Integrated information system for passengers and staff on transport terminal

The Integrated Information System for Passengers (IISP) is designed to deliver visual and audio announcements to passengers and transport terminal staff about events occurring in the facility, such as: the start and finish of check-in, the arrival and departure of flights, baggage claim, schedule changes, services offered, emergency situations, etc.

Why IISP?

Today IISP is a comprehensive solution for the automatic dissemination of information to passengers and employees at airports, railway and bus stations, which is unmatched in Russia and CIS countries.

Benefits of implementation

- Organization of a modern system for sharing information with passengers and staff
- Increased control in handling passenger traffic, including foreign travelers
- Reduced labor costs to broadcast audio and visual messages
- Less time required to find up-to-date information on situations in different zones of the transportation facility
- Formation of a unified information control platform

Benefits and functions of IISP

BENEFITS

Multilingual announcements. The system provides the ability to disseminate audio and visual information in different languages.

Flexible setup. Advanced configuration tools allow you to control the color, language, ticker, output video and slides on a schedule.

Integration with different types of boards. Management of boards from different manufacturers and different directional properties from a single system.

Parallel broadcast of different audio announcements in different zones. Messages are only heard in locations where they are needed. Parallel broadcast of up to 16 audio announcements.

Localization in foreign languages. Staff workstations are automatically organized in their native language.

Reliability. IISP operates 24/7. The system's core and peripherals run unattended around the clock.

Data reporting. The collection of data on system events, operator activities, system failures, and equipment malfunctions provides effective performance monitoring of the system and personnel.

Multitasking. Implementation of a software control interface for a Public Address sound verification system allows it to be used in fire alarm systems and audio information systems.

FUNCTIONS

- Obtain real-time information from the terminal database or from operators
- Automatic generation of audio and visual announcements in accordance with the specified formats and requirements of carriers
- Planning and optimization of announcement schedules and auto-routing. Control over the flow of announcements depending on the volume of events
- Monitoring and archiving of announcements. Monitoring of equipment and logging of information output processes
- Customization of the appearance and content of the information displayed on workstations, based on the roles of the operators (announcers, gate agents, baggage claim agents, VIP lounge agents, controllers, etc.)

Visual information alerts for passengers

The visual display system combines elements of a fully automated information display and the work of the operator.

Information is sent to display boards using a basic software suite and drivers, which allows information processing to be tailored to individual settings for each board.

The system allows the integration of different types of display boards (dot-matrix, plasma, flip-disc) from different manufacturers.

The operator can change the appearance and content of the information displayed on each board from his/her workstation.

Audio information alerts for passengers

The audio information system combines elements of a fully automated alert and the work of the announcer/information agent.

The audio message generator "stitches" together pre-recorded audio fragments about the status of flights and puts them in a queue, thereby providing information announcements to specific zones for a set number of repetitions. The audio service can be flexibly configured according to customer requirements.

The audio driver, controlling the audio stations, disseminates prioritized messages to the desired transport terminal at the needed time, in the required time zone. Up to 16 messages can be displayed at the same time.

The announcer/information agent controls the dissemination of audio messages from his/her workstation. If necessary, an additional message can be recorded and placed in a play queue.

Structure of the help system

The help system is primarily based on the information portal. To access the information portal, help desk operators use automated workstations while passengers or Internet users use information terminals installed in various parts of the city and in the transport terminal. Depending on the request, the portal receives real-time information about a transportation facility from the IISP database or from the Internet.

The IISP administrator can attach various documents (diagrams, text documents, spreadsheets) to the portal in order to provide additional information.

INFORMATION TERMINALS ALLOW:

- Flight schedules to be checked for selected destinations and specific dates
- Verification of travel time, number of transfers, ticket prices, etc.
- Helpful information to be obtained about the terminal and city services (including a map of the city, addresses, phone numbers of hotels, etc.)

Management and monitoring of IISP

A complex control and monitoring system has been developed, which allows information to be collected about the status of various components, such as the operating base of a transport terminal, information display panels, public address systems, and security systems, including unauthorized access and the registration of operators.

The status may be displayed on-screen or in the form of voice messages. Recommendations for personnel actions are displayed in parallel on the automated workstation screen (AWS).

THE ADMINISTRATOR'S AWS ALLOWS:

- Management of end devices (for example, run visual tests on information boards, disable equipment during repair, etc.)
- Monitoring of the performance of all components
- Generation of reports on the messages produced, active operators, and system failures or equipment malfunctions.

System scaling

Through phased expansion, IISP is capable of maintaining at least:

- 256 of each type of information board
- 32 audio systems
- 16 channels of simultaneous independent broadcasting for each audio system
- 256 technical zones for simultaneous independent transmission
- 256 user workstations for simultaneous operation
- 16 administrator workstations for simultaneous operation
- 256 check-in counters in each terminal
- 256 gates in each terminal
- 32 baggage claim carousels in each terminal
- names of 5,000 stations, airports and cities in each language
- names of 1,000 shipping companies in each language

The system currently serves more than 80% of air passengers and 30% of the railway passengers in Russia.

Completed Projects

DOMODEDOVO INTERNATIONAL AIRPORT (DME)

Domodedovo International Airport is the leader in terms of traffic within Russia. In 2013, Domodedovo became the first Russian airport to move into the category of the largest European airports, according to the classification of Airports Council International (ACI).

The use of new, advanced passenger service technologies played a large role in the successful development of the airport. Among such technologies was the automated audio announcement system. The new system allows for notification in 24 world languages and is capable of the simultaneous display of up to 15 messages in different areas of the terminal. A similar solution has been deployed at the Paveletsky Railway Station terminal for Domodedovo passengers and employees.

KHABAROVSK AIRPORT

Khabarovsk Novy International Airport is ranked first in terms of passenger traffic on domestic and international routes among airports in the Far East. The airport serves more than 1.6 million passengers annually.

An automated information system was implemented in preparation for the APEC 2012 summit in Vladivostok and has significantly increased the level of service for international flights.

The system provides passengers and staff with visual and audio information on the current situation at the airport, such as: aircraft departures and arrivals, check-in, schedule changes, etc.

Visual information is displayed on 35 electronic boards in Russian and English. Messages are broadcast simultaneously over 4 audio channels, which eliminates delays in the dissemination of information.

The system is designed with a high degree of reliability. It operates 24/7 and provides airport staff with a wide range of management and monitoring capabilities.

PULKOVO AIRPORT SAINT-PETERSBURG (LED)

Pulkovo Airport ranks third in passenger traffic in Russia. 32 foreign airlines, 21 Russian airlines, and 14 CIS airlines conduct flights to Pulkovo Airport on a regular basis. In 2013, the total passenger traffic at Pulkovo Airport was 12,854,366 people, which is 15.2% more than in 2012.

During the project, a Honeywell sound verification system was implemented for the first time in Russia. It can be used in fire alarm systems and sound information systems.

Integration with the operational base of Air-Transport IT Services was carried out by built-in IISP tools without programming, which allowed quick implementation and took into account all the nuances of the source data.

Currently, an automated sound information system provides broadcasts in Russian and English simultaneously in five different areas of the new terminal in Pulkovo Airport. The system allows the language line to be extended as needed.

SHEREMETYEVO AIRPORT (SVO)

According to the international study program ASQ (Airport Service Quality) and ACI (Airports Council International), Sheremetyevo International Airport was recognized as the best airport in Europe in 2013 in terms of quality of service.

Sheremetyevo is the largest Russian airport that serves regular international flights. The route network of the Sheremetyevo Airport includes over 200 destinations. In 2013, Sheremetyevo Airport served 29,256,000 passengers, which is 11.7% more than in the previous year.

Currently, the automated sound information system has been implemented in four airport terminals (C, D, E and F) and provides announcements in the Russian, English and Kazakh languages, depending on the flight destination.

Implementation of the automated sound information system helps optimize the airport's production and human resources. Currently, about 3,500 voice messages are provided each day in the Sheremetyevo Airport.

The automated information system is also used in the following transportation facilities:

- Railway stations in the cities of Yekaterinburg, Krasnoyarsk, Khabarovsk, Perm, Rostov-on-Don, Tallinn, Tyumen, Ufa, Kazan, Penza, Sochi, and Adler; Paveletsky Railway Station in Moscow, Ladozhsky Railway Station in St. Petersburg
- A single system, serving the Tuapse-Adler-Sochi-Olympic Park-Krasnaya Polyana railway line (9 railway terminals and 11 stations)