THE SECURITY CHECKS IN AIRPORTS AND THE FUNCTION OF MODERN INFORMATION SYSTEMS IN THE PROCESS

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The aim of this paper is to describe the problems of security controls applied to passengers in airports. The article describes the disadvantages of the current concept, its limits and possible future trends in the implementation of these activities using modern information technology and knowledge from psychology or sociology. These ways consist of profiling passengers by preliminary assessment and different rate of performing security controls with respecting riskiness of passengers.

K e y w o r d s: airport security, behaviour analysis, risk assessment

1 INTRODUCTION

An essential part of tourism services represent not only accommodation, catering and visitor attraction, but also transport services which enable the implementation of tourism. With increasing standard of living of the population and the continuing political and economic globalization the demand is increasing for more exotic and remote destinations and thus for air transport. Each year air carriers transport around three billion passengers - customers.

Ensuring fulfilment of current standards in the process of checking in passengers, especially the phase of security controls disproportionately increases the time spent by passengers at the airport, which negatively affects their comfort. At the same time related procedures often go to the edge of ethics and human dignity and adversely affect the psyche of individuals. Those passengers lose the feelings of the customer and find themselves on the side of potential criminals. It brings with it, despite all the efforts of the operating personnel, psychological consequences: negative public opinion to air transport.

The current methods of protection against unlawful acts have approached its limits during the four decades of its development. Therefore, it is necessary to adopt measures that will be able to meet current and planned future needs of an acceptable level of security and efficiency in the sustainable development of commercial air transport and the flow of passengers at the airport.

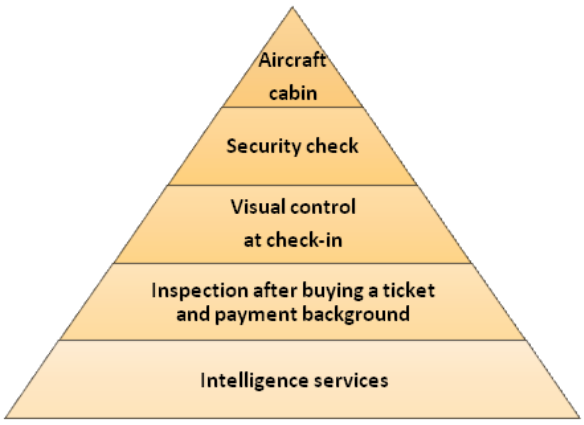

Fig. 1: Pyramid of the security system

According to the Pyramid of the security system (Fig. 1), it is clear that the focus of risk assessment should concentrate on operations prior to security check. A necessary prerequisite for the implementation of such activities is the creating an information system integrated with the check-in systems, security systems, search systems, etc.

Such preliminary assessment system should be able, on the basis of all available data, analyze the person of the passenger, the social and economic ties and behavior at the airport. The system then shall determine the potential risk of the passenger (Fig. 2).

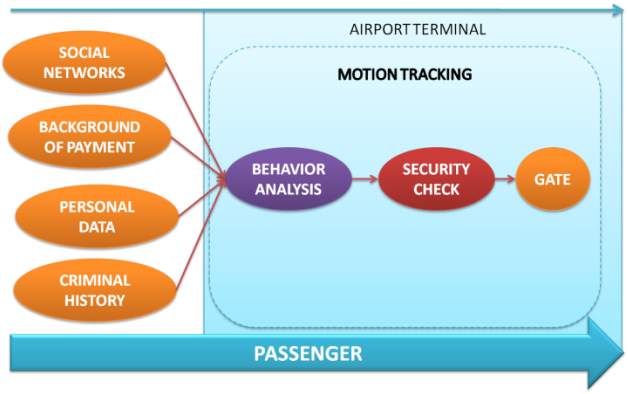

Fig. 2: Risk management of air passenger

2 ASSESSMENTS OF SECURITY THREATS AND BACKGROUNDS PAYMENTS

Searching and monitoring of security threats and situational analysis is one of the major aides in the struggle against terrorism and organized crime in the aviation and elsewhere of human life for a number of years. Risk assessment is carried out invisibly and continuously. All actors involved in the protection against unlawful acts are also involved in this field, e.g. airlines, airport operators and air traffic service providers.

What is needed is effective sharing of sensitive passenger data for proper risk assessment. The first systems were in the late 90s in the United States of America CAPPS (Computer Assisted Passenger Prescreening System) based on the Passenger Name Record, the PNR. The system was managed by the FBI and the Federal Aviation Administration (FAA), and in

practice meant a thorough check in baggage of risky passengers. It also proved to be his greatest weakness. Before the attacks of September 11, 2001 CAPPS correctly assessed the available data at increased risk of attackers and were thoroughly checked luggage. However, the fact that these terrorists used weapons hidden at their bodies, were not revealed. Based on these facts, the upgraded system CAPPS II was adopted, which in addition to data on passengers, obtained by buying a ticket, utilized data stored in national and private databases for evaluation, such as social ties to organized groups and movements, financing, bank accounts, criminal history, and more. This system was soon (2004) stopped because of ombudsmen and replaced by another system called Secure Flight, which puts emphasis the voluntary disclosure of certain information to the air carrier. The trend therefore is to let the passenger voluntarily provide personal information in exchange for easier and smoother security checks.

3 TRACKING THE MOVEMENT OF PEOPLE AT THE AIRPORT

At a time when the passenger arrives at the airport, comes the next layer security system. As an act of terrorism in January 2011 at Moscow's Domodedovo airport has pointed out, there is no risk of attacks only on board the aircraft or in so called security restricted area of the airport SRA, but also in publicly accessible areas of the terminals. For this reason, a security check on persons at the airport does not guarantee the security of air transport. And because the terminal may occur unidentified persons without a ticket, pre-evaluation processes of passengers are not enough.

A number of systems come monitoring the movement of people in the crowd. Their mission is based on predefined patterns to differentiate abnormal behavior of individuals or groups. They use a system of cameras located to cover a substantial part of the footage space or places at risk the terminal. The resulting anomalies (abnormal movement or gestures, running, forgotten objects, etc.) in real time inform airport security staff. Applying a part of this non-invasive security system is so called stand-off detection, i.e., detection of dangerous substances and objects where the examined person is not in close proximity or inside the detector. It uses the millimetre wave technology or quadrupole resonance and is able to detect prohibited or potentially hazardous material at a distance of 30-100 m

4 BEHAVIOR ANALYSES

However, as mentioned above, too much attention to the detection and seizure of scissors manicure leads to excessive repression low-risk passengers. It should also be noted that a man with fighting methods can seriously injure or even kill another person brutally, and in much less time than passengers with nail file, which does not control such skills. For this reason, the trend is "looking for bad people and not just bad things," or search for real threats, which are people with bad intentions rather than people with a bottle of tea or a pocket knife.

5 CONCLUSIONS

Air transport is an essential part of tourism, together with increasing living standards. Although it belongs to the very top technical and technological, security procedures in handling passengers perform by outdated and the well known scenarios for decades. It brings potentially reduced level of security and unduly strict procedures disrupt positive perception of aviation as a modern and friendly mode of transport. Bodies working in air transport sector are aware of the negative and therefore come with the trend of the preliminary assessment of passengers. This includes differentiation in implementation of security controls. The first step is the evaluation of the intelligence services, i.e. social relations, criminal history, payment background or voluntarily provided data. The next step is then, after arriving at the airport, the tracking system and evaluation of individual deviations from normal. Most recently, an analysis of passenger behavior takes place directly before performing security controls through interdisciplinary knowledge of sociology and psychology.

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