

CREATION OF INDIGENOUS UCAS IN COOPERATION WITH THE AUKUS AND NEIGHBORING EU COUNTRIES IS THE KEY ELEMENT OF THE NATIONAL SECURITY OF UKRAINE

Los O. V.

ACE Ltd., London, Hetman Petro Sahaidachnyi National Army Academy, Lviv

According to the definition of Dr. Frank G. Hoffman from the Foreign Policy Research Institute, USA, the world is entering a new era, which is now called the Seventh Military Revolution or the Age of Autonomy [1].

As such, unmanned vehicles, collectively referred to as UxV, are nothing new. The request of the military regarding autonomous combat equipment, for example, aviation and missile, has now come to the fore amid the recent successes in the creation of radio-electronic countermeasures, which often makes remote control of an aircraft completely impossible. And this very fact creates a positive feedback loop: a successful fight against the adversary autonomous combat equipment in extreme conditions requires the presence of an appropriate autonomous combat equipment at the defending party. NATO military strategists expect that autonomous combat equipment will be utilized as early as 2025.

The development of autonomous combat vehicles simultaneously allows solving the problem of their teaming with human formations and human-controlled equipment. Already known examples in the field of unmanned combat aerial systems (UCAS) are the Boeing Loyal Wingman and the Sukhoi S-70 "Okhotnik". Usually, the interaction of several UxVs as part of a cluster system with the distribution of functions under the general control of a human operator is considered. In the English language literature, this principle of interaction was named "collaborative autonomy". Derived from "collaborative autonomy" is the concept of "swarm" of autonomous machines interacting with each other, with such a quantitative advantage that the enemy's attack and defense systems will not be able to hit a part of the "swarm" that is critical for the performance of a combat mission.

An important issue for Ukraine is to determine which classes of military vehicles to focus on for the modern and perspective multi-domain battlefield.

We have already witnessed the signing of the USA-Ukrainian intergovernmental agreement on projects in the field of research, development, testing and evaluation; the creation of the trilateral "Ukraine-Poland-United Kingdom" alliance, therefore it is appropriate to consider the military capabilities of the totality of these countries and crystalize the specialization for Ukraine in it.

Considering the field of combat aviation, taking into account the tactical situation, especially in the electromagnetic domain, it is appropriate to focus on the creation of combat autonomous and semi-autonomous UCASs. Despite the fact that piloted aviation will not lose its relevance in the foreseeable time horizon, but in the conditions of Ukraine, the further, the more dangerous, given the risk of loss of pilot's life, will be the use of piloted aircraft for tactical, and later operational combat tasks.

Reference:

1. F. G. Hoffman. Will War's Nature Change in the Seventh Military Revolution? *The US Army War College Quarterly: Parameters*. 47, no. 4 (2017):19-31