EUROPEAN
ACADEMIC
RESEARCH

Challenges of Civil Aviation Security in the 21ˢᵗ Century

Dr. BEJTUSH GASHI
Assistant Profesor
Faculty of Public Security
Deputy Minister, Ministry of the Kosovo Security Forces
Prishtina, Kosovo
M.Sc. KASTRIOT GASHI
Prishtina, Kosovo

Abstract:

Safety of Civil Aviation is the strategic objective of states, while contemporary threats are not related to geographical boundaries, but airports, airplanes and other air transport presents substitute objectives. Violent acts have caused uncertainties that affect air transport safety and regularity. However, analyzing the situation presented in this paper, we can conclude that air safety is significantly improved compared to previous years, mentioning the statement of the Director General of the International Air Transport Association, "if you travel by plane, is one of the safest ways that people can travel"[1].

Protection of civil aviation against acts of unlawful interference requires constant vigilance by international organizations and institutions of the state in the development and implementation of positive actions for preservation. While there is a clear need to strengthen security (application of measures) at all stages of the process associated with the transportation of persons, carry-on luggage and their belongings on the plane. Also, a device should be used for

---

[1] International Air Transport Association (IATA), Geneva, Switzerland, p.9, 2012.

reading personal identification documents of passengers and flight crew, in order to strengthen resistance against forged passports etc.., and closer cooperation between states to strengthen resistance against fraud. There is no doubt that all these serve the purpose of detection of terrorists in order to prevent acts of unlawful action.

The role of civil aviation safety in the security sector in Kosovo is a matter of vital interest. We cannot speak about true security if there is no safety in the field of civil aviation. The concept of civil aviation security is a new field for the institutions of the Republic of Kosovo, because before the independence this field was reserved. After the Constitution of the Republic of Kosovo entered into force, the Ministry of Internal Affairs is responsible for providing security for Civil Aviation of the Republic of Kosovo based on the Law on Civil Aviation.

Key words: civil aviation safety, terrorist acts, International Air Transport Association (IATA), MIA, etc**.**

Introduction

The terrorist attacks of 9/11 2001 marked the beginning of a new era in the modern history of humanity. This period is characterized by instability, unpredictability and reorganization of complex systems, including traditional challenges and new types of threats. Of particular importance and the most dangerous is, beyond all doubt, the emergence of terrorism as a true global threat. In the 21st century, terrorism has evolved into a major geopolitical factor, capable of causing global systematic crisis.

Traditional threats and risks in the civil aviation industry can be: aircraft hijackings, aircraft sabotage and airport sabotage, terrorist attacks on airports and airport sections, as well as acts of unlawful actions in aviation.

The proposals that emerged for security policies in the field of civil aviation after the Lockerbie bombing in 1988 were not mandatory for every country. Therefore, these policies were

not implemented by all countries. However, the events of 9/11 2001 resulted in significant policy changes in civil aviation safety. Entry into force of Regulation 2320/2002[2] for Europe and the Government of the United States of America taking over responsibility (TSA[3]) to provide and oversee civil aviation security in America has resulted in substantial change in development and management mode of civil aviation security worldwide.

Worldwide air transport revolution is more important than the revolution in information technology, which paves the way for free and rapid movement of people, goods and services, on a global scale. Recognizing this, civil aviation is of particular importance for all governments of different countries. Nowadays, air transport is able to transport people and goods in the farthest corners of the earth, from anywhere, within twenty-four hours. It is important to note that aviation today is more dynamic, in its development. Quantitative indicators are proof to its importance and pace of development, where about 10,000 air transport companies currently operating in the world, use more than 15,500 passenger airlines (not including cargo and light aircraft) and airports for landings (over 5000 airports).

Unfortunately, this positive trend has also a negative side. Considering its functional importance and weaknesses, civil aviation is increasingly becoming the focus of operational activity of various terrorist structures, as a subject of their actions. This, in turn, makes it critical to take practical steps towards tightening the level of security in the field of civil aviation.

---

[2] Regulation (KE) No. 2320/2002 - establishing common rules in the field of civil aviation security, which allows EU member states to transfer the responsibility of civil aviation security in the institutions of the responsible member state

[3] Transport Security Administration.

One aspect of the war on terrorism seems to be neglected: the tie between terrorism and organized crime. The importance of organized crime phenomenon in Southeast Europe is present and different groups have established networks bringing huge profits from organized crime, in conjunction with other criminal networks, where carrying out these activities, for terrorists and terrorist groups, is welcomed. Given the international community's efforts after 9/11 to freeze funds and assets of Al Qaeda or others linked to terrorist groups, these terrorist groups constantly attempt to raise new funding through organized crime.

Southeast Europe is characterized by a high level of activities by organized crime, particularly drug trafficking, and the presence of terrorist groups, including Al Qaeda (mainly in the Western Balkans). In this context, it is hard to believe, and it would be a mistake not to consider that terrorist groups would use criminal activity networks that already exist in the region. Therefore, security institutions must work consistently, not to allow our region to become a "safe haven" for terrorists.

Dr. Assad Kotaite, former president of the Council of ICAO, would state on an ICAO anniversary of its foundation:

> In recent approach of the twentieth century, air transport is already known as a guaranteed (safe) way of travel around the world. Before the international civil aviation rules and modernization of global air traffic systems, what is considered to be key challenges in the 21st century is the necessity to maintain and consolidate, in a higher degree of safety and security, the air transportation industry.

The greatest problems about the safety of civil aviation preside in countries which:

- rule of law is absent;
- there is a high crime rate;
- there is a dissatisfaction of the minority population;
- there is a social / political uncertainty, and
- there is a dispute or problem with the borderline.

Groups threatening the security of civil aviation may be terrorists, criminals and people with mental problems, disgruntled employees in the aviation industry, refugees and governments of countries.

Motives of groups threatening the safety of civil aviation can be:

– to gain publicity;
– to free prisoners or other terrorists;
– to change national or international policy;
– to undermine and discredit the authorities who oppose their cause;
– to target certain individuals for assassination;
– to frighten the public and disrupt normal life, and
– to obtain money by threatening or blackmailing.

Another challenge of civil aviation security in the 21st century is cyber-attacks worldwide. This concern was raised by the International Civil Aviation Organization (ICAO), which is demanding the creation of a cyber-security task force.

At this time concern were raised – because of the risk of civil aviation security from cyber-attacks. Currently, civil aviation cyber-attacks are a relatively small issue, but this is changing day by day, even though the adoption of new technology is an ongoing activity in civil aviation, the actual pace and scope of new information technologies has increased significantly to the risk of cyber-attacks.

Technology being used today, especially a large number of cell phones that through a program one can monitor the position of the aircraft, its type, airline, number of passengers the aircraft cargo and destination.

Using different software and hardware by the civil aviation attackers can irritate air traffic controllers by removing aircraft from airspace (their monitors) as they are not flying. The equipment needed for such an attack costs very

little. Therefore, it remains up to countries institutions to seriously fight this phenomenon.

Also, we should note that a recent challenge to civil aviation security is that terrorists forcing an aircraft to carry out an act, without having to board the plane at all. This can be done by terrorist taking hostages the families of the pilots who are piloting the aircraft, and then send commands (orders) to the pilot from the ground.

Terrorism in civil aviation

Appearance of terrorism in civil aviation was introduced with aviation growth, as a mode of transportation. The first recorded incident of terrorism in aviation is prior 1930s, when Peruvian rebels seized a plane that served to distribute propaganda leaflets. But this has become common practice in the last four decades, primarily due to the impact of global factors (World War II, etc.)

Terrorism has been a constant threat to aviation industry for the last 50 years. Three distinct phases of aviation terrorism have emerged during these periods:

First phase: 1948-1968 - flight from persecution or prosecution.
Second phase: 1968-1994 – political phases.
Third phase: 1994 until present - airplane as a weapon for destruction.

The initial phase as a target of terrorism has been political benefits, by using aircraft hijacking to escape persecution or prosecution of migration. World's governments and global aviation industries were relatively notified. Recent events, however, have seen a shift in the philosophy behind the attacks. This last stage, where the planes are increasingly being used as a weapon of destruction, resulted in dramatic changes in how the aviation safety is handled worldwide.

A recent study issued 109 different definitions of terrorism, whereas common elements are:

– brute force - 83.5% of definitions;
– politics - 65%;
– fear, causing terror - 51%;
– threats - 47%;
– psychological effects - 41.5%;
– mismatch between target & victim - 37.5%;
– intentions and actions - 32%, and
– tactics strategy -30.5%.

Date of the beginning of modern terrorism in aviation, as now, appeared in July 22, 1968, when three gunmen from the Popular Front for the Liberation of Palestine hijacked a passenger airplane of the "El Al" Israeli airline, on a flight from Rome to Tel Aviv. Terrorists wanted to exchange their hostages with prisoners in Israel[4].

This operation, although it was the twelfth case of interventions in civil aviation in 1968, was completely different in its content and ultimate goal. This was the first time that a plane was hijacked, not by criminal motivations or for personal reasons, but specific political goal, putting pressure on the opponent and using the incident as a propaganda message to bring political prestige in the world. In the late 1960s and early 1970s was marked with an increase in the number of terrorist acts using explosives directed at air transport, most of which followed a typical pattern, the armed seizure of an airplane, hijacking in a secure airport and issuing demands under the threat of hostage executions.

So far, the world has never known and seen terrorist attacks greater than the 9/11 2001 attacks in New York and Washington, carried out by hijacked civil aircraft. For the first time, the planes were operated by suicide pilots. Hijacked aircraft (airlines) were used as weapons to defeat the objectives

---

[4] Bruce Hoffman, Terrorism. The Insight (Moscow: 2003), 77

set by the terrorists. Replacing classical weapons, by other means available is one of the basic principles of asymmetrical warfare. In the meantime, rejection, or talks to develop applications against the backdrop of military operations is an eloquent summary of the state of total war. This fact gave many experts to consider 9/11, 2001 as the date of the start of World War III.

Today, terrorism is viewed as a special type of war, which always takes new forms, affecting the economic, financial, cultural and other developments. We will present two examples to reflect the effects of terrorism that occurred in October 2002. Bombing of two nightclubs in Bali, Indonesia, and the attempt to shoot down an Israeli passenger plane in Kenya, resulted in significant reductions in the number Western tourists, who traditionally spent their vacation in warm places, in these parts of the world. In this operation, not only did it cause damage to the tourism sector but also to the tourists (which constitute no less than 10 percent of spending in Western economies). The same attack suffered a French oil base off the coast of Yemen, which resulted in a temporary increase in oil prices in world markets, which also damaged the airlines, because they had to buy fuel at high prices. Therefore, we can say that terrorism is a very effective instrument of economic warfare.

Therefore, terrorism is a major threat to aviation safety around the world, which does not respect borders, and if this threat is not reduced, could cause loss of life and injury to persons. To combat this phenomenon it is vital to have cooperation between various agencies, in order to decrease the human and material damage and increase public confidence in air transport.

The main goals of the terrorists' attacks are also airports, in order to cause the maximum number of victims with their actions. To carry out these attacks at airports, terrorists use various explosive devices and automatic weapons.

However, the state intelligence institution should collect information to investigate, in order to unveil these acts before they occur.

Following, we would refer to some terrorist attacks that occurred in various world airports, by terrorists.

- Lode Airport, Tel Aviv Israel (1972).
- Rome, Italy (1973).
- Paris, France (1978).
- Manila, Philippines (1983).
- Rome, Italy and Vienne, Austria (1985).
- Seoul, South Korea (1986).
- Algiers, Algeria (1992).
- Johannesburg, South Africa (1994).
- Heathrow Airport, England (1994).
- Reus, Spain (1996).
- Lahore, Pakistan (1996).
- Colombo, Sri Lanka (2001).

To summarize, I should eventually reach the pessimistic conclusion: terrorism will exist as long as humanity does. Even worse, its trajectory is currently in the ascent. Therefore, the problem of air transport security is more critical than ever before. So, it is necessary to mobilize the entire security system to reduce the risk of terrorism, not only in aviation but in all spheres.

Airplanes are considered to be the biggest air polluters

In 2012 all airlines whose planes depart or arrive in Europe must present a certificate showing how much carbon dioxide (CO_2) is released into the atmosphere. If they release more CO_2 than specified they must pay for this. European Commission specifies annual maximum amounts of greenhouse gases that air transport are allowed to emit throughout the EU. Exactly, for these quantities of greenhouse gases, the Commission shall

issue an emission certificate, which can also be sold and purchased.

Airlines receive 82 percent of certificates for free, 15 percent they need to buy and 3 percent are kept in reserve for new air companies. They are allowed to emit a certain amount of greenhouse gases, namely according to the certificates they possess, or they will have to buy from other airlines, namely to trade with these rights. If the law is violated then the law foresees penalties in the amount of 100 euros per ton of CO_2. The law can even set a flight ban.

This will help to limit CO_2 emissions in air transportation. This is because emissions in air transport in the EU have been growing rapidly and almost doubled since 1990.

According to estimates an airplane flying Brussels-New York round trip produces 800 kg of CO_2 per person. Organizations for the protection of nature and environment hope that the new rules of EU will bring an improvement in capacity utilization of aircraft, flight management towards a reduction of indirect routes and improving waiting flights for landing and the use of recent efficient turbines.

But what is hailed by environmental protection associations has sparked fear among travelers thinking that airlines might increase ticket prices to counter rising costs. A wave of protests actually occurred in non-European countries, because they do not feel bound by the EU laws on emissions. Primarily China, USA and Russia complain that the EU's involvement in the trade of air transport CO_2 to its territory was done without asking the others. Chinese aviation office CAAC forbid its air companies to pay what it's demanded of them as a result of the emissions trade. China even threatened through back channels discussion that it will cancel its orders in billions with Franco-German Company Airbus.

There are signs of compromise from Brussels. On the legal point of view, EU officials see the issue resolved. European Court during the reviewed in December 2011 ruled

that the regulation does not conflict with the basic principles nor the rights of peoples, not even the so-called Treaty of Open-Skies, in which the EU and the United States are committed to a free market of air transportation. However the question remains questionable unless there is a court, arbitrator of international law, which would consider a legislation that is binding to EU.

Even if concessions were to be made to USA and China, European airlines have warned of protests. German aviation companies have argued that emissions trade makes sense only if all airlines departing or arriving in Europe should pay as prescribed. Otherwise they would have advantages in competition and thus would offer tickets at the lowest price. It is going to be interesting early next year because then airlines will have to inform about the quantities of harmful gas for the atmosphere and only then there will be an estimate.

In the 38th Assembly of ICAO, held from September 24 to October 4 2013, have been complicated discussions on market measures to reduce the emission of C02 gas. However, ICAO has already shown success in achieving compliance in two new related areas. Last year was agreed how to measure emissions. According to the reached consensus, emissions that will be measured will be the one at a certain point in the cruise and will liaise with the maximum weight of the aircraft. Now since its defined how to measure the emissions, a problem that still needs to be resolved is defining acceptable boundary of these emissions, taking into account technical feasibility, environmental benefits, cost effectiveness and impact of interdependent factors. Compliance to the allowed limits will be reached by 2016, to be adopted at the 39th Assembly of ICAO. Another point in this debate was whether the existing types of aircraft in production would be forced to reach compliance with the new standards, especially considering that for the moment only one manufacturer reaches the intended limits. Such an

obligation for existing aircraft types would bring the need for recertification, which is quite costly.

On June 5, 2012 in Madrid, "Solar Impulse" airplane continued his first intercontinental flight without a drop of fuel, starting from Madrid to Rabat (Morocco). The launch took place at 5:23 pm, and planned landing in North Africa at 23:00 am local time[5].

The plane weighs 1.6 tons and with a wing spans as Airbus A340 (63.4 m) flies on four electric motors, working with over 12,000 solar elements. The average speed of the aircraft is - 50 km/h. In 2014 the members of "Solar Impulse" hope to perform a full flight around the Earth in several stages without refueling.

Fig. 1. - "Solar Impulse" Airplane.

International aviation is growing rapidly, resulting with increased air pollution from aircraft exhaust gas release. Concerns about the growth trajectory of the industry and carbon emissions have led to calls for additional market measures.

Airplane hijackings

Civil Aviation is an attractive objective to carry out any terrorist act because of aviation industry high profile (the cost of the aircraft and airline reputation), due to the large number

---

[5] www.koha.net, published on June 5 2012.

of passengers that can be in the plane, the incident can affect the response of the state government and the use of different methods by terrorist to be away from the incident.

Various threats that occur, to include civil aviation, depend on the purpose or desire to attack a particular objective and ability to perform the action (threat). If one of these two factors does not exist, then we can say that this threat is not credible.

Table 1

Action Category	Action Objective	Action Purpose
Plane hijacking for retention	Passenger	It is political action to achieve propaganda and psychological effect.
Plane hijacking for movement	Airplane	Movement of terrorists from an area that they are restricted or prohibited for any reason to exit at another geographical point.
Plane hijacking for destruction	Airplane + Passenger	To inflict direct material damage to an opponent, in combination with political and psychological damage.
Direct action against planes	Airplane + Passenger	Destruction of an aircraft in the air killing people and creating political and psychological consequences.
Direct action against infrastructure	Both airlines and passengers/crew on board are the objectives of this class of attack	Destruction and annihilation of infrastructure by creating political and psychological consequences.
Peripheral categories	Airplane (passenger, crew and infrastructure in the field)	Some

Plane hijacking for retention. Passengers on board an aircraft are the main objects of this category of actions. The goal is to achieve political propaganda and psychological effect (show of force, pressure on state and public structures, attract maximum attention, in accordance with the conditions and requirements). A classic act of terror displayed by seizing a plane with passengers and a demonstrative threat to their lives poses a

political and moral-psychological dilemma practically insoluble to the state, which is facing pressing needs of terrorism and the need to save the lives of hostages that are diametrically opposed tasks. As effective means of pressure, this form of terror gives terrorists ample opportunity to present their demands, since they are in a position to achieve their goals. In November 1991, a group led by Shamil Basajev hijacked an airplane Aeroflot Tupolev-154 at Mineralniye Vody airport in Turkey, and demanded the release of the hostages, the cancellation of the state of emergency that had been imposed by the Russian government in Chechen Autonomous Republic.

Plane hijacking for movement. Airplane as a means of transport is the main objective of this category of actions, with passengers operating as an additional guarantee for terrorists. The aim is to ensure the movement of terrorists from an area that they are restricted or prohibited for any reason to exit to another geographic point. In this category, seven acts of hijacking of passenger airliners was conducted in the USSR in 1990 only to attempt to leave the country because of personal, political, or economic motivation. In some countries, this category of terrorist acts remains a marginal method of migration of individuals or small groups of people with similar ideas.

Plane hijacking for disposal/destruction. By using an aircraft as a weapon to hit selected targets, even though the target could be the passengers on board, providing an extra level of overall damage to the ultimate result of the attack. The goal is to inflict direct material damage to an opponent, in combination with political and psychological damage. This category of actions is directly linked with the parameters of asymmetrical warfare. The first operating precedent was set in December 1994, when gunmen from the Algerian terrorist organization (Armed Islamic Group - GIA), hijacked Air France Airbus A-300 plane with 240 passengers on board in an attempt to slam it

over Paris. There was a rescue operation by a rapid intervention team that helped to avoid fatal consequences. Also, it should be noted the hijackings of four airplanes on Sept. 11, 2001, and using them as missiles against targets in Washington D.C. and New York.

Direct action against planes. Both, airlines and passengers/crew on board are the objectives of this category of attack, whose goal is to destroy a plane in the air and kill people followed by material, political and psychological damage. In practice, terrorists prefer to use improvised explosive devices (IED), rocket-propelled grenades, anti-tank, light weapons, heavy machine guns and sniper rifles.

The development of air traffic has forced the need for regulating issues related to the criminal conviction of actions carried out on the plane. This issue is renewed especially during the last decade; the hijacking of aircraft has become a fairly common phenomenon, which seriously jeopardizes the aircraft, the lives of passengers and crew. Although most national legislation punishes such actions that endanger people and flights, yet a large number of hijackers were never convicted because their motive was almost always political and the country where they are sheltered sees their actions sympathetically.

The legislation that was adopted regarding offenses that made on the plane as a starting point had the principle of territorial jurisdiction. Starting from this, civil aircraft in flight are considered part of the territory of the country whose flag it holds, meaning they are considered as "flying islands". Simultaneously, they can be considered as the territorial part of a country, so even it, the country whose flag the plane bears, can act against delinquents in the same manner as the country that own the ship and the country that harbors the ship can act in case of offenses carried out on commercial ships in their national or international waters.

Tokyo Convention of 1963, regarding the abduction of aircraft provides that all countries shall take all necessary measures that the legitimate captain of the aircraft regain and maintain control in any case where a person through force or threat can undertake any illegal act of kidnapping or exercise control over the aircraft in flight. The country where the plane lands shall allow passengers and crew to continue their journey as soon as possible and return the aircraft to the legitimate owners (Article 11). The last rule shall be observed by all states, including those that are not contracting parties. Tokyo Convention does not impose upon countries the obligation to hand over the hijackers. Hague Convention of 1970, on the prevention of illegal abductions of aircraft and the Montreal Convention on preventing illegal acts directed against the security of civil aircraft of 1971, states that countries should severely punish perpetrators based on their laws or to hand them over to the country that owns the plane.

The first recorded hijacking occurred in May 1930, when Peruvian revolutionaries seized a Pan American mail plane with the intent to use it to drop propaganda leaflets over Lima. Some hijackings were recorded until 1947. Between that year and 1958, 23 hijackings were reported, carried out mainly by eastern Europeans seeking political asylum. The first fatal hijacking in the world took place in July 1947 when three Romanians killed a plane crew member.

Table No. 2 will show statistical data and attempted aircraft hijackings chronologically by years.

Table 2

Year	Airplane hijackings	Airplane hijackings attempts
1970	49	38
1971	38	20
1972	43	36
1973	17	12
1974	13	14
1975	12	11
1976	13	13
1977	18	16

1978	13	13
1979	16	10
1980	29	17
1981	24	14
1982	19	11
1983	21	17
1984	21	7
1985	20	7
1986	5	6
1987	4	6
1988	7	3
1989	8	4
1990	20	12
1991	7	5
1992	6	2
1993	30	7
1994	22	5
1995	9	3
1996	3	12
1997	6	5
1998	11	2
1999	11	2
2000	12	8
2001	7	2
2002	2	8
2003	3	5
2004	1	4
2005	2	0
2006	1	3
2007	4	2
2008	1	6

Preventive measures in illegal interference in civil aviation safety

Tokyo Convention of 1963 (Convention for the actions and other acts committed on board the aircraft), defines as illegal interference with international civil aviation", such acts, whether or not they are offenses, may or may not jeopardize the safety of the aircraft or of persons or property therein, or jeopardizes discipline and order on board". Available in the Security Manual for safeguarding civil aviation against acts of unlawful interference (Doc 8973 - Limited) is a comprehensive definition of unlawful interference. However, from the crew

perspective, three main forms of unlawful interference are: disorderly passenger, hijacking and bomb threat.

The protection of civil aviation against acts of unlawful interference requires constant vigilance and development and implementation of positive actions for preservation by international organizations and state institutions. While there is a clear need to strengthen security (application of measures) at all stages of the process associated with the transportation of persons and their belongings on the plane and cargo. Also, devices should be used for reading the personal identification documents of passengers and flight crew, in order to strengthen the security against fraud with forged passports etc.., and close cooperation between countries to strengthen the security against fraud. All these, undoubtedly, serve the purpose of detection of terrorists in order to prevent acts of unlawful interference.

Among other important measures to protect, civil aviation against acts of unlawful interference is the staff that is involved in the process, but for the staff to be efficient they should be hired through a qualified selection process, well trained and has a clean past (criminal background check).

Implementation of technical measures to prevent acts of unlawful interference in civil aviation requires financial means and personnel training. Developing countries are still facing difficulties in implementing full preventive measures due to insufficient financial , technical and material resources.

Civil Aviation Safety refers to the techniques and methods used in the protection of unlawful interference, including: the protection of passengers, staff and aircraft used, as well as other threats that may come. The large number of people that pass through airports every day presents a potential target for terrorism and other forms of crime due to the number of people located in one particular place.

The staff that deals with the safety of civil aviation airports, especially those trying to prevent any threat or

potentially dangerous situation that can enter or leave the country. If airport personnel will succeed in preventing acts of unlawful interference, in airports and airplanes, then we can say that the safety of civil aviation is at an appropriate level.

The mission of all those working for the safety of civil aviation throughout the world, is above all a humanitarian mission, which aims to enable safe travel of people across the world. Therefore, the Kosovars working for this purpose are part of that group in the world, which enables all citizens of the world to take advantage of the benefits brought by aviation capabilities, to travel faster and safer.

There are a variety of local and international rules that stipulate procedures to safeguard civil aviation against acts of unlawful interference. The system of civil aviation security has several layers or levels (rings) of security. at the external limit of the airport may be a layer. The imposition of measures outside of the buildings inside the airport limits, conducting patrols, guard duty and supervision of aircraft movements and parking places. Setting scanning equipment for scanning passengers and goods, using sophisticated technology. Protection or adding additional security measures for aircraft with high threat.

Fig. 2. - Protection of aircraft from different security levels.

The authorities responsible for aviation security should be more responsible (strict) in the implementation of standards that regulate the field of civil aviation. The case of 9/11 2001, which occurred in the USA, when terrorists hijacked four American

planes and three of them hit buildings and one hit the ground, causing the death of thousands. In 1999, a report by the Department of Transportation Office of Inspector General (OIG) criticized the FAA to restrict unauthorized access to security areas at airports, stating that its investigators were able to penetrate areas that were secured at airports. Meanwhile, in 2000 this agency blamed the agency for issuing identification cards for access to areas of the airport without sufficient control.

In addition, it should be emphasized the recent cases concerning assassination attempts in the form of package bombs (a bomb hidden in the ink cartridge of a printer) shipped from Yemen through Germany to the UK. This issue forced to the present German government to present in Brussels five points, in relation to civil aviation security. Among them German Interior Minister urged that the civil aviation security should follow the European level of security and transport planes coming from unsafe sites should be monitored and better checked. He also urged the creation of a test procedure according to the principle of sieve, check for keywords in transport documentation and control of shipments of suspicious packages, e.g. *"if a Jewish organization orders the delivery of copy machines from Yemen, it is such an unusual thing that raises suspicion and must be checked"[6]*.

Fig.3. – Concealed explosives in printer cartridge.

---

[6] Mr. Thomas de Maiziere, German Defence Minister.

Improved security system in civil aviation, to include procedures relating to the purchase of tickets in order to register and screen the passengers and their cargo, to ensure that individuals do not bring items on the plane that can pose a threat to passenger safety. This also includes enhancing technical standards and safety control, forming security zones around airports, as well as improving conditions for all security services.

In addition, improvement and introduction of protective measures of the airplane, affects the increase of safety in civil aviation. Establishing preventive measures aimed at preventing acts of terror in civil aviation. This will include the creation of databases for potentially dangerous passengers: more stringent procedures during the screening of members of radical political organizations, religious sects, criminal groups, etc., and complete screenings of flight crews and technical personnel employed by airlines.

Coordinating efforts and expansion of cooperation between the civil aviation authorities and the state security services. This includes the establishment of closer ties between the airlines and civil aviation authorities and the armed forces, intelligence and special services, law enforcement, immigration, and customs agencies in combating international terrorism and organized crime.

Improving national and international legal mechanism to counter terrorism in the field of aviation. Conventions and current laws are not sufficient to properly coordinate the actions of countries to combat terrorist threats directed toward civil aviation.

The expansion and deepening the cooperation between relevant professional structures at regional and international levels. This includes providing organizational, financial and technical support for specific countries that are located in danger areas.

Passenger control at Pristina International Airport "Adem Jashari" is performed rapidly thanks to passenger eye contact check method and sophisticated equipment that is used by airport security service for checks.

Passenger eye control is conducted by focusing on the passenger. Who is the passenger? If his past makes him reliable, no special attention is directed to the luggage. If he falls into the category of suspicious passenger, he will be subject to detailed scrutiny. Most people spend about 15 minutes in checking. Not everyone should remove their shoes or make whole body scans. In the control process a 25-second interview is introduced where operators determine why the passenger arrived at the airport, where will he be going and a background check. The purpose of this is to find that sole passenger that can potentially be a terrorist and poses a threat to aviation safety.

Technology used for checkups at airports helps make the selection of who needs to be checked, but the operator must be the one that stops the traveler who possess the illegal items.

Following we will present a story on acts of unlawful interference (bomb attacks) in civil aviation security:
- – 98% of bomb threats are hoax;
- – Less than 2% of the bomb explosions were preceded by a threat warning, and
- – The country's culture affects the type of attacker.

The question arises, who makes problems to the civil aviation security?
- – Real attacker, trying to give legal warning;
- – potential deceivers;
- – "nuisance" callers who want to hamper operations;
- – Delayed passengers, and
- – People with mental problems.

How is this done?
- – In written (paper / electronic);
- – Personally, and
- – Verbally, usually by telephone, most commonly.

Review and thorough analysis of acts of unlawful interference is done as soon as possible after each threat or attack, the appropriate authority should perform analysis and a summary of all what happened. Depending on the nature and severity of the action, written reports from participants may be required. In any case, all those involved should report according to their responsibilities, problems and successes, relationships with others, including the effectiveness of communication and observations on the need for the amendment or revision of plans for the implementation of measures to unlawful interference in civil aviation.

Conclusions

Referring to the data in this paper it appears that airlines, airports and airplanes are the main targets for intervention in civil aviation security worldwide. Therefore, to stop illegal interference in aviation scanners must be installed at airports and have well trained staff regarding passenger control and identification of suspicious items. Installing new scanners at airports that check the body that can see through the clothes of the passenger cannot be too sophisticated. It is the issue of respecting passenger's privacy. Of course, it is always a problem whether or not to use technological equipment to see the body, as if the passenger is stripped. This would constitute violation of privacy.

Role of civil aviation in the security sector of the Republic of Kosovo is a vital one. Kosovo institutions entrusted the Ministry of Internal Affairs with the responsibility of civil aviation security, since this area is sensitive. The field of civil

aviation security is new to the Ministry of Internal Affairs, but must emphasize that have succeeded in establishing and maintaining the level of safety in civil aviation in Kosovo and the region, since this not only that affects the country of Kosovo but also the entire region.

Statistics show that 80 percent of air accidents occur directly after launch or shortly before landing and often are considered to have occurred due to human error.

National Commission on Civil Aviation Security, which is headed by the Minister of Internal Affairs, determines the extent of the threat to civil aviation against from acts of unlawful interference in the Republic of Kosovo. This committee ensures coordination, communication and cooperation between the competent authorities of the Republic of Kosovo in order to implement effective measures, actions and best practices for preventive and effective actions in emergencies.

Given the problems in the short term timeframe with the International Civil Aviation Organization (ICAO), Kosovo has initiated bilateral agreements with neighboring countries and the region since this was the only way possible to avoid the legal procedures of ICAO. This process can continue until clarification of the status issue with ICAO and then Kosovo can record and publish new corridors through ICAO.

Traditional threats and risks in the civil aviation industry are abductions of aircrafts, aircraft sabotage, airport sabotage, terrorist attacks on airports and airport parts, as well as acts of unlawful interference in aviation.

Cyber-attacks on civil aviation are a relatively small issue, but this is changing day by day, even though the adoption of new technology is an ongoing activity in civil aviation, the actual pace and scope of new information technologies has increased significantly the risk of cyber-attacks.

The manner of securing the plane from the terrorists and preventing them to carry out any acts, without having to board the plane will henceforth be a challenge. This can be done by taking the pilots' family hostage by terrorists, who pilot the plane from the ground (the pilot takes orders from the terrorist on the ground)

BIBLIOGRAPHY:

Primary sources:
Stavri Vesho, Transporti Ajror, Tiranë 2011.
Bruce Hoffman, Terrorism. The Insight (Moscow: 2003).
Ariel Merari, "Attaks on Civil Aviation: Trends and Lessons", lecture at White House Commision - George Washington University.
Internacional Air Transport Assosiation (IATA), Geneva, Switzerland, p.9, 2012.

Legislation in the field of civil aviation security:
Low No. 03/L-51 on Civil Aviation.
Regulation (KE) Nr 2320/2002 establishing common rules in the field of civil aviation security.
Paris Convention of 1919.
Warsaw Convention of 1929.
Chicago Convention of 1944.
ICAO Annexes.
Resolution of the UN General Assembly (Nr. 1962 year 1963).
Military Technical Agreement between NATO and Serbia, in June 1999.

Institutions that deal with aviation:
Ministry of Internal Affairs (MIA)
International Civil Aviation Organization (ICAO)
International Air Transport Association (IATA)

Transport Security and Administration

Electronic addresses:
http://www.icao.org/
http://www.voal-online.ch
www.koha.net, published on June 2015
http://www.dw.de/de-maiziere-calls-for-more-international-coordination-on-air-freight-security/a-6181398.