to safely interdict

# People Stopping

# LED-based Incapacitator for Law Enforcement (LEDI)

Ability for law enforcement officers to assure compliance with lawful orders using non-lethal means



## CURRENT

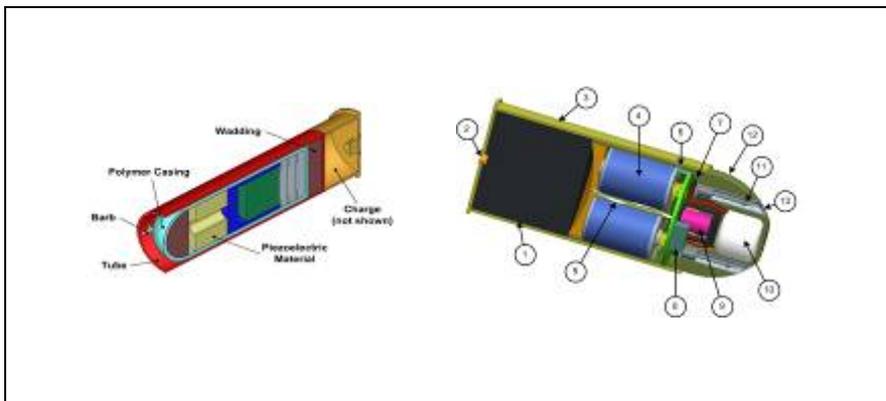
- A light-weight, energy efficient, robust, hand-held optical eye-safe less-lethal device neutralizes and assures compliance of unruly and uncooperative individuals
- Cause temporary, safe, flash-blindness effects, psychological discomfort, disorientation, and other affects without threatening the safety of officers or innocent civilians

## FUTURE

- Smaller
- Longer Range
- Different uses (e.g. crowd control)

# Less-Lethal Compliance Measures for Personnel

Ability for law enforcement officers to assure compliance with lawful orders using non-lethal means



## CURRENT

- Electro-Muscular Disruption (EMD) circuit to deploy from widely used weapons platforms
  - 12 gauge shot-gun round
  - 37 (40) mm projectile
- Stand-off distances expected to exceed 15 yds
- Wireless control and safety features

## FUTURE

- Lighter-weight
- More energy efficient
- Greater range to increase stand-off distance
- Higher levels of safety to ensure timely recovery consistent with law enforcement needs and subject state of health
- High-levels of versatility within the law enforcement community

# Other

# Boarding Team Communications

Current communications are intermittently unreliable in cluttered environments and affect officer safety and efficiency



## CURRENT

- Provide boarding team protection, communication, and detection capabilities during routine shipboard searches and inspection
- Replace intermittent and unreliable USCG Boarding Team communications with a continuous, reliable, inter-deck and team-to-ship communications platform
- Below deck repeaters (self forming wireless network)
- Above deck ship-to-ship and over the horizon
- Can be used for voice & data

## FUTURE

- Miniaturization
- More devices that can attach
  - Sniffers
  - Fingerprint
  - Video

# Ballistic Protection

Improved ballistic protection from personal protective equipment



## CURRENT

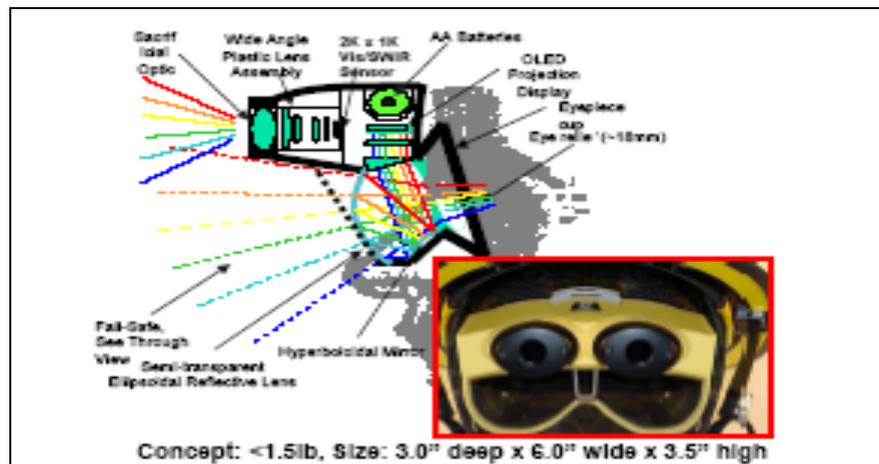
- N/A

## FUTURE

- Fit into current ballistic protection equipment
- Weigh less
- More buoyant
- Withstand the harsh operational environment better
- Stop a larger and more deadly range of bullets while maintaining low weight and robustness
- Increase the ability of a law enforcement officer to perform their job with full ballistic protection

# Coxswain's Enhanced Vision System (CEVS)

Nighttime surveillance equipment to identify contraband and alien smuggling



## CURRENT

- An extremely wide field of view helmet mounted system with short wave infrared camera technology and dual imaging lenses.
- Fully digital, providing image enhancement, extended FOV, lower power, greater redundancy and lower weight.
- Superior operational performance over traditional night vision devices

## FUTURE

- Smaller / lighter
- Wider Field of View
- Longer range