**A comprehensive look at intelligent warfare丨"Order dispatch": a new style of precision strike**

Source: China Military Network-People's Liberation Army Daily

Author: Gao Kai and Chen Liang

Editor: Zhao Leixiang

Date: 2025-01-23

introduction

Lenin once said, "If you don't understand the times, you can't understand war." In recent years, the widespread use of information and intelligent technology in the military field has promoted the deep integration of technology and tactics, and has given birth to "order-based" precision strikes based on intelligent network information systems. Commanders and command agencies can generate strike list requirements based on combat missions. The decision-making system can intelligently match strike platforms, autonomously plan action paths, and scientifically select strike methods based on personalized needs such as strike time, combat space, and damage indicators, thereby quickly and accurately releasing strike effectiveness.

**The operational characteristics of "order-to-order" precision strikes**

As the informationization and intelligence of weapons and ammunition continue to improve, the cost of modern warfare is also increasing. How to use limited strike resources to achieve the best cost-effectiveness and maximize combat effectiveness has become a central issue for commanders and command agencies in combat planning. "Order-based" precision strikes can provide a "feasible solution" for this.

Instant optimization and precise energy release. Modern warfare places more emphasis on structural strikes and destruction of the enemy's combat system, and achieves combat objectives by quickly and accurately releasing combat effectiveness. This requires commanders and command agencies to seize the fleeting "window" of opportunity and strike high-value, nodal, and key targets in the enemy's combat system before the enemy responds. The traditional "discovery-guidance-strike-assessment" combat loop is time-consuming and has poor combat effectiveness. Therefore, "order-dispatching" precision strikes need to rely on advanced intelligent network information systems, do not pre-determine the strike platform, and publish a list of strike targets in real time. The auxiliary decision-making system quickly evaluates the strike performance of various weapon platforms and the expected damage to the target, autonomously assigns strike platform tasks, quickly links and regulates multi-domain firepower strike forces, and autonomously closes the kill chain to quickly strike key targets.

Multi-domain energy gathering and coordinated strike. The advantage of modern combat precision strikes over previous firepower strikes lies in the information-based and intelligent combat system, which does not require human intervention and relies on a closed strike chain to autonomously complete tasks such as "detection, control, attack, and evaluation". It can not only save the cost of strikes and reduce resource waste, but also achieve adaptive coordination based on unified combat standards. Therefore, the "order-to-order" precision strike requires the firepower strike forces distributed in various combat fields to establish a unified standard grid. As long as a demand is issued at one point, multiple points can respond and the overall linkage can be achieved. Forces and firepower can be flexibly concentrated, and multiple means and rapid multi-domain energy gathering can be used to determine the strike direction, strike order, and strike method of each strike platform on the move. Through system integration, time can be effectively saved, and multi-domain precision strikes can be carried out on key node targets and key parts of core targets of the enemy, giving full play to the overall power of the superposition and integration of the combat effectiveness of each combat unit.

The attack must break the enemy's system and be quick and decisive. Modern warfare is a "hybrid war" implemented simultaneously in multiple fields. The interweaving influence and confrontation of new domains and new qualities such as information, aerospace, and intelligence are more obvious. This requires both sides of the war to be able to discover and act one step faster than the enemy, destroy and paralyze the enemy's combat system, and reduce the efficiency of the enemy's system. On the one hand, it is necessary to accurately identify the nodes of the enemy system and instantly optimize and accurately strike; on the other hand, it is necessary to conceal one's own intentions and strike forces, and strike quickly when the enemy is unprepared. "Order dispatch" type precision strikes can well meet these two requirements. With the support of network information systems, intelligent integration of firepower strike forces in various fields can be achieved, and multi-source information perception, data cross-linking, and multi-domain coordinated strikes can be achieved. The seamless and high-speed operation of "target perception-decision-making command-firepower strike-damage assessment" is realized, and information and firepower are highly integrated to quickly achieve combat objectives.

**The system composition of "order dispatch" type precision strike**

The "order-based dispatch" precision strike builds an efficient closed strike chain, compresses action time, improves strike effectiveness, enables various firepower strike platforms to better integrate into the joint firepower strike system, and provides fast and accurate battlefield firepower support. The key lies in the "network" and the focus is on the "four" systems.

Multi-domain platform access network. With the support of information and intelligent technology, an integrated information network system with satellite communication as the backbone will be established, and the firepower strike platforms distributed in the multi-dimensional battlefield will be integrated into the combat network to establish a battlefield "cloud". Different combat modules will be distinguished, and "subnet clouds" such as "detection, control, attack, and evaluation" will be established. Relying on the integrated communication network chain, the "subnet cloud" will be linked to the "cloud", which can enhance the firepower strike platform's full-domain, full-time, on-the-go access, autonomous networking, and spectrum planning capabilities, and realize the network interconnection of firepower platforms, domain-based combat systems, and joint combat systems, as well as the interconnection of internal strike forces.

Joint reconnaissance and perception system. Relying on various reconnaissance and surveillance forces within the joint combat system, conduct all-weather, multi-directional, and high-precision battlefield perception of the combat area. This requires the construction of a full-dimensional reconnaissance and perception force system that exists in physical and logical spaces, tangible and intangible spaces, and the deployment of intelligent perception equipment over a wide area to form an intelligence data "cloud". Through the intelligence data "cloud", the enemy situation is analyzed, the key points of the enemy combat system and time-sensitive targets are found, and the reconnaissance information is updated in real time to show the dynamics of the target.

Intelligent command and decision-making system. Relying on a new command and control system with certain intelligent control capabilities, various planning and analysis models are constructed to expand functions such as intelligent intelligence processing, intelligent task planning, automatic command generation, and precise action control. Databases such as the target feature library, decision-making knowledge base, and action plan library are expanded and improved to strengthen the system support capabilities for task planning, action decision-making, and control in the process of combat organization and implementation, improve planning and decision-making and combat action control capabilities, clarify "how to fight, where to fight, and who will fight", and achieve accurate "order dispatching".

Distributed firepower strike system. Relying on the intelligent network information system, on the one hand, it integrates land, sea, air, space and other multi-dimensional firepower strike platforms, strengthens the functions of intelligent target identification and remote control strike, and realizes various combat methods such as remote control combat of combat units, manned and unmanned coordinated combat, and flexible and mobile combat; on the other hand, it can build a low-cost firepower strike platform mainly composed of low-altitude and ultra-low-altitude unmanned strike platforms such as crossing aircraft and cruise missiles. By adding different functional combat payloads, it can work closely with high-end firepower strike platforms to implement battlefield guidance, precision strikes, firepower assessment and other tasks, and efficiently complete the "order".

Autonomous damage assessment system. Relying on the reconnaissance and surveillance forces within the joint combat system to build a damage assessment system, after the firepower platform completes the strike, it will autonomously conduct strike effect verification on the target. It mainly conducts real-time, dynamic, objective, and systematic analysis and evaluation of the target's appearance, degree of functional loss, etc., and promptly transmits relevant information to decision-making and command centers at all levels through video images. The evaluation center will judge "how well the strike was" and whether it meets the expected damage requirements. If it does not meet the requirements, the combat operations can be adjusted in a timely manner and supplementary strikes can be carried out to provide strong support for maximizing combat effectiveness.

**Planning and implementation of “order-based” precision strikes**

The "order dispatch" type of precision strike is just like the way online ride-hailing services operate. Through a series of processes such as formatted "order" generation, intelligent object matching, and autonomous path planning, it independently completes the "OODA" combat cycle. Its actions are more efficient, the strikes are more precise, and the coordination is closer.

Firepower requirements are reported in real time, and combat units "submit orders" on demand. Reconnaissance elements distributed in different combat areas and multi-dimensional battlefield spaces use radar, optical, infrared and technical reconnaissance methods to form battlefield target intelligence information through wide-area multi-source detection. This information is connected to the battlefield information network through intelligence links and is transmitted to combat units anytime and anywhere. The combat units will perform correlation processing, multi-party comparison and verification, and comprehensively compile battlefield target information to generate accurate task "orders". The combat unit analyzes the target value and connects to the decision-making platform on demand, builds an "order"-style closed strike chain, and submits task "orders" in real time to achieve in-motion optimization and precise adaptation.

Differentiate fire strike tasks, and the decision center intelligently "dispatches orders". Through the battlefield information network and relying on the intelligent task planning system, the decision center can automatically parse the task "order" information data submitted by the combat unit, and automatically generate the task requirements such as the type and quantity of ammunition, strike method and damage index required for the fire strike action according to the nature, coordinate position, movement status, threat level, etc. of the battlefield target, and form a fire support task "order". Through intelligent matching of the best firepower platform, link nodes are connected as needed, and intelligent command-based "dispatching" is carried out, which is immediately delivered to the firepower platform waiting for combat.

The firepower platform can "accept orders" immediately by matching the best targets at all times. The firepower platforms distributed at multiple points in the battlefield area can respond to "accept orders" immediately through the battlefield information network. The firepower platform and the combat unit can establish a chain autonomously, and directly establish a guided strike chain after mutual "identity" verification, coordinate and cooperate with the firepower strike operation, and adjust the strike method and shooting parameters in time according to the damage to the target after the strike and the dynamics of the battlefield target, and then carry out firepower strikes again until the "dispatching" task is completed. The firepower platform always follows the principle of "strike-transfer-strike-transfer", completes the strike task, quickly moves the position, stays in a combat state at all times, and receives "orders" online in real time. After the task is completed, the guided strike chain between the firepower platform and the combat unit will be automatically cancelled.

Acquire damage information from multiple sources, and the assessment center will "evaluate" in real time. Comprehensively use long-distance information-based intelligent reconnaissance methods such as satellite reconnaissance, radar reconnaissance, and drone reconnaissance to implement multi-domain three-dimensional reconnaissance, obtain the target's fire damage information in real time, and provide accurate assessments for precision fire strikes. Comprehensively determine the damage effect, conduct quantitative and qualitative evaluations of the strike effect, distinguish the three damage states of the target's physical, functional, and system, and provide timely feedback to the decision-making center. According to the damage assessment results of the strike target, timely put forward control suggestions, adjust the fire strike plan, optimize combat operations, and achieve precise control of fire strikes, so that commanders can accurately control the combat process and achieve efficient command and control of the effectiveness of fire strikes.