
Development trend of Autonomous Navigation Control

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Abstract

At present, we are in the new normal state of the strategy. This development trend requires the rise of autonomous navigation technology. This paper expounds the autonomous navigation control technology, introduces its role in improving the ability of scientific research, and introduces the development trend of autonomous navigation control technology.

Keywords

Autonomous navigation; Intelligent perception; Intelligent control.

In the current big environment, the high and new technology of our country is developing rapidly. In the memorandum of national defense innovation initiative, the National Defense Department of the United States has put forward a new concept, the "third offset strategy", which has a new direction - the technology of autonomy, hypersonic, subversive, and at the same time Under the strategy, the United States has also formulated a research plan to follow this direction. In 2015, Russia made and issued the Russian national security strategy before 2020. In this strategy, it clearly emphasized the importance of information technology and has an irreplaceable role in promoting the development of the country. In the future, Russia has pushed forward the development of the supersonic vehicle and further developed the core. Warhead and aerospace defense system, in which the input of innovative technology is increased to promote its development. From the above, we can see that a large number of concepts of war have come into being at the beginning of the day, such as the integration of the whole region, the cross field operations, the integration of empty sky, and the competition of Qi. That is to say, we have come up with a new type of strategic campaign mode, that is, "multi-mode energy confrontation". All countries in the world must transform the national defense weapons and equipment under the network battlefield conditions, and under this transition, autonomous navigation control is a new trend.

Since the coming of twenty-first Century, new computer science has been formed step by step. With the impetus of information technology and large data, various innovative technologies have come into being, such as bionic engineering, robot, brain science, etc. These fields are promoting a new type of strategic campaign step by step. According to the current situation, the future battlefield space, to a large extent, is to be extended to the non boundary, the development of various fields to the deep scale, and the corresponding expansion in the field of weaponry, such as the speed of flight and the expansion of the area, and the development of all fields to the equipment. Autonomous intelligence is also a good driving force, and it also promotes coordination and precision between platforms. For intelligence, big data is its foundation, and cloud computing promotes the realization of intelligence. From the present situation, although we have different goals and bases in many aspects, such as political military and weaponry, we should also see the key point, that is, the development momentum between the defense frontier technology and the rapid subversive technology development is similar, not only that, but also the new weaponry. Preparation is also in a very consistent way to adapt to the emerging strategic globalization.

1. Ways to Deal with the Information of Future War

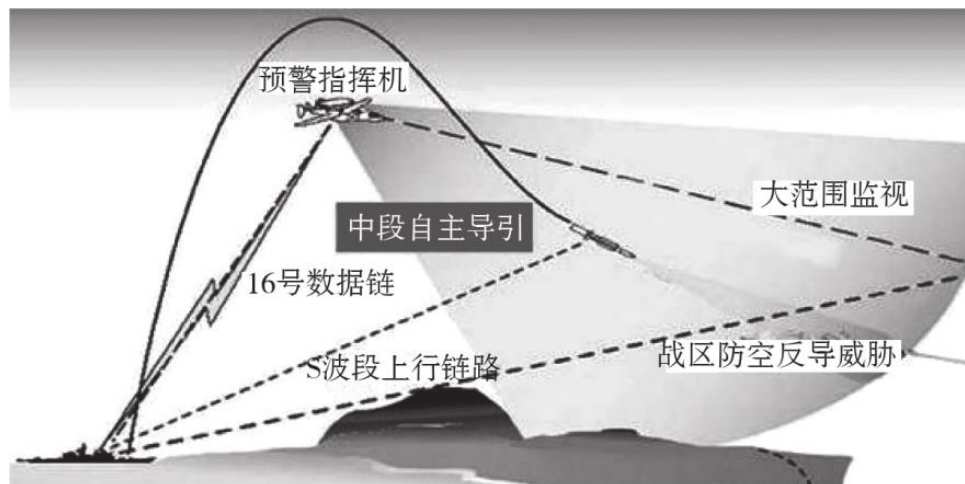


Figure 1. "standard" 6 over the horizon interception in the United States

From Figure 1, we can see that the U.S. Navy ship-borne "standard" 6 - air-to-air missile system, under the "cooperative combat capability", can get the early-warning reconnaissance data very well through the data chain, which is a typical cooperative over the-horizon intercept. The MEADS under the "medium range enhanced air defense system", which is developed by European and American cooperation, is a new type of ground to air missile weapon system, which is mainly composed of missiles. There is also a system that is developed in Europe, called "FlexiS" in Europe, based on actual combat requirements, and then very flexibly and flexibly assembled to achieve specific operational purposes. These two systems have the characteristics of "modularization and serialization", and rely on them to realize the information and intelligence of the whole system under the action of the integration of the missile borne equipment and the launcher.

2. Ways to Deal with the Three-Dimensional Multidimensional War in the Future War

Of course, the United States and Russia are mainly in the military to increase the input of a variety of strategic / tactical hypersonic conventional missiles. This is because the target is very different in the course of flying missile weapons. In the United States, the American "advanced hypersonic weapon" AHW, its multi-purpose missile can intercept warplanes, but also to combat cruise missiles, for large range of combat control is also within the control range.

3. Conclusion

At present, under the new normal situation of strategy, we are also facing the rapid development of new high-tech. These two forces promote the transformation of new fields. It is a high challenge for us to speed up our scientific and technological ability and speed up the speed and quality of scientific research. The control and development of autonomous navigation technology is a developing trend in the future. At the same time, building a powerful army, speeding up the construction speed of our national defense science and technology power and adapting to the international development as soon as possible, this is the perfect way for us to meet the new challenge before the dawn.