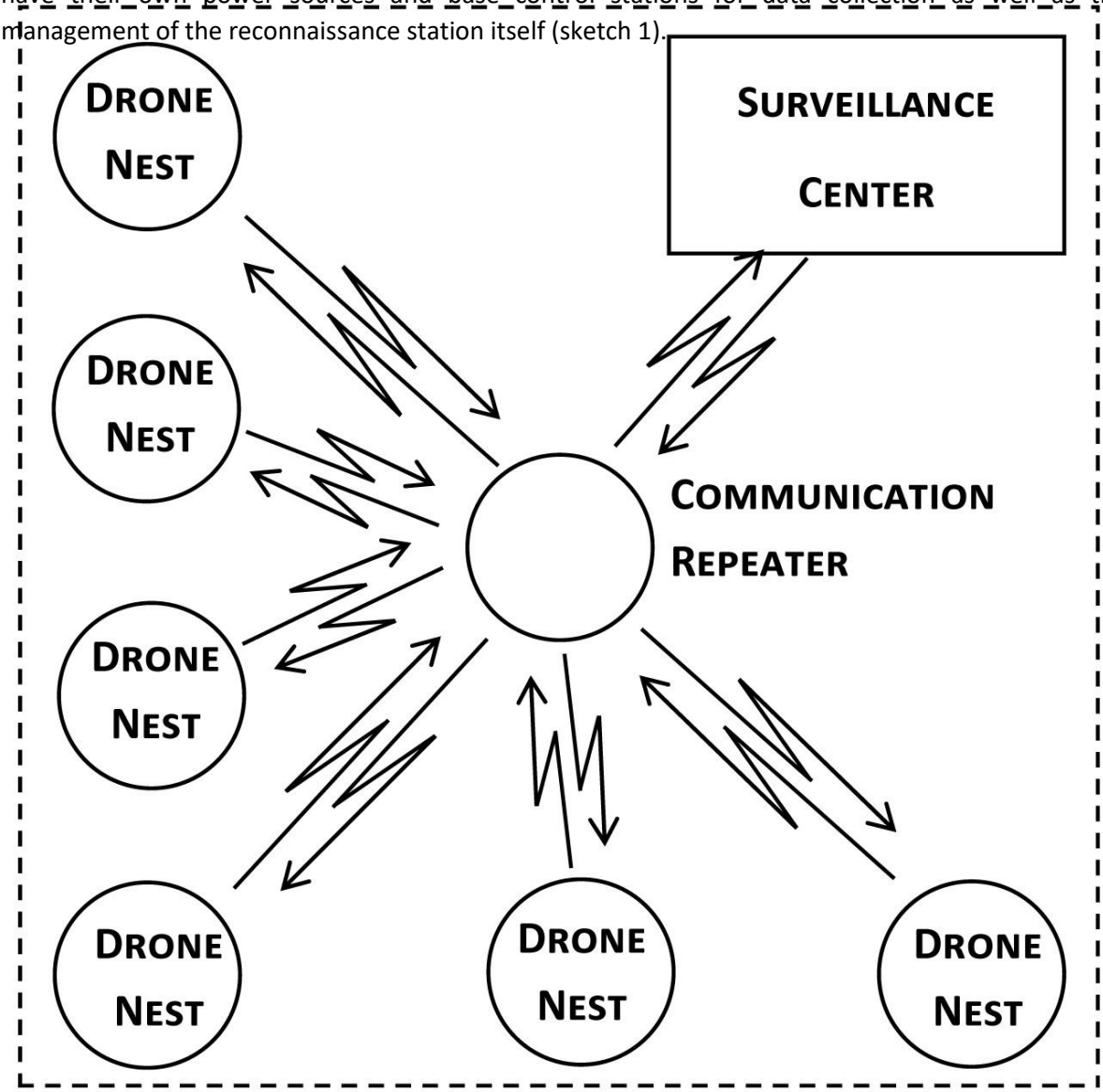
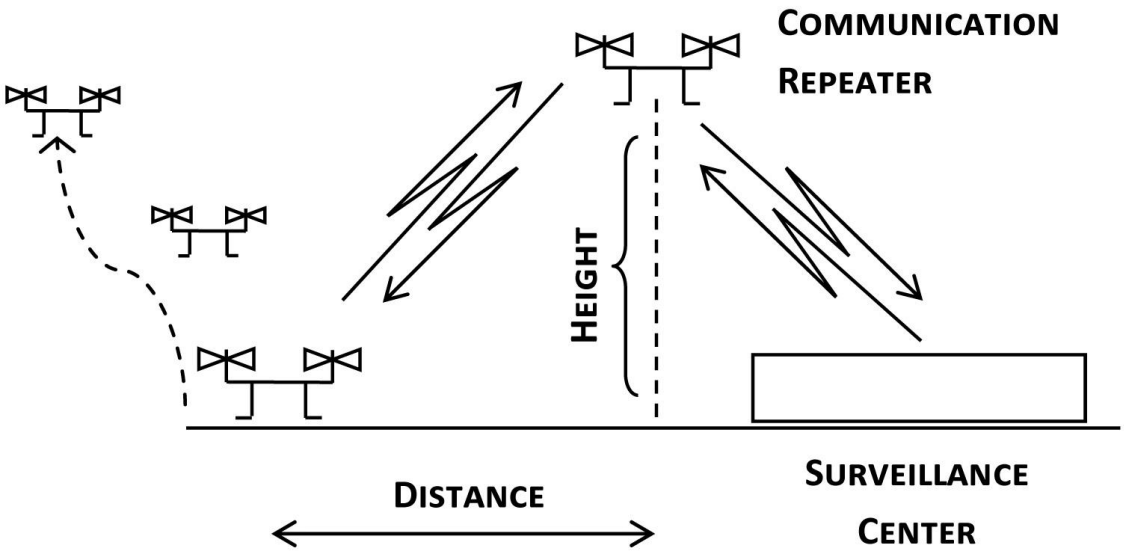
VIDEO surveillance SYSTEM FOR HIGHER AFFILIATED OR INCREASED GREAT TERRITORIES

Large-area video surveillance requires the development of a complex stationary infrastructure that aims to capture and transmit signals through repetition stations to a central system that processes data and presents to the same operator. For the development and installation of such systems, it is necessary to build infrastructure including accessible roads, to bring the required power sources, to place appropriate cameras in certain places, etc.

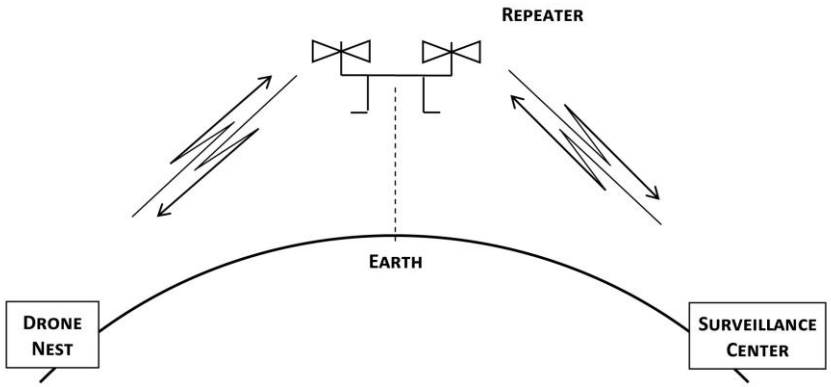
The proposed system is completely autonomous and mobile, based on "dron" technology. It is designed so that only data collection and video images are performed by independent scout stations (ISS) equipped with drones. They are located in the appropriate Drones (Drone Nest - DN) which have their own power sources and base control stations for data collection as well as the management of the reconnaissance station itself (sketch 1).



For the transmission of data over long distances, transmission stations (SPPs) and stationary arrays should be used, which are positioned at the required height (from 25m to 50m), at certain intervals

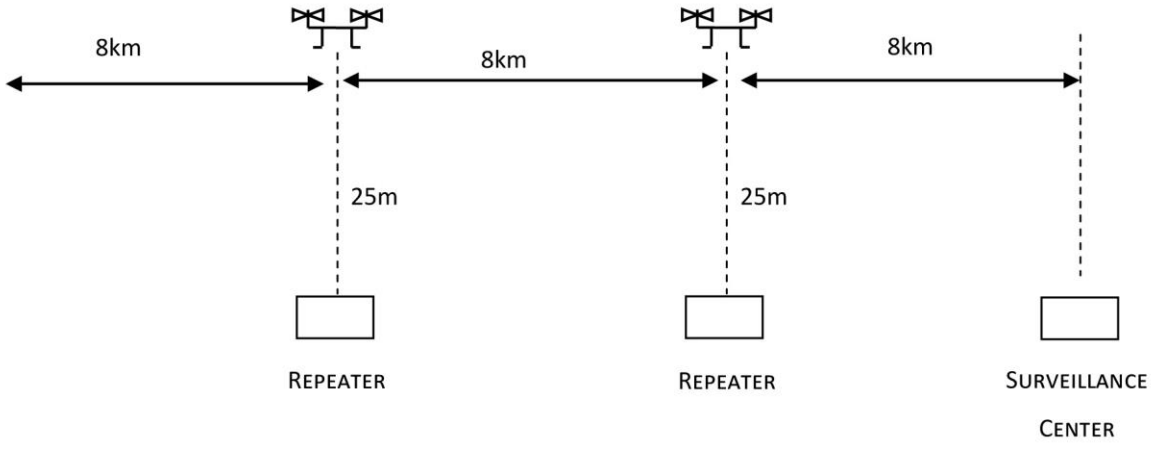


(9 to 15 km) and connected with the wired connection with the earth station above which floats, which serves to provide power to the transmission station as well as for data backup in the event of a temporary disconnection of the link as well as for the supply of substitute droplets that are sent to the whip stations (sketch 2).



The SPP is also equipped with a spare DN that serves to accept the dirgers who are referred to the ISS in case of need for replacement or additional reconnaissance support.

MULTIPLE REPEATER



The control unit itself - the Surveillance Center (SC) has all the elements of the video surveillance station with the location for the operator that manages and gives orders to self-contained independent stations and collects the data they send, their status ....

Independent scout station ISS

An independent station consists of (sketch 3):

Nest of Nails

12 drones for daily reconnaissance

12 drones for night scouting

4 drones for incapacitating objects

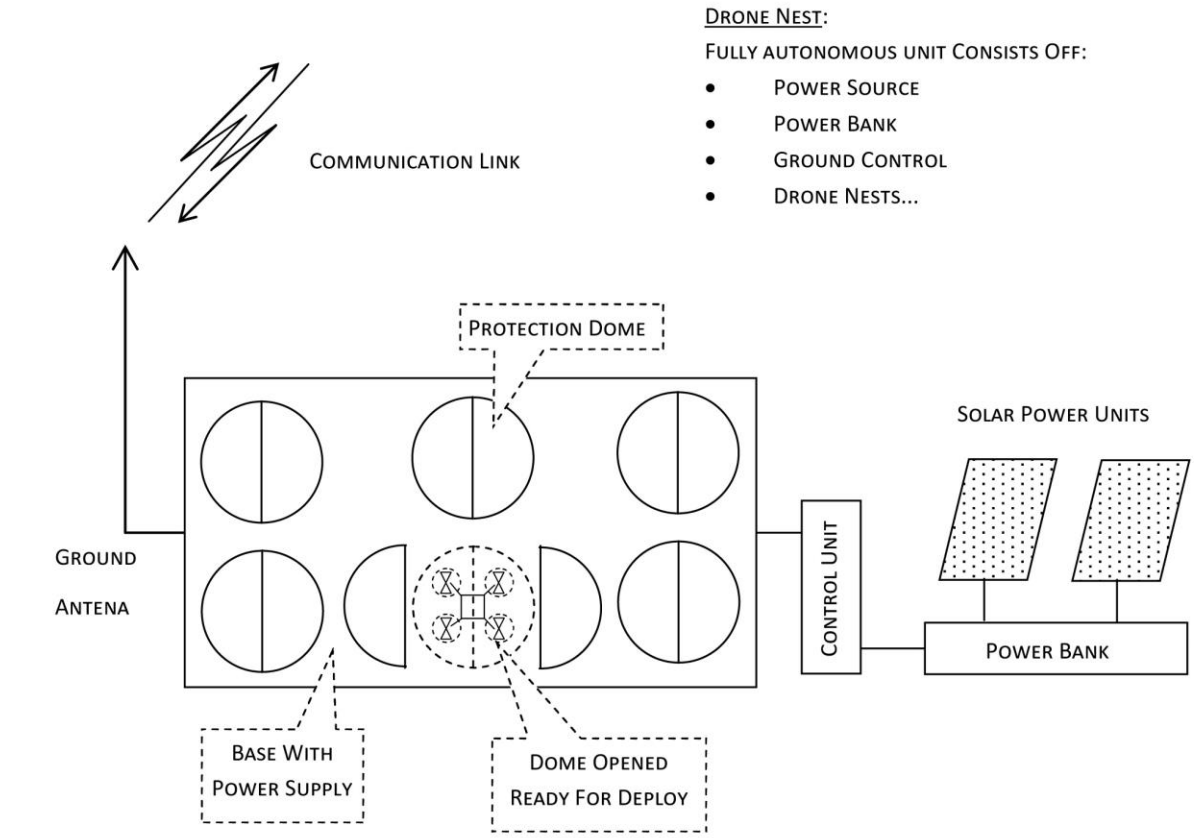
Individual platforms for powering drones and corresponding dormitories for storing drones while in nest

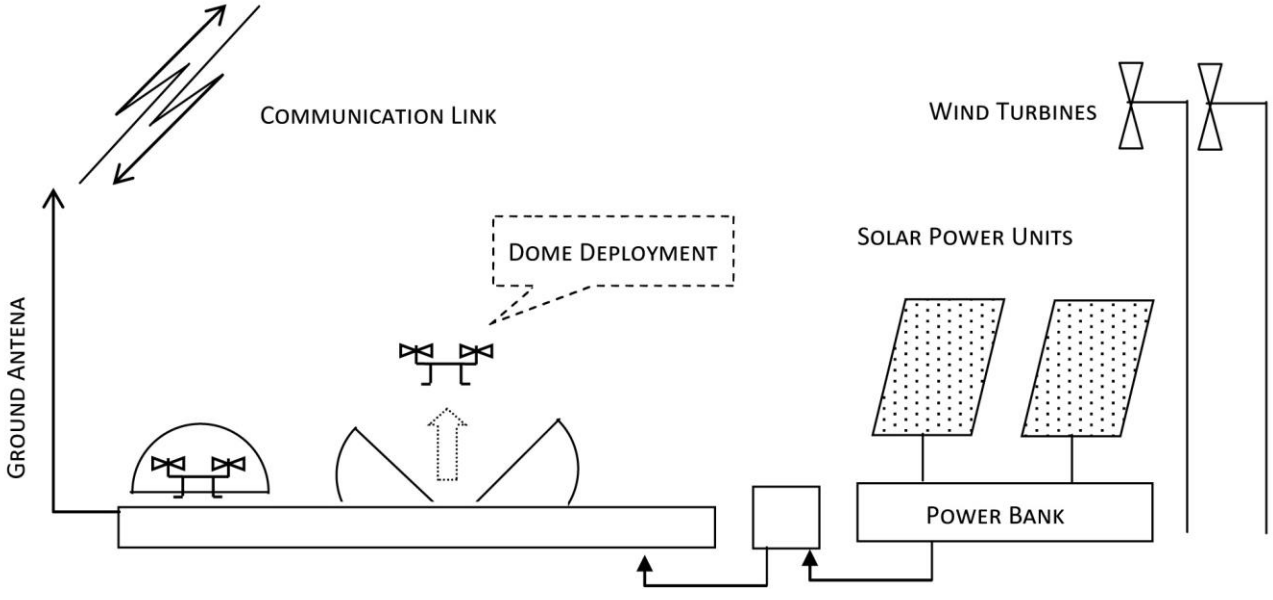
The controlling base station that controls the work performs the monitorin status of the drones in the nest and collects and stores data in the event of a temporary interruption of the connection to the video surveillance station.

Power bank, solar power source, wind generator and spare generator with 24 fuel reserves in case of bad weather conditions

** The number of drones that are equipped with ISS can vary according to the needs and tasks that are set before ISS*

Skica 3





Data transmission station SPP

The data transmission station consists of (sketch 4):

Dron with minimal own power source and wired connection with earth module

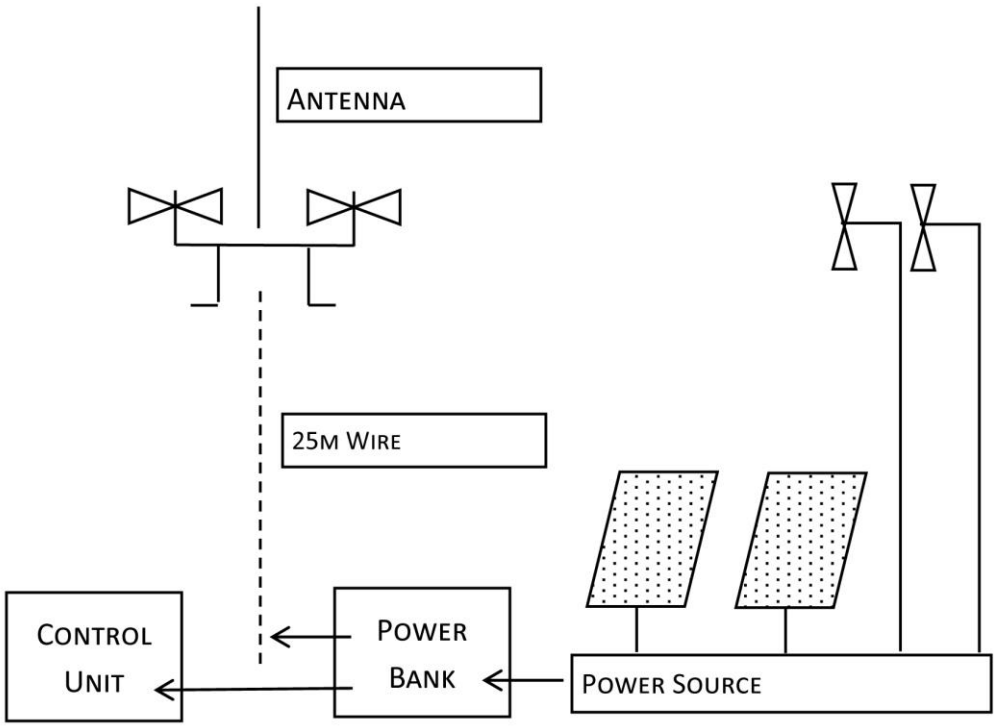
Earth module with a wire winding with a controlled swipe of the same

The control module that monitors the operation of the station has the ability to record data in the event of a temporary interruption of transmission of the same

Required number of platforms with dome rotation domes

Power bank, solar power source, wind generator and spare generator with 24h

SKICA 4



WEIGHT CALCULATION:

1. WIRE: SOLID COOPER WIRE DIA. 2MM X 2

   25M WIRE-DOUBLE CCA 4G

2. EQUIPMENT 4KG

   fuel reserve in case of bad weather conditions

NO BATTERY !!

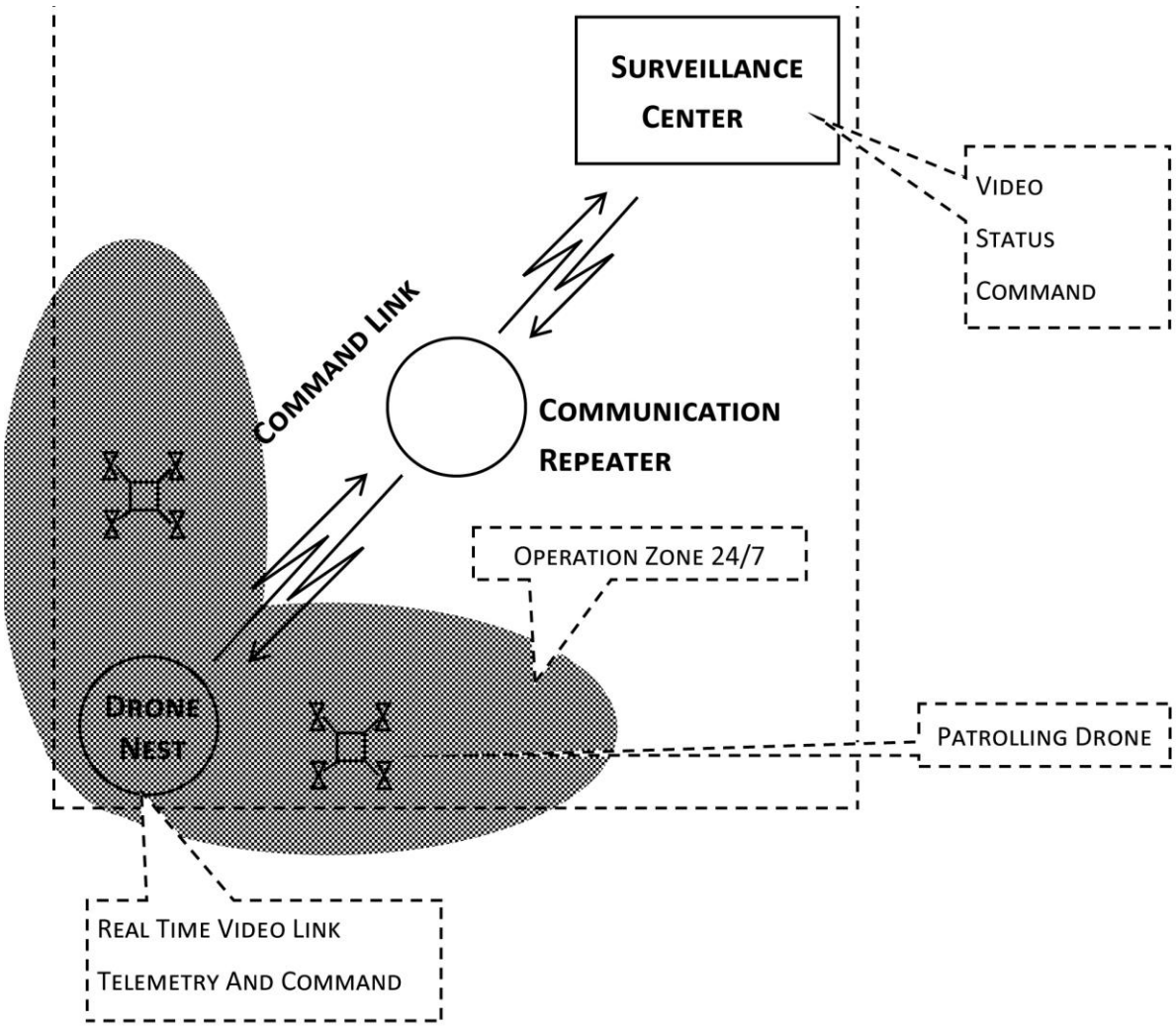
OPERATIONAL 24/7

System principle:

An independent reconnaissance station, according to the status and according to the needs of the operator, selects the reconnaissance drone for the patrol and sends it to the route required. Route can also be corrected during the mission. Dron performs video surveillance, flying at a higher altitude, and in real time, recognizes the event in the area he is experiencing. In the event of a displacement or an IC change, the dron drops to a lower height and is located above the object causing the disorder. The base automatically sends another dron, which remains at a higher altitude in the stationary position and serves for emergency use in case of an emergency.

The signal is transmitted in real time via the Data Transmission Station to the operator in the video surveillance control unit. System upgrading can be developed in the direction of training the system to perform non-neutralization or disabling of the detected object after the recognition. The base station is launching a dron for disabling, which, when placed near a position marked by a whistle drone, is a daring micro drone swarm that neutralizes the object.

In the event that the decision can not be made quickly, the base station decides and sends the replacement of the patrol, returns the previous one to the nest where the feeding of the scout donations is made and prepares for the next mission ...



In the event of a temporary interruption of the signal, the base station retrieves data from the drone arriving at the nest and distributes the same immediately after re-establishing the connection.

Base all the time monitors the state of the droplets on the patrol, returns them to the nest and sends the next to the mission.

In the event that there is a need to replace the drone due to a malfunction or an unsatisfactory technical condition, the base station sends a request to the operator who sends the replacement on the route where the data transmission stations are located. In this place, the replacement dron is powered by a power supply. After battery power, it continues prema Nezavisnoj baznoj stanici.

System development and integration requires a multidisciplinary approach because the ultimate technical task arising from specific needs from the field can be solved without the intervention of hardware. The base station can be equipped with new types of drones. It can also, if necessary, be done very easily and replace the SPP. The system serves as a platform and simplifies the software upgrade by developing new algorithms.

The proposed system requires the development of the following algorithms:

Algorithm for detection, recognition and recognition.

Algorithm for autonomous operation and decision-making in case of interruption with operator (AI).

Algorithm for detecting threats of interference and moving to standalone operation (AI).

Adjustment algorithm for communication interruption.