



PUBLIC NOTICE

Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

News Media Information 202 / 418-0500
Internet: <http://www.fcc.gov>
TTY: 1-888-835-5322

International Bureau Satellite Division Information:

Clarification of 47 C.F.R. § 25.140(b)(2)
Space Station Application Interference Analysis
Public Notice No: SPB-195
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The Commission requires all applications for space station licenses to be substantially complete when they are filed. Applications that are not substantially complete are returned to the applicant without further processing.¹ The Commission's Part 25 Rules set forth various information requirements that applicants must provide in their space station applications.² In particular, for applicants requesting launch and operating authority for space stations in the Fixed-Satellite Service (FSS), Section 25.140 of the Commission's rules requires, among other things, an interference analysis.³ The interference analysis must demonstrate that the proposed FSS satellite system will be compatible with the Commission's two-degree orbital spacing environment.⁴ In this Public Notice, we seek to provide guidance and to clarify the types of information that FSS space station applicants must include in their applications to meet the interference analysis requirements of § 25.140(b)(2).

The requirements of § 25.140(b)(2) may be met by either of the following methods:

1. For FSS satellite systems operating in Ka-frequency bands subject to §25.138,⁵ the interference analysis must include the minimal data requirements listed in

¹ See e.g., Amendment of the Commission's Space Station Licensing Rules and Policies, *First Report and Order and Further Notice of Proposed Rulemaking*, IB Docket No. 02-34, 18 FCC Rcd 10760, 10852 (para. 244) (2003), citing Amendment of the Commission's Space Station Licensing Rules and Policies, *Notice of Proposed Rulemaking*, IB Docket No. 02-34, 17 FCC Rcd 3847, 3875 (para. 84) 2002.

² See 47 C.F.R. Part 25.

³ 47 C.F.R. § 25.140(b)(2).

⁴ See §25.140, Licensing of Space Stations in the Domestic Fixed-Satellite Service and Related Revisions of Part 25 of the Rules and Regulations, *Report and Order*, CC Docket No. 81-704, FCC 83-184, 54 Rad. Reg. 2d 577 (released Aug. 16, 1983); *summary printed in* Licensing Space Stations in the Domestic Fixed-Satellite Service, 48 F.R. 40233 (Sept. 6, 1983) (*Two Degree Spacing Order*).

⁵ The frequency bands subject to §25.138 are 18.3-18.8 GHz (space-to-Earth), 19.7-20.2 GHz (space-to-Earth), 28.35-28.6 GHz (Earth-to-space), and 29.25-30.0 GHz (Earth-to-space).

§25.140(b)(2). This data includes: (1) link noise budget, (2) modulation parameters, and (3) overall link performance analysis for each type of r.f. carrier. The applicant, in addition, must provide an analysis demonstrating that the satellite system's Power Flux Density limits at the Earth's surface and the earth station off axis EIRP spectral density values will not exceed and can operate at those levels listed in §25.138.

2. For FSS satellite systems operating in Ku-frequency bands subject to §25.212(c),⁶ the interference analysis must include the minimal data requirements listed in §25.140(b)(2). This data includes: (1) link noise budget, (2) modulation parameters, and (3) overall link performance analysis for each type of r.f. carrier. The applicant, in addition, must provide an analysis demonstrating that the satellite's EIRP density and the earth station input power density values will not exceed and can operate at those levels listed in §25.212(c).
3. In all other cases, including cases where the FSS satellite system operates at levels exceeding those in §25.138 or §25.212(c), or for FSS satellite systems operating in bands subject to §25.138 or §25.212(c) that choose not to use the methods set forth in items 1 and 2 above, the interference analysis must also include the minimal data requirements listed in §25.140(b)(2). This data includes (1) link noise budget, (2) modulation parameters, and (3) overall link performance analysis for each type of r.f. carrier. The applicant, in addition, must provide an analysis showing the potential of interference into and from carriers of adjacent satellites with a spacing of 2 degrees.⁷ This analysis must include the r.f. characteristics of both interfering and interfered with carriers, as well as the resulting interference potential, such that the Commission or other applicants in the future course of consideration of these applications can complete the analysis.⁸

FSS space station applications received after the date of this public notice that do not contain an interference analysis meeting the requirements specified above will be dismissed as defective.⁹ Applications filed prior to this notice that do not meet these requirements may be subject to a Commission letter requesting that the applicant provide supplemental information on interference analysis that meets the requirements specified above. Failure to respond in a timely manner to the request for supplemental information may result in the dismissal of the application.

For further information, contact Robert Nelson at 202-418-2341.

⁶ The frequency bands subject to §25.212(c) are 11.7-12.2 GHz (space-to-Earth), 14.0-14.5 GHz (Earth-to-space).

⁷ See *Two-Degree Spacing Order*.

⁸ Submission of the tabular results generated by the Sharp, Adjacent Satellite Interference Analysis (ASIA) program meet the requirement for this analysis.

⁹ See 47 C.F.R. § 25.112.

