



ShoeScanner™

Morpho Detection, Inc. / SAFRAN Group



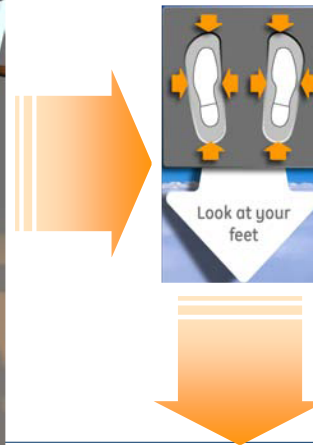
ShoeScanner

Quantum Magnetics, Inc. (QM, a wholly owned subsidiary of Morpho Detection, Inc./SAFRAN Group) is developing a new shoe scanner device (SSD) that provides improved security and passenger convenience at airport checkpoints. The SSD consists of three proven integrated detection technologies providing broad coverage for both metal and explosive threats. Passenger's shoes are screened while on their feet, thereby reducing the number of per-passenger items divested and screened by X-Ray. The SSD also eliminates the time consuming task of taking off (and putting on) passenger's shoes. The result is faster throughput, better security, and greater passenger convenience.



SSD integrates three orthogonal and complementary sensors: electromagnetic differential (EMD) metal detection for weapon detection, Quadrupole Resonance ED technology, and Trace Explosives Detection (based on the MobileTrace® engine)

Concept of Operation Example



- Passenger enters ShoeScanner
- Exit doors are closed to block thoroughfare
- Passenger is prompted to position feet
- Operator initiates scan protocol
- System scan occurs and logs results

Detection Technologies

Quadrupole Resonance (QR)

Chemically-specific bulk explosives detector

Highly effective on low vapor pressure explosives

Ion Trap Mobility Spectroscopy (ITMS™)

Chemically-specific trace explosive detector

Vapor mode sampling effective on high vapor pressure explosives

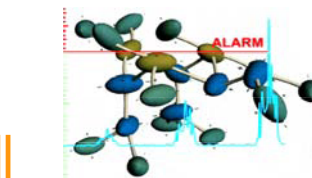
Electro Magnetic Differential (EMD) Metal Detection

Discriminates between shoe shanks and irregular metal objects about the shoe region

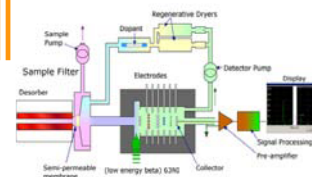


Combined results reported:

- **Red Light:** doors remain closed, officer action
- **Green Light:** doors open, pax free to go



QR Scan



ITMS™ Scan



EMD Scan