E-Business Management Consulting

Guarantee Airline Security Based on the Adoption and Implementation of a Commercial Flight Eligibility Standard for Airline Passengers

A New Airline Security Concept

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Introduction

The tragedy of the World Trade Center and Pentagon terrorist attack caused by hijacked airplanes on September 11, 2001 has made it clear that previously adopted airline security plans have not worked. The tragedy has escalated interest in improving airline security to a top priority requiring immediate action. The options facing those charged with responsibility for guaranteeing the general flying population that they can fly without fear of terrorism is either to fix the problems in the existing system or create a new security strategy.

The history of the existing airline security system, dramatically underscored by the tragedy of September 11th cause system analysts to question whether the existing system can ever be improved to the point that terrorist actions, such as the one at the New York World Trade Center and Pentagon, can be prevented. The present system is based on a set of assumptions that have proven to be invalid. The most significant of those assumptions are noted below:

1. The assumption that the screening of the entire flying public at airport security check points can result in the identification of potential terrorists and prevent them from boarding an airplane;
2. The assumption that the screening of the baggage of the entire flying public at airport security check points can result in the identification of baggage containing terrorist assets and prevent this baggage from being loaded on a commercial aircraft;
3. The assumption that the general flying public will continue to tolerate the inconvenience and delays required for the security program outlined in #1 and #2 to be properly administered;
4. The assumption that the cost of the program outlined in #1 and #2 can be cost justified based on the speculation that it can be implemented in such a manner that it can prevent terrorists and their baggage from being loaded on aircraft.

Indeed if an upgraded security program, such as the one outlined in #1 and #2 above were pursued it would make air travel extremely inefficient, inconvenient and costly to both the airlines and the general flying population. The terrorists would have won. However, the biggest concern is whether such a system can ever achieve the goal of protecting the general flying population from terrorists and having their deadly baggage loaded on airplanes.

Those considering how best to guarantee security to the general flying public should reject the premise that airline security can be guaranteed by the screening of the entire flying population to identify potential terrorists and prevent them from boarding an airplane. This premise needs to be replaced with a new airline security concept and a set of assumptions that have greater probability of achieving the security goals with minimal inconvenience to the airlines and the flying public and stand up to reasonable cost benefit analysis.

This paper is written based on the belief that the existing airline security is faulty and can never achieve the goal of providing reliable, cost effective and convenient airline security. A new airline security concept is needed to protect the flying public from terrorists. This paper introduces such an alternative.

The Fundamental Questions Basic to Guaranteeing Airline Security

As originally conceived airline security was based on the assumption that terrorists could be prevented from boarding an aircraft, and as a result the airline and its passengers could be guaranteed a safe and secure flight. This assumption has proven to be false at great consequence to the airline industry, the flying public and those that perished in the WTC and Pentagon tragedies.

To achieve true airline security, a plan must be devised that takes into consideration the knowledge that has been gained over the past 20 years as governments and the airline industry, and their attempts to develop and administer a security system that can ensure safety, guarantee the reliability and effectiveness of the system, minimize the level of disruption to the industry and the air traveler caused by the system, is based on the body of knowledge gathered about airline terrorists, the actual circumstances and conditions that define the nature of the terrorist threat to the industry and the air traveler, and the cost effectiveness of those airline security plans.

History has demonstrated that security plans that attempt to identify terrorists by screening the general flying population at the point of boarding the aircraft are costly, inefficient, ineffective, inconvenient and easy to circumvent by the terrorists. This history of experience makes it prudent for airline security be looked at from a totally new perspective and based on a new set of assumptions.

This new perspective must be based on specific security performance goals targeted at actions that can reverse the failures of the present system. These goals include:

1. Identification of potential terrorists prior to boarding a commercial aircraft;
2. Isolating the terrorists from the general flying population;
3. Prevention of terrorists and terrorist baggage from boarding a commercial aircraft;
4. Controlling any potential terrorist that might gain eligibility to be aboard a commercial aircraft;
5. Disabling any potential terrorist on a commercial aircraft who attempts to engage in a terrorist act.

The new security system designers should begin by examining the existing knowledge base concerning the failures of the present system and set goals that would eliminate these failures and eliminate the terrorist threat to the airlines and the flying public. The basic questions include but may not be limited to the following:

1. Who are potential terrorists and how can they be identified so that they can be isolated from the general flying population and prevented from flying on commercial airlines?
2. How can the terrorists be isolated from the general flying population, controlled and disqualified from the privilege of air travel?
3. How can the potential terrorist who may become eligible for air travel be controlled to ensure that he/she is not a treat to the airline and the general flying population?
4. How can the air traveler who becomes a terrorist be disabled in the event that he/she is able to circumvent the air travel disqualification element of the security process?

By incorrectly focusing on terrorists as a part of the general flying public and treating airline security as a problem that must include the general flying population, the resulting security plan, by necessity, is

disruptive and inconvenient to the entire flying population at great cost and marginal success for the airline and those demanding a secure flying experience.

By making the terrorist the primary focus, outside of the general flying population, of the airline security strategy, the general air travel population can be excluded, air travel can return to a more convenient experience for the general public, the costs to the airline industry can be dramatically reduced and the efficiency and effectiveness of the system can be dramatically increased.

How can such a system work?

A General Introduction to a New Approach to Airline Security

The new approach to airline security must be based on the following goals:

1. The identification and isolation of potential terrorists from the general flying population;
2. The disqualification of potential terrorists from eligibility for commercial flight until they can certify that they are not a terrorist risk, only then to be granted eligibility for commercial flight;
3. Control the action of potential terrorists who gain conditional eligibility to fly commercially;
4. Have the ability to disable a potential terrorist who has earned conditional eligibility to fly and becomes a terrorist threat during flight.

How can these goals be accomplished within the existing air travel system? How can they lead to increased convenience for the air traveler, less cost for the airline and greater security for the general flying public?

Goal I. Identify and Isolate Potential Terrorists from the General Flying Population

Air travel should be regarded as a privilege rather than a right, and to be eligible to enjoy the privilege all air travelers should be required to make application for air travel eligibility status. While this may sound like a major task for the airlines, those who have been air travelers in the past can be easily identified, screened and granted eligibility status.

The criteria for determining air travel eligibility status should be determined collectively by the airlines, the government regulatory and security experts based on a set of discriminating criteria designed to separate the general flyer from those individuals who might be potential terrorists. Those individuals who meet the air travel eligibility requirements would be granted multiple identification vehicles and would then have access to air travel without the need for the traditional airline security checks. In this manner 95% of the existing security requirements and related inconvenience and costs could be eliminated.

What might the air travel eligibility status criteria include?

Terrorists around the world have developed a history which includes a comprehensive picture of who the terrorists have been, the groups they have been affiliated with (IRA, White Supremacist, PLO, Lebanese Hizballah, al Qaeda, etc.), place of national origin, the views they represent, the philosophies they espouse, their educational background, work history, family background and so on. This body of information should provide the data to help develop the air travel eligibility status criteria. Any potential air traveler who is found to have any of the terrorist characteristics could be denied air travel eligibility until evidence is provided that eliminates the concern for that characteristic.

By following the air travel eligibility process, it is likely that 95% or more of the general air traveling public can be granted air travel eligibility without the need for costly and inconvenient traditional security screening, and the potential terrorist can be isolated and disqualified form air travel.

What form of Identification Would the Air Travel Eligible Passenger Use

For the new security system to work the airline industry must be able to efficiently, effectively and consistently discriminate between those who have been granted air travel eligibility and those who might be potential terrorists. A potential terrorist with false identification could easily circumvent the system and board an airplane by creating the appearance of being a air travel eligible passenger. As a result it is essential that the system be supported by a multiple identification process that makes it impossible for the terrorist to falsify his status. Such a multiple identification system should be based on modern technology and state-of-the-security techniques. A multiple security identification process might include the following elements, all of which must provide a positive identification for the passenger to be granted permission to board the aircraft:

- The scanning of a thumb or finger print;
- The scanning of eye retinal characteristics;
- A randomly assigned password;
- A bar coded picture identification card;
- The use of RFID (radio frequency identification) technology
- A DNA screening.

Goal II. Disqualify Potential Terrorists from Eligibility to Engage in Air Travel Until They Can Demonstrate Eligibility

The identification and isolation of potential terrorists by a method similar to the one outlined in Goal I would make it possible for the airlines to abandon the present security check process which is so costly, inconvenient and ineffective today, and concentrate its security efforts on those who have the greatest potential to do harm to the airline and its passengers.

Some might argue that the process outlined in Goal I is discriminating and an example of "racial/ethnic profiling" designed to deny certain individuals their right to air travel based on their national origin, race, culture or religion. Those that design the air security system based on an air travel eligibility criteria should take care to objectively select criteria that have been proven to be valid and reliable indicators of a potential terrorist, and should include mechanisms in the process that allows those who can provide evidence that they are not to be included in the potential terrorist class to be granted air travel eligibility status.

There are a number of mechanisms that the air travel eligibility screeners can set in place to determine if a disqualification characteristic should be disregarded in considering eligibility of an air traveler. These include a review of the applicants personal and work history, a comprehensive FBI type security check, a review of past acquaintances and associations, references from work or notable individuals who can guarantee eligibility.

There may be instances in which an applicant for air travel eligibility status appears to be eligible on a majority of the criteria, but some questions remains regarding the ultimate potential of the applicant to engage in terrorist activities. The new security system can grant this type of individual temporary and/or

conditional eligibility to use the air travel system if they agreed to comply with a set of conditional security requirements.

Goal III Control the Action of Potential Terrorists who Gain Conditional Eligibility to Fly

The ideal security system would disqualify all who might be potential terrorists from the privilege to fly. Reality and a desire not to unfairly disqualify air travelers who might not be potential terrorists may cause it to be impossible to deny all who are identified as having positive characteristics, as measured by the air travel eligibility criteria, from air travel. However, to protect against potential terrorists, the security system can include conditional requirements for those who may fall in this category. The objective is to control any individual who may have the potential for being a terrorist so that were he/she to have terrorist intentions, those intentions could be neutralized and rendered unachievable by the conditional requirements.

The following represent some conditions that might be required of conditional air travelers to ensure that they are controlled in a manner that would prevent air terrorism:

- A comprehensive pre boarding screening of the conditional air traveler's person and belonging;
- Required escorting of the conditional flyer on and off the air craft by a Air Marshall
- Assigned seat in a secure area of the aircraft;
- The requirement that the conditional traveler remain in his seat with locked seat belts preventing him from free movement within the aircraft without the supervision of an Air Marshall;

Some might regard this type of close control and security to be excessive, but experts in terrorism would confirm that those who have engaged in terrorism in the past would go to all ends to achieve their terrorist objective. Indeed, the above conditions imposed on a potential terrorist provide no absolute guarantee that an individual predisposed to engage in a terrorist act using an aircraft could not do so. This reality makes it necessary to consider ways in which a potential terrorist who found a way to circumvent the conditional requirements of the security systems might be disabled if he/she initiated actions of a terrorist nature.

Goal IV The Ability to Disable a Potential Terrorist Who Has Earned Eligibility to Fly and Becomes a Terrorist Threat During Flight.

It may not be enough to isolate, disqualify and control potential airline terrorists. Based on the history of terrorism, individuals and organizations that are committed to terrorism can be ingenious in finding ways to circumvent security systems to achieve their objectives. To be totally secure the system must anticipate that the ingenious terrorist can gain eligibility to fly and defeat control systems like the ones suggested in Goal III. To be complete the system must be able to disable a terrorist who has found a way to initiate a terrorist act in spite of the other preventive elements of the system.

One final condition for an individual who has been granted conditional eligibility for restricted air travel, but who still remains ineligible for air travel eligibility status due to terrorist characteristics that have not been satisfactorily resolved, should be a requirement that the conditional travel wear some form of

disabling device that could be activated by appropriate individuals, such as the pilots of the aircraft, an Air Marshall, or by individuals on the ground.

The wearing of electronic devices is not new. Courts have required some criminals who have been ordered to serve their sentences under house arrest to were electronic devises to monitor their adherence to the Court's rules. Stun guns have been used by law enforcement officers for some time as accepted devices to render criminals harmless without the same adverse consequences as bullets from a gun.

A device of this type would only be activated in the event of the initiation of a terrorist threat by the person wearing it, but would have the capacity to render the individual harmless if activated. The required use of this device by those potential terrorists who gained conditional eligibility to fly on an airline would provide the ultimate deterrent to any intended terrorist act, and provide final protection against anyone who might defeat the conditional circumstances of his/her flight and elect to initiate terrorist activity.

Summary and Conclusion

The tragedy of the WTC and Pentagon attacks has demonstrated that the airline industry and the United States Government needs to take a fresh look at airline security, and find a way to guarantee air travelers that they will be secure as they engage in air travel.

The traditional approaches to airline security, that required the security system to screen all air travelers prior to boarding an aircraft, and isolate those who might be terrorists has been costly to the airline industry, inconvenient to the air traveler and has not worked.

The ideas outlined in this introductory paper are based on a new set of assumptions that point at the advantages that can be gained from redirecting the focus of the airline security system away from the general are traveler population and toward the characteristics of the minority who engage in terrorist activities. By doing so, an air travel eligibility status can be set up that requires all air travelers to become pre-qualified as eligible based on a set of air travel eligibility criteria designed to separate the potential terrorists from the general air traveler population.

By focusing attention on those who are the potential terrorists, the general air travel population can be relieved of the inconveniences which they have been forced to deal with to comply with traditional airline security systems. The airline can also experience a significant cost saving and efficiency gain by focusing their attention on only those who might be potential terrorists.

To be successful such a plan needs to be able to achieve four goals:

1. Identify and isolate potential terrorists from the general flying population;
2. Disqualify potential terrorists from eligibility to engage in air travel until they can demonstrate eligibility;
3. Control the action of potential terrorists who gain conditional eligibility to fly;
4. Disable a potential terrorist who has earned eligibility to fly and becomes a terrorist threat during flight.

This paper offers an introduction of this new airline security concept for the purpose of stimulating new thinking about how air security can be achieved. It introduces a concept that outlines how the existing system might be displaced by a more cost effective and efficient approach to airline security that could lead to less inconvenience for air travelers, higher profits for the airlines and a rebirth of the sense of confidence and security in air travel for those dependent upon the airline industry for their work, family relationships and travel.

The paper is not intended to provide either a complete or total answer to the security and terrorist problems facing the airline industry, but to introduce new ideas to stimulate discussion and generate new approaches that can help return confidence in air travel and deter airline terrorism.

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