

Satellite Industry Association
Part 25 FNPRM – Presentation – September 17, 2015

ITU Filings for GSO and NGSO FSS Space Stations

- SIA supports the FCC proposal to enable the FCC to file with the ITU an operator proposal for a GSO space station for non-planned FSS bands before requiring a full space station application to be filed.
- FCC should expand this proposal to permit ITU filings prior to the license application for NGSO operations in non-planned FSS frequency bands, and for NGSO and GSO operations in frequency bands beyond those allocated to the FSS.
- Current ITU filing practice is inconsistent with the public interest.
 - US applicants are disadvantaged because they must publicly disclose their space station plans in great detail before the FCC will file with the ITU.
 - Operators have a disincentive to pursue U.S. licensing of new satellite systems.

Milestones and Bonds

- FCC should simplify the showing for construction commencement.
 - An adequate showing should be signed by both the satellite licensee and an independent manufacturer and should include such evidence as a picture of the satellite's communications panel or primary structure.
- FCC should simplify the critical design review ("CDR") milestone.
 - Routine submission of CDR documentation unduly prolongs milestone review and creates unnecessary risk that highly sensitive commercial information could be inadvertently disclosed.
 - An adequate showing should be signed by both the satellite licensee and an independent manufacturer and should include such evidence as the CDR meeting agenda, list of participants, and when and for how long the CDR team met.
- Milestone compliance filings should be deemed granted if not acted upon within 60 days of filing.
- The FCC should not increase the existing bond amount.

Smallsats

- SIA urges the Commission to initiate a separate proceeding to address the regulatory issues that small satellites pose, and is considering filing a separate petition for rulemaking on this issue.

Earth Station Technical and Licensing Rules

Overarching Goals

- SIA members seek to bring new products to market faster. New technologies offer exciting opportunities for the satellite industry to serve new markets, and to serve existing markets with improved services. Overly stringent technical standards hamper flexibility and delay licensing and deployment (because of the need to obtain waivers).
- The technical rules should be simplified and, in some cases, relaxed. The satellite industry has reduced interference through greater cooperation and technological advances.
- The changes proposed by SIA will not present a materially greater risk of harmful interference.

Specific Proposals

- 25.209 should be modified to focus on general antenna technical compliance, rather than GSO specific compliance. This will allow testing entities to verify 25.209 compliance without knowledge of the operational use of the antenna.
- SIA supports FCC's efforts to change and align the allowed excess of the routine envelopes for emissions. SIA has clarified that it supports that FCC's proposal that the excess off-axis gain in 25.209 be allowed to exceed the mask over 10% of the *entire* angular range.
- The FCC should modify the off-axis EIRP density mask for conventional GSO Ka-band antennas (25.138) and conventional Ku-band antennas (25.218, 25.222, 25.226 and 25.227) by removing the "wings" that begin at 19.1° and end abruptly at 48°.
- There should be no cross-polarization mask beyond 7°.
- There should be no minimum earth station diameter requirements for routine application processing. Such requirements will put state-of-the-art technologies at a regulatory disadvantage.
 - Earth station terminal performance, regardless of size, should be the only relevant criteria for licensing.
 - Operators are confident that coordination, rather than regulatory mandates, will adequately address any problems with mis-pointing.
 - In all events, there should be no minimum antenna size for GSO FSS earth stations that automatically track the target satellite, and have appropriate pointing error and shut-off mechanisms.
- SIA clarifies that its proposed changes to Part 25 were not intended to foreclose the possibility, pursuant to Section 25.209(f), of licensing non-conforming NGSO FSS earth stations that do not cause unacceptable interference. SIA is filing an ex parte on this issue.

- The Commission's proposals in the FNPRM regarding the minus $10\log(N)$ formula are problematic and would disrupt existing operations.
 - Spot beam satellites have been operating for some time and no problems have been identified to date with the current definition of $N = 1$ for TDMA and FDMA.
 - Aggregate off-axis EIRP density from co-frequency earth stations in each target satellite receiving beam should meet the 25.218 and 25.138 off-axis EIRP density masks.
 - SIA has committed to provide the Commission with additional documentation to support our position on the $10\log(N)$ issue, and will do so as soon as possible.

- The 1 dB limit below the routine off-axis EIRP limits should be eliminated because it is unnecessary and could have a serious impact on network performance.