

STPI Holds Panel on Space Traffic Management

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On July 30, 2018, under the auspices of the IDA Space Issues Working Group, the IDA Science and Technology Policy Institute (STPI) hosted a panel discussion inspired by the release of Space Policy Directive-3 (SPD-3) of June 18, 2018, National Space Traffic Management Policy (83 Federal Register 28969). SPD-3 outlines U.S. national priorities, defines terms, and allocates roles and responsibilities for federal departments and agencies regarding space situational awareness (SSA) and space traffic management (STM).

The panel featured Scott Pace, Executive Secretary of the National Space Council; Colonel John Giles, Senior Policy Advisor at the National Space Council; Kevin O'Connell, Director of the Office of Space Commerce at the Department of Commerce; Robert Rego, Strategic Missions Advisor to the Commander at U.S. Strategic Command; Audrey Schaffer, Director of Space Strategy and Plans in the Office of the Secretary of Defense; and Steph Earle, Space Traffic Program Lead at the Federal Aviation Administration Office of Commercial Space Transportation. Over 60 experts from government, Federally Funded Research and Development Centers, and commercial entities attended the event. IDA's President David Chu provided introductory remarks.

Scott Pace provided a keynote address, which outlined three primary ways SPD-3 represents an architectural shift in the U.S. SSA system. First, the policy identifies a civil agency, the Department of Commerce (DOC) as responsible for providing basic SSA data and STM services to the public. The Department of Defense (DoD), now maintains the government's "authoritative" catalog of space objects, and DoD will continue to provide publicly available data and services until DOC has the capacity to fulfill these basic services. Second, the policy effectively bounds the services that the government will provide to the public, free of direct user fees, to establish a foundation for safe space operations. Third, the policy calls on DOC to establish a repository to facilitate the exchange of data that can support SSA and STM coordination more broadly.

Following the keynote address, STPI Director Mark Lewis moderated a 90-minute panel discussion under the Chatham House Rule to ensure a free flow of ideas. Five key takeaways from the discussion follow:

- **The current public catalog of space debris is inadequate, and the authoritativeness of the new catalog needs to be made clear.** SPD-3 introduces the concept of an authoritative catalog of space objects. Both panelists and attendees indicated that "authoritative" and "catalog" must be defined more clearly: without a more detailed explanation, these terms can create confusion among operators and private SSA data and service providers regarding where value can be offered.



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- **Current basic SSA services are inadequate, but will evolve to fit with the changing needs of stakeholders.** SPD-3 stipulates that the U.S. Government, through DOC, continue to offer baseline information to conduct safe operations in space to the public free of direct user fees, as is the case with the services DoD currently offers. Some private satellite operators and providers of SSA data and services expressed the concern the information DoD provides does not necessarily meet the needs of operators.
- **The Federal Government needs to establish and articulate ways to engage and leverage the commercial sector.** Audience members were encouraged to see that one goal of SPD-3 is to promote U.S. commercial leadership in SSA and STM, but felt relevant steps should be more clearly communicated to private entities, both operators contributing asset-specific data as well as vendors supplying SSA services.
- **Private operators and providers of SSA data and services recommend speedy implementation.** A priority expressed by some audience members, especially private operators and SSA data and service vendors, was to operationalize the new SSA initiative quickly, especially given the strong capabilities commercial entities already have. Both panelists and attendees raised concerns that failure to move quickly on implementation (halting efforts until a study or analysis of alternatives is completed) could cause the United States to lose the initiative to other countries beginning or considering their own SSA and STM efforts.
- **U.S. STM efforts are integral to continued leadership in space.** Participants agreed that to maintain U.S. leadership in space, the United States must continue to actively organize its domestic activities and streamline its policies and regulations regarding space.

Panelists and audience members alike stressed the importance of continuing dialogue about the implementation of SPD-3. The success of the new paradigm will require collaboration among the U.S. Government, private operators and vendors, academia, and international partners. STPI looks forward to participating in and supporting this effort.

The following reports outline the need for ensuring safe activities in an increasingly complex space environment—especially as potential adversaries begin to challenge U.S. freedom of action in space—and how these potential adversaries are driving the need for more decision-quality SSA and comprehensive approaches to STM: [IDA D-9074](#), *Global Trends in Space Situational Awareness (SSA) and Space Traffic Management (STM)*, B. Lal, A. Balakrishnan, B. M. Caldwell, R. S. Buenconsejo, and S. A. Carioscia, April 2018); [IDA NS P-8038](#), *Evaluating Options for Civil Space Situational Awareness (SSA)*, E. S. Nightingale, B. Lal, B. C. Weeden, A. J. Picard, and A. R. Eisenstadt, August 2016. Research was sponsored by the Office of the Director of National Intelligence and the Department of Transportation, Federal Aviation Administration.