

Simulants for Security

The use of simulated explosives and other threat objects is an essential tool for the development of an effective security system. This allows for both the routine training of personnel and testing of the security system itself.

When automated explosive detection systems are undergoing development and certification testing, live explosives are used in order to prove, without question, whether or not a system works. Once a system is certified, simulants are then used for all the routine testing and training that will occur throughout the deployment lifecycle of that system.

GST develops simulants of vari-

ous commercial, military and homemade explosives for the Department of Homeland Security and other government agencies. Simulants have to be tailor made to the type of detection system that is being used. Different detection systems will identify explosives based on different properties. A detailed knowledge of the properties of various explosives and the principle of detection for a given system is used to develop a safe and inert material that will effectively mimic those properties.

Once simulants are developed, they can be packaged to test for any number of concealment scenarios and to test the vigilance of security personnel.

Evolving Threats

In the late 60's and early 70's, the primary threat to civil aviation was hijacking for political or criminal purposes. The modus operandi was typically a concealed weapon that was used to terrorize the passengers and crew in order to commandeer the aircraft.

The FAA responded to this threat by installing metal detectors and x-ray scanners to detect these weapons. The threat of explosives emerged soon thereafter and required a new security strategy.

In the wake of the destruction of Pan Am flight 103 over Lockerbie Scotland, a major push was given to the development

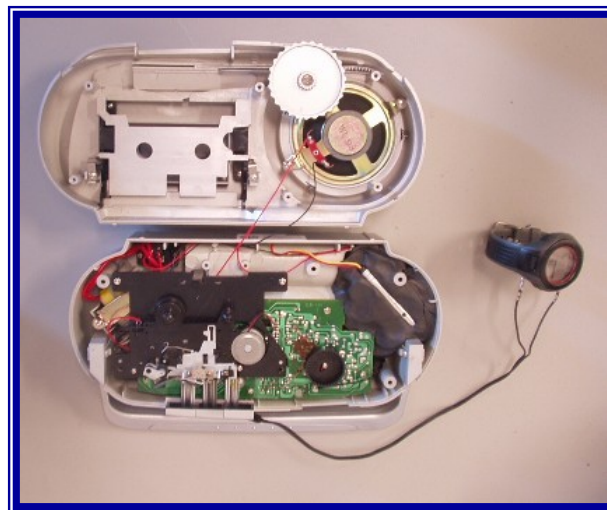
of automated explosive detection systems for checked baggage. This program was a revolutionary success which borrowed heavily from medical CAT Scan technology. This technology is expensive and was initially deployed to screen checked luggage on international flights. As of today, this technology has been fully deployed for all domestic air travel throughout the US.

GST has kept abreast of the evolving security environment for the past 18 years and continues to develop and produce new tools to support the testing, evaluation and deployment of cutting edge technology and integrated security systems.

Which Bottle Contains the Explosive?



Would your current detection technologies, personnel and procedures detect this threat?



Reproduction of the IED used in the Pan Am 103 - Lockerbie, Scotland

Are you ready for 100% cargo inspection?

GST has developed products and services targeted to assist the industry to meet the Congressional Mandate of 100% Air Cargo Screening. GST is prime contractor at the DHS / Transportation Security Laboratory. Our scientist and engineers are the leading industry experts because of our background of supporting the FAA/DHS programs in Aviation Security for over 18 years. Call Ozzie Gerald at 215-579-8200 or email

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