



October 27, 2006

*VIA ECFS*

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth St., S.W.  
Washington, D.C. 20554

**Re: Part 25 Biennial Review of 2000 Third FNPRM, IB Docket No. 00-248**

Dear Ms. Dortch:

On Thursday, October 26, 2006, the Satellite Industry Association (“SIA”) met with John Giusti, Roderick Porter, Scott Kotler, Robert Nelson, Gardner Foster, and Steve Spaeth of the International Bureau. SIA representation included: Carolyn Roddy, Director of Regulatory Affairs of SIA, Steve Doiron of Hughes Network Systems, Jose Albuquerque of Intelsat, and Audrey Allison and Alan Rinker of Boeing. The SIA representatives discussed the Association’s position with respect to the Part 25 Biennial Review of 2000 Third FNPRM. As shown on the attached PowerPoint slides provided to the group, the SIA presentation concerned EIRP density mask, analog video transmissions, and contention protocols.

One electronic copy of this Notice is being submitted to the Office of the Secretary of the FCC in accordance with Section 1.1206(b)(1) of the Commission’s Rules.

Sincerely,

/s/

Carolyn Tatum Roddy  
Director of Regulatory Affairs  
Satellite Industry Association

cc: John Giusti  
Roderick Porter  
Scott Kotler  
Robert Nelson  
Gardner Foster  
Steven Spaeth



# Part 25 Biennial Review of 2000 (3<sup>rd</sup> FNPRM)

## SIA MEMBER COMPANIES





## Part 25 Biennial Review of 2000 (3<sup>rd</sup> FNPRM)

- SIA is here today to present its views on the 3<sup>rd</sup> FNPRM on the 2000 biennial review of Part 25 (IB Docket No 00-248) to the International Bureau.
- The 3<sup>rd</sup> FNPRM was released on 15 March 2005 (Comments due 6 Sept 2005, reply comments 6 Oct 2005).
- The 3<sup>rd</sup> FNPRM was a complex document, addressing many important sections of Part 25 dealing with earth station licensing.



## Part 25 Biennial Review of 2000 (3<sup>rd</sup> FNPRM)

- SIA commented on several parts of the 3<sup>rd</sup> FNPRM. However, there were three areas that had particularly significant impact on SIA members.
  - EIRP density mask
  - Analog video transmissions
  - Contention Protocols
- SIA's aim for today is to summarize the three issues above and to elaborate on SIA's view for each one.

## ISSUE 1 - EIRP Density Mask

- The current earth station licensing process looks separately at both antenna performance and power density at the antenna flange.
- The FCC's proposal was to simplify the processing of earth station license applications by reviewing the off-axis EIRP performance instead.
- SIA is generally supportive of the EIRP mask concept being proposed. However SIA is concerned that smaller antennas have larger pointing error. If applications are reviewed based on an EIRP mask that applies to all antenna sizes, there could be more adjacent satellite interference (ASI) received from smaller antennas.
- In its comments, SIA recommended applying the proposed FCC EIRP mask for larger antennas (effective diameter of >70 cm for Ku band and 2.4 for C band). SIA proposed alternative mask that would apply to terminals using smaller antennas.

## ISSUE 2 - Analog Video

- The FCC noted in the FNPRM that there are no EIRP density limits in the rules applicable to analog video signals and proposed three options:
  - That analog video abide by the off-axis EIRP density limits for other types of analog signals;
  - That another mask be proposed; or
  - That analog video service be turned off within one year.
- SIA is of the view that none of these options should be adopted.
- SIA does not see either the applicability or the need for EIRP density limits for analog video.
- Signal off-axis EIRP changes continuously with time which is very different from digital PSK signals.

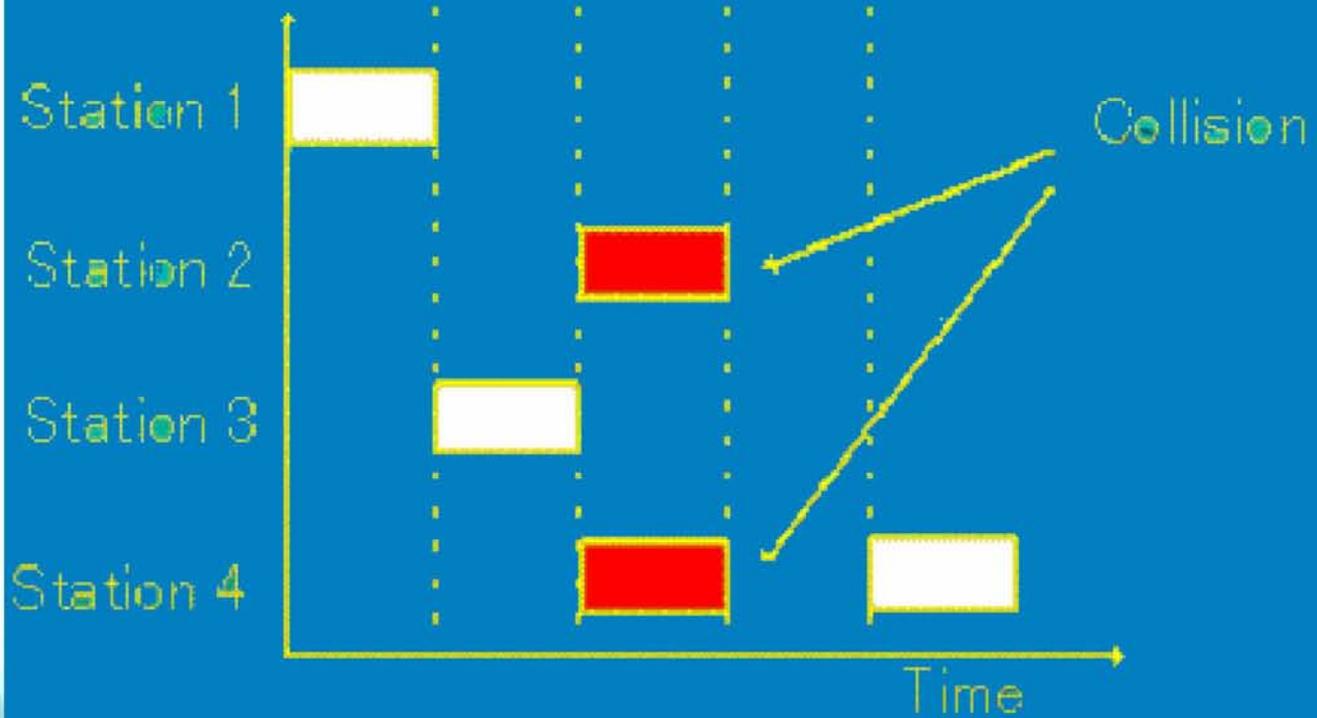
## ISSUE 2 - Analog Video (cont.)

- SIA notes that analog video has been around for a long time and current rules, combined with satellite coordination, have for years appropriately addressed the ASI from analog video.
- While analog video systems are slowly being withdrawn from service, many customers have large infrastructures based on analog video systems.
- The conversion is being done as the business environment requires it.
- SIA feels that there is no need for the FCC to act on this issue. The interference from analog video is not problematic to the industry and analog systems are progressively being removed from the market because of business and cost pressures.

### Background

- Contention protocols are used by some VSAT operators.
- It is a method used by VSAT terminals to dynamically request satellite resources.
- Occasionally, packets from different terminal will collide at the satellite.
- If request doesn't get through, the VSAT waits a random amount of time and tries again.
- The result is that interference from contention channels is statistical in nature.
- If a VSAT operator overloads a contention channel, its throughput drops quickly.
- The FCC proposed an EIRP mask for systems using contention protocols that attempts to limit increases in off-axis EIRP.

## Slotted ALOHA

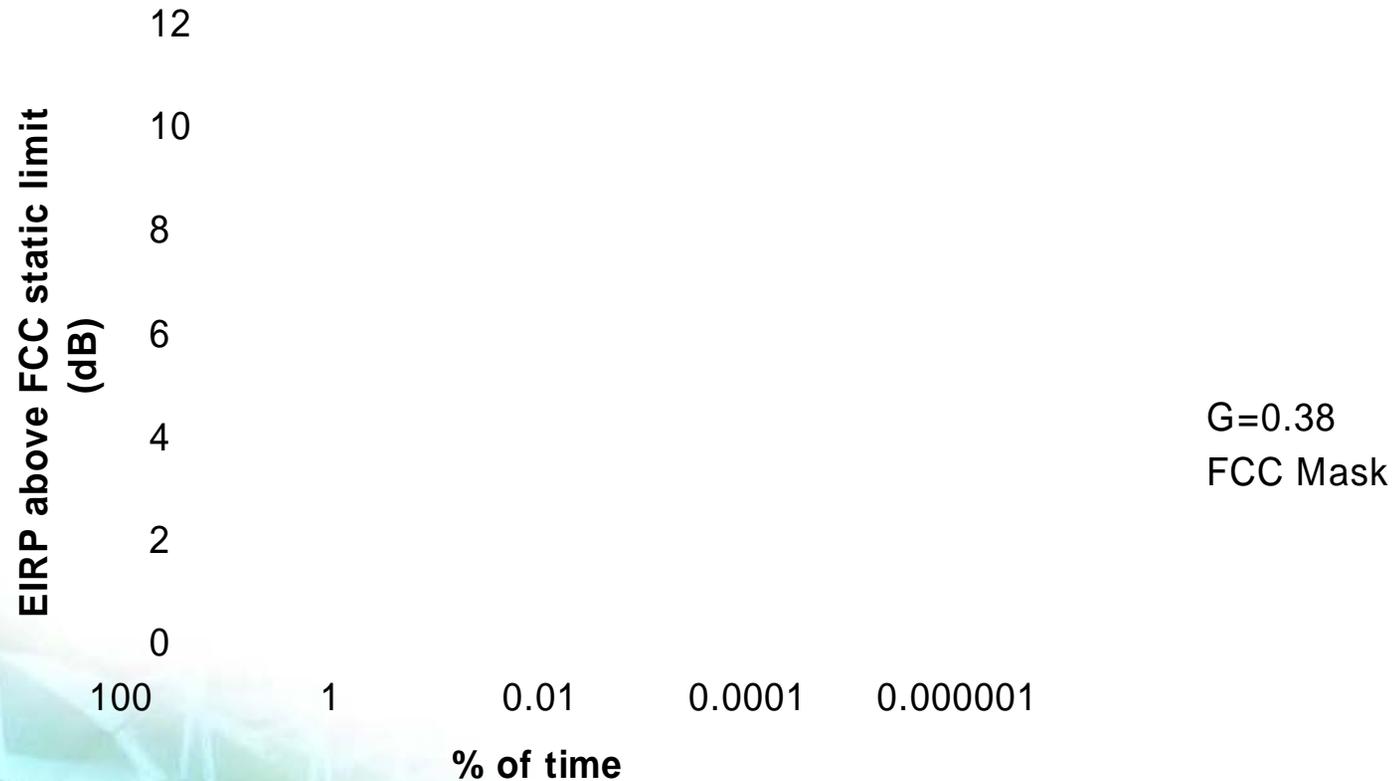


### Discussion

- In reviewing the FCC proposed mask, SIA notes that it does not match the physics of contention protocol links. This makes the FCC mask additionally conservative.
- SIA has reviewed the proposed FCC mask and found that it would prevent most real life VSAT system from operating. The traffic level which would meet the mask would be too low to allow effective allocation of satellite resources.
- SIA has studied the impact of current links using contention protocols and found that in many cases, they impact availability less than would a static link!! Interference victims would actually receive more protection from contention protocol systems that comply with the FCC mask than they would from a comparable static link.
- This coincides with the fact that there have been no recorded complaints against contention protocol links. This access method has been in use for over 20 years. Over 600,000 VSATs in the USA now use contention protocols.

# Issue 3 - Contention Protocols (cont)

## Typical Slotted Aloha Performance vs FCC Proposed Mask ( $G = 0.38$ )



### Conclusion

- Adopting the FCC mask would have a significant impact on the US VSAT industry.
- The proposed rules attempt to fix something that is not broken. There have been no interference complaints and analysis shows that in many cases, contention protocol links are better neighbors than a static link.

### Summary

- SIA supports the FCC's proposal to review earth station license applications based on an off-axis EIRP mask. However, in finalizing its rules, the FCC needs to take into account the impact of the pointing error of small antennas.
- SIA does not believe that new rules are needed regarding analog video transmissions. Systems using this modulation have been in operation for years and a combination of coordination and the FCC's rules have led to their successful operation with other types of FSS traffic. Analog video systems are progressively being replaced by more efficient digital systems when it makes economic sense to do so. Imposing new rules on such a mature system or accelerating its demise would cause hardship to the FSS industry and FSS customers.

### Summary (cont)

- The FCC's proposal to limit the contention protocol channels would seriously impact both VSAT operators using this access method as well as the over 600,000 VSATs in the USA that currently use contention protocols.
- SIA's analysis of contention protocol systems shows that these systems provide an acceptable impact to availability and often impact availability less than would a static link. The lack of complaints confirms through experience what was demonstrated in theory. SIA believes that no rules are needed to govern VSAT systems using contention protocols.