Senate Committee on the Judiciary
Subcommittee on Terrorism, Technology & Homeland Security:

Hearing on "Keeping Terrorists Off The Plane: Strategies For Pre-Screening International Passengers Before Takeoff"

Testimony Submitted by
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Chairman Kyl and distinguished members of the Committee, I thank you for the opportunity to be here today and to provide testimony on this most important issue – aviation security.

My name is Leon Laylagian; I am the Executive Vice President of Passenger-Cargo Security Group. PCSG, a trade association working with legislators, regulators and aviation security professionals is dedicated to providing solutions in efforts to improve aviation security. PSCG has a professional partnership with over 22,000 airline pilots, an affiliation with nearly 400,000 airline passengers; and numerous industry leaders. I am also an airline pilot of 17 years with over 12,000 hours in a variety of aircraft, both domestically and international. I have flown for 3 passenger carriers and presently fly a Boeing 757/767 for a major all-cargo airline. My airline security work began in 1993, and I have served in many different capacities with unions and grass roots efforts improving airline security. I have served on various government working groups including the TSA's ASAC for cargo security in 2003. I am a graduate of Embry-Riddle Aeronautical University, also having served in the United States Navy.

Dating back to the 1920's, U.S. airlines have earned a large share of their revenue from freight and mail. Prior to September 11, 2001, many major passenger airlines carried more freight-ton miles than the major all-cargo airlines. After 9/11, security requirements decimated passenger airlines ability to earn this important revenue. While regulations were put in place to screen 100% of checked passenger bags, belly freight and mail had different rules.

With respect to freight, the TSA allowed the reintroduction of packages on passenger airlines that were "screened" by the Known Shipper program. Since the Known Shipper program simply shows the paper trail of the chain of custody for a given shipment, screening in this context is in stark contrast to inspection. The Known Shipper program did nothing to prevent Charles McKinley from shipping himself from New York to Texas; this demonstrates access. This was discussed and debated during the 2003 ASAC, however, the TSA decided to canonize the Known Shipper program as a method of screening. While an effort exists to enhance the Known Shipper program through continued working group process called the Freight Assessment System, now titled the Cargo Working Group, not much progress is being made. The TSA has not created a central data

base, and continues to allow shippers to manage their own lists. While this protects proprietary customer data, it does not enable what could be a very useful layer of security to serve as a package profiler. An enhanced Known Shipper program would be a very useful tool to decide what packages would undergo a further electronic inspection.   Alone and without refinement, the Known Shipper program is a stop-gap measure.

Technology application for cargo inspection ideally should be 100%, however this is prohibitive with respect to throughput. A meaningful inspection formula would require 40% using electronic or physical means, with the 40% chosen by an enhanced Known Shipper program.   The enhanced Known Shipper program would also go beyond a "yes or no" proposition, and delineate from "green, yellow, orange, and red" to better articulate the need for inspection.   While there are presently 400,000 known shippers, hundreds of thousands more are involved in the supply chain.   An additional random screening feature should be added to this inspection process.

Presently, a low percentage of cargo is inspected by either physical means, or available technologies. In the U.S., Explosion Detection Systems (EDS) are used to inspect passenger bags, and can handle broken bulk cargo. EDS produces an x-ray like image, and will alarm for the operator when an identified threat is recognized.   Other available equipment includes Explosive Trace Detection (ETD, or spectral analysis) which takes a sample of particulate either by contact or forced air and tests the sample. This can be a desk top unit, or as large as an enclave. There is the TRX, or TIP (Threat Image Projection) Ready X-ray, otherwise known as the "enhanced screener" or the screening portal x-ray machine, which is not the most effective for detecting explosives. Another extremely effective tool is the K-9; while readily available and very accurate for explosive detection, K-9's do have a limited sensitivity and attention span. A technology that nearly matches the K-9 is Florescent Polymer. Florescent Polymer works very similar to the K-9, and like the dog, can detect liquid explosives. Other technologies include Gamma and Neutron based systems which have limited applications due to the problems they can cause for shipped contents, such as biomedical items.

Internationally, technology is used effectively to inspect cargo in several countries, and they have developed a proven track record of mitigating smuggling, contraband, and terrorist related shipments. These countries

include the United Kingdom, Amsterdam, Germany, France, Switzerland, Israel, Japan, China, Australia, and others. The first three utilize High Energy X-ray which cannot recognize the chemical structure of material, but still provides a lot of information with respect to operator interpretation. The United Kingdom and Amsterdam have High Energy X-ray equipment that is over 5 years old, and is considered to be performing successfully. In France, cargo is contained in a room, air is forced over the cargo to release particulate, and then the air is evacuated from the room through a filter. The filter is then examined by K-9's. In Israel, they begin with the nature of the shipment, since different types deserve different techniques. Switzerland (and others) uses Sub Pressure Simulation, or altitude chambers. Clearly, different tools are available for a variety of throughput, and risk assessment needs. Additionally, in China, they not only build their own equipment for cargo inspection, they inspect the supply chain, and require the build-up of freight to take place at the airport of departure.

At the screening portals, the ability to keep threat material, such as explosives, off the aircraft cannot depend on the TIP Ready x-ray machines and individual TSA screeners alone. The TSA is to be commended for implementing Behavior Pattern Recognition (BPR) which they now call the SPOT program. While this is a good beginning, it is far from being sufficient. The SPOT program only teaches TSO's how to detect suspicious behavior, and not how to ask the important questions that actually make BPR work. That role is delegated to the airport law enforcement officers, who are the backbone of the airport security. These law enforcement officers, however, are not trained in BPR. Given the explosive threat, the Richard Reid "shoe bomber" incident provides a good example. Mr. Reid was selected by security screeners, and was questioned by the French airport police. Their training was focused on criminal activity, not terrorist behavior, and therefore they released him to travel on a subsequent flight. In the U.S., Boston Logan airport hired BPR originator, Mr. Rafi Ron, to train the Massport police. To date, the police at the Boston airport report that non-terrorist related arrests have significantly increased due to the application of the BPR program. The Boston police move throughout the entire airport environment. The SPOT program resides solely at the screening portal, and does not use the effective BPR tools anywhere else in the airport environment. A properly run BPR program in combination with K-9's can be very effective at mitigating many types of "carry on explosives" Given the restrictions that international operations may pose, it would be extremely effective to train U.S. pilots that

fly to international destinations in the BPR program. These crewmembers stay in the hotels, travel through the communities, enter the airport(s) from the curb, and transit all the way through the sterile side of airport operations. As the most vetted aviation employees in the system, and given their mobility, they are uniquely qualified to perform a BPR function at foreign airports. Various airport and airline employees stove pipe their training, and are not well integrated with respect to application and response with other employee groups.

Technology is an important tool for cargo inspection, and the lack of direction and will, prevent its refinement and use. Do we "buy the computer today, or do we wait two months for improvements"? We cannot wait for magic solutions, and while many technologies are not perfect at this time, they are significantly more effective than doing nothing. We also cannot ignore the human element and the value of ongoing intelligence, and placing that intelligence in the right hands. With very few exceptions, crewmembers still do not have access to Security Directives or Information Circulars.

In closing, we urge Congress to work together to ensure that the security of both cargo and passengers airlines – and the flying public - are not compromised by overlooking yet another aviation security loophole.

Thank you again Chairman Kyl and distinguished members of the Committee for the opportunity to provide testimony. I welcome any questions.