

*Summary of remarks for presentation at the “International Symposium on Sustainable Space Development and Space Situational Awareness,”
Tokyo, Japan, February 26-27, 2015*

Challenges of 21st Century Space Governance

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(The views expressed here are those of the speaker alone and do not represent the official policies of the U.S. Navy or the U.S. government.)

The increase of space activity has begun to create conditions similar to those in other “at risk” global commons, such as the world’s airspace, oceans, and rivers. Put simply, heavily trafficked regions like low-Earth orbit are becoming increasingly “finite” as more spacecraft and more orbital debris create dangerous risks, degrading our ability to access space safely. In space, the implications of these problems are even worse than in other environments, given the clear linkage between space activity and both the health of the global economy and the stability of global military relations. Spacefaring countries and companies today will need to collaborate more than ever before to develop effective rules and practices if they are to maintain safe access to space. Due to existing mistrust, rivalries, and military concerns, however, this will not be easy.

From 1958-62, in the absence of any rules for space activity, the two Cold War superpowers tested nuclear weapons in space. But the harmful effects of the electromagnetic pulses from these explosions on satellites caused the superpowers to turn to diplomacy and mutual restraint. This led to the Limited Test Ban Treaty (1963), the Outer Space Treaty (1967), and eventually other important agreements. But no new space treaties have emerged since the 1970s, despite a series of new threats to space’s safety and stability: the rapid expansion of space actors; worsening orbital debris and traffic; and crowding of the radio-frequency spectrum. Moreover, several countries, most recently in Asia, are developing counterspace technologies. Diplomatic efforts like the International Code of Conduct, the UN Group of Governmental Experts, and the long-term sustainability studies under the UN Committee on the Peaceful Uses of Outer Space are positive developments. But more needs to be done.

Some possible new ideas for space cooperation include the following: requiring more timely and more comprehensive reporting of launches and orbital activities to the UN Registration Convention; developing an international SSA network to support enforcement of the UN Liability Convention; prohibiting tests of debris-producing systems in orbital space; and promoting international collaboration on developing technologies for orbital debris removal. Increasing participation by commercial companies and scientists in space security discussions may promote greater actions by governments. Too often, nations today view space from a “zero sum” perspective. If we are going to preserve the space environment for future use, all actors will need to begin viewing space from a “humankind” perspective: treating cooperation, transparency, and responsible behavior in orbit not as an exception, but as a requirement.