

Updates

August 30, 2022

FCC Seeks to Spark Space Innovation



Earlier this month, the Federal Communications Commission (FCC) released a [Notice of Inquiry](#) (NOI) directed at advancing the space economy by examining in-space servicing, assembly, and manufacturing (ISAM) activities. The FCC's goal is to develop a record to facilitate the integration of the private space industry's expertise with the FCC's own policies and procedures to form part of an ongoing interagency dialogue on how to best foster commercial and nongovernmental ISAM activities for the newspace age. The FCC seeks comment on modifications to its licensing processes to "responsibly facilitate progress and reduce barriers for ISAM missions."

Background

In April 2022, the National Science and Technology Council (NSTC) and the Office of Science and Technology Policy (OSTP) released an [ISAM National Strategy](#) to effectively coordinate executive branch space policy across federal agencies, including among the FCC, the U.S. Department of Defense (DOD), the U.S. Department of Commerce, and National Aeronautics and Space Administration (NASA). The ISAM National Strategy laid out six strategic goals to foster further development of ISAM capabilities:

1. Advancing ISAM research and development;
2. Prioritizing the expansion of scalable ISAM infrastructure;
3. Accelerating the emerging ISAM commercial industry;

4. Promoting international collaboration and cooperation;
5. Prioritizing environmental sustainability; and
6. Inspiring the future space workforce.

The NSTC and OSTP also note, however, that meeting these broad goals requires improved coordination and collaboration among the federal government, academia, industry, and international partners, as well as clear and consistent messaging to industry to stimulate ISAM investment and the establishment and adoption of technical and procedural standards to promote growth. While the FCC has already licensed some ISAM-related space missions, the agency has structured the current inquiry to solicit input on a broader array of ISAM-related issues aimed at bringing its rules in line with broader national policy goals and rapidly evolving technologies.

Launching New Rules

The FCC drafted its ISAM NOI to address decades-old spectrum allocation rules and licensing requirements that do not account for the number or breadth of activities and materials needed for ISAM missions. In particular, the NOI seeks information on:

- **Spectrum needs of ISAM missions.** The FCC seeks comment on the "typical" spectrum usage involved in ISAM missions. The FCC is particularly concerned with how these usages interact with other international and U.S.-based frequency allocations. For example, the FCC has previously licensed some ISAM missions under part five of the FCC's rules, which merely grants an "experimental" license and prevents the licensee from claiming interference protection from other authorized spectrum users. The FCC also intends to consider comments in previous rulemakings that suggested additional spectrum may be necessary to support ISAM missions.
- **Potential updates to the FCC's licensing process.** Currently, ISAM missions are licensed under part 25 (for commercial operations) and part five (for noncommercial operations) of the FCC's rules. Space stations, meanwhile, are licensed on a facilities basis (i.e., the license is associated with a specific radio station and the station includes accessory equipment for conducting communications). The FCC is considering whether to consolidate these licensing procedures as well as which current processes and procedures may need to be modified to better support ISAM missions.
- **Potential updates to the FCC's orbital debris mitigation and remediation rules.** The FCC already possesses rules for orbital debris mitigation that apply to all space station operators, including ISAM missions. However, ISAM missions present new risks and activities outside of the current mitigation framework. The FCC, therefore, seeks comment to determine the nature and scope of these risks and how to best address them.

The FCC is also interested in technological advancements in debris remediation and whether active debris removal should be part of the requirements for an operator's orbital debris strategy.

- **Ancillary considerations for ISAM missions.** In addition to the specific issues outlined above, the FCC seeks comment on other ancillary considerations, such as whether it may license ISAM missions beyond Earth's orbit, what role (if any) it should have in ensuring ISAM missions benefit the public interest, and how it can facilitate further innovation and investment in ISAM.

- **The impact of the discussed changes on digital equity and inclusion.** Additionally, the FCC seeks comments on how the topics of this NOI affect diversity, equity, inclusion, and accessibility and its legal authority to address them.

The scope of this NOI and a recent, sharp increase in agency staff dedicated to reviewing space-related matters potentially portends a large-scale shake-up of the FCC's existing space-related rules, especially in the areas of licensing, spectrum allocation, and orbital debris mitigation and remediation that are likely to affect all ISAM missions. Based on prior proceedings, the extent to which ISAM-related entities must assist with orbital debris mitigation and remediation, in particular, is likely to be a hot-button issue yet again and may have a significant impact on the cost of conducting future ISAM missions.

Initial comments will be due 45 days after the NOI is published in the *Federal Register*, and reply comments will be due 30 days after the initial comment deadline.

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