# The Digital War Is the New Reality

## Russia Must Quickly Adapt to It

*Yuri N. Baluyevsky, Ruslan N. Pukhov*

**Yuri N. Baluyevsky,** General of the Army
Chief of the General Staff of the Armed Forces of the Russian Federation in 2004-2008

**Ruslan N. Pukhov**
Center for Analysis of Strategies and Technologies, Moscow, Russia
Director

DOI: 10.31278/1810-6374-2026-24-1-74-80

No expert would deny the tectonic shift that has taken place in modern warfare—the 'drone revolution' or, more broadly, the 'digital war.' And these changes are likely to expand and deepen, as the ability to use drones surpasses the ability to defend against them.

The miniaturization and cheapening of hardware components, and the development of network technology (AI will also be important but will likely remain secondary for a long time), have brought to the battlefield hordes of drones of various types, shapes, sizes, and roles. Mostly small and cheap, these vehicles are increasingly long-range and autonomous, combining reconnaissance and strike capabilities. The front, and dozens of kilometers behind it, may become a 'total extermination zone.'

Countering UAVs is thus a critical task. As armed combat becomes an aerial battle for 'drone superiority,' force structure must be aligned with this goal.

**DANGEROUS TRANSPARENCY**

One of the most important consequences of the drone revolution is battlefield transparency, the dissipation of the fog of war, which will only accelerate as unmanned aerial vehicles (including military spacecraft) and network technology continue to develop. The improvement of surveillance tools, sensors, computing power, information networks, data transmission and processing technologies, and AI will eventually create a single global land-air-space information environment (information battlespace) that expands overall tactical, operational, and strategic transparency. The boundaries between tactical, operational, and strategic combat operations have already blurred.

An important consequence of battlefield transparency is the new face of warfare, demonstrated in the course of the Special Military Operation (SMO) in Ukraine; principally the very low density of forces. Greatly improved reconnaissance, detection, targeting, and precision-strike capabilities have increased the vulnerability of tactical and operational formations, and of individual weapons systems. This makes it impossible to covertly redeploy and concentrate forces and resources in the areas of main effort, fundamentally changing the very philosophy of how they ought to be used.

In the SMO's informational battlespace, the main feature has been the mass use of the internet via *Starlink*, the first implementation of a generally accessible, fast, sufficiently secure information network. This technology encompasses all levels of troop control, down to the lowest, and provides communication and battlefield control regardless of the distance. The latter has revolutionized drone navigation, for the first time allowing the massive use of even small drones at a theoretically unlimited range. Commercial cellular networks can do the same, but less effectively.

In the next stage of this track of the information revolution, we will see the integration of satellite and cellular networks to permit global satellite communication through cell phones and similarly-sized devices. This will lead to explosive growth in the military's capabilities, especially in 'remote' warfare. Every soldier on the ground will have

direct connection to the internet. And command-and-control—including of drones and precision weapons—will be possible regardless of distance.

For centuries, direct-fire combat has been the key to success, with all battlefield tactics designed to support it. Now, battlefield transparency, long-range detection, real-time targeting, and high-precision weapons (primarily drones) make fire within visual range unnecessary. Moreover, dispersed indirect-fire systems have superior survivability. This necessitates fundamental revision of the entire system of fires.

It is this—not a lack of protection from drones—that has caused the crisis of tank forces.

## THE CRISIS OF TRADITIONAL FORCES

A tank is the main means of direct fire support on the battlefield, having been designed as a protected platform for conducting such fire. However now it has become an easily detectable and vulnerable target with an insufficiently effective system of direct fire. As a result, tanks have lost their former significance as the army's primary means of breakthrough and maneuver.

Attempts to increase the survivability and combat potential of tanks, by equipping them with active protection systems, UAVs, and long-range weapons, do not yet appear cost-effective. It is not clear what battlefield utility can be had from a vulnerable vehicle, with a limited armament, that approaches a fighter jet in cost. And as a platform for UAVs or over-the-horizon precision weapons, a tank is overly protected and too heavy.

There is also an artillery crisis. The military conflict in Ukraine seems to have reinstated unguided artillery as the 'god of war.' But the use of expensive guns, consuming numerous expensive shells, is questionable when the same tasks could be accomplished on the 'transparent' battlefield by drones or other high-precision weapons. Modern artillery must be long-range, but effective engagement at such distances requires guided high-precision projectiles (including rockets). Is it rational to use bulky artillery systems to fire such ammunition?

Defenses of tanks and artillery, in the spirit of Voroshilov's claim that "the horse will yet prove its worth," ignore the fact that unmanned technologies are still in their infancy. Thus, it is more likely that ***drones*** will "yet prove their worth," especially as network and space technologies continue to evolve.

In sum, drones really are revolutionizing modern warfare. They impede force concentration, but also make tactical maneuvering unnecessary for striking the enemy. These fundamental changes in tactics and operational art should lead to a reconsideration of how wars are fought and force structures are organized.

## THE POST-INDUSTRIAL COLLISION

The SMO has drawn a line under industrial societies' almost century-old prioritization of mechanized warfare, becoming the first full-scale armed conflict of the 21st century and marking a revolutionary transition to digital warfare. All evident and emerging trends will likely evolve further in the next decade, continuing to change the art of war.

Attempts to combine digital and drone warfare with mechanized warfare, e.g., by preserving the previous role of tanks and tank units, will only reduce the effectiveness of the armed forces, rendering them ill-suited for the new combat conditions and leading to unnecessary costs and losses. Some such attempts, currently observed in Ukraine, are due to both sides' relative technological backwardness and shortage of drones, and to Russia's shortage of communications technology, which has forced them to improvise with what is available.

Today, each side purchases hundreds of thousands of FPV drones per month, matching or perhaps exceeding artillery shell production. FPV drone swarms have become the main means of destroying equipment and personnel. According to Russian statistics as of the beginning of 2025, drones accounted for more than 70 percent of military casualties. Drones' range is constantly increasing, and already exceeds dozens of kilometers, allowing their use for counterbattery operations, logistics interdiction, attacks on the enemy's second echelon, and isolation of the combat zone. In the future, we are likely to see a transition to group and swarm tactics, including drone clusters

controllable by a single operator, and UAVs capable of attacking autonomously.

Drones affect the organization and use of forces in three major ways:

***First.*** The extreme dispersion of manpower and materiel at the front will radically change units' organization and interaction.

***Second.*** The sharp increase in effective fire range will expand the 'total extermination zone' by dozens of kilometers, making it impossible to maneuver or concentrate forces even in the operational rear.

***Third.*** The war has exposed a difficult problem of supplying troops, caused by supply vehicles' vulnerability to enemy attack (this problem arose long ago but was ignored by Soviet strategists). In the context of drone warfare and the expansion of 'total extermination zones' into the operational rear, supply at the operational, tactical, and 'micro-tactical' levels is becoming an enormous problem that will require daring and groundbreaking solutions.

## SOME ISSUES OF FORCE STRUCTURE

What force structure is fit for a drone war? It should combine assault units, unmanned systems, other fire platforms (issued at levels down to the squad) such as fiber-optic-guided missiles, and counter-drone systems (issued to every soldier and platform, and also concentrated in specialized units). All these forces should be integrated into a network that directs aviation and higher-level fires.

The objective is the achievement and maintenance of drone superiority. Forces should advance using a combination of means dependent on the situation, including foot, motorcycles, light vehicles, armored vehicles, and heavily-armed-and-armored infantry fighting vehicles.

Such IFVs should form the basis of the Army's armored wing. The combination of high defensibility with moderate weight will demand less engineering and other support. Although heavy IFVs/APCs, about equal in weight to main battle tanks, can also be considered, their excessive weight and cost make them inferior to 'compromise' medium-weight vehicles of 30-40 tons (e.g., the M2 Bradley, which has proven

to be ideal in the Ukraine war). Equipping such vehicles with counter-drone systems (mostly active defenses), along with all-round protection and survivability measures (e.g., separation of ammunition and fuel), will grant them greater survivability even on the battlefield of the 'drone war' while maintaining their status as 'expendable' and suitable for mass production. The question of creating IFV units (either with attached infantry, or as 'taxis') requires separate consideration.

Infantry units should be provided, instead of tanks, with heavy assault-engineering mine-clearing vehicles: platforms with maximum protection, including armor and active anti-drone systems. They do not need significant armament, as this will only reduce their survivability.

Troops should have appropriate logistical, technical, and other support. In modern war, such support itself is a form of combat, involving constant defense against the enemy's attacks, and this should be reflected in its organization and equipment (including unmanned systems).

Thus, the army of the future should not be rigidly divided into branches but, on the contrary, should become a maximally unified and integrated multifunctional force capable of operating in any conditions.

We assume that readers have taken note of the description, recently provided by the Ukrainian resource *DeepState*, of Russia's "new infantry doctrine" and its tactical adaptation to 'drone warfare.' Four key changes in Russian tactics are highlighted.

***First.*** Increased use of land-based robotic systems, loitering munitions, and heavy FPV drones, "robotizing some combat processes." Efforts are being undertaken to make drones entirely responsible for assaults and fires, in order to avoid harm to assault groups.

***Second.*** Transition to the use of numerous, scattered small groups of only two to four men.

***Third.*** Minimization of firefights, frontal attacks, and other forms of infantry contact with the enemy, with drones providing most fire support for assault groups.

***Fourth.*** Small groups' slow, creeping infiltration or flanking of the enemy, using camouflage and other means of concealment. The objective is to penetrate as deeply as possible behind enemy lines, finding and neutralizing drone operators, mortar crews, etc.

Again, structure, organization, and equipment need to be aligned with the demands of modern warfare. The time of big battalions has passed.

## FUNDAMENTAL TRENDS

The drones most widely used in combat (Mavics, FPVs, small drones) are developed and produced by commercial companies, primarily in huge markets like China and America. This makes them readily available but renders mass production of new models by Russia problematic under autarky and import substitution, especially given their rapid development. More complex drones require top-notch surveillance, satellites, sensors, computing power, networks, and AI. A country lacking in these spheres is doomed to military backwardness.

The digital war has revealed computing power's crucial importance for military science and military capabilities (and human civilization in general) in this century, as it spurs progress in all the abovementioned areas. Computing power, more than territory or resources, will determine the power of countries and alliances. The development of computing capacities—and on their basis the development of networks (including in space) for monitoring, detection, targeting, and data transmission—will permit the creation of automated global reconnaissance, strike, and defense systems of tremendous density and effectiveness. In particular, qualitatively improved missile defense systems may undermine nuclear capabilities and nuclear deterrence.

In the medium term, Russia is set to fall behind world leaders in the development of computing power, due to its lack of competence, production capabilities, and market size. Immediate attention is needed to prevent the gap from widening, threatening Russia's strategic interests. Russia does have the resources and scientific-technological potential to remedy the situation, but this must be done quickly, given how fast the world is changing. Political disagreements must be cast aside, in order to focus on the urgent administrative and technological tasks before us.