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INTRODUCTION

For years, criminal elements around the world have targeted the aviation sector to disrupt the flow of passenger and cargo traffic. In response to the September 11, 2001 attacks on U.S. soil (9-11 attacks) both Canada and the United States introduced sweeping reforms in aviation security after identifying vulnerabilities in the security of the aviation sector. These reforms are mainly reactive and result from numerous vulnerabilities that were identified in the aviation security regimes. However, these changes require Canada and the U.S. to tailor aviation security measures within the framework of an efficient and accessible transportation system.

This paper will compare the aviation security efforts in Canada and the United States, and demonstrate how a risk-based, multi-layered regime has evolved with support from federal agencies. This multi-layered regime includes federal agencies, intelligence, law enforcement, air carriers, and the private sector (airport authorities). In particular, specific aviation security legislation and policies will be explored to show how the federal agencies contribute financial and technological resources in administering core aviation security principles. This federal support is required because of: (1) the need to develop an integrated network of multiple security layers to address heightened security concerns; (2) the need for substantial funding and resources to fully implement security measures; and (3) the need to promote economic prosperity through streamlined trade.

Part I outlines the importance of aviation security in terms of its guiding principles, technology, impact on the economy, and its overall multi-layered nature. Part II examines the role of federal agencies in Canada and the U.S. in applying aviation security measures. Part III describes the aviation security legislation and policies that form the federal regulatory framework in creating a multi-layered aviation security regime. Part IV discusses the relationship between aviation security and commerce, and how the global conventions and the Open Skies policy fit into this scheme. Finally, Part V outlines some current trends in aviation security.

I. THE IMPORTANCE OF AVIATION SECURITY

Definition and Guiding Principles of Aviation Security

Aviation security is defined as ground or air security measures which prevent criminal elements to cause actual harm to passengers or cargo. There are two types of aviation security: (1) ground security (baggage screening, airport perimeter screening, and passenger identification) and (2) air security (air marshals, armed pilots, and reinforced cockpit doors).¹ In Canada and the U.S., the guiding principles of aviation security serve as the basis for air and ground security, and include: (1) responding to threats by designing a risk-based, multi-layered system of security with federal support; (2) randomness and unpredictability in screening passengers, personnel, and cargo; (3) continuous assessment and modification of security measures through technological innovation, and (4) promoting global stability and economic prosperity.²

With serious vulnerabilities being identified within the aviation security regimes, the federal governments in Canada and the U.S. recognized that more financial and technological resources are needed to provide adequate security to prevent successful attacks on the ground or in the air. While there are notable differences in the application of aviation security in Canada and the U.S., the guiding principles of aviation security serve as the foundation for the multi-layered security measures applied in both countries in the context of a federal regulatory framework.

Historical Events Leading to Modern Aviation Security

For Canada, the 1985 explosion of Air India Flight 182 over Ireland drew attention to the seriousness of terrorism in the aviation corridor, and how the Canadian government should respond to such events.³ The Air India tragedy prompted the Canadian government to create a Commission of Inquiry in September 2006 to identify

¹ Victor V. Ramraj, Michael Hor, and Kent Roach, *Global Anti-Terrorism Law and Policy*, Cambridge University Press (2005), Alan Khee-Jin Tan, *Recent Developments relating to Terrorism and Aviation Security*, at 225.

² Aviation Transportation System Security Plan, Supporting Plan to the National Strategy for Aviation Security (Mar. 26, 2007), at 5. *available at* http://www.dhs.gov/xlibrary/assets/hspd16_transssystemsecurityplan.pdf (last visited Apr. 6, 2008).

³ The Air India bombing killed 329 people, 280 of whom were Canadians. On the same day, two baggage handlers were killed in Tokyo's Narita Airport by a bomb destined for another Air India flight. *See, e.g.*, CBC News, *The Bombing of Air India Flight 182* (Sept. 5, 2006), *available at* <http://www.cbc.ca/news/background/airindia/bombing.html> (last visited Apr. 6, 2008).

vulnerabilities in the Canadian aviation sector.⁴ For the United States, the 9-11 attacks on the World Trade Center in New York City and the Pentagon raised awareness of the vulnerabilities within the U.S. aviation sector and its negative impact on commercial travel and trade.⁵ Thereafter, Congress introduced a series of legislative reforms to modify aviation security measures.

Historically, aviation security in Canada was regulated primarily under Transport Canada, and later the same system continued within a deregulated industry with private stakeholders. In the United States, aviation security was governed by the Federal Aviation Administration (FAA) with significant private sector involvement by way of public-private partnerships. However, after the Air India tragedy and the 9-11 attacks, legislators in Canada and the U.S. decided to overhaul the regulatory framework of aviation security by transferring virtually all security responsibilities to the federal agencies, but within a multi-layered security regime.

The Multi-Layered Aviation Security Regime

The multi-layered aviation security approach is premised on the idea that if one layer of security is breached, the other layers would serve as preventive barriers to help avoid a successful attack. In Canada and the U.S., the multi-layered regime includes the following groups: (1) federal agencies; (2) air carriers; (3) law enforcement; (4) intelligence; and (5) the private sector (airport authorities). Each group plays a vital role in coordinating and exchanging passenger or baggage information in order to secure the public against external or internal threats. But, the federal agencies are mainly responsible for developing and applying aviation security regulations and policy, and to ensure that groups within the multi-layered regime comply with such measures.

The air carriers are responsible for securing aircrafts (including passengers and cargo) by training personnel and instituting response measures when handling real threats. Law enforcement provides armed responses to security threats by cooperating with federal agencies. Intelligence groups provide threat assessment information to leading federal agencies based on current intelligence drawn from various sources. The airport

⁴ Canadian Air Transport Security Authority, CATSA News, at 6, *available at* <http://catsa-acsta.gc.ca/english/media/bulletin/2008-01.pdf> (last visited Apr. 6, 2008).

⁵ Paul B. Larsen, Joseph C. Sweeney, and John E. Gillick, *Aviation Law – Cases, Laws, and Related Sources*, (Transnational Publishers, Inc., 2006) at 27.

authorities in the private sector respond to threats within airports and surrounding areas, while providing pre-board screening and hold bag screening along with law enforcement. Each group provides a layer of security by exercising aviation security measures, while continually refining these measures based on the changing nature of threat.

The Aviation Screening Process and Technology

The ground aviation security systems in Canada and the U.S. largely depend upon the efficient design and application of the screening process and technology. The aviation security screening process generally involves three steps: (1) Passenger Screening; (2) Carry-On Baggage Screening; and (3) Checked Baggage Screening. First, at check-in, computer-assisted passenger screening (CAPPS) software uses criteria to identify certain passengers.⁶ Second, passengers are asked a series of questions by airport personnel (such as whether they packed their own bags). Third, at security checkpoints passengers and their carry-on bags are screened by passengers walking through metal detectors.

If an alarm is triggered, then screeners use metal-detecting hand wands on the passengers. Meanwhile, the carry-on bag is screened by x-ray equipment. If an operator sees a suspicious object, he or she may hand search the bag. This backup procedure is important as nonmetallic objects such as plastics or ceramics may go undetected by the x-ray equipment. For carry-on luggage such as laptop computers, it is often time-consuming to open them up for inspection, and so equipment is used to detect chemical signatures of trace quantities of explosives.

Before the 9-11 attacks, screening technology used for passenger screening was primarily through metal detection, but with advances in research and development newer forms of screening technology have emerged. For instance, trace-detecting portals were introduced

⁶ Daniel Morgan (Analyst in Science and Technology Resources, Science, and Industry Division), Congressional Research Service Report for Congress (Library of Congress), "Aviation Security Technologies and Procedures: Screening Passengers and Baggage" (October 26, 2001), *available at* http://www.law.umaryland.edu/marshall/crsreports/crsdocuments/RL31151_10262001.pdf (last visited Apr. 6, 2008). The gathering of passenger data has triggered several constitutional issues of unreasonable search and seizure under the 4th Amendment of the U.S. constitution. The 4th Amendment states: "The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized." *See, e.g.,* Findlaw, U.S. Constitution, 4th Amendment, *available at* <http://caselaw.lp.findlaw.com/data/constitution/amendment04/> (last visited Apr. 7, 2008). Some groups have argued that CAPPS is discriminatory against certain passengers on the basis of race, nationality, or ethnicity. However, the U.S. Department of Justice has maintained that such factors are not discriminatory.

in Canadian and American airports to detect trace explosives and other nonmetallic substances. Trace-detecting portal equipment uses image technology in the form of x-rays or millimeter waves, and some trace-detection equipment includes hand wands and air jets.⁷ Biometric technology uses fingerprints, retina scans, and video face recognition devices to match identities of suspicious-looking passengers with existing databases.

Aviation Security in the Modern Economy

Aviation security is important in the modern economy for three main reasons: (1) it provides safety and security for travelers; (2) stimulates international trade and tourism in an increasingly global market; and (3) it enables air carriers to continue doing business without significant interruption. Vulnerabilities within the aviation sector affect the interrelationship between security and commerce, and have drawn serious attention to aviation security into the context of bilateral and multilateral trade. As more nations promote tourism through safe passenger travel and free trade through the movement of goods, governments have placed aviation security as a national priority in helping restore confidence in traveling and doing business. The aviation sector contributes to the economy by allowing the streamlined flow of passengers and cargo for increased travel and shipping. In this way, airports and airlines serve as an integral component in the aviation sector by handling a large volume of passengers and cargo on a daily basis.

With a high volume of traffic of passengers and goods passing through airports, a security breach may adversely affect both tourism and commercial trade. For the major air carriers, the transport of cargo generates huge revenues (in the U.S up to 10% of the total operating revenues exceeds \$20 million for each carrier).⁸ The recognition that aviation security impacts commercial trade is well-settled, and has led to the enactment of several global conventions and Open Skies policies that promote security and commerce. This is why Canada and the U.S. are contracting states to the global conventions and Open Skies agreements. While delays within the aviation sector have a deleterious effect on the economy due to a disruption of passenger and cargo traffic, there are also enormous costs for setting up and maintaining an aviation security regime. For example, in establishing new security programs, federal funds are required research, development, and installation of new screening technologies in airports.

⁷ *Id.* at 3.

⁸ *Id.* at 10.

The 9-11 attacks exposed vulnerabilities within the airline industry, and in recent years the airline industry has experienced financial downturns. For instance, several of the major U.S. air carriers were restructured in the last few years under Chapter 11 bankruptcy protection by reducing its workforce by 39%, lowering wages by 30%, and defaulting on \$20 billion on employee pensions.⁹ Although the airlines are returning to respectable profit levels, the huge costs associated with rising jet fuel prices and the installation of new aviation security measures are putting strains upon the airlines.

The imposition of security fees on passengers by airports and airlines also reflect the need to pay for aviation security resources. However, the benefit of a multi-layered security regime is that federal funds can directly assist airports and air carriers when they spend money to install and maintain aviation security measures to comply with federal security regulations. As will be seen, aviation security legislation allows for the federal agencies to earmark substantial monies for various security projects, while in other cases, federal agencies may compensate airports and air carriers for the implementation of air and ground security measures.

II. THE ROLE OF FEDERAL AGENCIES IN AVIATION SECURITY

In the context of aviation security, federal agencies in Canada and the U.S. are responsible for creating and enforcing aviation security regulations and policies. The federal agencies add an enormous layer of security and work closely with the private sector (airports authorities), intelligence groups, and law enforcement. Together, these groups form a robust network of security layers that fulfill the guiding principles of aviation security by protecting the public from criminal acts that disrupt the flow of traffic in the aviation corridor.

⁹ The Economist, Aviation – A Normal Industry? (Feb. 16-22, 2008), at 69. Chapter 11 is part of the United States Bankruptcy Code, which allows a company to reorganize under bankruptcy laws without liquidating their assets (as is done under Chapter 7), and to restructure their costs (often by terminating pensions and retiree health benefits). *See, e.g.*, Frontline, Exploring the New Corporate Bankruptcy Strategy, *available at* <http://www.pbs.org/wgbh/pages/frontline/retirement/world/bankruptcy.html> (last visited Apr. 6, 2008). The financial woes experienced by some airlines have led to mergers, such as between Delta and Northwest, who are negotiating a possible merger with 11,000 pilots. According to the International Air Transport Association (IATA), airlines' global spending on fuel has increased from \$40 billion in 2002 to \$135 billion in 2007. The European Union has already seen the merger of several airlines such as Air France-KLM and Lufthansa-Swiss

Canadian Federal Agencies - Transport Canada and CATSA

In 2001, the House of Commons Standing Committee on Transport and Government Operations produced a report entitled *Building a Transportation Security Culture: Aviation as the Starting Point*.¹⁰ This report outlined how Canada should strengthen its aviation security regime by establishing a risk-based regulatory framework in a multi-layered regime. The Committee recommended the following: (1) information gathering and sharing should involve intelligence; (2) passenger and baggage screening should be enhanced; (3) on-flight security should require air marshals; (4) training of security personnel should be standardized; and (5) a security culture should evolve throughout Canada such that one federal agency should regulate aviation security. Thus, the role of federal agencies was strengthened in order to cultivate this security culture.

Transport Canada and the Canadian Air Transport Security Authority (CATSA) are the two federal agencies that regulate aviation security in Canada. Together, these two agencies form part of the multi-layered regime with intelligence, law enforcement (RCMP), airport authorities, and air carriers.¹¹ Transport Canada is the main federal agency responsible for developing and enforcing policies, regulations and programs for safe, efficient, and accessible transportation throughout Canada.¹² Transport Canada deploys a layer of security measure known as Passenger Protect.¹³ This program aims to prevent persons who pose as an immediate threat from boarding commercial aircraft by screening passengers against a Specified Persons List.¹⁴ If an airline finds a match on this list of suspects (which are provided by the Minister of Transport, Infrastructure, and

¹⁰ John Christopher, Science and Technology Division, Library of Parliament, Parliamentary Research Branch, Aviation/Airport Security (July 22, 2002), *available at* <http://dsp-psd.pwgsc.gc.ca/Collection-R/LoPBdP/PRB-e/PRB0206-e.pdf> (last visited Apr. 6, 2008), at 5.

¹¹ Transport Canada, Canadian Air Transport Security Authority (CATSA), Flight Plan: Managing the Risks in Aviation Security – Report of the Advisory Panel, *available at* http://www.tc.gc.ca/tcss/CATSA/Final_Report-Rapport_final/chapter2_e.htm#2.5 (last visited Apr. 6, 2008).

¹² Transport Canada, What We Do, *available at* <http://www.tc.gc.ca/aboutus/whatwedo.htm> (last visited April 6, 2008). Transport Canada employs approximately 4,700 people across Canada.

¹³ Transport Canada, Passenger Protect, What is the Passenger Protect Program?, *available at* <http://www.passengerprotect.gc.ca/home.html> (last visited Apr. 6, 2008). *See, e.g.*, Transport Canada, Passenger Protect Program, *available at* http://www.tc.gc.ca/vigilance/sep/passenger_protect/menu.htm (last visited Apr. 6, 2008).

¹⁴ Transport Canada, Reconsideration Under the Passenger Protect Program, *available at* <http://www.tc.gc.ca/reconsideration/ppp/menu.htm> (last visited Apr. 6, 2008). This security measure is similar to the U.S. “No Fly List”. The Specified Persons List includes the name, date of birth, and gender of suspected person(s). Transport Canada maintains this list by delivering it to airlines in secure form. Under identity screening regulations, the airline must screen the passenger who appears 12 years of age or older against the Specified Persons List prior to issuing a boarding pass to them.

Communities), the airline will confirm the identity of such persons with Transport Canada in order to decide whether or not to allow that person to board the aircraft.¹⁵

Any passenger who is held back from boarding may use the “reconsideration process” through Transport Canada’s Office of Reconsideration.¹⁶ This allows the passenger who is denied boarding an aircraft to have the Minister of Transport’s decision to be reviewed by an independent advisor. The Office of Reconsideration does not make a final determination on this issue, but only makes recommendations to the Minister of Transport. Transport Canada sends a letter to the applicant usually within 30 days. If the passenger is denied boarding an aircraft, they may apply for reconsideration of the Minister’s decision. After this reconsideration process is concluded, the affected passenger may have their name removed from the Specified Persons List. If not, their name remains on the list.

A part of Transport Canada includes the Safety and Security Group, which monitors, tests, and inspects national standards for the aviation sector.¹⁷ Transport Canada also works with other groups such as the Canadian Airports Council, the Canadian Air Transport Security Authority (CATSA), NAV Canada and the Air Transport Association of Canada in forming the Canadian Aviation Security Awareness Advisory Committee (CASAAC).¹⁸ This organization thus consists of a partnership between federal agencies and the private aviation sector. The goal of CASAAC is to enhance security awareness in the aviation sector by providing strategy materials to industry stakeholders.

The Canadian Air Transport Security Authority (CATSA) is a federal Crown corporation that was created on April 1, 2002 under Bill C-49.¹⁹ The creation of CATSA was part of the Canadian government’s \$2.2 billion package for establishing aviation security

¹⁵ *Id.*

¹⁶ *See, e.g.,* Transport Canada, Office of Reconsideration, *available at* <http://www.tc.gc.ca/reconsideration/menu.htm> (last visited Apr. 8, 2008). *See, e.g.,* Transport Canada, The Process, *available at* <http://www.tc.gc.ca/reconsideration/ppp/process.htm> (last visited Apr. 6, 2008).

¹⁷ *Id.* The Safety and Security Group also monitors other transportation sectors such as marine, rail, and roads. *See, e.g.,* Transport Canada, Safety and Security, *available at* <http://www.tc.gc.ca/tcss/menu.htm> (last visited Apr. 6, 2008).

¹⁸ Canadian Aviation Security Awareness Advisory Committee, Welcome to CASAAC, *available at* http://www.casaac.ca/index_en.htm (last visited Apr. 6, 2008). CASAAC was formed in 1998.

¹⁹ Canadian Air Transport Security Authority, About CATSA, *available at* http://www.catsa-acsta.gc.ca/english/about_propos/index.shtml (last visited Apr. 6, 2008). CATSA is governed by a Board of Directors composed of 11 members, two of whom are nominated by airport representatives, and two of whom are nominated by airline representatives.

measures in the 2001 budget.²⁰ The Canadian Parliament's more recent 2008 Budget allocates \$147 million to CATSA for operational matters.²¹ Under section 33 of the CATSA Act, CATSA shall report to the Parliament every five years (through the Minister of Transport) to address the efficacy of aviation security measures.²² CATSA has approximately 5,200 screening officers at Canada's 89 airports, and has several partners such as the Canadian Security Intelligence Service, the Canada Border Services Agency, and the RCMP.²³ CATSA performs five main functions:

1. pre-board screening of passengers;
2. hold-bag screening (explosives detection);
3. provides federal contributions for airport policing (Airport Policing Program);
4. works with the RCMP to provide officers on aircraft (Aircraft Protective Officer Program); and
5. uses biometric technology for the Restricted Area Identity Card.²⁴

Thus, CATSA is primarily a security screening and funding body, and not a policing organization. CATSA enforces security policies derived from legislation and policies which are drafted by Transport Canada. In an effort to create more streamlined procedures within airport security operations, CATSA has worked with regional airports to add more screening lines, provide additional hours to screening operation, and recruit and train additional screening officers. CATSA introduced the Screening Contractor Qualification Program to allow qualified screening services organizations to bid on future Request for Proposals (RFP) at various Canadian airports.²⁵ CATSA's duties meet some of the guiding principles of aviation security through random screening of officers.

²⁰ Canadian Air Transport Security Authority, An Overview, *available at* http://www.acsta.gc.ca/english/about_propos/mandat.pdf (last visited Apr. 6, 2008).

²¹ Canadian Airports Council, Funds for Border and Aviation Security (Feb. 26, 2008), *available at* http://www.cacairports.ca/english/news/press_releases/108.php (last visited Apr. 8, 2008).

²² Department of Justice Canada, Canadian Air Transport Security Authority Act (2002, c.9, s.2), *available at* http://laws.justice.gc.ca/en/showdoc/cs/C-11.2/bo-ga:s_33/en#anchorbo-ga:s_33 (last visited Apr. 6, 2008).

²³ Canadian Air Transport Security Authority (CATSA), CATSA News, *available at* <http://www.catsa-acsta.gc.ca/english/media/bulletin/2008-01.pdf>, at 1 and 3 (last visited Apr. 6, 2008).

²⁴ Canadian Air Transport Security Authority, Frequently Asked Questions, CATSA Overview, *available at* http://www.catsa-acsta.gc.ca/english/help_aide/faq/catsa_acsta.shtml (last visited Apr. 6, 2008).

²⁵ Canadian Air Transport Security Authority, CATSA News Release, *available at* http://www.catsa-acsta.gc.ca/english/media/rel_comm/2008-01-30.shtml (last visited Apr. 6, 2008). CATSA also responds directly to security breaches. On January 4, 2008, an incident at Pearson International Airport involved a man who ran passed pre-board security checkpoints, and ran into the cockpit of Air Canada Jazz plane. Some airline staff held the passenger, who was later accompanied by Peel Police, after CATSA screening officers contacted them. This incident serves as a reminder of the integrated role that CATSA has with

U.S. Federal Agencies - TSA under the DHS

Prior to the 9-11 attacks, the Federal Aviation Administration (FAA), operating under the Department of Transportation (DOT), was primarily responsible for aviation security in the United States.²⁶ However, with the enactment of the Aviation Transportation Security Act (ATSA) in November 2001, the Transportation Security Administration (TSA) became the main federal agency responsible for aviation security throughout the U.S.²⁷ In March 2003, the TSA moved from the DOT to the Department of Homeland Security.²⁸ The TSA is responsible for: (1) setting aviation security standards; (2) assessing security threats; (3) conducting screening of passengers in various national programs; and (4) testing new technologies.²⁹

The TSA applies a host of security measures that change with the nature of threat. The Assistant Secretary of the TSA, Kip Hawley, commented on how the TSA participates in a multi-layered security regime:

Explosives detection training, better quality workforce through better recruiting, higher retention, pay for performance, career progression, additional layers of security in behavior detection, viper teams, document checking, employee screening, daily checkpoint explosives detection drills, better intelligence integration, proactive federal air marshal missions, secure flight, checkpoint process improvement, harmonization of international security measures, more effective use of existing affordable technology, active engagement with our partners in transit security, in general aviation, in rail, in port security, better vetting of those with access to critical infrastructure, to name just several

other agencies to enhance aviation security within the airport environment. Following this incident, CATSA is planning to produce a training video to be used by screening officers. CATSA's screening program falls under its Standard Operating Procedures (SOPs) drawn from Transport Canada's Security Screening Order.²⁵ See, e.g., Transport Canada, Regulatory Framework 4.2, *available at* http://www.tc.gc.ca/tcss/CATSA/Final_Report-Rapport_final/chapter4_e.htm#42 (last visited Apr. 6, 2008).

²⁶ Raymond C. Speciale, *Fundamentals of Aviation Law* (McGraw-Hill, 2006), at 122-23. The Department of Transportation was created in 1966, and its purpose is stated in 49 U.S.C. §§ 101(a) and (b): "...development of transportation policies and programs..." which must meet national "...objectives of general welfare, economic growth and stability, and security of the United States."

²⁷ Transportation Security Administration, *What is TSA?*, *available at* http://www.tsa.gov/who_we_are/what_is_tsa.shtm (last visited Apr. 6, 2008). Other U.S. federal agencies involved in aviation security either directly or indirectly include: (1) Department of Justice; (2) Department of Defense; (3) Department of State; (4) Department of Energy; and (5) Department of Commerce.

²⁸ European Commission, *Civil Aviation Security Financing Study*, Section 7, U.S. Aviation Security (September 2004), *available at* http://ec.europa.eu/transport/air_portal/security/studies/doc/2004_aviation_security_s_7.pdf (last visited Apr. 6, 2008).

²⁹ *Id.* The transfer of the TSA to the Department of Homeland Security was achieved under the TSA's Border and Transportation Security Directorate.

highlights. These are the security measures that help protect against the threat we know we face.”³⁰

Under the Secure Flight system, the TSA receives passenger information, and determines if the passenger data matches government watch lists (no fly list) by transmitting matching results to aircraft operators. Here, air carriers normally conduct watch list checks during domestic flights. This prescreening system for passengers is overseen by the Screening Coordination Office (created in 2007 by the Department of Homeland Security under Secretary Michael Chertoff), and which integrates screening measures overseen by the DHS.³¹ The TSA also conducts its Screening Passengers by Observation Techniques program (SPOT).³² Under the SPOT program, behavioral detection officers patrol airport concourses and departure lounges and monitor any suspicious activity based on passenger behavior. The officers are assisted by airport surveillance cameras that feed passenger images into a computer program which detects facial expressions. The TSA indicates that the SPOT program has resulted in over 700 arrests from 70,000 people being questioned.³³

Like its federal counterpart in Canada, the TSA has an Aviation Security Advisory Committee that recommends improvements to aviation security in the U.S.³⁴ This body monitors key aviation security initiatives such as the Electronic Baggage Screening Program, which uses the Explosives Detection System (EDS) equipment and automated checked baggage system.³⁵ The Electronic Baggage Screening Program is estimated to cost approximately \$23 billion between 2006 and 2025. Of these costs, the federal government will bear \$19.7 billion and the rest of the aviation industry will bear \$3.6

³⁰ U.S. Dept. of Homeland Security Transportation Security Administration, Statement of Kip Hawley (Assistant Secretary) Before the U.S. House of Representatives Committee on Homeland Security Subcommittee of Transportation Security and Infrastructure Protection (July 31, 2007), *available at* http://www.tsa.gov/press/speeches/registered_traveler.shtm (last visited Apr. 6, 2008). The Transportation Security Administration was signed into law on November 19, 2001 by President Bush under the auspices of the Aviation and Transportation Security Act (ATSA).

³¹ Dept. of Homeland Security, Remarks by Secretary Chertoff at a Press Conference on Secure Flight and the Advance Passenger Information System (August 9, 2007), *available at* http://www.dhs.gov/xnews/releases/pr_1186693761881.shtm (last visited Apr. 6, 2008).

³² Transportation Security Administration (TSA), Screening Passengers by Observation Techniques (SPOT), *available at* http://www.tsa.gov/what_we_do/layers/spot/index.shtm (last visited Apr. 7, 2008). The SPOT program is currently operational in over 40 airports across the U.S.

³³ *Id.*

³⁴ Transportation Security Administration, Aviation Security Advisory Committee, *available at* <http://www.tsa.gov/research/asac/index.shtm> (last visited Apr. 7, 2008).

³⁵ *Id.* This is part of the TSA’s Baggage Screening Investment Study (BSIS), which is a primary screening strategy to accelerate the deployment of equipment for the Explosives Detection System (EDS) and the Explosives Trace Detection (ETD).

billion. As such, the Advisory Committee recommended that: (1) a \$3 billion tax credit bond program should be introduced to fund the infrastructure to support optimal explosives detection system; and (2) federal appropriations of \$435 million should be made for the purchase and installation of an Explosives Detection System.³⁶ The explosive detection system thus illustrates how seriously TSA considers the screening process by providing substantial financial contributions. This federal support also allows airport authorities to avoid paying for the costs of security measures.

Some commentators have noted that the increasing role of federal authorities in handling aviation security is due to the need for massive financial resources:

Economic theory can be used to make a strong case that the federal government play an important role in aviation security. The basic question is whether the federal role should be restricted to setting and monitoring security standards or whether the role should also include the *financing* and implementation of security. The most contentious change emanating from 9/11 is that the federal government has assumed responsibility from the airlines and airports for the actual provision of aviation security. Policymakers assigned the responsibility for aviation security to the federal government.³⁷

The Department of Homeland Security (DHS) is a federal agency that was created in 2002 under the Homeland Security Act. The DHS was given a mandate by Congress to receive advance information for international passengers traveling by air as part of the 2004 Intelligence Reform and Terrorism Prevention Act (IRTPA).³⁸ The IRTPA legislation requires commercial carriers to gather Passenger Name Record (PNR) data for passengers arriving in or departing from the U.S.³⁹ The gathering and collection of passenger information prior to departure is part of the Advance Passenger Information System (APIS) regulation, which requires passenger information to be received at least 30 minutes prior to the departure of the aircraft.⁴⁰ This 30-minute period allows the DHS to perform security checks against federal watch lists. The Security Secretary of the DHS, Michael Chertoff, explained the relevance of pre-departure screening of international

³⁶ *Id.*

³⁷ Cletus C. Coughlin, Jeffrey P. Cohen, and Sarosh R. Khan, *Aviation Security and Terrorism: A Review of the Economic Issues* (Sept.-Oct. 2002), at 12 [hereinafter *Aviation Security and Terrorism*].

³⁸ Department of Homeland Security, *DHS Announces Predeparture Screening of International Passengers and First Step Toward Secure Flight* (August 9, 2007), *available at* http://www.dhs.gov/xnews/releases/pr_1186668114504.shtm (last visited Apr. 8, 2008). Both the APIS regulation and the Secure Flight regulation will be published in the U.S. Federal Register.

³⁹ *Id.*

⁴⁰ *Id.*

passengers: “Stopping known threats before they board an aircraft, whether domestically or internationally, is a critical security measure... This enables our frontline personnel to get key passenger information prior to boarding. This information will better identify individuals who may pose a known or suspected threat to aviation or national security”.⁴¹

In the context of prescreening passengers prior to departure, the main goal of the DHS is to create a uniform system of prescreening (by combining the APIS regulation with the Secure Flight regulation), and to avoid misidentification issues with passengers. This is because any passenger who is subject to delays at a U.S. port of entry on the basis of additional screening or denial of entry upon an aircraft may seek redress through the DHS Traveler Redress Inquiry Program (DHS TRIP).⁴² Similar to Canada’s reconsideration process, the DHS TRIP allows aggrieved passengers to resolve any controversial profiling issues and to seek redress against APIS regulations.

III. AVIATION SECURITY LEGISLATION AND POLICIES

Since the 9-11 attacks, both Canada and the United States have enacted several pieces of aviation security legislation to strengthen air and ground security. Federal agencies help enforce these statutes by partnering with air carriers, intelligence, law enforcement, and the airport authorities in a multi-disciplinary regime. When one compares the Canadian and American legislation and policies, many similarities and differences can be found with respect to the content and application of key aviation security provisions. Common themes are found in aviation security legislation in Canada and the U.S., which reflect the guiding principles, including:

- Laying the federal regulatory framework for air and ground security;
- Research and development for screening technologies;
- Appropriation of funding for various security programs;
- Promoting intra-agency and inter-agency cooperation as multiple layers

⁴¹ *Id.* In August 2007, the DHS published two regulations (Advance Passenger Information System and Secure Flight Notice of Proposed Rule Making) as a means to strengthen aviation security in the U.S.

⁴² Dept. of Homeland Security, DHS Traveler Redress Inquiry Program, *available at* http://www.dhs.gov/xtrvlsec/programs/gc_1169676919316.shtm (last visited Apr. 8, 2008).

Canada

As listed in Table 1, Canada has two main pieces of aviation security legislation: (1) Aeronautics Act and (2) the Canadian Air Transport Security Authority Act (CATSA Act). Under these statutes, Transport Canada and CATSA represent the federal agencies that regulate security measures in a multi-layered regime.

Table 1: Key Aviation Security Legislation in Canada

LEGISLATION	YEAR ENACTED	NOTABLE PROVISIONS
Aeronautics Act	1985	Section 4.71(1) (aviation security regulations)
Canadian Air Transport Security Authority Act (CATSA Act)	2002	Section 6 (mandate) Section 33 (5-year review)

Aeronautics Act

The Aeronautics Act (1985) is a broad federal statute governing aviation industry in Canada.⁴³ Section 4.2 of the Aeronautics Act grants legislative authority to the Minister of Transport, Infrastructure, and Communities, to develop regulations within the sphere of the aviation sector.⁴⁴ The Aeronautics Act is significant for aviation security because it provides security regulations. For instance, section 4.71 of the Act outlines Canada's aviation security regulations related to the overall screening process:

- Protection of the public, passengers, crew members, aircraft, aerodromes, and other aviation facilities;
- Restricted areas in aerodromes or aircraft;
- Screening and detention of persons and goods;
- Training and security clearance for aviation personnel;
- Security management systems under CATSA and air carriers;
- Security requirements for technology⁴⁵

Section 4.7(1) of the Aeronautics Act authorizes the Minister of Transport to designate pre-board screening officers by prescribing minimum performance standards.⁴⁶ These

⁴³ Aeronautics Act, R.S. 1985, c. A-2. Transport Canada, Regulatory Framework, *available at* http://www.tc.gc.ca/tcss/CATSA/Final_Report-Rapport_final/chapter4_e.htm#h4 (last visited Apr. 8, 2008).

⁴⁴ Aeronautics Act R.S. 1985, C. A-2, s. 4.

⁴⁵ Transport Canada, Aeronautics Act, R.S. 1985, c. A-2, *available at* <http://www.tc.gc.ca/acts-regulations/general/a/aa/act/menu.html> (last visited Apr. 8, 2008).

standards require that screening officers be 18 years of age, Canadian citizens (or permanent residents), undergo security clearance, and successfully complete the Transport Canada Airport Pre-Board Passenger Screener Course. Moreover, screening officers must be capable of manually searching passengers and carry-on and checked baggage, and must perform correct testing procedures with hand-held and walk-through metal detectors and x-ray equipment. Screening officers are expected to detect explosive substances, weapons, or dangerous articles. The standardization of screening officers is important because it follows one of the guiding principles of random screening, whereby airport personnel can prevent their own staff from bringing unauthorized persons within secured areas of the airport and thus avoid security breaches.

Canadian Air Transport Security Authority Act

The Canadian Air Transport Security Authority (CATSA) is a federal agency required to report to Parliament under the Canadian Air Transport Security Authority Act (CATSA Act). The CATSA Act requires the agency to screen passengers moving through restricted areas in airports and monitor those persons boarding the aircraft. Drawing from the guiding principles of the Aeronautics Act, there are three security measures under the CATSA Act. First, the Restricted Area Identity Card is a program jointly operated by Transport Canada and CATSA to monitor airport personnel as a means to secure restricted areas in airports.⁴⁷ Through biometric technology, this card system reads fingerprint and iris patterns to accurately identify airport personnel (such as caterers, maintenance workers, and baggage handlers) walking through secure areas.⁴⁸ Second, the Canadian Air Carrier Protective Program assigns RCMP officers to board selected domestic and international flights. This program requires CATSA to designate RCMP officers aboard aircraft to provide air security in the event a criminal penetrates

⁴⁶ Canadian Air Transport Security Authority, Screening Officers, Designation Standards for Screening Officers, *available at* <http://www.catsa-acsta.gc.ca/so-ac/english/legislation/designation.htm> (last visited Apr. 8, 2008). Section 4.72 of the Act allows the Minister to make security measures for aviation security, particularly when the security of any part of the aviation sector is compromised. Section 4.75 of the Act focuses on air security and requires all foreign air carriers to meet all security requirements that are acceptable to the Minister.

⁴⁷ Canadian Air Transport Security Authority, Restricted Area Identification Card Background, *available at* <http://www.catsa-acsta.gc.ca/english/media/information/raic-cizr.shtml> (last visited Apr. 8, 2008).

⁴⁸ Canadian Air Transport Security Authority, Programs, Non-Passenger Screening, *available at* http://www.catsa-acsta.gc.ca/english/about_propos/prog.shtml (last visited Apr. 8, 2008).

ground security in the airport.⁴⁹ Third, the Airport Policing Contribution Program requires CATSA to fund initiatives in order to establish a police presence within the airports. To meet the enormous costs of applying new aviation security measures like the three CATSA security measures mentioned above, Canada imposes an Air Travelers Security Charge (ATSCs), which was created under the Air Travelers Security Charge Act.⁵⁰

On December 12, 2006, a three-member advisory panel reviewed the CATSA Act and made 40 recommendations to the Canadian Parliament, including: (1) the responsibility for aviation security will remain with Transport Canada; (2) CATSA should work closely with industry partners, while continuing to report to Parliament; and (3) the Canadian Air Carrier Protective Program should involve the RCMP starting on April 1, 2008.⁵¹ The panel therefore felt that the federal government should continue playing a dominant role in the overall maintenance of aviation security, but work closely with industry stakeholders. The reporting requirement enables Parliament to amend security provisions based on changing circumstances (such as new threats).

Canadian Aviation Security Policies

Much of Canada's aviation security policy derives from the National Security Policy of 2004, which enhances Canadian aviation security measures from provisions under the Public Safety Act.⁵² The National Security Policy contributed three relevant policies. First, various agencies such as Transport Canada, the RCMP, and the Canadian Security Intelligence Service (CSIS) are required to integrate their services by requesting and

⁴⁹ See, e.g., Canadian Air Transport Security Authority, *The Canadian Air Transport Security Authority: An Overview*, available at http://www.acsta.gc.ca/english/about_propos/mandat.pdf (last visited Apr. 8, 2008).

⁵⁰ Dept. of Finance Canada, *Air Travelers Security Charge to Take Effect as of April 1, 2002* (March 28, 2002), available at <http://www.fin.gc.ca/news02/02-027e.html> (last visited Apr. 8, 2008). Interestingly, the Canadian Airports Council considers the Air Travelers Security Charge (ATSC) to be a negative impact on the aviation industry because it feels that the ATSC charges place an unreasonable burden on the aviation industry by imposing a cost on the industry that other transportation sectors don't impose. The Air Travelers Security Charge Act can be found at CanLII, available at <http://www.canlii.org/ca/sta/a-10.5/> (last visited Apr. 8, 2008).

⁵¹ Government of Canada, Transport Canada, Minister Cannon Announces Outcome of the Canadian Air Transport Security Authority Act Review (September 4, 2007), available at <http://news.gc.ca/web/view/en/index.jsp?articleid=348289&keyword=aviation+security> (last visited Apr. 8, 2008).

⁵² Transport Canada, *Flight Plan: Managing the Risks in Aviation Security – Report of the Advisory Panel, Protecting Canadian Air Travellers*, available at http://www.tc.gc.ca/tcss/CATSA/Final_Report-Rapport_final/final_report_e.htm (last visited Apr. 8, 2008). The Public Safety Act received Royal Assent by the Canadian Parliament in 2004 after being introduced in 2002.

exchanging passenger information to assess threats at airports or aboard aircraft. Second, the federal government would allocate \$26 million to help this integrated network and improve air cargo security and screening technologies.⁵³ Third, there was a commitment to cooperate with the U.S. to strengthen security measures through a vulnerability assessment methodology. These three policies reflect Canada's commitment to a multi-layered regime that enhances the screening process, while integrating security measures with the U.S.

To demonstrate the need for integrated security within the multi-layered system, Transport Canada's aviation advisory panel is recommending that each Canadian airport have an Airport Security Advisory Group.⁵⁴ This group would consist of representatives from Transport Canada, CATSA, local police, Canada Border Services Agency (CBSA), air carriers, and airport authorities. This advisory group would coordinate airport security measures under Canada's federal regulatory framework. Transport Canada also seeks to reduce vulnerabilities within the aviation sector, including air cargo operations. Transport Canada has observed that air cargo goes largely unscreened by x-ray or other detection equipment, and this type of screening is handled by the air carriers.

In the context of trade, the screening of air cargo creates delays, so the challenge for Canadian federal authorities is to ensure streamlined commerce without compromising air cargo security. Air cargo can be transported either by all-cargo aircraft or passenger flights, and air carriers typically rely upon known shippers to deliver cargo to various destinations. In December 2005, the Canada Border Services Agency (CBSA) began operating the Advance Commercial Information program, which is a risk-based approach that requires all air carriers and freight services to electronically transmit air cargo data to the CBSA prior to loading the cargo at a foreign port.⁵⁵ This system allows the CBSA to identify potential threats before the cargo arrives at Canadian ports of entry. Since CATSA has no mandate under section 6 of the CATSA Act to screen air cargo, Transport

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ Canada Border Services Agency, Advance Commercial Information, *available at* <http://www.cbsa-asfc.gc.ca/media/facts-faits/003-eng.html> (last visited Apr. 8, 2008).

Canada is recommending the creation of an Air Cargo Security Strategy to test various pilot programs and seek input from stakeholders in the supply chain.⁵⁶

United States

Historically, aviation security in the U.S. was characterized by public-private partnerships. Airlines would handle passenger and baggage screening by contracting with private companies to provide screeners at security checkpoints. Airports were responsible for law enforcement and general security in and around the airport. Federal agencies provided security policies, regulations, research and development for deployment of security technology, and threat information. Due to the sheer volume of passenger and cargo traffic, the aviation security regime in the U.S. involves several more layers of security than Canada.

A notable feature of U.S. aviation security legislation is the emergence of greater federal responsibilities in what was formerly a public-private partnership industry. Although deregulation allowed private companies to play a greater role in aviation security, the U.S. aviation security regime now consists of multiple layers of security involving both federal agencies and public/private organizations, but with the federal agencies administering aviation security policies. One aviation security report highlights the enormous structural change in the U.S. aviation security regime:

Since September 2001, aviation security in the U.S. has gone dramatic change. The most visible change is that the federal government has assumed direct responsibility from the carriers and airports for the actual provision and funding of aviation security . . . The U.S. government has recognized that it has an important role to play in aviation security. The federal government has moved from the setting and monitoring of security standards to one of financing and implementing standards. This substantial enlargement of governmental involvement is in contrast to the public-private partnerships that dominate the implementation of aviation security standards in Europe.⁵⁷

⁵⁶ Department of Justice Canada, Canadian Air Transport Security Authority Act (S.C. 2002, c.9, s.2), The CATSA Act was first introduced as Bill C-49, and was later assented to March 27, 2002. The mandate of CATSA is found under section 6 of the CATSA Act, and provides for screening of persons, but not air cargo. Section 6 states: "The mandate of the Authority is to take actions, either directly or through a screening contractor, for the effective and efficient screening of persons who access aircraft or restricted areas through screening points, the property in their possession or control and the belongings or baggage that they give to an air carrier for transport."

⁵⁷ European Commission, Study on Civil Aviation Security Financing, Summary of Final Report (September 2004), *available at* http://ec.europa.eu/transport/air_portal/security/studies/doc/2004_aviation_security_s_0.pdf (last visited Apr. 8, 2008) [hereinafter European Commission Study].

In June 2006, the National Strategy for Aviation Security was introduced to unite all federal programs to prevent threats and reduce vulnerabilities in the U.S. aviation security system.⁵⁸ This program identifies three sources of threats to the aviation sector: (1) terrorists; (2) hostile nation-states; and (3) criminals.⁵⁹ The multi-layered aviation security regime operates in a way to confront these three sources of threat on different levels, and with specific security measures. Screening technology at airports can identify suspects, while intelligence reports can provide background information about various hostile nations and how they assist known suspects.

Congress has enacted several forms of aviation security legislation largely in response to the 9-11 Commission's recommendations on how aviation security could be strengthened in the U.S. transportation sector.⁶⁰ Certain terrorist attacks also prompted new aviation security legislation. For instance, the bombing of Pan Am 103 led to the enactment of the Aviation Security Improvement Act of 1990.⁶¹ The 1996 crash of TWA Flight 800 led to the creation of the White House Commission on Aviation Safety and Security, which later recommended improvements in screening technology and uniform performance standards for the training of screeners.⁶² Table 2 illustrates some relevant aviation security legislation in the United States.

⁵⁸ The White House, Department of Homeland Security, The National Strategy for Aviation Security, available at <http://www.whitehouse.gov/homeland/aviation-security.html> (last visited Apr. 8, 2008). The National Strategy for Aviation Security has 7 supporting plans, including: (1) Aviation Transportation System Security Plan; (2) Aviation Operational Threat Response Plan; (3) Aviation Transportation System Recovery Plan; (4) Air Domain Surveillance and Intelligence Integration Plan; (5) International Aviation Threat Reduction Plan; (6) Domestic Outreach Plan (ensures stakeholders participate in aviation security); and (7) International Outreach Plan (which solicits international cooperation for improved global aviation security network). These supporting plans are frequently updated based on the changing circumstances of the surrounding environment, technology, and air transport demands.

⁵⁹ Bart Elias, Congressional Research Service, CRS Report for Congress, National Aviation Security Policy, Strategy, and Mode-Specific Plans: Background and Considerations for Congress (January 2, 2008), available at http://assets.opencrs.com/rpts/RL34302_20080102.pdf (last visited Apr. 8, 2008), at CRS-7.

⁶⁰ The 9-11 Commission reports several weaknesses in the U.S. aviation security system including: (1) lax checkpoint screening and allowing small knives and (2) lack of in-flight security such as air marshals and reinforced cockpit doors. The 9-11 Commission Report issued several recommendations to strengthen aviation security, including: (1) improving passenger pre-screening; (2) improving explosive detection measures on passengers; (3) expediting in-line baggage screening systems; and (4) identify dangerous cargo. See, e.g., CRS Report for Congress, Aviation Security-Related Findings and Recommendations of the 9/11 Commission (March 30, 2005), available at <http://fpc.state.gov/documents/organization/46482.pdf> (last visited Apr. 8, 2008).

⁶¹ Aviation Security and Terrorism, *supra* note 37, at 12.

⁶² *Id.* Congress also passed the Federal Aviation Reauthorization Act of 1996 and the Omnibus Consolidated Appropriations Act of 1997 that helped fund many of the Commission's recommendations.

Table 2: Key Aviation Security Legislation in the U.S.

LEGISLATION	YEAR ENACTED	NOTABLE PRINCIPLES
<i>National Intelligence Reform Act</i>	2004	Directs Secretary to enhance screening systems and biometrics
<i>Vision 100 - Century of Aviation Reauthorization Act</i>	2003	Title VI – Section 604: Directs DHS Secretary to monitor air marshal program, reinforced cockpit doors, passenger and cargo security screening
<i>Aviation and Transportation Security Act (ATSA)</i>	2001	Placed aviation security under federal agencies, and created the Transportation Security Administration (TSA), which regulates security in all modes of transport
<i>Aviation Security Technology Enhancement Act</i>	2001	Requires screening of passengers and property, and expands Federal Air Marshal program

Vision 100 - Century of Aviation Reauthorization Act

Enacted on December 12, 2003, the Century of Aviation Reauthorization Act (“Vision 100”) incorporated many aviation security-related provisions based on the 9-11 Commission’s recommendations. Vision 100 requires the Department of Homeland Security to report to Congress on the overall effectiveness of the aviation security system, including the air marshal program, passenger screening, and the reinforcement of cockpit doors.⁶³ Like the reporting requirement in Canada, section 604 of Vision 100 requires the Secretary of Homeland Security to study the effectiveness of aviation security, and to file a report to the Senate Committee on Commerce, Science, and Transportation.⁶⁴ Section 605 of Vision 100 also creates the Aviation Security Capital Fund, which authorizes Congress to allocate up to \$500 million per year towards aviation security projects such as the deployment of explosive detection systems behind ticket counters and baggage sorting areas.⁶⁵ Thus, Vision 100 echoes the CATSA Act by requiring responsible federal agencies to report directly to the national legislature.

⁶³ Bart Elias, CRS Report for Congress, Aviation Security-Related Findings and Recommendations of the 9/11 Commission (March 30, 2005), *available at* <http://fpc.state.gov/documents/organization/46482.pdf> (last visited Apr. 8, 2008), at 12.

⁶⁴ *See, e.g.* Library of Congress, Vision 100 – Century of Aviation Reauthorization Act, H.R. 2115, *available at* <http://www.govtrack.us/congress/bill.xpd?bill=h108-2115> (last visited Apr. 8, 2008).

⁶⁵ *Id.*

Aviation and Transportation Security Act (ATSA)

The most comprehensive aviation security legislation in the U.S. is the Aviation and Transportation Security Act (ATSA). Enacted on November 19, 2001, ATSA formally created the Transportation Security Administration (TSA), and delegated all authority for aviation security in the U.S. to this agency.⁶⁶ In fulfilling many of the guiding principles of aviation security, ATSA includes the following security measures:

- requiring all screening processes to come under federal jurisdiction;
- Federal Security Directors (who assist with unifying airport security across the U.S.);
- Federal Flight Deck Officers (allowing armed pilots to defend the cockpit against criminal acts with less-than-lethal weapons);
- the creation of a Federal Security Manager at each U.S. airport;
- the creation of the Federal Air Marshal Program;
- Cockpit door reinforcement;
- the Private Security Screening Pilot program;⁶⁷ and
- the Aviation Security Infrastructure Fee.⁶⁸

The designation of the TSA as being the main federal agency responsible for aviation security, and the departure from private-sector screening duties, signifies the transfer of aviation security responsibilities to the federal government. Despite the expansion of federal powers, however, ATSA allows the private sector to continue playing a role in the overall system of aviation security. Like the CATSA Act, ATSA requires minimum job qualifications and background checks for screening employees, the installation of reinforced cockpit doors (and video monitors to link the cockpit and cabin), and the installation of explosive detection systems at airports to scan baggage.

To address cost issues for the installation and maintenance of security measures on the ground and in the air, the Aviation Security Infrastructure Fee grants authority to the TSA to charge a fee from air carriers in order to raise money for new aviation security measures.⁶⁹ This is significant because many of the costs associated with enhancing aviation security include funding for screening technologies, conducting background

⁶⁶ Aviation Security and Terrorism, *supra* note 37.

⁶⁷ European Commission Study, *supra* note 58. The less-than-lethal weapons are found under section 126 of the Aviation and Transportation Security Act (ATSA).

⁶⁸ *Id.* at 220.

⁶⁹ Transportation Security Administration, Transportation Security Fees, *available at* http://www.tsa.gov/research/fees/aircarrier_fee.shtm (last visited Apr. 7, 2008).

checks of employees, hiring and training personnel, and the federal air marshals program.⁷⁰

Section 108 of ATSA allows for airports to hire qualified private security firms (with consent of the Under Secretary of Transportation for Security).⁷¹ This allows the private sector to contribute to the multi-layered regime by providing security services, but with federal oversight. Realizing that aviation security measures cost a great deal, ATSA provides a financial incentive to airport authorities by compensating them for spending money on improvements to aviation security measures that comply with federal regulations. For instance, section 121 of ATSA authorizes the DOT to reimburse airports for their additional costs incurred for adding new security measures.⁷²

Aviation security cannot function without research and development of screening technologies. Under section 137 of ATSA, the Department of Transportation's receives federal funds for the research and development of aviation security technology.⁷³ This section specifies which forms of technologies will be funded, including: (1) explosives detection for checked baggage; (2) new screening technology for carry-on items; (3) threat screening technology; (4) integrated systems of airport security; (5) aircraft hardening materials (for reinforcement purposes); and (6) education and training of security personnel.⁷⁴ Section 137 is significant in that the bulk of spending in the U.S. aviation security industry between 2002 and 2006 has been in the area of passenger and baggage screening, with \$5.25 billion.⁷⁵ Other noteworthy costs associated with aviation security include airport security measures at \$1.54 billion, air marshals at \$1.02 billion, and research and development at \$240 million.⁷⁶

U.S. Aviation Security Policies

After the 9-11 attacks, several layers of security were added to the U.S. aviation sector. As mentioned previously, the Transportation Security Administration's Secure Flight

⁷⁰ Under Section 118 of ATSA, the Under Secretary of State shall impose a fee on passengers and air carriers (Security Service Fee) in order to pay for costs associated with enhancing aviation security.

⁷¹ Aviation and Transportation Security Act (2002), Public Law 107-71 (107th Congress), *available at* http://www.tsa.gov/assets/pdf/Aviation_and_Transportation_Security_Act_ATSA_Public_Law_107_1771.pdf (last visited Apr. 8, 2008).

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.* at §137.

⁷⁵ Aviation Security and Terrorism, *supra* note 37.

⁷⁶ *Id.* at 20.

program has added several new features, some of which include: (1) the Federal Air Marshal program; (2) Behavioral Detection Officers; , and (3) Visible Intermodal Protection Response (VIPR) teams.⁷⁷ The Federal Air Marshals service detects and prevents hostile acts on air carriers and airports. Such personnel must possess minimum qualifications (such as handling criminal terrorism and firearms use), and generally work with law enforcement groups.⁷⁸ Behavioral Detection Officers enforce the TSA's Screening Passengers by Observation Technique (SPOT) by watching the physical and psychological reactions of passengers traveling through the screening process.⁷⁹ The Visible Intermodal Protection and Response team represents a localized multi-layered regime consisting of federal air marshals, transportation security officers, behavior detection officers and explosive detection canine units.⁸⁰

The Transportation Security Administration (TSA) banned butane lighters from commercial flights on April 14, 2005.⁸¹ The problem with this security measure is that many lighters are not easily detected by X-ray machines (which the TSA admits), and that security screeners must themselves find these items and confiscate them from the passenger. Like Transport Canada, the TSA has published a Final Rule on air cargo security.⁸² This rule requires the screening of all cargo that will be placed aboard commercial aircraft operated by domestic or foreign air carriers. In March 2008, the TSA announced the creation of a new canine program to help detect explosives.⁸³ This program seeks to hire 400 explosive detection canine teams (with one dog and one handler), who will search mainly cargo bound for passenger aircraft.

⁷⁷ Transportation Security Administration, *Layers of Security, What We Do*, available at http://www.tsa.gov/what_we_do/layers/index.shtm (last visited Apr. 8, 2008).

⁷⁸ Transportation Security Administration, *Federal Air Marshals*, available at <http://www.tsa.gov/lawenforcement/programs/fams.shtm> (last visited Apr. 8, 2008).

⁷⁹ Transportation Security Administration, *TSA Expands Career Opportunities for Transportation Security Officers*, available at http://www.tsa.gov/press/releases/2006/press_release_0684.shtm (last visited Apr. 8, 2008). At present, there are approximately 500 Behavioral Detection Officers in U.S. airports.

⁸⁰ Transportation Security Administration, *VIPR Teams Enhance Security at Major Local Transportation Facilities*, available at http://www.tsa.gov/press/happenings/vipr_blockisland.shtm (last visited Apr. 8, 2008).

⁸¹ WashingtonPost.com, "TSA Bans Lighters from Flights", available at <http://www.washingtonpost.com/wp-dyn/articles/A61238-2005Feb28.html> (last visited Apr. 8, 2008).

⁸² Department of Homeland Security, Transportation Security Administration, *Air Cargo Security Requirements* (May 26, 2006), available at <http://a257.g.akamaitech.net/7/257/2422/01jan20061800/edocket.access.gpo.gov/2006/pdf/06-4800.pdf> (last visited Apr. 8, 2008). A Final Rule is ordinarily published in the U.S. Federal Register. This Final Rule was in force by October 23, 2006.

⁸³ Transportation Security Administration, *New TSA Canine Program Will Significantly Enhance Air Cargo Security* (March 14, 2008), available at <http://www.tsa.gov/press/releases/2008/0314.shtm> (last visited Apr. 8, 2008). The employees are trained at Lackland Air Force Base, San Antonio, Texas.

IV. AVIATION SECURITY AND COMMERCE: GLOBAL CONVENTIONS AND OPEN SKIES

Global Conventions, ICAO, and IATA

Considering that nations intend to streamline passenger travel and commercial trade, various global conventions, the International Civil Aviation Organization (ICAO), and the International Air Transport Association (IATA) influence how the overall aviation security regime is developed. Global conventions impose specific obligations for member countries to adopt a comprehensive aviation security system. For instance, the Preamble of the 1944 Chicago Convention stresses the need for the international aviation community to adopt interests in security and commerce:

THEREFORE, the undersigned governments having agreed on certain principles and arrangements in order that international civil aviation may be developed in a *safe and orderly manner* and that international air transport services may be established on the basis of equality of opportunity and operated soundly and *economically*.

Hence, the 1944 Chicago Convention stresses security and commerce as two major ingredients in promoting a globally progressive aviation sector. Although specific provisions such as Articles 35 and 36 of the Chicago Convention cover security matters related to cargo restrictions and photographic equipment, recent technological advances have allowed nations to tweak their screening technologies. The International Civil Aviation Organization (ICAO), which is a United Nations specialized agency, adopts aviation security standards from the Chicago Convention and generally requires member states to comply with its international standards and practices.⁸⁴ For instance, ICAO helps member states identify security risks within their aviation sectors, and provide valuable input to improve response measures. Both Canada and the U.S. are contracting states to the Convention on International Civil Aviation which codifies these aviation security principles.⁸⁵

Under the 1944 Chicago Convention, ICAO has amended its Standards and Recommended Practices (SARPs) on Aviation Security in Annex 17. The SARPs have

⁸⁴ International Civil Aviation Organization (ICAO), Strategic Objectives, *available at* http://www.icao.int/icao/en/strategic_objectives.htm (last visited April 6, 2008).

⁸⁵ Transport Canada, *available at* http://www.tc.gc.ca/tcss/CATSA/Final_Report-Rapport_final/chapter2_e.htm#2.1 (last visited April 6, 2008).

contributed to aviation security in Canada and the U.S. by recommending new security measures such as reinforcing cockpit doors and requiring background checks of airport employees. Annex 17 sets minimum security standards for all contracting states, where each member state must adopt and implement regulations and policies to respond to changing threats within the aviation sector. Annex 17 of ICAO serves as the foundation for the guiding principles of a multi-layered aviation security regime in Canada and the U.S, including:

- the requirement that each member state ensures that its airports and air carriers have security programs which comply with their national program;
- the establishment of a national aviation security committee to oversee the enforcement of regulations and integration of activities;
- the enhancement of screening technologies and the screening of personnel and cargo;
- in-flight security response measures such as federal air marshals; and
- the exchange of intelligence information and encouraging international cooperation to determine the risk of threats.⁸⁶

Both Canada and the U.S. have complied with several of these principles under Annex 17 by creating national programs and granting authority to Transport Canada and the Transportation Security Administration, respectively. From the Annex 17 principles, Canada and the U.S. have fashioned a multi-layered regime that integrates activities between participating groups, and have furthered their efforts to enhance screening technologies under a federal regulatory framework.

In June 2002, ICAO launched its Universal Security Audit Program (USAP) with the aim of enhancing aviation security and developing a global aviation security regime.⁸⁷ This program is part of ICAO's Aviation Security Plan of Action, which requires mandatory audits on aviation security systems among the member states. The USAP program helps identify security deficiencies within the aviation corridor, and enable ICAO to make

⁸⁶ Transport Canada, Flight Plan: Managing the Risks in Aviation Security – Report of the Advisory Panel, Protecting Canadian Air Travellers, *available at* http://www.tc.gc.ca/tcss/CATSA/Final_Report-Rapport_final/chapter2_e.htm (last visited Apr. 8, 2008). Clause 3.1.3 of Annex 17 states: “Each Contracting State shall keep under constant review the level of threat to civil aviation within its territory, and establish and implement policies and procedures to adjust relevant elements of its national civil aviation security programme accordingly, based upon a security risk assessment carried out by the relevant national authorities.”

⁸⁷ International Civil Aviation Organization, Office of the Secretary General, *available at* <http://www.icao.int/icao/en/osg/ssa/asa/> (last visited Apr. 8, 2008).

necessary recommendations.⁸⁸ This plan of action also recognizes that member states may face new threats, and that biometric technology may be adopted on a global scale.

The International Air Transport Association (IATA) is an international trade body representing over 240 passenger and cargo airlines, and which regulates commercial standards.⁸⁹ IATA ensures that the airline industry contributes to the economies of nations around the world through streamlined travel, but also coordinates between federal regulators and the airlines. IATA created the Global Aviation Security Action Group (GASAG), which has addressed key issues such as: (1) harmonizing aviation security standards; (2) funding mechanisms for security; (3) establishing restricted zones in airports; and (4) biometric identification technology. Notwithstanding their national security objectives, both Canada and the U.S. utilize resources from IATA to find better ways of promoting commerce.

The Open Skies Policy and Economic Prosperity

The safe and streamlined movement of people and cargo is critical in promoting free trade and economic prosperity. Since Canada and the U.S. share a large and integrated market, exposing vulnerabilities within the aviation sector is essential in promoting commercial trade by the free movement of goods. One commentator stressed the impact of passenger travel and commercial trade on aviation security:

One seemingly unavoidable reality for aviation security strategists is that continued growth in demand for air travel and for shipping goods by air is anticipated. The FAA estimates that the number of airline passengers will increase at an annual rate of about 3.4% domestically and about 4.7% for international flights over the next twelve years. This anticipated growth could strain passenger and baggage screening operations in the future if it is not adequately planned for.⁹⁰

In addressing this concern, Canada and the U.S. have signed the Open Skies agreements in November 2005. The Open Skies agreement refers to a bilateral agreement which

⁸⁸ *Id.*

⁸⁹ International Air Transport Association (IATA), About Us, *available at* <http://www.iata.org/about/mission.htm> (last visited Apr. 6, 2008). IATA has industry priorities which include: (1) Safety (audits and airline training and qualification); (2) Environment (reduce carbon emissions); (3) Simplifying business (through 100% e-ticketing); and (4) Financial (reduce airline costs and improve efficiency).

⁹⁰ Bart Elias, Congressional Research Service, CRS Report for Congress, National Aviation Security Policy, Strategy, and Mode-Specific Plans: Background and Considerations for Congress (January 2, 2008), *available at* http://assets.opencrs.com/rpts/RL34302_20080102.pdf (last visited Apr. 8, 2008), at CRS-20.

allows both nations to liberalize air transportation service by eliminating restrictions (except for safety and security) to support both tourism and business.⁹¹ In recent years, the Open Skies agreements have enabled Canada and the U.S. to promote their economies through streamlined trading of goods, while providing adequate security within the aviation corridor. More specifically, the Open Skies agreement allows airlines to operate services between various countries, including transit rights such as the seven freedoms of carriage.⁹²

The Canadian Airports Council (CAC) commented on the interrelationship between aviation security and commercial travel and how the Open Skies agreements could benefit Canada:

Direct benefits are realized from increased service to and from Canada through increased traffic and revenue for airports and airport-related businesses. Today, many overseas travelers to Canada will travel via the U.S. because of better routings, service that isn't available directly from Canada and/or fares that can be cheaper due to more competition. This imbalance should be eased with more Open Skies agreements between Canada and more countries. International air service also can put communities "on the map", bringing tourists that may not otherwise have visited and opening new international cargo links.⁹³

⁹¹ Canadian Airports Council, Open Skies with Europe, *available at*

<http://www.cacairports.ca/english/news/openskieswitheurope.php> (last visited Apr. 8, 2008).

⁹² Canadian Airports Council, Open Skies with Europe, Frequently Asked Questions, *available at* http://www.cacairports.ca/news2/CAC-OpenSkiesEU_FAQs.pdf (last visited February 18, 2008). The Canadian Airports Council (CAC) was formed in 1991 and is a federal representative of all Canadian airports. The CAC has 48 members representing 180 Canadian airports, including the National Airports System airports, including most municipal airports in every province and territory. The CAC generally handles Canada's air cargo traffic and passenger traffic (both nationally and internationally). *See, e.g.*, CAC, About Us, *available at* <http://www.cacairports.ca/english/about/index.php> (last visited Apr. 8, 2008). The first Open Skies agreement was between the United States and the Netherlands in 1992. Transport Canada, Flight Plan: Managing the Risks in Aviation Security – Report of the Advisory Panel, Protecting Canadian Air Travelers, http://www.tc.gc.ca/tcss/CATSA/Final_Report-Rapport_final/chapter2_e.htm (last visited Apr. 8, 2008). Other initiatives designed to promote trade include the Smart Border Declaration was signed by Canada and the U.S. as a means to enhance border security while facilitating the flow of goods and people. On March 31, 2006, Canada, Mexico, and the U.S. issued a joint statement in Cancun, Mexico: "Our vision is to have a border strategy that results in the fast, efficient, and secure movement of low-risk trade and travelers to and within North America, while protecting us from threat including terrorism. In implementing this strategy, we will encourage innovative risk-based approaches to improving security and facilitating trade and travel. These include close coordination on infrastructure investments and vulnerability assessments, screening and processing of travelers, baggage and cargo, a single integrated North American trusted traveler program, and swift law enforcement responses to threats posed by criminals or terrorists."

⁹³ Canadian Airports Council (CAC), Question 6, *available at*

<http://www.cacairports.ca/english/news/openskieswitheurope.php> (last visited Apr. 8, 2008).

The Canadian government has adopted another international air policy known as ‘Blue Sky’ that further promotes trade liberalization. The objectives of Blue Sky are as follows:

- Encourage competition and expand air services to benefit tourism and business;
- Provide opportunities for Canadian airlines to compete;
- Enable airports to market themselves;
- Support Canada’s international trade;
- Provide a *safe, secure, and efficient* transportation industry ⁹⁴

The Blue Sky policy recognizes that air transportation corresponds to a dynamic economy, but also that air trade liberalization can be guided by safety and security considerations. The Blue Sky policy eliminates trade restrictions (such as how many air carriers are allowed from each market, what destinations they may serve, and how many times they may fly), which can lead to greater foreign investment and trade potential with other nations.⁹⁵ As Canadian tourism is a \$57.5 billion industry, the Blue Sky policy is intended to attract tourism and trade to Canada, while encouraging Canadians and international travelers to travel safely.

Since Canada, Mexico, and the U.S. are signatories to the North American Free Trade Agreement (NAFTA), aviation security remains a strong priority. On March 23, 2005, a trilateral agreement was signed between the U.S, Canada, and Mexico to create the Security and Prosperity Partnership, which is a common security regime that promotes economic growth.⁹⁶ Under this partnership, airports and federal agencies work together to streamline passenger traffic and the shipping of goods at points of entry. This agreement reflects how governments hope to achieve a balance between the provision of aviation security and commercial trade.

⁹⁴ Transport Canada, Blue Sky - Canada’s New International Air Policy, *available at* <http://www.tc.gc.ca/pol/en/ace/consultations/blueSky.pdf> (last visited Apr. 8, 2008), at 2.

⁹⁵ Canadian Airports Council, News Release (Nov. 27, 2006), “‘Blue Sky’ Policy Will Benefit Canadian Travellers, Shippers, and Communities, *available at* http://www.cacairports.ca/english/news/press_releases/140.php (last visited Apr. 8, 2008).

⁹⁶ Homeland Security, Fact Sheet, Security and Prosperity Partnership, Implementation Report – Security Agenda, *available at* http://www.dhs.gov/xnews/releases/press_release_0695.shtm (last visited Apr. 8, 2008). Here, the CAC indicated that the re-screening of Canadian-originating baggage in the U.S. took up valuable resources through screening duplication and increases time delays in connection times for travelers. The CAC encourages the Canadian government to sign more Open Skies agreements with other nations, including those that serve as major hubs between North America and India such as the United Arab Emirates and Singapore.

V. CURRENT TRENDS IN AVIATION SECURITY

On March 5-6, 2008, the Canadian Aviation Security Conference entitled “Sharing Skies, Managing Risks” was held in Gatineau, Québec.⁹⁷ The conference focused on the latest international trends and legislation dealing with aviation security, as well as operational experiences from various nations. Various topics were explored such as terrorism, balancing public and private policing, screening technologies, integration of all security agencies, and enhancing air cargo security.⁹⁸ This conference brought together the key players in the multi-layered security regime from Canada (and some from the United States), including representatives from various federal agencies (CATSA, Transport Canada, and the Transportation Security Administration), the airlines, air transport security, airport authorities, and private security companies. Other notable groups that were present included IATA and ICAO. The Canadian and American approaches to aviation security have influenced other nations in terms of global application.⁹⁹

CONCLUSION

The security and economic prosperity of Canada and the United States relies upon the integrity of its transportation security system. In the aviation sector, security is necessary for protecting passengers and cargo both on the ground and in the air against criminal elements. Both Canada and the U.S. have fostered aviation security by creating a multi-layered regime by forging partnerships between federal agencies and intelligence, law enforcement, and the private sector. This multi-layered regime operates on a risk-based approach within a federal regulatory framework, whereby the federal agencies ensure the application of the guiding principles of aviation security.

⁹⁷ Canadian Aviation Security Conference, *Sharing Skies, Managing Risk*, available at <http://www.cata.ca/CanadianAviationSecurityConference/about.html> (last visited Apr. 8, 2008). This conference is sponsored by the following organizations: (1) CATSA; (2) Transport Canada; (3) The Canadian Airports Council (CAC); (4) The Air Transport Association of Canada (ATAC); (5) Airline Pilots Association International (ALPA); (6) The Canadian Advanced Technology Alliance (CATA); and (7) the Police Sector Council. The first Canadian aviation security conference was held in 2006 with resounding success.

⁹⁸ *Id.*

⁹⁹ The European Union has already enacted legislation and regulations to enhance aviation security in ground and air transportation sectors similar to that of Canada and the United States. Australia has shifted primary responsibility for airport security to the Australian Federal Police under its Aviation Transport Security Act (2004).

The Canadian and American approaches differ somewhat in terms of how their respective multi-layered regime functions. In Canada, Transport Canada and CATSA assume the primary responsibilities for aviation security in cooperation with other agencies such as Canada Border Services Agency (CBSA), Canadian Security Intelligence Service (CSIS), the R.C.M.P., local police, air carriers and airport authorities (the private sector). In the U.S., new federal agencies such as the Transportation Security Administration (TSA) cooperate with the air carriers, FBI/CIA, local law enforcement, and private security contractors. Although the private sector's involvement in aviation security is more pronounced in the U.S, modern legislation requires that the federal government oversee the hiring of these entities.

The federal governments is heavily involved in the aviation security regime because of national security, but also due to the enormous financial resources that are required to apply core security measures. Indeed, the federal governments in both Canada and the U.S. are funding the bulk of aviation security measures in ground security (airports) and air security (aircraft), while carefully coordinating efforts between federal agencies, law enforcement, and private security companies. Aside from national security, however, both nations stress economic prosperity as a means to participate successfully in global markets. Here, there is a strong link between global conventions (which provide for the guiding principles of aviation security) and the Open Skies policy (which liberalizes trade). With more nations signing Open Skies agreements, the aviation sector requires a multi-layered regime to allow for streamlined trade and passenger travel without significant disruptions.

In this sense, aviation security not only provides safety for travelers, but it also encourages commercial trade. Despite a security culture evolving since the 9-11 attacks, both Canada and the U.S. recognize the importance of allowing business to flourish since the aviation sector is so critical in streamlining the movement of people and goods. Thus, balancing aviation security with commerce requires enormous financial and technological resources, as well as extensive coordination between agencies that are strategically placed in a multi-layered regime.

Simply put, the multi-layered regime shows great promise in helping achieve the balance between security and commerce. But this regime will only succeed in fulfilling the

guiding principles of aviation security only if federal assistance is provided. The multi-layered approach used in Canada and the U.S. provides security and restores confidence in the public, enough to promote economic prosperity through streamlined movement of people and goods.

Steady changes to the aviation security measures allow for the guiding principles to be applied both on a local and global scale. In many ways, terrorist attacks have led to improvements in aviation security. But these improvements have evolved through the identification of serious vulnerabilities within the screening process on the ground and in the air, and also through novel legislation and policies that help meet the guiding principles of aviation sector. The multi-layered regime allows federal agencies to work closely with other agencies and thereby create a strong security culture that recognizes the guiding principles of aviation security, which are so instrumental for a progressive and secure aviation sector.

Figure A: The Multi-Layered Aviation Security Regime

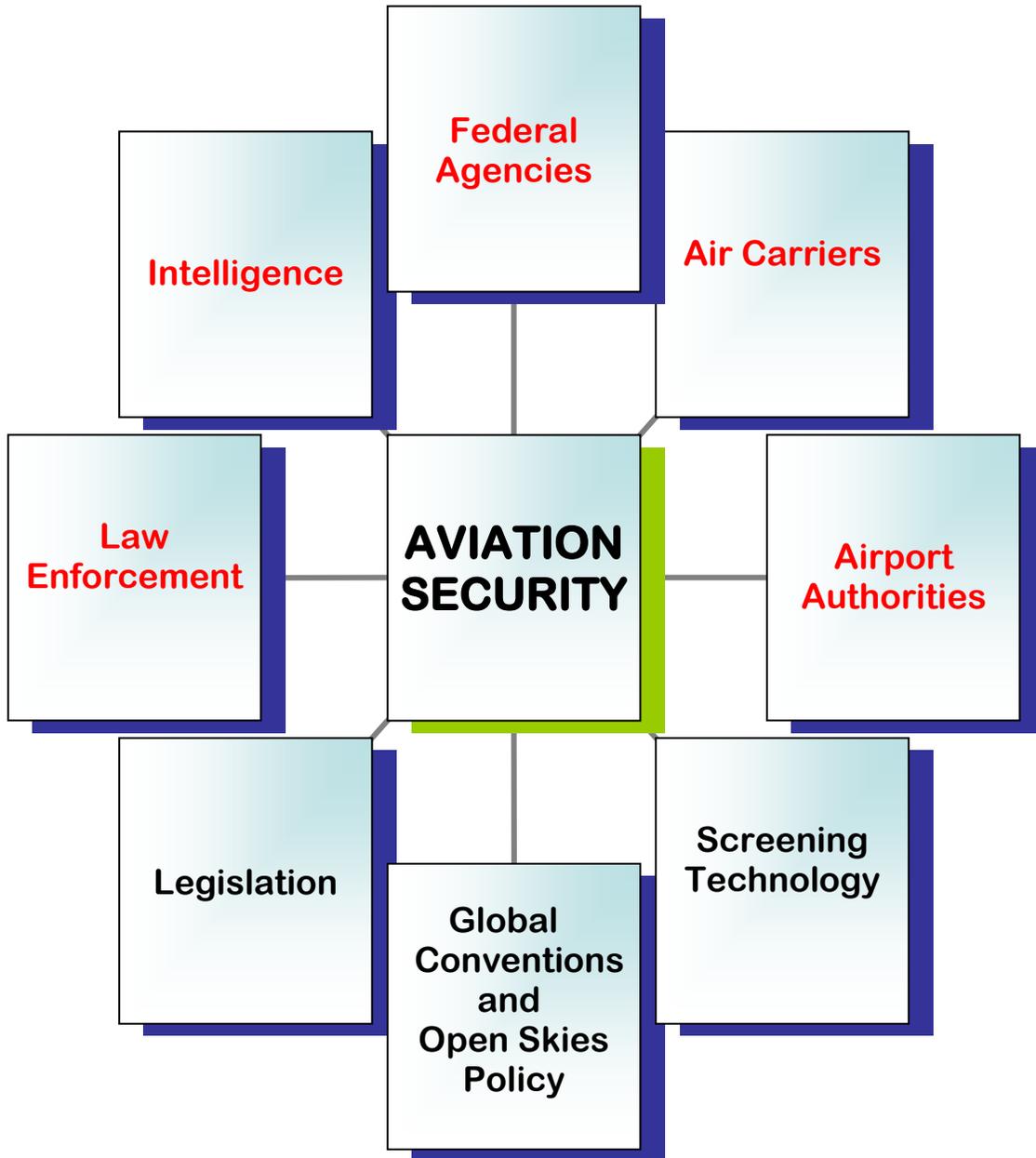


Figure B: Canada's Aviation Security Regulatory Framework

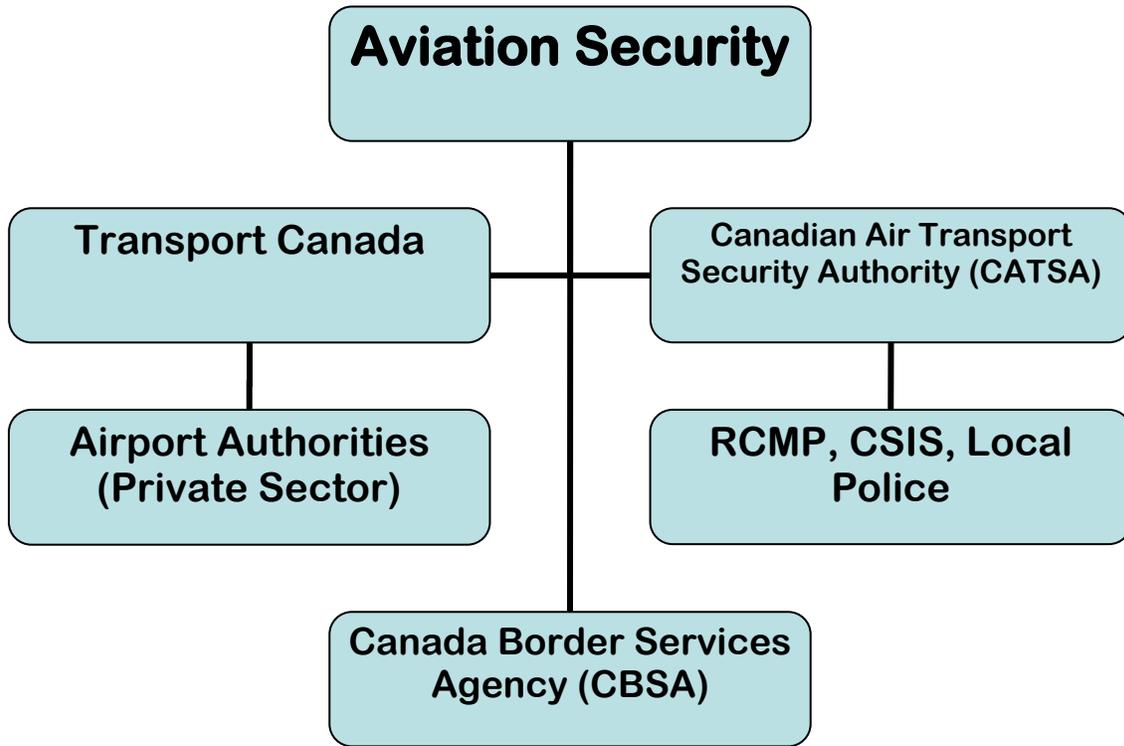


Figure C: United States Aviation Security Regulatory Framework

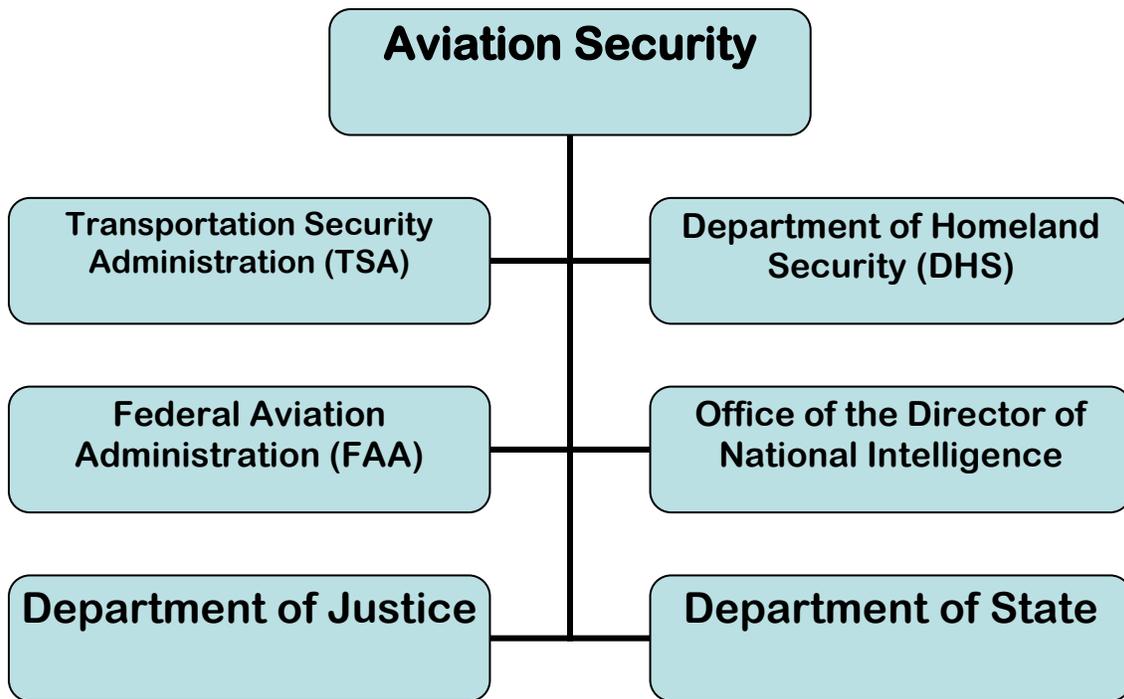


Figure D: Layers of Security in the U.S. Aviation Sector
 (Source: Transportation Security Administration - April 2006)

Layer of Security	Function
Intelligence / Customs and Border	CIA/FBI, Dept. of Homeland Security reports; TSA response
Joint Terrorism Task Force	Local cells of trained intelligence and law enforcement agents
No-Fly List and Passenger Pre-Screening	Identify suspected terrorists
Crew Vetting	Security threat assessment conducted on airline crew
Visible Intermodal Protection and Response (VIPR)	Team of Transportation Security Inspectors, Federal Air Marshals, and Canine Units
Secure Flight Program	TSA program to avoid security breaches
Behavior Detection Officers - Screening Passengers by Observation Techniques (SPOT)	Airport personnel watch passengers pass through the layers of security
Travel Document Checker	Identifies boarding passes and illegible or expired documents
Checkpoint - Transportation Security Officers	Use black lights/magnifying loupes to check passenger boarding passes and baggage
Trace Portals	Device that blows air on passenger and detects trace elements of explosives
Millimeter Wave	Detects traces of explosive materials
Biometrics	Fingerprint or retinal images
Bottled Liquid Scanners	Introduced after Heathrow Airport bombing in 2006

Checked Baggage and Canine Units	Dogs sniffing baggage for explosives
Transportation Security Inspectors	Passenger and cargo inspection
Random Employee Screening	Section 111(f)(5) of ATSA allows Under Secretary to conduct Annual Proficiency Review of screening employee
Bomb Appraisal Officers	Onsite investigation of bomb threats
Federal Air Marshal Service	Section 105 of ATSA authorizes on-flight undercover agent observing other passengers
Federal Flight Deck Officers	A voluntary program for pilots. Section 128 of ATSA authorizes pilots on passenger aircraft to carry firearms (subject to TSA and airline approval)
Trained Flight Crew	Flight crew responding to threats
Hardened Cockpit Door	Protect pilots from direct contact with suspected passenger
Law Enforcement Officers	Secure all areas in airports and their perimeters
Passenger Watch Program	Personal observations

Figure E: Overview of Canada's Multi-Layered Airport Security System
 (Source: Transport Canada's Flight Plan: Managing the Risks in Aviation Security - Report of the Advisory Panel - 2006)

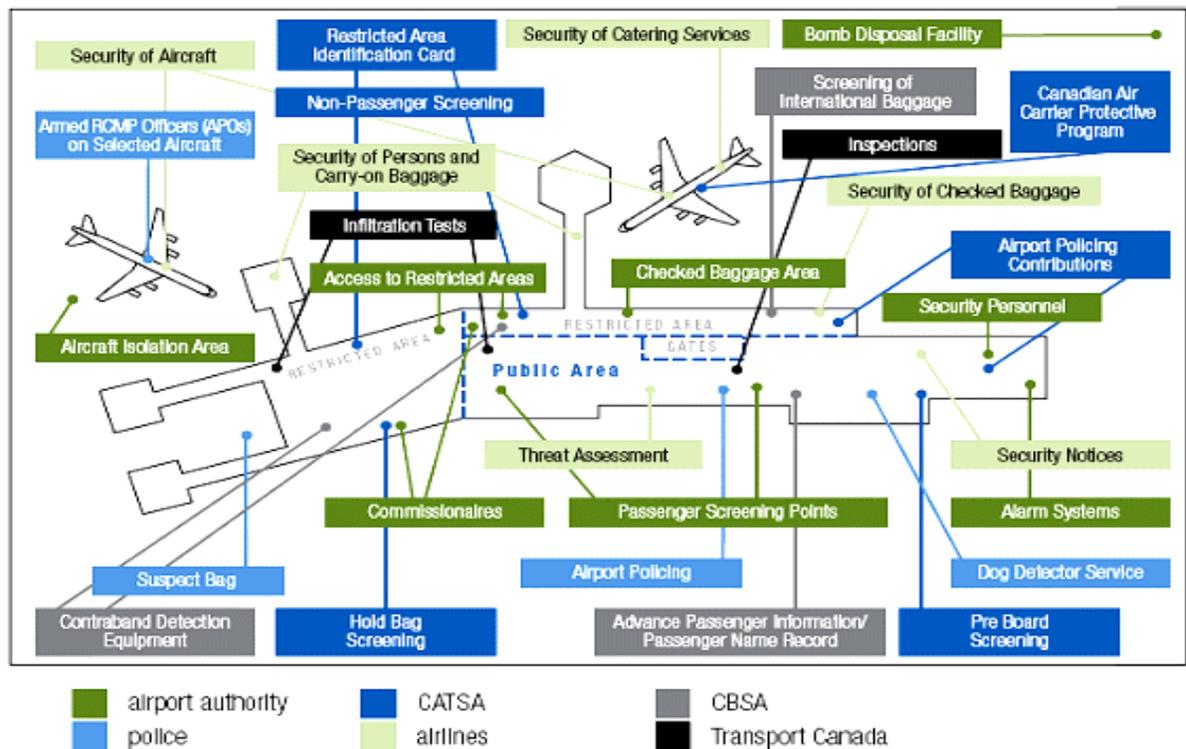


Figure F: Passenger Checkpoint Screening in the U.S.
 (Source: GAO Report on Aviation Security - April 2007)

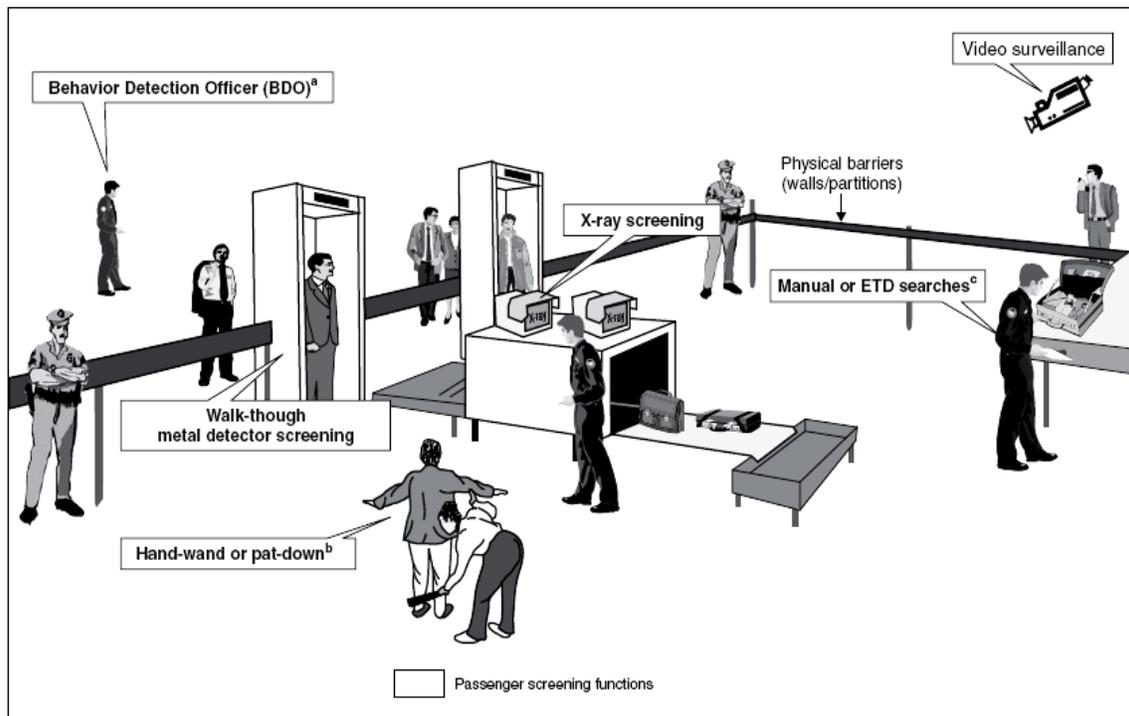


Table 3: Common Aviation Security Measures in Canada and the U.S.
 (Functional Equivalents between the CATSA Act and ATSA)

CANADA	UNITED STATES
Specified Persons List	Passenger Name Record (No Fly List)
Biometrics – Restricted Area Identity Card (RAIC)	Biometrics
Screening Officer Evaluation (CATSA)	Random Employee Screening (ATSA)
Canadian Air Carrier Protection Program	Federal Air Marshal Service (ATSA)
Airport Policing Program (CATSA)	Law Enforcement Officers
Explosives Detection System (EDS)	Millimeter Wave and Trace Portals
Security Watch Program	Passenger Watch Program
Airport Security Fee	Aviation Security Infrastructure Fee
Reinforcing Cockpit Doors	Reinforcing Cockpit Doors

Figure G: Aviation Security Threat Sources, Tactics, and Targets

