

INTERNATIONAL EXPERIENCE OF CUSTOMS CONTROL OF PASSENGERS CROSSING THE CUSTOMS BORDER AT AIR BORDER CHECKPOINT

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АННОТАЦИЯ

В данной статье описан круг проблем, связанных с организацией таможенного контроля и развитием таможенной системы Республики Узбекистан, международный опыт и анализ таможенного контроля в аэропорту на современном этапе и пути совершенствования таможенного контроля и его технических средств.

Ключевые слова: международный аэропорт, цифровая таможня, предварительная информация, предварительная идентификация, система распознавания лица, распознавание радужной оболочки глаза.

ANNOTATION

This article describes the range of problems related to the organization of customs control and the development of the customs system of the Republic of Uzbekistan, international experience and analysis of customs control at the airport at the current stage and ways to improve customs control and its technical means.

Keywords: international airport, digital customs, preliminary information, preliminary identification, face recognition system, iris recognition system.

INTRODUCTION

An international airport is an airport open to the arrival and departure of aircraft engaged in international air transport and where border, customs, sanitary and quarantine, security and other controls, provided for by current legislation, are carried out; in addition, airports are important transport hubs, "outposts" of internal and external communications.

Air (aviation) transport is a type of transport that transports passengers, baggage, goods and postal items by air, while providing

- 1) High transport speed;
- 2) The ability to deliver goods to remote and inaccessible regions; 3) minimal risks of damage to the consignment during transport.

In this context, the issue of finding ways of increasing the speed of customs operations at air border checkpoint becomes relevant.

The role of customs control in the system of customs administration is determined by the complex of measures that are carried out by customs authorities to ensure compliance with customs legislation. In turn, the complex of measures implemented by customs authorities means the forms, methods and techniques of customs control, which together form the content of customs control.

The introduction of new progressive technologies of customs administration, the optimisation of customs procedures, the increase of their transparency, as well as the development of customs infrastructure and its technical equipment, the increase of the crossing capacity of border customs posts of the Republic of Uzbekistan contribute to the creation of favourable conditions and improve the quality of customs services to people crossing the customs border, as well as increase tourism.

Since 2022, a new phase of modernisation of the customs system, in particular at Uzbekistan's international airports, has started, which mainly covers the development of customs infrastructure: construction, modernisation, use of new technical means of customs control, as well as development and introduction of a completely new concept involving "control without a customs officer".

On 17th February of this year, the President Shavkat Mirziyoyev held a video conference call on further reforming the customs system and making it a corruption-free industry. The meeting noted that the customs system is an important link between our country and the global economy.

Special attention was also paid to the digitalisation of customs procedures and the State Customs Committee, the Ministry of Information Technology and Communications Development and the Ministry of Finance were tasked to digitalise customs services by 70% in 2022 and 100% in 2023. It is important that the widespread introduction of the "Digital Customs" principle into the customs sphere serves to save time and money for participants of foreign economic activities, individuals and legal entities crossing the customs border of the Republic of Uzbekistan. With the large-scale introduction of such customs information systems and electronic services as "Risk Management" and "Single Window", the time spent on customs control and clearance is reduced.

The first step in the development of the customs system at airports in order to ensure compliance of customs clearance conditions for citizens with generally accepted international standards, simplify customs formalities, apply effective control methods, and create the most favourable conditions for the development of tourism is the Decree of the President of the Republic of Uzbekistan dated 7 February 2017 No. UP-4947 "On the Strategy for the Further Development of the Republic of Uzbekistan", and in implementation of which The Cabinet of Ministers adopted Decree No. 814 of 11.10.2017, which approved the Regulation on the application of the dual corridor system at the customs border crossing points of the Republic of Uzbekistan. Thus, according to this Decree, since 1 January 2018 the system has been implemented in international airports of Uzbekistan, which implies the possibility of selecting the "green" or "red" corridor for customs operations as a form of declaring goods for non-commercial purposes by an individual travelling through the customs border. To date, more than 95 per cent of all travellers use the green corridor. It is used by people who do not carry large sums of money, antiques, expensive jewellery, weapons and other prohibited goods. The green corridor is used by people who do not fill out any customs declarations. In this way, it increases the capacity of airports open to international traffic.

It is worth noting that the number of tourists coming to Uzbekistan is increasing every year: in 2005 the number of tourists visiting Uzbekistan was 240 thousand from 117 countries, and in 2017 more than 2.5 million tourists visited Uzbekistan, in 2019 more than 7 million. As we can

see, this figure is growing every year, which means that the number of passengers is also increasing.

SITA, a leading developer of information technology for civil aviation, predicts that passengers' numbers will reach 7.6 billion by 2036.

The increase in air travel is leading to ever-increasing security threats and increasingly unhappy passengers with queues and strict controls. So in order to understand passengers' expectations, it is necessary to find out who the modern passengers is and draw up a portrait of him or her. The modern passengers is a person, who makes purchases online in one click, who do not takes out wallet in the shop, but prefers to use self-service terminals, if it is possible, instead of talking to shop staff. This is a person, who carries their time, prefers to resolve issues remotely and does not travel unnecessarily if circumstances permit. So the passengers, spoiled by modern services, expect the same level of service at the airport. They want to check in at the touch of a button on his smartphone, to get through all pre-flight and post-flight formalities as quickly and comfortably as possible without having to use any paperwork. In addition, they want to be able to calculate precisely the time he will spend at the airport before departure and not arrive too far in advance. At the same time, the passengers like to shop in the 'clean' area and want to have this opportunity and time.

All of the above problems could be solved by introducing technologies based on facial recognition and biometric data collection at the airport. The use of these technologies would help to form a passengers "portrait" and the airport to simplify pre-flight formalities and be able to offer the passengers personalised services, customs services. Here an important element for further development of methods, means, procedures and mechanisms of performance of customs operations is definition and systematization of factors influencing the performance of customs authorities at air checkpoints. The improvement of technological bases of performing customs operations includes the development of methods, means and procedures of performing customs operations at the stages:

(a) advance information about arriving passengers and their cargo; b) actual control.

The improvement of the organizational and technical basis for customs operations involves the development of principles of organization, optimization of the structure and mechanisms of interaction between passengers and customs authorities moving by air transport.

Thus, a number of initiatives to improve the passengers screening process, such as OneID, FastTravel, Smart Security and Automated Border Control, aim to develop a streamlined, seamless, passengers-friendliness-oriented screening process that allows for identity confirmation at each stage of the screening process while maintaining the privacy of personal information. Such a model will ensure the implementation of a tailored passengers' experience, save money in the long run and be beneficial in terms of security and additional cash flow.

The exchange of passengers' data is a key element in achieving this objective. This is information about an individual in electronic form - Advance Passengers Information (API), or about their bookings - Passengers Registration Record (PNR), which is used by government authorities for border control purposes.

API data components:

- Code of the carrier (airline) actually performing the transportation by air;
- flight number;
- The date and time of departure of the flight (according to the time of the country of departure);

- The time of departure of the aircraft;
- The date and time of arrival of the flight (according to the time of the country of arrival);
- The arrival time of the aircraft; •point of departure;
- The passenger's travel route (including history of route changes); • destination;
- The unique number of the transport document (ticket);
- The country and organisation that issued the transport document (ticket) ; •the category of the document of carriage (ticket) ;
- The period of validity of the transport document (ticket); • name and surname;
- Nationality; • date of birth; •floor;
- Passengers seat number;
- Passengers status (passengers, crew member); • the weight of the luggage;
- The number of baggage pieces; • the number of the luggage tag;
- The total number of passengers on the flight; •residence;
- The intended place of residence in the country of residence; • email address;
- Phone number; •booking date;
- City, issuing a transport document (ticket);
- The date of issue/purchase of the transport document (ticket); • boarding number;
- The category of the document of carriage (ticket);
- The details and code of the agency/carrier that issued the document of carriage (ticket);
- The name and/or code of the booking class.

The building blocks of PNR data: • PNR data relating to the name;

- PNR locator;
- The date on which the PNR was created; • address information (provided by the passengers);
- Information about the travel agent;
- The "originally intended" date of travel; • the date of the late booking for the flight; • the entire route of the PNR trip;
- All information in the fields on the ticket; •all forms of payment;
- The details of the person/agency making the payment; • the identifier of the registration agent;
- Registration time; •registration status;
- Seats requested in advance;
- Actual seats only after the flight has closed (available upon completion of check-in).

API data is accumulated as a result of passengers check-in and includes all passport or ID data required to identify the passengers or crew member as well as general flight information. PNR data is the result of a record of information about each flight booked by passengers that is maintained and used by airlines for operational purposes. Such information enables all actors in the aviation sector (including travel agents, air carriers and passengers handling companies) to identify each passengers and gain access to departure and arrival details, means of communication and special assistance provided on board the aircraft. In addition to passengers' identification, PNR data can be used to assess the risk of passengers for whom API data is not available. They are more important in identifying suspicious trends, connections and travel patterns.

Advance passengers information (API) is biographical information, i.e. information about an individual such as full name, date of birth and nationality. API data can be made available electronically to government authorities in destination, origin or transit countries and allows these countries to determine who is arriving or departing from their territory. The API feature of pre-identification can be not only useful for immigration and customs authorities but also for aviation security services in detecting risks of illicit trafficking before departure. The API data can be transmitted as a single document containing information on all passengers on a flight or separately for each passengers during check-in and boarding passes.

A standard API file or "API packet" is the easiest form of data to implement: the carrier sends a list of passengers of the relevant flight with information about each of them (or a separate list of crew members). All passengers' information is sent in a single document, or "package". As the data is often made available after boarding, the possibility of government intervention is limited to the time of arrival. Thus, the API packet is primarily intended for the control of arriving passengers by the country of destination or transit, data validation is limited to the batch process and real-time changes cannot be requested.

Instead of the standard 'API package', many states use an interactive API as a preferred method of obtaining passengers data. Under this system, airlines provide real-time biographical data to government agencies as passengers check in. This data is then analysed to determine whether there is a reason to prevent the passengers from entering, leaving or boarding the current country. Based on this analysis, the government authorities also send a real-time response of "boarding" or "no boarding".

While the online API system is more complex and costly for governments and airlines alike, it has direct benefits for both. For example, the latter benefit from the programme by reducing the number of unauthorised travellers who need to be sent back at the expense of the airlines. PNR data generally contains information on passengers and their travel plans accumulated and stored in airline reservation systems. They are accumulated for commercial purposes. Consequently, the amount and nature of information in an individual PNR record may vary considerably between passengers and airlines. Booking systems are changing and more and more people are choosing online booking over travel agent services. The PNR record may contain a small amount of information such as name, itinerary, contact details and a sales reference. The name may not correspond to that on the passport as validity is not always required for a booking. Sometimes, however, PNR data contains a lot of information relating to a wide range of special services provided to the passengers, credit card details, contacts and so on. In today's environment, carriers are often restricted in the content of passengers reservation data provided to requesting authorities. Certain information is considered particularly sensitive and must not be disclosed according to the legislation of many countries.

In addition, the World Customs Organization considers the use of advance information, which forms the basis of the World Customs Organization's SAFE Framework of Standards and the risk management system in the customs control process, as an indicator of a high level of customs development.

Digital technology is rapidly bringing travel closer to the day when a face, iris or fingerprint will be the key to a comfortable journey.

Facial recognition is a technology that can identify or confirm a person from a digital image or video frame. The image captured by the cameras is processed using facial recognition software. A similarity is then established with the images from the archive of potential at-risk passengers who should be controlled or not allowed to enter the country.

Iris recognition is an automated biometric identification method that uses a mathematical technique to recognise the structure of a video frame of one or both eyes of a person whose complex pattern is unique, stable and can be recognised from a certain distance. This method is the most reliable form of biometric identification, making the previously lengthy process for travellers convenient, quicker and more reliable.

Biometric identification takes place as passengers' move along the corridor and does not require human intervention. When the system detects a passengers whose face matches that of the control object, a signal is sent to the customs inspector to carry out control of the passengers. Facial recognition tools, in particular, are effective in stopping attempts to use false documents, as the suspect's facial features remain virtually unchanged. In a broader sense, Customs acts as a 'second barrier' to national immigration control to better protect the country's security.

Passengers arriving at international airports in Australia have the option of going through passport control themselves, without airport staff, using the automated SmartGate system. It is simple enough: it uses biometric passport data and facial recognition technology to perform customs and immigration checks that would normally be carried out by border control officers. When the scanner reads the biometric information, the software synchronises with the token data and confirms or denies the passengers' passport and travel document data. Once the synchronisation procedure is completed, the passengers are issued luggage tags and the turnstile is opened for inspection.

Once passengers has checked his or her luggage, a special device reads the luggage tag and replenishes the passenger's online single token for later reconciliation during travel, making it easier to find luggage on transfer flights. This includes baggage retrieval, recognition and loading/unloading systems that speed up the process of baggage loading on board the aircraft and dispensing at destination.

Smart Path technology captures passengers' biometric data with a facial check at the airport entrance. Once checked, a single secure token is created on the passengers' travel documents. Then at every step of the way - regardless of whether the passengers is checking baggage, going through border control or boarding - the facial scan removes the need to display a passport or boarding pass.

The passengers then proceed to the waiting room and waits to board the flight. The entire check-in procedure takes 15 minutes.

An example of an attempt to implement Smart Path technology is Dubai Airport, where passengers' baggage handling is based on blockchain technology. According to the airport administration, the use of this technology will improve service quality and reduce the time passengers spend in the baggage claim area.

Brazil and the UAE are shining examples of effective passengers' data sharing and biometric identification.

The Brazilian Federal Revenue Board (RFB) undertook the development of a risk assessment system supporting Passengers Advance Information (API) and Passengers Registration Record

(PNR) systems, and a facial recognition system was acquired. The implementation of new analytical passengers monitoring tools in 2015 was a real revolution, especially in terms of detecting passengers under suspicion of drug smuggling according to the risk area. The number of drug seizures increased by 360 per cent between 2014 and 2016, a record high in the history of Customs. Also the most common offences and crimes included movement of undeclared cash, illegal acquisition of cultural property and smuggling of weapons.

After studying some of the internal characteristics of the API during the first two years of application, RFB has developed entirely new software for analysing API data. Using a range of algorithms, it can analyse received API notifications, identify and create a unique archive of passengers. This functionality allows the system to automatically correct API data containing errors such as incorrect passport numbers and blank data, as well as other problems that could lead to erroneous conclusions.

In 2016, Brazilian Customs installed two high-resolution cameras in the green corridor areas of fourteen international airports. The APN/PNR risk assessment system allows customs inspectors to easily identify objects of control without impeding the general flow of passengers. Information gathering and risk assessment systems allow border customs control agencies to identify airline passengers on watch lists and suspicious passengers, which also contributes to the fight against terrorism. A specific list of nationals associated with a potential threat has been created to manage security risks. The Federal Police Department and the Brazilian Intelligence Service are responsible for the data on the list. If the system detects suspicious passengers, the Federal Police identify the suspect and only then take appropriate action.

Supporting travel without delays, in January 2018, Dubai Airport introduced 100 biometric gates with facial and iris recognition technology. The biometric interactive booths contain a recognition device that can be embedded in many technical facilities. In the case of Dubai Airport, it has been implemented in the "Eyen" smart gate system. They can identify passengers in one or two seconds. It scans passengers' faces from a relatively short distance, reading their retinas and expressive features as they go.

Importantly, when introducing these technologies, it is also important to consider the amount of information that technology requires to be processed in large quantities and without interruption. Thus, the use of blockchain systems is necessary to achieve this goal. Blockchain technology eliminates the need for centralised processing and storage of airline passengers' personal data. Based on the cryptosystem, the computer science of the blockchain ensures that data is kept confidential and that no information can be leaked or misused. Blockchain also ensures

- Recording of events, including for a previous period, for the purpose of risk assessment (trust building);
- Reporting on events within the airport;
- Increasing the security and reliability of passengers data;
- Track and manage events during your journey.

With this technology, there would be no need to have staff responsible for checking documents and controlling passengers identification. All these functions will be replaced by a distributed database that cannot be destroyed or hacked.

Thus, the relevance of improving the system of pre-information as well as the implementation of translation customs control in the Republic of Uzbekistan is related to the increase in passengers traffic at airports, the increased volume of crime, the need to ensure effective border and customs control at airports as well as the active development of pre-information system under the growing threat of international terrorism.

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