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AREAS OF THE FUTURE: HOW DRONES CONQUER THE WORLD

Unmanned aerial vehicles have become increasingly popular with nuclear safety experts, as drones can be used for good (scientists using drones have explored one of the most polluted places on Earth – the Red Forest in the Chernobyl zone and have 3D- maps fluctuations in radiation level) and for the realization of evil intentions. Although the industry of small unmanned aerial vehicles has recently emerged, the threats and challenges of misuse have become apparent to many. That is why Greenpeace crashed a drone against the wall of a nuclear power plant in France to show the station's vulnerability.

Environmental activists smashed a drone in the form of a Superman comic book hero against the wall of the French Nuclear Power Plant "Bugey" near Lyon, for this they used two drones, one of which took off the flight and the other flew directly into the wall of the building where the spent uranium fuel was stored. The video from the drone they posted on Twitter. The flight and the crash of this drone showed how much airspace was not sufficiently protected, and the physical protection system did not provide such a threat at all [1].

Invisibility, high altitude and speed of flight, the ability to carry all kinds of dangerous goods make these devices potentially dangerous for virtually all areas of life. And the losses from the activities of even a small drone can be very large.

The European Aviation Safety Agency (EASA) has promulgated common rules for the use of drones, which will soon become mandatory for all EU Member States. Given the rapid development of the global drone industry, the emergence of such standards was only a matter of time. Until now, unmanned aerial vehicles remained unattended by legislators, without even having a clearly defined status [2].

The first legal regulations for drones were adopted in our country only in 2018.

The State Aviation Service has set rules for the use of drones in Ukraine. These are called the Temporary Order of Use of Ukraine's Airspace. It sets limits on the weight of drones – 2 kilograms, the time when it is possible to launch drones – which is only a day, and the places where aircraft are not allowed to fly: over protected objects, roads of national importance, power plants, seaports, fuel depots, oil, gas, over the central streets of settlements. Flights are also prohibited over correctional centers, colonies and detention centers, etc. In addition, it is now impossible to get too close and too close to people. The very rules that limit their scope already indicate the potential for sabotage and potential danger.

The issue under discussion is how to deal with air hazards.

Drones are divided into two large groups: the first group is the interference that affects the electromagnetic circuits and the electromagnetic situation around the

drone, either locally or in the direction of the drone, and the drone loses control signal from the ground. The main task of simple tools is to create obstacles. The drone does not see where it is, the drone does not understand what commands it receives. In this regard, a reasonable drone is reversed, a bad drone falls. Work is under way around the world to build drone countermeasures. Their number is already measured in the dozens. Among the most popular varieties: laser installations, microwave emitters, powerful electromagnetic interference and devices for drone strikes by sound wave [3].

There are quite extravagant ways – so, in Asia, birds of prey are used, European countries have developed drones-hunters armed with nets to catch "intruders".

But it will be most effective if the drone makers, by programming their products and laying their flight cards there, will simply put restrictions in these maps – airports and restricted areas, and the drone will not actually be able to fly there. Such software is available even in drones that are controlled remotely, rather than just flying on a given program. Unfair owners, of course, can break the software and remove such restrictions. Therefore, in conjunction with the modification, it is necessary to use the tools that hinder the flight of drones over a certain area.

In addition, the belgian police will lead a European Union-funded training program to counteract "unfriendly" drones. Such dangerous objects will be eliminated by police drones, including the use of special nets [4].

In Ukraine, training was also carried out "Drones over the Netishyn NPP" within the framework of tactical-specific exercises through the activation of terrorists in the Ukrainian rear – security officers (representatives of the Security Service of Ukraine, National Police, paramilitary and military units of NPP protection) work out all possible scenarios related to elimination of diversionary scenarios using drones.

The main purpose is to check the interaction of all services in case of emergency.

As soon as the unmanned aerial vehicle was spotted in the air, it was immediately cleared. Special equipment was used for this purpose – the so-called unique antidron protection manufactured in Ukraine [5].

However, according to scientists, people are so accustomed to the use of drones that in the near future they will not be able to do without them in everyday life. Airplanes will become as necessary as a computer or mobile phone.

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