

Battle Beyond Earth: American Commercial Space in the Face of Russia Satellite Threats

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Background

Konstantin Voronstov, Deputy Head of the UN Russian Delegation, stated that Western satellite usage intended to assist Ukraine is a threat to Russia, greatly impacting U.S. commercial space actors. This statement, made at a UN Arms Control Panel eight months after the Russian invasion of Ukraine, highlighted the possibility of retaliatory strikes by Russia against their adversarial government-based and commercial satellites. As the world enters an unprecedented space age of commercial actor dominance, satellites like SpaceX's Starlink Constellation and Maxar's imaging satellite fleet are continuously criticized by Russia for their aid to Ukraine through broadcast transmission and GPS navigation. These commercial satellites engage in evidence collection of Russian war crimes in Ukraine through military movement tracking, threatening Russian aggressors. Russia possesses counter-space weapons, demonstrated by their engagement in space warfighting through using the Nudol Anti-Satellite Missile to remove a defunct Kosmos 1408 Satellite (Bingen et al., 2022; Fidler, 2018; The Economist, 2023; Center for Strategic and International Studies, 2020; Spoehr, 2022; The White House, 2021).

These actions marked uncharted territory of the defense requirements of commercial space actors, creating a pressing need for allies of Ukraine, like the U.S., to address this threat. Although the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies is the sturdiest framework for outlining space policy, this document fails to holistically tackle the issue of threats against commercial space actors. This problem is urgent as Russian threats create a new danger to commercial satellites (UN General Assembly, 1967; Bingen et al., 2022; Fidler, 2018).

Objectives

The Biden Administration's 2022 National Security Strategy outlines the U.S. objectives thoroughly. The U.S. is at the helm of the international community in space. While it is incredibly challenging for the U.S. to remain the most-developed space power, partnerships with entities like the European Space Agency remain important to U.S. space dominance. Partnerships in the space domain ensure continued stability, safety, and security for the U.S. in space. The U.S. aims to create norms regarding space arms control, along with establishing regulations and policies concerning commercial space actors. The U.S. expressed increased support for Ukraine in the conflict against Russia, with a goal of maintaining support for Ukraine through meaningful actions is evident within policy creation and implementation (The White House, 2022; The White House, 2023; The White House, 2021).

Policy Alternatives

Policy Alternative #1: Maintain the Status Quo

The first policy option consists of status quo maintenance of the relationship between the U.S. government and commercial space actors. U.S. maintenance of the status quo reinforces the country's desire to establish norms and regulation of commercial actors. Within the U.S., the number of commercial satellites rose since 2018, without established measures to

protect commercial satellites if attacked in a warzone. This became a more prominent reality as the war in Ukraine broke out in 2022. The majority of the legalities for commercial satellites, such as licensing, occur within the Federal Aviation Administration, National Oceanic and Atmospheric Administration, and Federal Communications Commission. However, the safety of commercial satellites and defense strategy, if satellites are attacked, was not thoroughly developed. The current relationship between the U.S. government and the private space sector is lenient compared to other countries. Through the maintenance of the status quo within the current relationship between the U.S. government and commercial actors, lines remain blurred for Biden Administration action if U.S. commercial satellites are attacked by Russia (International Trade Administration, n.d.; Federation of American Scientists, 2023).

While the government likely has private plans for addressing this issue, no formal framework was established publicly. However, the current measures in place serve as a thinly veiled means to regulate the commercial space industry without a written protection guarantee for the U.S.-based commercial satellites, placed under the umbrella of general Russian threats. The present loose framework between the government and private space actors in the U.S. demonstrates a lack of clarity for their future relationship (The White House, 2022; International Trade Administration, n.d.).

Immediate Support Policy Alternative #2: Creation of the Commercial Space Actors Protection Act

This policy option provides a well-crafted governmental framework through the creation of the Commercial Space Actors Protection Act. This act outlines measures taken by the U.S. government if U.S. commercial satellites like SpaceX's Starlink Constellation were attacked by Russia in Ukraine. This act will include elaboration on retaliation principles by U.S. by military forces if a commercial satellite belonging to a U.S. private actor is attacked within a warzone. Presently, there are no formal protection guarantees for commercial satellites by the U.S., thus this act serves

as a framework to combat any potential Russian attacks. This act would be presented in a bill, moved through Congress, and signed by the President; this process would hopefully occur swiftly to protect U.S. commercial satellite assets from being attacked (Keating, 2022; The Economist, 2023).

Additionally, the consequences against Russia would increase, as a Russian attack on a U.S. commercial satellite warrants retaliation by the U.S. through this act. Despite the increase in the U.S. government bipartisan divide, the ability to defend the nation would overrule petty issues to stop the act's passage. Unfortunately, this act is more likely to pass in the aftermath of commercial satellite destruction, based on past patterns of Congressional action. Despite possible drawbacks, this policy option remains a strong course of action while upholding U.S. values. Through this policy option, safety, stability, and security are ensured in space, simply provided with a more concrete foundation for action. Through this act the U.S. serves as a norm creator in space. The U.S. would only act if a commercial actor was directly attacked, therefore this last-resort act serves as a safety net, protecting U.S. commercial space actors. Overall, the Commercial Space Actors Protection Act is the best course of action for the U.S. government to take in the wake of Russian threats against U.S. commercial space actors (Keating, 2022; The White House, 2022).

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