

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Proceeding to Address) **RM-9740**
Satellite Network)
Unwanted Emissions)

To: The International Bureau

COMMENTS OF FINAL ANALYSIS COMMUNICATION SERVICES, INC.

These comments are submitted on behalf of Final Analysis Communication Services, Inc. (“Final Analysis”), by its attorneys, in the above captioned proceeding on the issue of satellite network unwanted emissions.¹ Final Analysis is licensed to operate a low earth orbit satellite system in the Non-Voice Non-geostationary Mobile Satellite Service (“NVNG MSS”).²

The issue of out-of-band emissions (“OOB”) is important to every satellite system operator because the out-of-band emissions criteria have a major effect on system design. Furthermore, the OOB criteria affect the ability of a licensee to implement a satellite system that effectively utilizes the frequency allocation in which it must operate. Final Analysis is currently implementing its NVNG MSS system, and must utilize the existing criteria in order to meet the satellite construction and launch milestones imposed by the Commission in its license. However, the basic issue raised in this proceeding is whether both broadband and narrow-band satellite systems should be governed by the same OOB emission criteria in the future.

¹ Public Notice DA 99-2601, released November 19, 1999.

² Final Analysis, Order and Authorization, 13 FCC Rcd 6618 (1998) (“Final Analysis License”), Application for Clarification and Review, filed May 1, 1998.

Discussion

Domestic and international coordination requires satellite operators to prepare extensive analyses for sharing with other users of the same band as well as systems in adjacent channels. Systems are designed and implemented on the basis of these and other analyses. Once a system is implemented, new users should not be able to operate on the basis of different criteria which will impact incumbent adjacent band systems in ways not considered by them in their initial system design. Therefore, Final Analysis believes that the primary consideration in this proceeding must continue to be the protection of existing systems. While broadband systems may have different roll-off characteristics, they may also require more operating satellites in the band, thereby creating even stronger out-of-band interference to other users.

Our comments on the specific questions identified in the Public Notice are as follows:

1. The generic out-of-band mask should be identified in PFD (power flux density) units. Although the other measurement units mentioned may be appropriate for other purposes, any other type of measurement will eventually have to be converted to a PFD value in order to be useful to the adjacent band user. We would further recommend that the units be in $\text{dBW/m}^2/4\text{kHz}$, as that is the more common PFD value for satellite systems. Finally, the use of a PFD value will account for the different orbital altitudes used by various satellite systems. The mask should also accommodate single and multiple entry limits.
2. Final Analysis believes that any established limits for OOB emissions should be standard for all users. This is the only method whereby a user can be assured of protection from interference caused by out-of-band emissions from an adjacent band system. The operators of both narrow and broadband systems should have the same obligation to protect adjacent band users.

3. Authorized bandwidth rather than necessary bandwidth should be the baseline definition when determining the mask. Although there is no objection per se to computing the mask from the necessary bandwidth, it is easier to standardize the OOB limitation procedure if every system identifies the mask from the authorized bandwidth. In addition, a user will not be able to know the necessary bandwidth of a particular adjacent system without obtaining that information from its operator, whereas authorized bandwidth can be more easily determined from publicly available information.
4. Without further analysis, Final Analysis is not prepared to comment on whether one generic mask for all space systems is the best approach. On the surface such an approach may have some merits. However, it is important to ensure that (i) multiple satellite systems can be accommodated with a single mask approach, and (ii) that system designs claiming to meet the mask can be validated by both the regulatory authorities and systems potentially affected by such an entrant to the band.
5. The Commission appears to be asking whether as a general matter Part 25 of the Rules should follow recommendations of ITU-R approved by the ITU. We do not agree that the FCC should commit to a policy of agreeing in advance to ITU-R Recommendations. Any specific ITU-R Recommendations ultimately adopted on this issue would have to be carefully analyzed within the Commission's policy-making process to determine their applicability domestically.

Conclusion

Final Analysis agrees that an examination of the appropriate measurements of satellite out-of-band emissions is timely, and supports the efforts of the Commission to seek comment on the issue. However, a determination by the Commission of whether any specific changes to the current provisions of Part 25 of the Rules are warranted should be made only after a full analysis has been conducted of a complete record.

Respectfully submitted,

/s/

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December 20, 1999

CERTIFICATE OF SERVICE

I, Beatriz Viera, do hereby certify that a true and correct copy of the foregoing **Comments of Final Analysis Communication Services, Inc.** was served, by the method so described, to the parties listed below:

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