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Modern tendencies of development of systems of self-service of passengers at airports

The article defines the main directions for introduction of the through-system of self-service of air passengers, in particular, the maximum attention is focused on the analysis of such technological processes of the above-mentioned system as self-service of passengers at the stages of registration for the flight and registration and delivery of baggage. Also analyzed the main problems facing the total transfer of air carriers to this system

One of the main challenges faced by global civil aviation is the provision of passenger air transport with a high level of quality, efficiency and safety. For modern air travelers, the issue of creating and implementing progressive logistics systems for passenger transportation by land transport from the city to the airport raises the issue of new and more efficient technological processes to accelerate and simplify the passage of formal procedures at airport terminals, both before boarding a flight and its completion.

In this context, an important problem remains the need to reduce the time of service of air passengers. According to estimates by economists for most of the major international airports, this time is approximately 3-3.5 hours, of which 1.5-1.8 hours occupy operations performed at the airport, including about 1.25 hours takes the process of servicing passengers before the flight, 0.4-0.6 hours - after the flight.

The time spent transporting passengers from city to airport is significant and in many cases is up to 50% of total service time. As a rule, the airport is 20-40 km from the major cities (to the airport Boryspil (from Kiev) - 20 km, Schiphol (from Amsterdam) - 17 km, Fiumicino (from Rome) - 30 km). Reducing the time for delivery of passengers from city to airport and vice versa may be due to improved airport transport connections.

Reducing the time of direct service of passengers at the airport may be due to optimization of technological processes of passenger service and the maximum implementation of automation and mechanization of technological processes.

World trends in the development of the passenger service industry at airports determine the rapid growth of the "do it yourself" approach, that is, self-service. A significant part of the powerful international airports in North America, Europe and the Asia-Pacific region today are implementing a large-scale practice of self-service of passengers at the stages of check-in and, in part, check-in and baggage.

As you know, the technology of using Common Use Self Services (CUSS) kiosks appeared in 1998 thanks to the efforts of several airline members of the

International Air Transport Association - British Airways, Lugthansa, SAS and Swissair. Already since 2005, the automation of accelerated service began to be distributed massively at many airports in the world. Today, more than half of all carriers switched over to electronic tickets and are actively introducing CUSS technology.

It is worthwhile to emphasize immediately that using self-registration kiosks can be exclusively the category of e-ticket holders. By following the instructions of the instruction is simple enough interface, it is worth choosing the desired language, and then go to the identification of personal data. The automaton inserts any credit card or participant's incentive card bonus card for frequent flyers (German Lufthansa, UK British Airways).

The next step is to enter the surname, name, ticket number and reservation code in the appropriate fields on the screen, and then you only have to choose the most convenient place on the plan of the cabin, receive confirmation of registration and print the boarding pass.

In the case where the passenger has only hand luggage, the registration procedure is really simple and takes about 1.5-2 minutes, it is considered complete, and it is possible to go to the customs control zone. An air passenger with suitcases, having received a boarding pass, must follow the Fast Bag Drop racks, whose numbers are displayed on kiosk screens. In some airports, self-service kiosks are equipped with built-in conveyors, and after the registration they issue a baggage tag, which, of course, simplifies the procedure for making luggage. The problem may arise at the stage of an independent fastening of the baggage tag to the suitcase, which is explained by the lack of experience in carrying out such operations on ordinary citizens, as a result of which luggage can be rejected in an automatic conveyor system of the airport.

It is obvious that there is a significant complication of the passenger self-registration technology in the presence of a suitcase, despite the introduction of systems with a maximum level of automation of technological processes to shorten the time of baggage registration:

1. Entering backup information. The passenger approaches the rack of the system and enters the reservation information: surname and reservation number. After that, the system finds a passenger on the list and invites him to luggage. Following the instructions on the screen, the passenger places the luggage on the weighing conveyor. After checking the weight, the luggage tag is printed.

2. Labeling and delivery of luggage. Following the instructions on the screen, the passenger stamps the baggage tag and confirms his willingness to surrender. The system includes a weight conveyor and transmits luggage for inspection in the tunnel. The tunnel features luggage tag scanners and luggage dimensions scanner. The system checks the dimensions of the luggage, the presence of tags on it and accepts luggage for transportation - transports to the baggage handling system.

3. Print a boarding pass. Upon completion of the delivery of all items of baggage, the system prints a boarding pass for the passenger and invites him to go for landing in an aircraft.

However, now the management of many airports notes that the time of registration and maintenance with self-passage by passengers of these procedures is reduced more than twice. Accordingly, there is a shortage of highly skilled personnel, reduced requirements for large areas at airports for servicing passengers, reduced cleaning costs and maintenance of large registration rooms.

Despite the apparent promise of introducing a through-the-air self-service system for air passengers, it is worth noting that there are certain problems that, according to the authors, today prevent the total transfer of airline and airline companies to the use of the aforementioned system.

Here are some of the problematic issues:

- significant complication of the design of the technological equipment of the automated conveyor system for the registration and processing of passenger luggage by connecting additional conveyor subsystems of self-service, which can lead to a decrease in the overall level of reliability;
- the probable increase in the number of rejected luggage units when it is registered due to mistakes of passengers when carrying out independent luggage tag attachment;
- complexity in the process of self-registration of passengers of certain categories that are not adapted to the use of smartphones, computer systems of registration, modern electronic terminals (elderly persons, persons with certain religious views, persons with specific biases regarding the use of electronic devices, etc.);
- the emergence of social problems that are related to the apparent reduction of a significant number of aviation personnel.

Conclusions

Given the active introduction of the operation of airports and airlines of automated systems based on modern engineering solutions and information technologies, the growth of the general intellectual level and the level of computer literacy of potential air passengers, it can be confident that the further development of the self-service system is irreversible in the face of solving certain problems of a technical, psychological and social nature.

Today, more and more airports are moving into the management of information systems and introduces processes of self-service, which will eventually lead to a reduction in airline costs, reduce the cost of transportation and reduce the time of passengers' stay at the airport.