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Threat Assessments and the Space Domain

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Threat Assessments and the Space Domain

This session focused on risks in relation to the space domain, and the issue of how government resources should be applied to address risks. The point was made that the focus on threat assessments should be on looking for the most probable risks – since 9/11 the focus has been to identify all possible risks, and this is problematic as resources are inadequate for this approach. What is missing is a political context for threat assessments. It is the job of the military to consider all threats – to think of worst-case scenarios and to explore how to counter threats. But in this calculation, how much threat can you afford? Given resource constraints, trade-offs are needed. How you prioritize the threats and mitigation options are key issues to consider. The prioritization of risks, threats, and mitigation options is complicated by a number of factors and trends identified and discussed in this session.

First, current assessments suggest that there are not imminent threats to space capabilities. Will this change? Will there be challenges from the rise of China as a space power or the resurgence of Russia as one?

Second, China is not as dependent on space as the United States (U.S.). For example, China carries 10% to 20% of telecommunications by satellite compared to more than 80% for the U.S. military. This creates a vulnerability gap for the U.S. The key question in this regard is the extent to which the gap will, or will not, narrow? The U.S. has no concept of how this vulnerability will be overcome. U.S. global

reach has implications – this makes the U.S. dependent on space assets, and space assets are integrated into training, operational processes, and warfighting for the U.S. military. At the same time, as China further develops and integrates space assets for its own military use and security, China will emerge as more vulnerable and the vulnerability gap will likely narrow.

Third, space technology is dual-use. The U.S. Global Positioning System (GPS) is a good example of dual-use space technology. Dual-use is very often based on context; in other words, dual-use exists when there is demand for such use. A political context for dual-use is missing; where do you draw the line on dual-use? For example, are Chinese commercial telecommunication satellites (comsats) for military use, and is China's human spaceflight program linked to ballistic missile development?

Fourth, there is the tendency to exaggerate the capabilities of the other side in the dynamic of threat assessments. The dynamic is reinforced through insecurity, misperception, and miscommunication. In fact, these dynamics characterize current U.S.-China space relations. Dialogue is essential to offset these issues, similar to the dialogue that existed during the Cold War between the U.S. and the Soviet Union that developed common understandings between the two powers.

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Fifth, the global proliferation of space technology makes the threat assessment calculation not just about the U.S. and China. For example, there is Iran and the Middle East as well as South America and Brazil as emergent space powers. Many countries spend money for commercial and security purposes, and space plays an increasing role in those pursuits. In many ways, there is a global space race with regional rivalries. India, for example, is thinking of kinetic energy Anti-Satellite (KE-ASAT) tests as a result of the Chinese ASAT test. Such a development would, in turn, spawn Pakistan to challenge India. Each space power has a different strategic outlook and orientation that must be considered in threat assessments.

Sixth, in relation to the issue of space technology, the International Traffic in Arms Regulations (ITAR) regime of the U.S. Government is an internal threat to the U.S. This is a result of the dysfunctional nature of export control policies and laws. ITAR is an example of “fear-based” security. The approach with ITAR and export controls of space technologies demonstrates a lack of strategic thinking related to space.

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the governance environment with rules of the road, codes of conduct, KE-ASAT test ban practices and no KE-ASAT first use policy and declaration. Also, the U.S. does not adequately look beyond building, designing, and funding space assets. Structurally and organizationally the U.S. deals with space in the wrong way for optimal outcomes. The U.S. cannot afford to be confident in the continued use of space assets as it currently exists, and the U.S. will likely be surprised by the space capabilities of other space powers.

Lastly, deterrence is critical to think of as one key mitigation option. Space deterrence is not an issue of hard versus soft power, but one of a spectrum of power elements. In other words, deterrence must be placed within the context of strategic thinking. Yet to deter is hard, as different agendas and different interests among states and space powers complicates the threat assessment landscape.

Seventh, strategic thinking is essential to address U.S. vulnerability due to a dependence on space assets. There is no good implementation plan for space policy in the U.S. Plausible solution sets for the U.S. include: respond to, replace (Operationally Responsive Space), and mitigate (space control, space deterrence, counterspace); cooperation (rules of the road, multilateral engagement) and diplomacy backed-up by capability; and leadership based on shaping