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CHALLENGES TO SECURITY IN SPACE

DEFENSE INTELLIGENCE AGENCY

Published on 18/08/2019

Relations internationales

Although the United States and the former Soviet Union dominated early space activities, space capabilities have multiplied over the past six decades as technological barriers and costs have been removed. These capabilities provide important support for many of society's day-to-day activities, including communications, navigation, financial transactions and weather monitoring.

proposed translation:

In 2018, more than 1,800 active satellites are owned and operated by more than 50 countries and multinational organizations.1 Nine countries and one international organization can independently launch spacecraft: China, India, Iran, Israel, Japan, Russia and the North. Korea, South Korea, the United States and the European Space Agency (French Guiana). 2.

Space has also become more commercialized. The commercial space sector is involved in space launch, communications, space situational awareness, remote sensing and even manned space flight. These companies not only provide products to governments, but also compete in the marketplace.3

The number of objects in orbit (active satellites and orbital debris) will continue to grow rapidly, thanks to the greater availability of smaller satellites at lower cost and the prospect of large constellations of thousands of satellites. The problem of space

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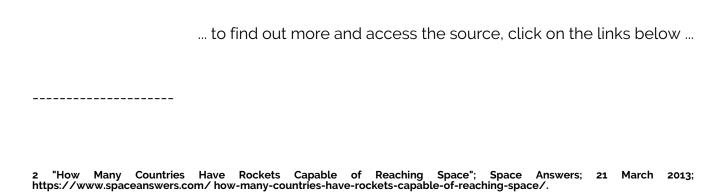
congestion will increase and actors will need better capabilities for tracking and identifying objects and preventing collisions in space.4.5.

Space capabilities are at the heart of many military operations, including warning, geolocation and navigation of missiles, monitoring the activities of the adversary. The military and intelligence-gathering capabilities provided by governmental and commercial remote sensing satellites reduce the ability of all countries to remain undetected when conducting sensitive test and evaluation activities or military exercises and operations.6,7

Some actors are looking for ways to deny the effectiveness of the United States, which has enjoyed more than 25 years of US military success made possible by space capabilities.8 China and Russia, in particular, are developing a variety of means to exploit the perceived American dependence on space-based systems and to challenge the American position in space. 9

Iran and North Korea have also highlighted certain counter-space capabilities that could pose a threat to armed forces using space-based services. While China and Russia are developing anti-space weapons systems, they are promoting agreements at the United Nations limiting the militarization of space. Their proposals do not deal much with space warfare capabilities and lack verification mechanisms, leaving the possibility for China and Russia to continue to develop counter-space weapons.10,11

The 1967 Outer Space Treaty prohibits the placement of weapons of mass destruction in body orbits and bans the use of celestial bodies for military bases, tests or manoeuvres. The treaty has been ratified by 107 states, including the United States, China, North Korea and Russia. Iran is one of 23 states that have signed the treaty but have not ratified it.12



3 Sellers, Jerry Jon; Understanding Space: An Introduction to Astronautics, 4th Edition; IEC: United States; 2015.

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4 "Statement for the Record: W Intelligence; 13 February 2018.	orldwide Threat Assessment of the	US Intelligence Com	munity"; Office of the Di	rector of National
	hreatens to 'Darken Skies' agazine.org/articles/2018/6/28/		ense Magazine; 28 gestion-threatens-to-da	
6 Chin, Carrey; "A Study on to United http://www.dtic.mil/dtic/tr/f	the Commercialization of Space- States National Securi ulltext/u2/a547960.pdf.		ng in the Twenty-First tgraduate School;	Century and Its June 2011;
7 "Space - An Enabler"; http://www.dtic.mil/dtic/tr/f	Army Space and Missile I ulltext/u2/a525767.pdf.	Defense Command,	Army Space Journ	al 2003; 2003;
	PS and the World's First article/gps-and-the-world-s-first-		entific American; 8	February 2016;
g "Statement for the Record: W Intelligence; 13 February 2018.	orldwide Threat Assessment of the	US Intelligence Com	munity"; Office of the Di	rector of National
10 "Statement for the Record: W Intelligence; 13 February 2018.	orldwide Threat Assessment of th	e US Intelligence Com	nmunity"; Office of the Di	rector of National
	of Votes in the First Committee on F Confidence-Building Measures in C /rls287165.html.			
12 "Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies"; United Nations; 10 October 1967.				
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Release date	17/08/2019	
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