

ALPA WHITE PAPER

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Meeting Today's Aviation Security Needs

*A Call to
Action for a
Trust-Based
Security
System*



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Executive Summary

A profoundly important gift was given to commercial aviation on Christmas Day 2009 when a failed terrorist attack against Northwest Flight 253 provided a wake-up call. We were reminded, yet again, that highly determined radicals and extremists continue to plot new and different ways to inflict great economic harm on an airline industry which has yet to fully recover from the staggering costs inflicted on September 11, 2001.

Terrorists have the ability, and will continue, to adversely impact our economy through repeated feints and attacks against the airline industry. This paper describes a path to significantly enhance our ability to prevent those malicious acts. By changing and improving our tactics to proactively counter the terrorists' own, we have the ability to thwart whatever our adversaries may plot against us before they strike.

The philosophy behind today's aviation security system can be traced to 1974 when prescriptive security legislation was signed into law. The screening system implemented to stop the Cuban hijacking crisis of the 1960s and early 1970s was devoted to identifying threat objects, primarily guns and bombs. The system worked quite well; the number of hijackings dropped significantly after security screening was implemented. Since 2001, however, we have recognized that the type of threat changed from that of individuals performing criminal acts, ostensibly for their own self-interest, to that of coordinated, ingenious suicidal terrorist attacks performed by trained individuals or groups.

Our philosophical approach and security culture, much more than the types and amounts of resources deployed, must adapt to today's threat. Our screening processes need to continue to interdict harmful objects carried into airports, but they also must be enhanced to do a much better job of screening for individuals with hostile intent.

Other areas of the world have made a successful transition in their screening culture and philosophy and have shown that, to be successful, we must adjust our current security resources to focus primarily on the trustworthiness of the individual traveler. Only after determining to the greatest practical extent whether an individual possesses hostile intent should advanced technologies and intrusive physical screening measures be used to examine the person and his or her belongings.

Our industry—not to mention our economy—cannot afford another terrorist attack that leads to mass destruction and loss of life. Decisive, reasonable, and effective changes to thwart today's threats against our industry can, and must, be made soon.

The Air Line Pilots Association, International (ALPA), representing more than 53,250 pilots who fly for 37 airlines in the United States and Canada, addresses this crucial issue from the perspective of an organization with a more substantial and historic record of expertise, accomplishment, and influence in aviation security than any other organization of its kind in the world. Our pilots adhere to the time-honored ALPA Code of Ethics that requires them, first and foremost, to safeguard their passengers—this paper is dedicated to them.

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Introduction

On December 25, 2009, a terrorist attempted to detonate an explosive device while on board Northwest Flight 253 from Amsterdam to Detroit. The device did not explode, but ignited, injuring the terrorist and two other passengers. According to a publicly released White House report, the terrorist involved was not on the U.S. government's terrorist watch list, but was known to the U.S. intelligence community.

The public outcry and response to that event have been overwhelming, which demonstrates the level of anxiety that many have about the effectiveness of the security screening system. ALPA shares those concerns; for several years the Association has urged the government to shift to an approach to security screening that focuses on an individual's trustworthiness before analyzing what types of objects they may have concealed on their person or in their belongings.

Some have perhaps forgotten, and many likely do not know, that passenger security screening was instituted by legislation in 1974 because ALPA forcefully advocated for several years to obtain it. Many within the government and airlines of that era opposed screening passengers at airports—even at the height of the extremely dangerous Cuban hijacking crisis—over concerns that included costs, privacy, and the potential for driving passengers away.

Just as in the 1960s and '70s, ALPA again has a profound interest in—and our passengers and members will be affected by—the outcome of the present debate about the future of aviation security. Airline pilots have a strong moral and professional obligation to safeguard the 800 million passengers and millions of tons of freight carried on their aircraft each year. Pilots literally “wear the target” and therefore have a natural interest in securing their workplace. Our members are deeply concerned that a successful attack could seriously damage or even destroy their profession and livelihood. ALPA has a long record of identifying and successfully advocating for new security improvements, to include today's aircraft security procedures (called the *Common Strategy*), the Federal Flight Deck Officer program, and many, many others. Complementing our natural interest in security is a great wealth of aviation security experience and expertise possessed by our pilots and professional staff, more than any other organization of its kind in the world.

Because of its demonstrated experience, capabilities, and insights, ALPA strongly believes that the recommendations made in this document should serve as a guide to a more secure airline industry. We look forward to working with both government and industry in this critical undertaking.

Aviation Threats

The most prevalent security concern for commercial aviation is the threat posed by the ideological extremist. This threat is particularly difficult to overcome, because these terrorists

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are willing to commit suicide to inflict harm on their enemies. Our adversaries are intelligent, determined, creative, adaptive to countermeasures, and are becoming increasingly bold in their probing and testing of the aviation system's defenses.

According to intelligence agencies in the United States and Canada, the threat is expected to be a significant concern for aviation well into the future. Numerous terrorist attacks and attempted attacks have been documented against military, civilian, and aviation targets, most notably involving the horrific use of airliners as weapons of mass destruction on September 11, 2001.

Some have said that the attacks of September 11 were enabled by a lack of imagination and that the country could not accept the notion of suicidal attackers in North America. While that is true for many, intelligence and security professionals have long considered the very real possibility of such acts of domestic terrorism. Suicidal and other types of attacks are regularly planned against U.S. interests; it is imperative, therefore, that our defenses be proactive and adaptive and that we maintain an advantage over terrorists in order to meet this ever-changing threat.

On December 29, the president acknowledged the "attempted terrorist attack that occurred on Christmas Day . . ." against Northwest Airlines Flight 253. In his weekly address of January 2, 2010, the president stated, "I will do everything in my power to make sure our hard-working men and women in our intelligence, law-enforcement, and homeland security communities have the tools and resources they need to keep America safe. This includes making sure that these communities and the people in them are coordinating effectively and are held accountable at every level. And as president, that is what I will do."¹

As seen by the mounting and evolving attacks against it, and with the support and commitment of the administration, our aviation security system needs to be enhanced to counter today's threats. Doing so will help prevent other types of threats as well (e.g., disruptive and disturbed passengers, theft, sporadic acts of violence not intended for mass destruction, etc.).

Aviation security screening has long focused on the interdiction of threat objects (e.g., guns, knives, improvised explosive devices). The weapons of choice by those who would attack aircraft have evolved over time, and their methods for concealing those weapons continually change. The one constant for all would-be attackers, however, is hostile intent to carry out an assault.

The terrorist is not constrained by a mindset that demands immediate gratification. He is patient, adaptable, dedicated, and has shown the ability to continue his malicious acts over generations. The insider threat to the aviation industry must not be overlooked or minimized. It must be addressed along with enhanced screening capabilities; background checks should be conducted on all those with access to our airplanes.

¹Remarks of President Barack Obama, Weekly Address, January 2, 2010, White House website

Today's Aviation Security Screening System

The security screening system put into place in the early 1970s was designed to counter the most prevalent and serious threat of that era: a lone individual carrying a threat object, normally a pistol, knife, explosive device, or some combination of the three. Once implemented, the screening system was quite effective in accomplishing its intended purpose. According to U.S. Department of Transportation statistics, between 1968 and 1972, there were 133 hijackings of U.S. airliners. Security screening was implemented beginning in 1973; from 1973 to 1977, there were just 17 such events, only one of which actually resulted in the hijacker achieving his goal of commandeering the flight.

It became glaringly obvious after the attacks of September 11, 2001, that the nature of the threat against aviation had significantly changed. The U.S., Canadian, and world economies have yet to fully recover from the events of that day.

Despite the fact that the threat has demonstrably changed in recent years, the United States has yet to significantly alter its decades-old screening methods to adapt to the new danger. Current screening procedures are predicated on two general assumptions: (1) every passenger poses an equal threat, with limited exceptions, and (2) the primary focus of screening is to identify objects that could be used to harm individuals and/or the aircraft. As a result, when terrorist tactics change and/or a different weapon or threat object is used, the security system is reactively adjusted to that new object or tactic. Over time, this inadequate response to the problem has the effect of creating a patchwork of "band-aids."

Accordingly, we need to shift our resources to identify the person who poses a threat in order to prevent intended malicious acts. Our security screening philosophy must be altered to embrace two principles: (1) the vast majority of passengers are trustworthy and pose very little or no threat to the flight, and (2) the only means of providing genuine security is to positively identify known, trustworthy passengers, process them in an expeditious manner, and concentrate our finite high-technology and behavioral screening resources on the small percentage of passengers whose trustworthiness is unknown or in doubt. Such a proactive security system will defeat the terrorists by anticipating future threats, be much more effective and efficient than current security protocols, and will reduce security-related inconvenience and delays for the vast majority of the traveling public while protecting passenger privacy to the maximum practical extent.

Whom Can We Trust?

Trust is a key ingredient in virtually every facet of society. On the basis of demonstrated trustworthiness, individuals are accepted for employment, bank loans are approved, security clearances are given, and access to federal office buildings is granted, as just a few examples of this principle.

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Various occupations require differing levels of trust. In determining an individual's trustworthiness, background checks by potential employers are very common, in which an individual's credit and criminal histories are disclosed to the company in order to be considered for a position. Certain occupations require submitting to fingerprint-based criminal history records checks, as does the piloting profession.

There was a time in aviation's history when a pre-boarding determination of a passenger's trustworthiness was unnecessary, but that time is long gone. Today, because of societal changes and the extremist threats, it is essential that a passenger's trustworthiness be determined to the greatest practical extent before being given a seat on an airliner. In our data-rich society, there is so much publicly available information about every citizen that a basic determination of trustworthiness is readily achievable. What is presently lacking, and what is sorely needed, is the ability to leverage our knowledge about an individual's trustworthiness and use that against our adversaries.

Risk Management

Whether we realize it or not, every mature adult is a risk manager. The kind of car that we drive, the hobbies in which we engage, the financial investments we make, and our choice of occupation—all have risks. Each of us makes choices on the basis of how much, and what types, of risk we are willing to accept to live the lifestyle that we choose.

In the airline industry, risk management is a well understood safety science with practical applications to each flight. Risk is measured, mitigated to acceptable levels, and flight operations proceed on that basis. Risk is composed of two variables: severity of outcome multiplied by likelihood of occurrence. The outcome of an attack against an aircraft can be catastrophic. However, if the likelihood of that attack occurring is zero or a very small number (i.e., the risk posed by nearly all passengers), the total threat is also zero or negligible. When a person with hostile intent and the capability to carry out a planned attack boards an aircraft, however, the risk of a catastrophic event is extremely high.

What we conclude from such a simple calculation is (1) establishing trustworthiness for each passenger is vital to understanding the amount of risk that each flight accepts, and (2) our finite security resources must focus primarily on identifying those with hostile intent and keeping them off of our airplanes. Today, our security efforts are primarily focused on the detection of threat objects carried by all passengers; this approach dilutes security resources across so many passengers that terrorists and others with hostile intent have an opportunity to circumvent detection.

Shifting Our Focus: A Trust-Based Approach to Security

As we have demonstrated, a philosophical change toward how we conduct security screening is critical to our success. Fortunately, shifting the focus of security does not necessitate increased security expenditures, making unreasonable privacy demands of the traveling public,

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or requiring them to endure ever-more demanding, and restrictive security procedures. To the contrary, we are convinced that the new security system, which we intend to work with government and industry to develop, will actually reduce outlays, decrease privacy intrusions on all but a very small percentage of passengers, and make travel logistics considerably less troublesome and tiring for the majority of travelers. Other countries have had great success with such a system because its philosophy is based on determination of passenger trustworthiness first and foremost.

The purpose of the aviation security system is to (1) detect, (2) deter, and (3) defend against all possible threats. The system must be flexible, proactive, predictably reliable, and adaptive to any new type of threats that those with hostile intent may devise.

It should be emphasized that, contrary to popular opinion, advanced technologies are not the first place to start when devising a better security system. There is much debate presently about whether “whole-body imaging” scanners should be installed and used at airports. In our view, that debate is premature and misses the point; threat object detection technologies are tools to be used after—and only after—an initial assessment of the individual’s trustworthiness is made.

The most important goals of an efficient, effective security system are to:

- Use a combination of intelligence, human interaction, and technology to ensure that the risk to flight posed by any single passenger is zero or negligible.
- Identify the trustworthiness of each passenger through a combination of publicly available information, human interaction, and behavior-pattern recognition.
- Start identifying passengers’ trustworthiness even before they arrive at the airport, and continue the process from the moment they enter the facility until they board.
- Reduce the level of privacy intrusions on the vast majority of travelers.
- Increase public confidence in aviation as a highly secure mode of transportation.
- Minimize the amount of time spent screening most passengers, but spend significantly more time on those whose trustworthiness is not known, or those who are known to be untrustworthy.
- Make security much more efficient while keeping costs constant or even reducing them.
- Create a strong deterrence against further violent attacks on aviation.

Functions

Our new security screening system should perform these essential functions:

1. As is done today, intelligence agencies gather and assess information about terrorists and others with hostile intent. The identities of such individuals are made known to the Transportation Security Administration and the Canadian Air Transportation Security Authority (CATSA) for their use in conducting security screening when the passenger purchases a ticket and continues upon their arrival at the airport.

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2. Each passenger's identity will be verified through a combination of means to include publicly available information, government-issued identification, historical knowledge of the individual, and so forth. If an individual's identity cannot be verified, their trustworthiness assessment (see next step) will reflect that situation.
3. Once the identity is verified, a trustworthiness determination is created and passengers will be identified as posing (1) no or negligible threat, (2) an unknown threat, or (3) a known threat.
4. Each passenger will be issued a medium at the airport (e.g., boarding pass) that will provide proof of identity and their trustworthiness score. That medium will be provided to Transportation Security Officers (TSOs) at the screening checkpoint and used to determine what screening processes will be used for each passenger.
 - Passengers who pose no or negligible threat will be processed quickly through metal detectors, and their carry-on bags will be examined by X-ray and any additional technologies as required.
 - Passengers categorized as unknown threats will meet with TSOs who are trained to identify threat-related behaviors. These officers will determine whether additional screening measures are warranted, and if so, what types.
 - Passengers classified as known threats will be prohibited from flying.
 - Pilots, flight attendants, Federal Flight Deck Officers, law enforcement, and other aviation employees whose trustworthiness is verified should be accommodated at the screening checkpoint in a secure, discreet manner befitting that trust. ALPA, with the full support of Congress and the TSA, has initiated an effort to create such a methodology for U.S. airline pilots, called the Crew Personnel Advanced Screening System (CrewPASS). Canadian authorities, with ALPA's urging and assistance, have adopted the Restricted Area Identification Credential (RAIC) program for use by Canadian flight crews. Both programs should be used as essential components of trust-based security systems.

It is beyond the scope of this paper to define the specific details of the new trust-based security system that we have described. ALPA urges the TSA and CATSA to work in collaboration with the airline industry and the Association to fully develop and expeditiously implement this system in the most effective and efficient way.

Additional Security Considerations

The focus of this paper is on the adoption of a new security screening philosophy, because it is ALPA's view that this component of our security system is in the most urgent need of modification. However, the Association has devoted significant resources and is working tirelessly to achieve improvements in the following additional areas:

- Efforts are ongoing to significantly enhance aircraft security through the design of new lightweight and low-cost "secondary" barriers to protect the flight deck when the fortified door is opened. These barriers will be installed on the cabin side of the door to deter and detect those with hostile intent from gaining access to the flight deck.

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- The Federal Flight Deck Officer program started with just 44 graduates in 2003 but has grown exponentially since that time to many thousands of trained, armed pilots protecting the flight deck with lethal force. The program's budget and management staff have not, however, grown commensurately. ALPA urges government to take the necessary steps to ensure that this very effective and efficient program flourishes.
- There is a stark difference between the security that is afforded passenger operations and that protecting all-cargo operations. Even at large hub airports, access to all-cargo aircraft is much too open; inadequate threat assessments are used to identify potential insider threats, and security-procedures training for pilots and other critical personnel is largely absent. These and other problems plague all-cargo security and must be addressed.

Several other significant aviation security deficiencies deserve serious consideration.

- Many airlines did not notify their airborne flight crews, or flight crews preparing to take off, of the failed attack on NWA Flight 253 until long after it occurred. Those crews should have been issued a caution from their respective companies that instructed them to institute specific countermeasures contained in the *Common Strategy*. The procedures for using air-to-ground and ATC notifications to flight crews of such serious security events must be improved. ALPA is promoting a concept called Threatened Airspace Management (TAM), which is intended to address this entire subject.
- Aviation and safety go hand in hand; since the Wright brothers began flying more than a century ago, continually improving aviation safety has necessarily been a primary focus. As a result of this history and evolved culture, airlines are very safety centric. What airlines need to become, however, is both safety and security centric; the same degree of attention paid to safety needs to also be given to airline security procedures, equipment, and training.
- As part of a comprehensive security program, government and industry should continually review and upgrade their procedures, equipment, and training to counter our adversaries' constantly changing tactics. Included in such reviews should be an examination of ways to incorporate security into airport facility design, protection of airport entrance points, addressing the "insider" threat, protection against aircraft sabotage, and other potential security weaknesses.
- Aviation employees, with very little training, could be used to significantly enhance security. For instance, they could act as the "eyes and ears" of their companies wherever they go, and employees traveling in the aircraft could be used to assist in an emergency.

Conclusion

ALPA strongly believes that time is of the essence to shift to a trust-based security system and institute other needed security measures. Our adversaries will not relent—we must not fail.