

# COLLECTIVE INTELLIGENCE OF ROBOT GROUPS



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## OBJECTIVES

Solving tasks performed by groups of unmanned aerial vehicles (UAVs): reconnaissance and survey of the area, monitoring the condition and protection of industrial facilities, providing security at public events, participation in search and rescue, building digital models of terrain and three-dimensional models of buildings and different military tasks

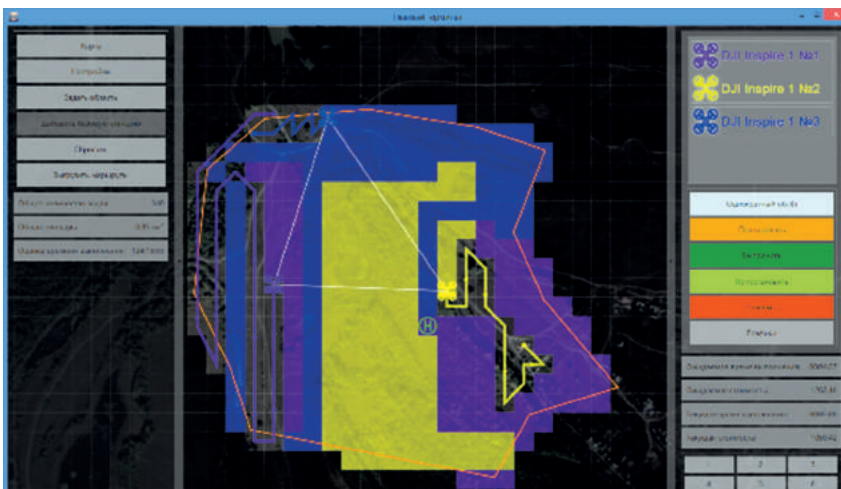


## AREAS OF USE

Military and Civil Industry (Dual-Use Technologies)

## IMPLEMENTATION

Since 2016, this system has been used as a part of a multi-agent precision farming system at an agricultural enterprise in the Rostov region. In 2017, it was tested as a part of the "Vikhr" robotic complex developed at the Main Research and Development Test Center of Robotics of the Ministry of Defense of the Russian Federation



## LEGAL DEFENSE

Certificate of state registration of computer programs N° 2016616174 - Multi-agent system for coordinated planning of flight tasks of jointly operating groups of unmanned aerial vehicles



The scientists plan to test new intellectual technologies and form an intelligent “system of systems” of the new generation based on the application of situational control elements, a network-centric approach, using the knowledge base about available information sources and multi-agent technologies.



#### PECULIARITIES

This project implements the concept of “swarm of swarms” - a community of intelligent interacting systems (systems of systems), which is built on the principles of the “smart” Internet of things.



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#### CORE COMPETENCIES

#INTELLIGENT TECHNOLOGIES, #NETWORK-CENTRIC SYSTEMS, #MULTI-AGENT TECHNOLOGIES, #UNMANNED AERIAL VEHICLES