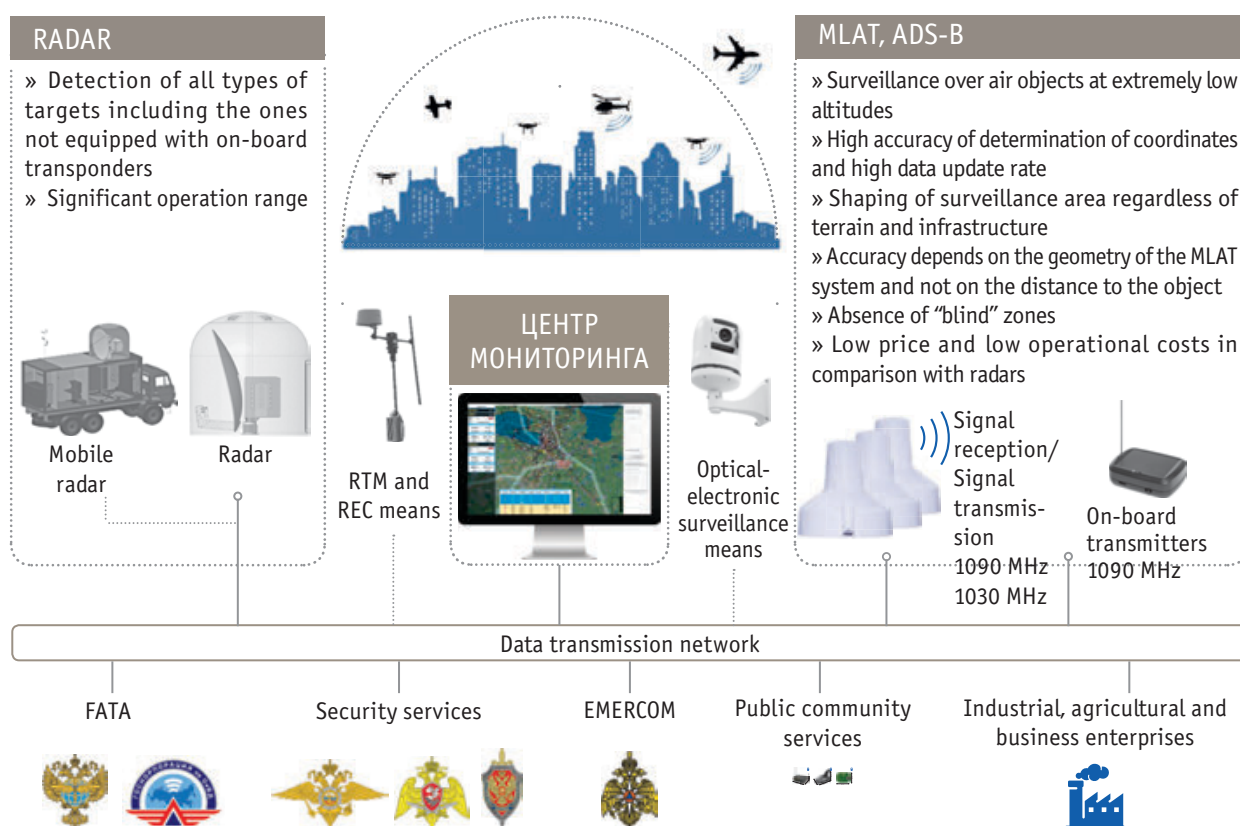


MONITORING SYSTEM OF AIRSPACE USE OVER A MEGAPOLIS

Innovative system for airspace use monitoring provides continuous automated detection, tracking, identification of aircraft and unmanned aerial vehicles present within the airspace above a megapolis and adjacent regions, as well as recording of information on violation of current flight requirements with further output of data to the data consumers involved.

The system is based on the principle of joint use of advantages of main technologies for surveillance over air objects: primary radar surveillance, multilateration and automated dependent surveillance. This approach ensures detection and tracking of all types of air objects, including the ones not equipped with on-board transponders.



The system has a scalable architecture and is capable to provide stable detection and tracking of air objects at altitudes up to 1500 meters within any territory regardless of surrounding terrain and infrastructure.

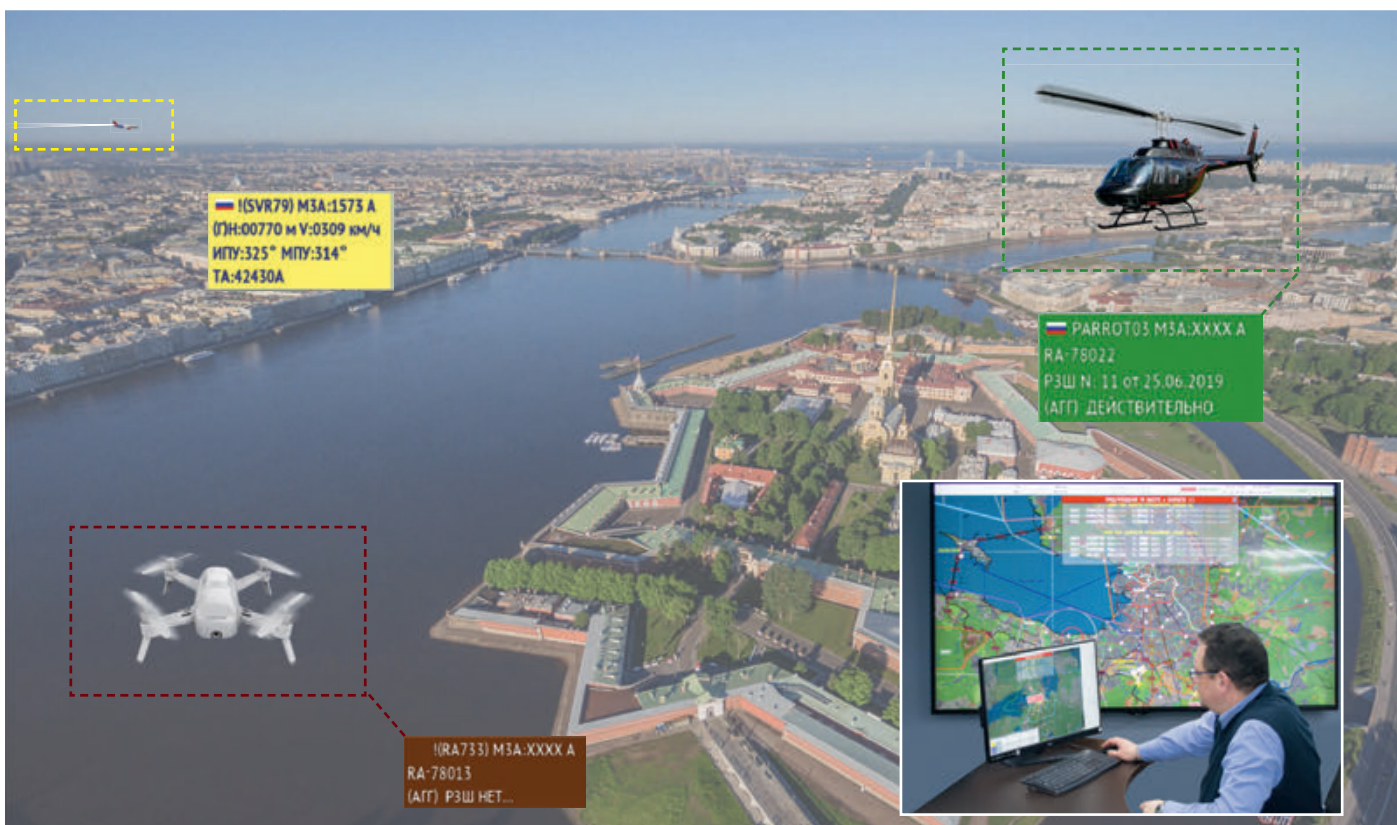
In order to provide a high level of security in critical areas, one or several "ROSC-1" mobile radar complexes equipped with radio-electronic reconnaissance, optical surveillance and UAV counteraction means may be integrated into the system.

The monitoring system ensures an increased level of public safety, public order and living environment security by providing corresponding authorities and services with comprehensive and relevant information on air situation.

Flexibility of applicable solutions ensures multilevel integration with other hardware and software means in order to implement a unified system approach for predicting, responding, monitoring and preventing potential threats.

ADVANTAGES

- » achievement of synergetic effect by implementation of different surveillance technologies;
- » simultaneous surveillance over GPA, UAVs and high air traffic at all flight altitudes;
- » automatic identification of aircraft and UAVs, and detection of potential threats;
- » solution of “blind” zone problem in conditions of complex urban terrain;
- » round-the-clock data obtainment in real-time;
- » inter-agency integration;
- » recognition and wide-spread use of the technology;
- » design on the base of domestic mass-produced equipment;
- » flexible in placement, passive and/or low-power equipment;
- » scalable system;
- » compliance with international standards and requirements.

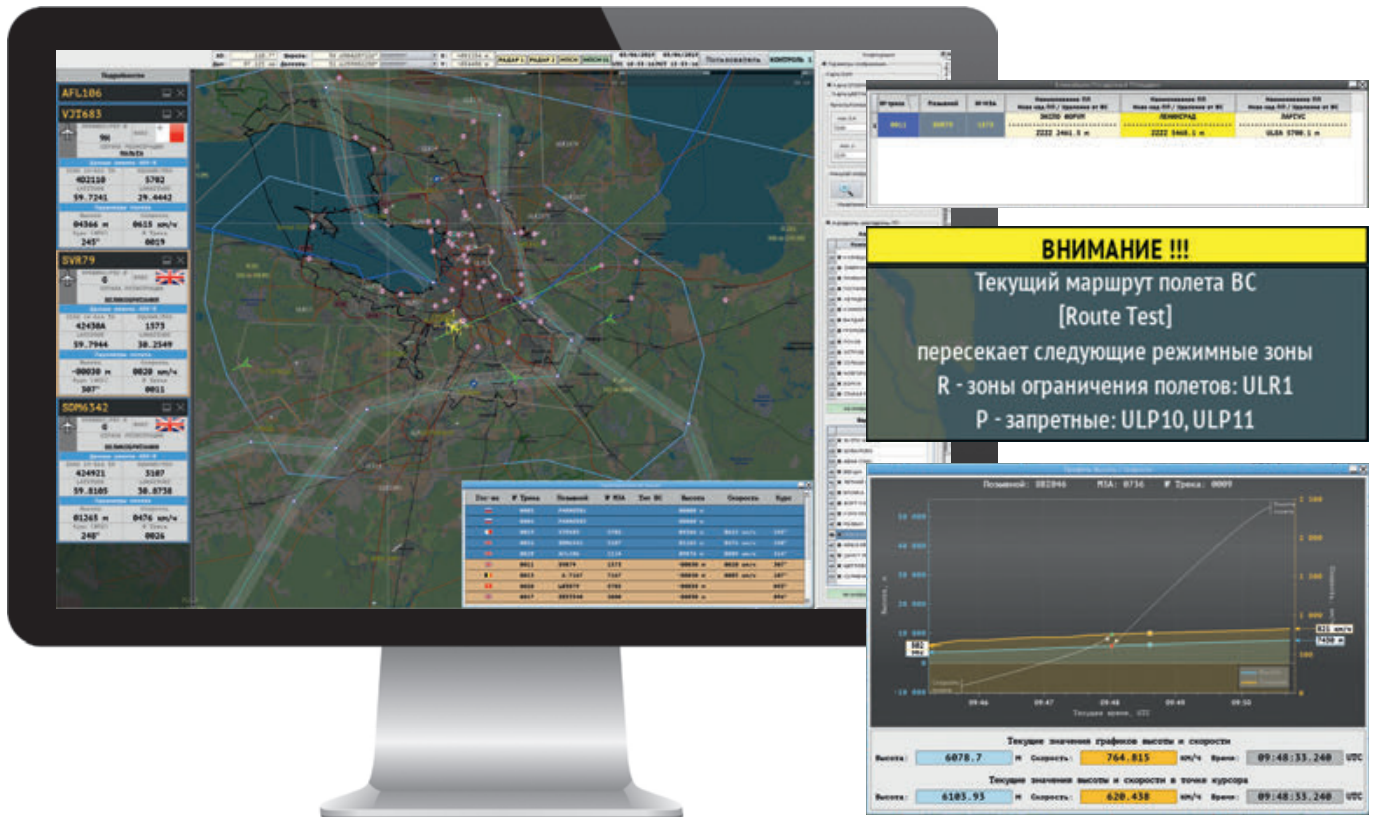


AIRSPACE USE MONITORING SYSTEM

- Source of comprehensive data on air situation above and outside the city;
- Airspace security provision means;
- Efficiency improvement means of agencies and services related to the use of UAV and/or GPA, as well as provision of information on airspace use;
- Interface for interaction of pilots and aircraft operators with general air situation and infrastructure;
- Environment providing effective interaction of operators, controllers, data suppliers and data consumers.

CENTER OF MONITORING SYSTEM OF AIRSPACE USE

Center of monitoring system of airspace use provides fusion of information obtained from all data sources and fulfillment of all computational and analytical tasks in order to shape a unified information model of airspace, air traffic and related infrastructure.



- » Monitoring of flights at altitudes up to 900 meters: tracking, identification and detection of potential threats;
- » Verification of flight clearance issuance and flight clearance status;
- » Monitoring of assigned flight route parameters;
- » Checking of altitude, velocity and restricted flight area boundaries for compliance;
- » Analysis of logistic tasks in accordance with available infrastructure;
- » Output of information on air traffic participants;
- » Management of surveillance log archive.

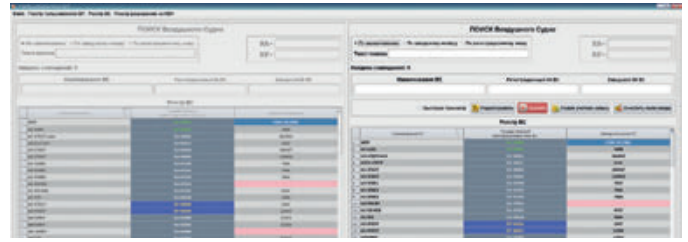
Data flows are individually generated on the base of the unified information model for the best and full compliance with the tasks solved by the data consumers: access rights are granted and interfaces for display of data on workstations are optimized.

MONITORING SYSTEM DATABASE

» The monitoring system database manages registries of registered manned and unmanned aircraft, information on pilots/operators and owners of these aircraft, as well as issued clearances to use the airspace;

» The database supports search by preset parameters, including by criteria of issued clearances to use the airspace and their status;

» The results are displayed in the user's interface on demand of the database, as well as the results are output in tabular form suitable for data export and drawing-up of reports.



Селекция разрешений / Поиск разрешений

Все разрешения
 Действующие только для физических лиц
 Только действующие
 Действующие только для юридических лиц

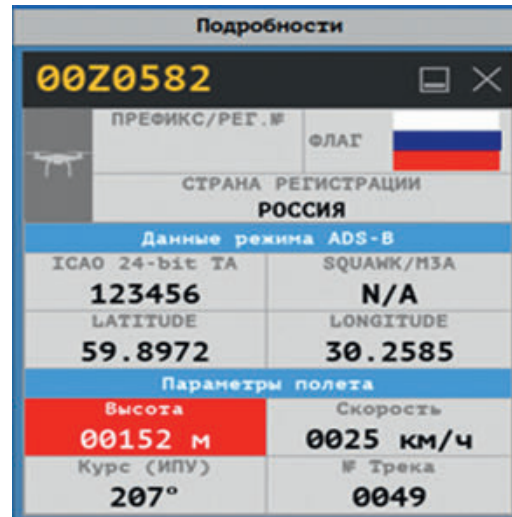
Поиск разрешений

№	Дата выдачи	Номер разрешения	Кому выдано разрешение	Дата начала действия	Дата окончания действия	Время начала действия	Время окончания действия
1	17.12.2018	1	Войсковая часть 09030	17.12.2018	18.12.2018	00:00	23:00
2	17.12.2018	2	ООО "Навигационные Технологии И.С."	17.12.2018	19.12.2018	00:00	00:00
3	17.12.2018	3	Иванович Влад Владимирович	17.12.2018	17.12.2018	00:00	00:00
4	21.01.2019	4	Аверин Сергей Владимирович	21.01.2019	22.01.2019	00:00	13:00
5	23.01.2019	5	Аверин Сергей Владимирович	23.01.2019	24.01.2019	07:00	14:00
6	01.04.2019	6	Аверин Сергей Владимирович	01.04.2019	05.04.2019	00:00	00:00
7	18.06.2019	7	Аверин Сергей Владимирович	18.06.2019	21.06.2019	00:00	00:00
8	18.06.2019	8	ООО "Навигационные Технологии И.С."	18.06.2019	18.06.2019	00:00	00:00
9	18.06.2019	9	Васильев Юрий Николаевич	17.06.2019	21.06.2019	00:00	00:00
10	24.06.2019	10	ООО "Навигационные Технологии И.С."	24.06.2019	24.06.2019	00:00	00:00

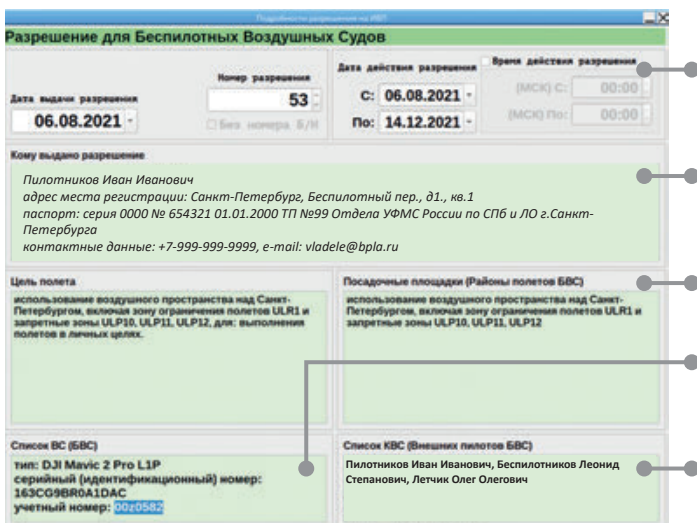
REGISTRY OF AIRSPACE USE CLEARANCES



Display of aircraft label in the system



Display of flight parameters



Visual information on status of airspace use clearance

Detailed information and contact information of aircraft owner

Information on flight purpose and flight areas

Aircraft information

Information on authorized operators