Standoff Detection of Chemical Threats on Shipped Parcels

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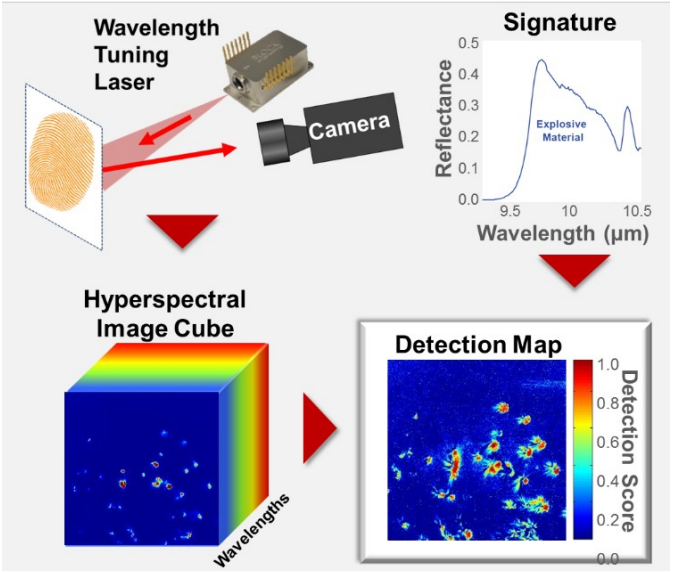
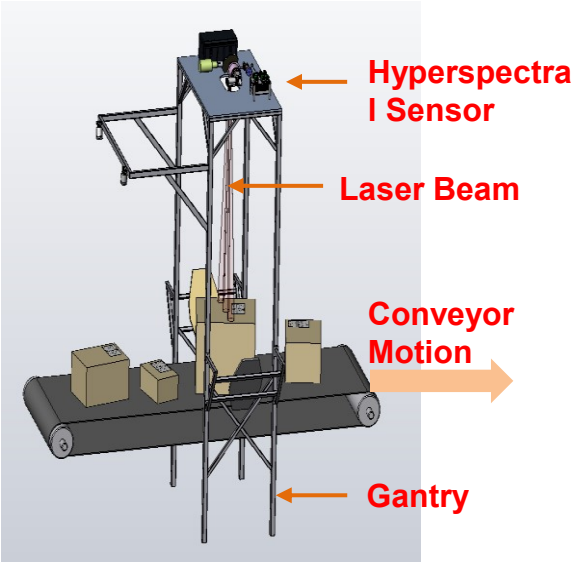
So What? Who Cares?

- **Space**: *Countering Weapons of Mass Destruction*
- **Problem**: Standoff *Detection and Identification of Explosives, Chemical Warfare Agents, Drugs and Emerging threats at Low Trace Levels*
- **Solution**: Block Developed *Quantum Cascade Laser (QCL) and Hyper-Spectral Imaging (HSI) Technology Based Products under IARPA SILMARILS*



Under DHS CWMD Transitioning the technology to Parcels Screening On-The-Move



Results: Demonstrated Detection & Identification of Explosives, CWA, TICs, Drugs, Narcotics, Emerging Threats at μg/cm^2. Stationary PLUS On-The-Move

TRL: *Currently TRL5 then at Delivery TRL7*

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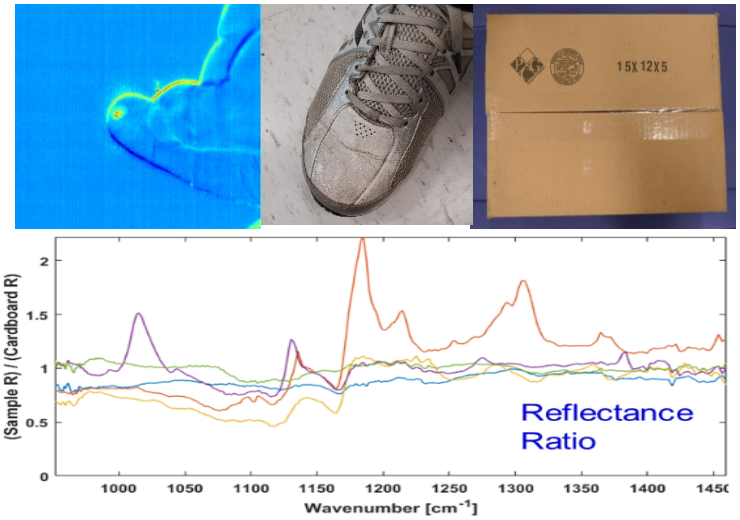
Applications

- Miniaturized widely tunable Eye Safe Laser
- “Finger Print” region of most chemicals of interest

- **Built a Large Library of Hundreds of Chemicals & Substrates combinations**
- **Extensive Testing at Indy 500, DPG, JHU/APL, FIU, Block**
- **Validated on Hands, Phones, Laptops, Shoes, Backpacks, Hair dryers, Passports, IDs, Boarding passes, Credit cards, Coins, Cars, Most Parcels Shipping material, and Ground surfaces: Dirt, Concrete, Gravel, etc..**
- **Standoff Distance: From 1 m to 30 m**
- **Up to 10 MPH (so far)**



TSA – People, Luggage
CBP – People, Cars, Luggage
MSF – Envelop, Luggage, Boxes
DoD: Military on the road applications – Won a new program with US. Navy