

Policy Challenges for Civil Situational Awareness and Traffic Management in Space

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Background

As part of a project on provision of future civil space situational awareness (SSA) services, the IDA Science and Technology Policy Institute (STPI) identified general *approaches* to providing such services and specific *options* for one of those approaches—provision by a civil government entity, such as the Federal Aviation Administration (FAA) Office of Commercial Space Transportation (AST) within the Department of Transportation. STPI evaluated the approaches and options in terms of strengths and challenges they present and estimated the costs for provision of the services.

Situational Awareness and Traffic Management in Space

Given strong links between SSA and space traffic management (STM), the next civil SSA regime needs to be extensible to STM. At present, no overarching national or international STM regime incorporates launch, reentry, and on-orbit activities seamlessly. STPI briefly reviewed a range of potential future STM regimes and surveyed possible models from other sectors. As with SSA, STM can be accomplished at various levels by industry, governments, or international bodies. Given these various options, the decision about the shape of the future civil SSA/STM regime should be made based on what is best for the United States' long-term strategic interests, not just on the short-term economic costs.

Policy Challenges

STPI identified a range of policy-related challenges that need to be resolved before a decision is made regarding which option to pursue:

- Are SSA and STM inherently governmental functions, and if so, does that mean that they need to be performed *within* government, as opposed to being *overseen* by government?
- To what extent is provision of civil SSA a “public good” in an economic sense, and what is the implication of this with respect to who pays for civil SSA services—the government or the end users?
- How should challenges related to sharing of sensitive national security or proprietary information on satellite location be addressed?
- How can buy-in to any path forward be gained from all relevant constituencies—the national security community, civil space agencies, satellite owner/operators, emerging commercial sector, and Congress?
- How do existing agreements, policies, and regulations limit or impact civil SSA, and which ones would need to be augmented if the system is changed? How should international commitments, such as those related to the Outer Space Treaty of 1967, and the United States' desire to be seen as a global leader in the SSA domain be addressed?
- What is the role of government in promoting innovation and creating new industries, especially in the context of developing IT products and services related to SSA?

Both the options and the policy issues are complex, and additional options, issues, and concerns are likely to arise. A decision on the best course of action is similarly complex and will require balancing many competing interests and ideologies.