New satellites to extend China's military reach

David Lague, Reuters

China this week reached a milestone in its drive to master the military use of space with the launch of trials for its Beidou satellite global positioning network, a move that will bring it one step closer to matching U.S. space capabilities.

If Beijing can successfully deploy the full 35 satellites planned for the Beidou network on schedule by 2020, its military will be free of its current dependence for navigation on the U.S. global positioning network (GPS) signals and Russia's similar GLONASS system.

And, unlike the less accurate civilian versions of GPS and GLONASS available to the People's Liberation Army (PLA), this network will give China the accuracy to guide missiles, smart munitions and other weapons.

"This will allow a big jump in the precision attack capability of the PLA," said Andrei Chang, a Hong Kong-based analyst of the Chinese military and editor of Kanwa Asian Defense magazine.

China has launched 10 Beidou satellites and plans to launch six more by the end of next year, according to the China Satellite Navigation Management Office.

Chinese and foreign military experts say the PLA's General Staff Department and General Armaments Department closely coordinate and support all of China's space programs within the sprawling science and aerospace bureaucracy.

As part of this system, the Beidou, or "Big Dipper," network will have an important military role alongside the country's rapidly expanding network of surveillance, imaging and remote sensing satellites.

China routinely denies having military ambitions in space.

Defense Ministry spokesman Yang Yujun Wednesday dismissed fears the Beidou network would pose a military threat, noting that all international satellite navigation systems are designed for dual civilian and military use.

CATCHING UP WITH THE U.S.

China accelerated its military satellite research and development after PLA commanders found they were unable to track two U.S. aircraft carrier battle groups deployed in 1996 to the Taiwan Strait at a time of high tension between the island and the mainland, analysts say.

The effort received a further boost when it was shown how crucial satellite networks were in the 1991 Gulf War, the 1999 NATO bombing of Yugoslavia and the 2003 invasion of Iraq.

While China still lags the United States and Russia in overall space technology, over the last decade it has rapidly become a state-of-the-art competitor in space-based surveillance after deploying a range of advanced satellite constellations that serve military and civilian agencies.

With the launch of more than 30 surveillance satellites over the last decade, according to space technology experts, the PLA can monitor an expanding area of the earth's surface with increased frequency, an important element of reliable military reconnaissance.

That coverage gives PLA commanders vastly improved capability to detect and track potential military targets.

Real-time satellite images and data can also be used to coordinate the operations of China's naval, missile and strike aircraft forces in operations far from the mainland.

"What we are seeing is China broadly acquiring the same capabilities in this area as those held by the U.S.," said Ross Babbage, a defense analyst and founder of the Canberra-based Kokoda Foundation, an independent security policy unit.

"Essentially, they are making most of the Western Pacific far more transparent to their military."

In a recent article for the Journal of Strategic Studies, researchers Eric Hagt and Matthew Durnin attempted to estimate the capability of China's space network using orbital modeling software and available data on satellite performance.

China's most basic satellites carried electro-optical sensors capable of taking high resolution digital images in the visible and non-visible wavelengths, wrote the authors.

More advanced satellites launched in recent years carried powerful synthetic aperture radars that could penetrate cloud and cover much bigger areas in high detail.

Added to that, China was now deploying satellites that could monitor electronic signals and emissions, so-called electronic intelligence or ELINT platforms, the authors said.

"Next to China, only the United States possesses more capable tactical support systems in space for tactical operations," they wrote.

(Editing by Don Durfee and Robert Birsel)

Posted by Jason Lomberg, Technical Editor

http://www.ecnmag.com/news/2011/12/new-satellites-extend-chinas-military-reach