

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
Office of Engineering and Technology)	ET Docket No. 17-215
Announces Technological Advisory Council)	
(TAC) Technical Inquiry into Reforming)	
Technical Regulations)	

**COMMENTS OF
COMMERCIAL SMALLSAT SPECTRUM MANAGEMENT ASSOCIATION**

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I. INTRODUCTION

The Commercial Smallsat Spectrum Management Association (“CSSMA”) hereby respectively submits the following comments in response to the above captioned inquiry.

CSSMA is a trade association comprised of the world’s leading small satellite (“smallsat”) companies. CSSMA seeks to create the conditions for a coordinated, transparent, and expedited spectrum coordination process among commercial smallsat spectrum users, government users, and other satellite and terrestrial users, and to advocate and represent the members’ views on spectrum management and other policy matters that affect the smallsat community.

In particular, CSSMA is responding to the TAC’s inquiry into how the regulatory process can be made more efficient and timely. Numerous CSSMA members have been through the Part 5¹ and Part 25² licensing processes and the comments below are informed by this first-hand experience.

II. SHARED BAND COORDINATION PROCESS

CSSMA members have had experience filing for licenses in shared frequency bands allocated to both Federal and non-Federal services in the US Table of Frequency Allocations (the “US Table”).³ These shared bands are extremely critical to smallsat companies as they are among the limited available spectrum in the US Table capable of being used for telemetry, tracking, and command (“TT&C”) and data downlinks. US Federal agencies are also using these shared bands for critical functions and must be coordinated with. The process as it exists today

¹ See 47 C.F.R. § 5.

² See 47 C.F.R. § 25.

³ See 47 C.F.R. § 2.106.

is governed by 47 C.F.R. § 25.217(b)(2),⁴ 47 C.F.R. § 25.142(b)(2)(ii), and practices and procedures developed between the National Telecommunications and Information Administration (the “NTIA”) and the Federal Communications Commission (the “Commission”) when not covered in the rules and standards in the applicable regulations.

47 C.F.R. § 25.142(b)(2)(ii) states the following:

The Commission will use its existing procedures for liaison with NTIA to reach agreement with respect to achieving compatible operations between Federal Government users under the jurisdiction of NTIA and non-voice, non-geostationary Mobile-Satellite Service systems (including user transceivers subject to blanket licensing under §25.115(d)) through the frequency assignment and coordination practices established by NTIA and the Interdepartment Radio Advisory Committee (IRAC). In order to facilitate such frequency assignment and coordination, applicants shall provide the Commission with sufficient information to evaluate electromagnetic compatibility with the Federal government use of the spectrum, and any additional information requested by the Commission. As part of the coordination process, applicants shall show that they will not cause unacceptable interference to authorized Federal government users, based upon existing system information provided by the Government. The frequency assignment and coordination of the satellite system with Federal Government users shall be completed prior to grant of authorization.⁵

In practice, the process today built on these rules is slow, lacks certainty, and is unduly burdensome on both the Federal and non-Federal participants. CSSMA, based on the experience of its members, has the following recommendations for improving this process in order to create a transparent and expedited spectrum coordination process.

a. Initiation

Today the initiation of the NTIA/Commission coordination process begins after a Part 25 application has been placed on public notice and the public notice period ends. It is often the last step in a licensing application and can be a lengthy process starting after what can also be a lengthy public notice period, resulting in an overall long Part 25 licensing process.

⁴ 47 C.F.R. § 25.217(b)(2) (“In addition to the requirements set forth in paragraph (b)(1) of this section, the Commission will coordinate with the [NTIA] regarding the operations of any licensees authorized to operate in a shared government/non-government frequency band, pursuant to the procedure set forth in §25.142(b)(2)(ii).”).

⁵ 47 C.F.R. § 25.142(b)(2)(ii).

In recent years, there are more non-Federal users of these shared bands. A system of serial coordination, where Federal coordination follows coordination amongst non-Federal users, is likely adding new or repeat burden to the dockets for the NTIA, Commission, Federal agencies, and non-Federal applicants. For example, an applicant might agree with non-Federal users that 402.7 MHz is an acceptable uplink, but then find during NTIA coordination that it is not, but that 449.75 MHz can be coordinated. 449.75 MHz would then need to be refiled in an application and go back through the public notice and coordination process with non-Federal users, who may now take issue with the application.

CSSMA believes it would be far better to run both coordination processes simultaneously and at the outset of the Part 25 licensing process. This change would likely speed up US license applications and reduce repeat burden on the Federal agencies.

CSSMA also believes that pre-coordination, particularly with Federal agencies, is advisable even before a formal application is filed. Pre-coordination can add an informal period of consideration and lengthen the time that Federal agencies have to consider a license application. CSSMA has an interest in fostering that pre-coordination among Federal and non-Federal users.

b. Information for Compatibility Analysis with Federal Government Use is not Available

47 C.F.R. § 25.142(b)(2)(ii) provides that “applicants shall provide the Commission with sufficient information to evaluate electromagnetic compatibility with the Federal government use of the spectrum, and any additional information requested by the Commission.”⁶ As a practical matter, this can only be done today in an iterative and time-consuming process for the Commission, Federal, and non-Federal users.

The first issue is that for any given shared band, the Federal agencies users’ systems of potential concern and appropriate contacts are not available. One option is to refer to the NTIA Federal Government Spectrum Compendium (the “Compendium”).⁷ Unfortunately, the Compendium is often out of date (last updated in December 2015 for 225 MHz to 5 GHz), not comprehensive (*i.e.*, stops at 7.125 GHz), and lacks many important details needed for compatibility studies. To learn more information about the Federal use of the bands, it is often difficult to determine and find contact information for the appropriate spectrum managers to discuss systems of concern and the potential for compatibility in the shared bands. The practice today generally requires waiting for the NTIA to flow back consent or non-consent from the Federal agencies, and in the case of non-consent, the applicant must then seek out the concerns of the applicable agencies, sometimes even then without full contact information.

⁶ 47 C.F.R. § 25.142(b)(2)(ii).

⁷ See *Federal Government Spectrum Use Reports 225 MHz – 7.125 GHz*, NTIA, <https://www.ntia.doc.gov/other-publication/2017/federal-government-spectrum-compendium> (last visited Oct. 26, 2017).

CSSMA believes that the Commission should be informed by the NTIA of each band that requires coordination with a Federal agency and the point of contact for that agency. This information could then be provided to non-Federal applicants early in their licensing process so that they can proactively reach out and attempt to gain an understanding of the system of concern. Such a process would facilitate a better understanding of what analysis would need to be prepared and allow that analysis to be submitted along with a Part 25 licensing application. Ideally, this information should be published publicly in the same manner as the Compendium, namely by frequency band. Furthermore, the information should be comprehensive, updated frequently and include contact information.

Another issue is that the Commission and NTIA coordination process does not require the full license application to be sent to NTIA and then on to Federal agencies. It is our understanding that only a one-page summary goes to the agencies. It would be useful if the full application were sent by the Commission to all implicated Federal agencies. Alternatively, with comprehensive contact information for the Federal agencies, the non-Federal applicant could send its full application to the contacts directly.

c. No Timeframe for Actions

47 C.F.R. § 25.142(b)(2)(ii) provides that “[t]he frequency assignment and coordination of the satellite system with Federal Government users shall be completed prior to grant of authorization.”⁸ However, there is no timeframe on decisions under the NTIA coordination process. This can cause consternation for both the Federal agencies and non-Federal applicant when there is urgency to complete analysis. For small companies, large delays through the process can quite literally “run the clock out” on a commercial company’s existence. A welcome change would be to introduce a required timeline for submissions and rebuttals within the overall coordination process, accelerating the procedure and providing more certainty.

d. Summary

There are a number of changes that could be made to 47 C.F.R. § 25.142(b)(2)(ii) to make the NTIA coordination process more workable for both Federal and non-Federal users in shared bands. These include:

- Run the NTIA coordination process at the outset of the Part 25 licensing process;
- The Commission should be informed by the NTIA for each band which a Federal agency needs to be coordinated with and the point of contact for that agency. Points of contact should be provided to applicants early in their licensing process so that they can proactively reach out and attempt to gain an understanding of the system of concern and what analysis would need to be prepared, with that analysis

⁸ 47 C.F.R. § 25.142(b)(2)(ii).

then being submitted along with a Part 25 licensing application. Ideally this information would be publicly available, comprehensive, and frequently updated.

- Full applications should be sent by the Commission or the applicant (if they have sufficient contact information) to all implicated Federal agencies.
- Required timeline for submissions and rebuttals within the overall coordination process, providing more certainty and speed to the process.

All of the above would provide an improved level of efficiency, transparency, and certainty that is in the public interest.

III. ITU FILING PROCESS

CSSMA members expressed some frustration with the ITU Advanced Publication Information and Notification procedures. In particular, there is not a clear understanding of the timing and status of such filings as they make their way through the process to publication by the ITU. It is understood these filings are critical in the international community for the coordination of spectrum, and space operators rely on the ITU databases for such information (*i.e.*, the ITU Space Network Systems Online tool). A particularly important aspect is the publication of the space station in the Master Register (“MIFR”), which establishes a right to international recognition of the frequency assignments.⁹ Of particular interest, is the date of bringing into use for beams within the ITU database, which is used to establish a priority date for the satellite beams, which may be important in establishing coordination agreements with other operators in the band.¹⁰ Therefore, CSSMA members are interested in seeing the progress of filings as they make their way through the ITU publication procedures.

Some difficulties arise when the operator seeks status of the ITU filing process as there is no online source for the information until it is published in some way by the ITU. Apart from a specific dialogue with Commission staff, it is difficult to know if the ITU files (*i.e.*, SpaceCap) have been accepted by the Commission and subsequently transmitted to the ITU and, furthermore, any status at the ITU concerning acceptance of the ITU filing and progress towards any public notice. Therefore, CSSMA has the following recommendation for improving this process:

- a. Establish improved communication guidelines between the Commission and the space station applicant. Changes could include the creation of an online tool within MyIBFS that provides the status and progress of ITU submissions. An example of a status format is the MyIBFS Application Report WR07 page where the application material and dialogues among the Commission, applicants, and other parties are clearly available under the “Other filings related to this application (Petitions, comments, etc),” “Public Notice List,” and “Attachment Menu” links.

⁹ See ITU Radio Regulations, Article 8, Section 3.

¹⁰ See ITU Radio Regulations, Article 8, Section 5.

- b. Update the Commission regulations to specify the communication guidelines. CSSMA proposes an addition to the § 25.111 rule that guides the Commission to some level of progress status of these filings.¹¹ Appropriate information could include interactions outlined in ITU Radio Regulations 9.1 through 9.5.¹²

IV. STREAMLINING GROUND STATION RULES

By streamlining the ground station licensing process and technical showings required in 47 C.F.R. § 25.115, the Commission can reduce undue administrative burden for entities applying for authority to operate ground stations associated with smallsat operations and the Commission staff processing those requests.

Both applicants and Commission staff have difficulties on their respective sides during the mentioned ground station licensing process. Applicants are often trying to deploy a number of the same antennas at various locations across the United States at the same time but have to spend many hours unnecessarily duplicating information under the current iteration of FCC Form 312 and Schedule B. On the other side of the application process, Commission staff have to spend hours parsing through an operator's simultaneously pending applications, which may only have minor differences (*i.e.*, location details) amongst the stations.

To accommodate the quick growth of smallsat-related ground stations and for more effective application processing, the Commission should streamline the ground station licensing rules.¹³ A quick-fix solution could include instituting an application form and grant process similar to the Commission's streamlined Form 312EZ process, which is applicable to C-, Ku-, and Ka-band operators seeking to deploy similar antennas.¹⁴ These Form 312EZ applications require limited showings and are granted thirty-five days after the date of the "accepted for filing" public notice, provided no objection is filed during the 30-day public notice period.¹⁵ Use of a similar form and grant process is sensible. Smallsat operators' space station license grant conditions, based out of the NTIA coordination and/or public notice processes, usually protect those concerned Federal or non-Federal operators' interests on orbit and on the ground. Additionally, these concerned operators typically do not comment during smallsat-related ground station license application processes, showing that a streamlined process may be feasible and is in the public interest.

¹¹ See 47 C.F.R. § 25.111.

¹² See ITU Radio Regulations, Article 9, Sections 1-5.

¹³ The Commission has previously provided different licensing methods for other ground station operations due to similarity in the ground stations deployed. See, e.g., 47 C.F.R. § 25.115(c)(1), (c)(3), (d), (f); 47 C.F.R. §§ 25.221, 25.222, 25.226-25.227.

¹⁴ See 47 C.F.R. § 25.115(a)(2); see also *Section 1: FCC Form 312EZ Qualification Questions*, FCC, <https://licensing.fcc.gov/myibfsdocs/HelpGuide4.htm> (last visited Oct. 26, 2017).

¹⁵ See 47 C.F.R. § 25.115(a)(3).

V. CONCLUSION

CSSMA believes that updates to the shared band coordination process, ITU filing process, and ground station filing rules could make such processes more efficient and timely for the reasons stated above.

Respectfully submitted,

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