Space Security Index 2009: The Status of and Future Trends in Space Security

Sponsored by the Secure World Foundation, the Space Security Index, and the Canadian Embassy

Space security experts convened at the Canadian Embassy in Washington, D.C. for a discussion of the Secure World Foundation and Project Ploughshare's 2009 Space Security Index, released last October. The event featured presentations by Cesar Jaramillo, Program Manager of Canada's Project Ploughshares; Clay Mowry, President of Arianespace, Inc; Dr. Peter Hays, Senior Scientist for SAIC assigned to the National Security Space Office; and Marcia Smith, Founder and Editor of SpacePolicyOnline.com.

Mr. Jaramillo opened the seminar by briefly explaining how the Space Security Index is put together every year, a process he described as rigorous and peer-reviewed. He outlined three overarching themes: (1) the operating environment in space from a physical and legal standpoint; (2) the number and diversity of "actors" (governments and companies) in space; and (3) space technology, including military and dual-use. Mr. Jaramillo explained the purpose behind the project -- "we know what we want to accomplish: space security." He noted that the 1967 Outer Space Treaty (OST) is used as the reference point and guidance for the report's definition of space security, which is that space should be preserved as a global commons to be used by all for peaceful purposes. He noted that some people argue that the OST is "outdated and insufficient," but stressed that any efforts to develop a new treaty must be realistic (done in incremental steps instead of trying to develop a single "catch-all" treaty), proactive (anticipating new technologies), and consensual.

Mr. Clay Mowry provided a commercial perspective. He noted that the commercial satellite business does not appear to have been negatively affected by the global economic downturn, but that probably is because satellites take several years to build, so those being launched now were ordered before the crisis. A record 34 commercial geostationary satellites were launched last year, but he expects that the market will stabilize at about 20 per year. The bankruptcy of Sea Launch has reduced global commercial launch service availability, and some are trying to get U.S. Evolved Expendable Launch Vehicles (EELVs) or Chinese launch vehicles back into the market. However, he added that China is currently making "oil for launches" deals with a number of countries that may destabilize the market. He also discussed elements that have had negative reverberations across the sector, such as the cancellation of the multi-billion dollar Transformational Satellite (TSAT) program by the Department of Defense (DOD) and the continuation of strict U.S. export control laws under the International Traffic in Arms Regulations (ITAR). Mr. Mowry ended his comments by identifying developments to watch for in 2010, including the inaugural flight of SpaceX's Falcon 9; the highly expected decision by the Obama Administration on the future of the U.S. human space flight program; and the outcome of legislative efforts to reform U.S. export control laws, which passed the House last year.

By Laura M. Delgado and Marcia S. Smith

In her statement, SpacePolicyOnline's Marcia Smith described signs of optimism as well as signs for concern in space security. Ms. Smith said that "international cooperation and coordination seem to be booming" as evidenced by the number of international fora on space issues such as the Group on Earth Observations and the Framework for the Global Exploration Strategy, as well as programs such as the International Space Station. She reviewed the several space policy reviews underway either by direction of the White House or Congress, including the National Security Council (NSC)-led review of space policy in response to Presidential Study Directive-3, the already released Augustine Committee Report, a review of export control laws, and a Space Posture Review required by Congress. "We seem to be up to our ears in reviews," she said, "decisions, not so much." She then raised the issue of whether the U.S. decision to end its ability to launch astronauts into space for 5-7 years would reduce its stature in international space discussions, saying that "we will learn over the next few years if our 'seat at the table' gets any lower once our human space capabilities are diminished. And will China's seat be higher?"

Dr. Peter Hays, who works for SAIC, but is assigned to DOD's National Security Space Office, noted that he has worked with the Space Security Index since 2002. He applauded the index as "an extremely helpful resource." In his remarks, he highlighted the importance of space situational awareness and concerns about the growing threat of space debris. He hailed the recent International Conference on Orbital Debris Removal sponsored by the Defense Advanced Research Projects Agency (DARPA) and NASA as the first of its kind that resulted in "potentially useful outcomes." In particular, he cited the work of Nicholas Johnson, Chief Scientist and Program Manager for NASA's Orbital Debris Program Office, who suggested that if the United States focused on removing the five biggest pieces of U.S. orbital debris each year, it would reduce the likelihood of a cascading effect where one piece of space debris hits another, creating more space debris, that collides with yet more pieces. Dr. Hays also discussed the progress of the Space Posture Review and the NSC-led space policy review. He predicted that a short "non-prescriptive" version of the Space Posture Review would be released along with the FY2011 budget request so that it could be provided to Congress (it was due December 1, 2009), with the bulk of the work merged into a "national space strategy" that would come out after a new national space policy is released. He said the target date for the new national space policy is summer 2010, but cautioned that meeting the deadline would be a challenge. He described the participants in the review as being grouped into four camps:

(1) those who believe that not much has changed since the 2006 National Space Policy was released and therefore no change in policy is needed,
(2) those who acknowledge that things have changed and believe we need to do better,
(3) those who argue for more international cooperation, partnering, development of Transparency and Confidence Building Measures (TCBMs), and leveraging commercial space capabilities, and
(4) those who want to increase DOD's "less benign" capabilities.

With such disparate points of view, a clean sheet approach to policy will be difficult, he said, also pointing out that it took four years for the George W. Bush Administration to complete its space policy review (from 2002 to 2006).

During the question and answer period, Dr. Hays was asked why it matters whether or not there is an overall national space policy and he agreed that it might be just as well to have “piece part” policies – for example a space transportation policy, and a positioning, navigation, and timing (PNT) policy – instead a single overarching policy that is so difficult to craft.