

November 15, 2005

**Via Electronic Filing**

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

**Re: IB Docket No. 01-185**  
**Written *Ex Parte* Submission**  
**Flexibility for Delivery of Communications by Mobile Satellite Service**  
**Providers in the 2 GHz Band, the L Band, and the 1.6/2.4 GHz Bands**

Dear Ms. Dortch:

Mobile Satellite Ventures Subsidiary LLC (“MSV”) hereby responds to certain claims made by Inmarsat Ventures Ltd. (“Inmarsat”) in its Reply<sup>1</sup> filed in the above-captioned proceeding regarding (i) the inability of its new satellites to withstand aggregate emissions from MSV’s satellite-only mobile earth terminals (“METs”); (ii) the adoption of a reference distance for calculating the intermodulation threshold used to trigger notification of base station operations; and (iii) the ATC base station power limits adopted in the *2005 ATC Order*.<sup>2</sup>

*Inmarsat’s New Satellites Can Withstand Aggregate Emissions from MSV’s METs.* In the above-captioned proceeding, Inmarsat is asking the Commission to reverse its decision and impose a limit on the number of ATC mobile terminals permitted to simultaneously transmit over the systems of L band MSS operators.<sup>3</sup> Inmarsat claims that a limit is necessary to protect Inmarsat satellite receivers from overload interference from the aggregate emissions of ATC mobile terminals.

As an initial matter, MSV emphasizes that a restriction on the number of simultaneously transmitting ATC mobile terminals to protect Inmarsat satellite receivers is a solution in search of a problem because MSV is unlikely to approach the 150 million customers needed to reach the

---

<sup>1</sup> See Inmarsat Ventures Ltd, Reply, IB Docket No. 01-185 (August 17, 2005) (“*Inmarsat Reply*”).

<sup>2</sup> See *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L Band, and the 1.6/2.4 GHz Bands, Memorandum Opinion and Order and Second Order on Reconsideration*, FCC 05-30 (February 25, 2005) (“*2005 ATC Order*”).

<sup>3</sup> See Inmarsat Ventures Ltd, Petition for Partial Reconsideration and Clarification, IB Docket No. 01-185 (May 13, 2005) (“*Inmarsat Petition*”), at 9.

limit that would potentially harm Inmarsat in the near future.<sup>4</sup> Inmarsat's request is a bare attempt to saddle MSV with additional unnecessary regulations that will serve no purpose other than to impede MSV's ability to attract financing for its next-generation system.

In opposing this proposal when Inmarsat first made it, MSV demonstrated that at the time the current L band coordination agreement was made, Inmarsat was well aware of the potential for the U.S. and Canadian-licensed L-band satellites to support more than 1,000 METs transmitting simultaneously, allowing for voice activation. Thus, given the 16 dBW maximum EIRP of these METs, there can be more than 46 dBW EIRP ( $16 + 10 \cdot \log(1000)$ ) launched toward space from current L-band METs alone. *MSV Opposition* at 9-10 and Technical Appendix. Inmarsat cannot simply dismiss these results when it was well aware of these system parameters at the time that the coordination agreements were made.

*A 600-Meter Distance for Calculating the Intermodulation Threshold Is Appropriate.* Inmarsat offers nothing new in its Reply to justify its request to use a 100-meter reference distance for calculating the signal level threshold used to determine when notification of base station operations must occur. Inmarsat does repeat once again its baseless claim that the Commission made a "finding" in the *2003 ATC Order* that it is reasonable to assume that Inmarsat METs will be located within 100 meters of an ATC base station. *Inmarsat Reply* at 6. The Commission never made such a finding in the *2003 ATC Order* or any other decision. In the *2003 ATC Order*, the Commission merely cited an ITU recommendation that predicted the amount of antenna discrimination between a base station and a MET if the MET were located 100 meters from the base station.<sup>5</sup> The Commission never stated or implied that it was reasonable to assume that an Inmarsat MET would commonly be located within 100 meters of an ATC base station. Indeed, the Commission could not have made such a "finding" because there was no evidence in the record to support it. Nor has Inmarsat provided any evidence on reconsideration to rebut the Commission's conclusion in the *2005 ATC Order* that Inmarsat METs are not likely to be used within urban areas, let alone within 100 meters of an ATC base station. *See 2005 ATC Order* ¶ 56. As MSV demonstrated in its Opposition, the use of a 600-meter reference distance in calculating the required signal level threshold is a reasonable balance between protecting Inmarsat METs and avoiding unnecessary regulatory burdens for MSS operators implementing ATC. *MSV Opposition* at 7-9.

*ATC Base Station Power Limits Should Reference a "Per 200 kHz" Carrier Bandwidth.* In its Opposition, MSV demonstrated how the Commission's use of a "per 200 kHz" reference

---

<sup>4</sup> See MSV, Opposition to Inmarsat Ventures Ltd. Petition for Partial Reconsideration and Clarification, IB Docket No. 01-185 (August 4, 2005) ("*MSV Opposition*"), at 9-10 and Technical Appendix.

<sup>5</sup> See *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L Band, and the 1.6/2.4 GHz Bands, Memorandum Opinion and Order and Second Order on Reconsideration*, 18 FCC Rcd 1962 (February 10, 2003), at ¶ 151 ("*2003 ATC Order*").

bandwidth specification for base station power levels was appropriate and consistent with the Commission's goal of accommodating ATC technologies that use carrier bandwidths wider than those of GSM. *MSV Opposition* at 5-6. While Inmarsat claims that ATC base stations using protocols with wider carrier bandwidths will transmit at a greater power than base stations using a GSM-based protocol, Inmarsat provides no evidence that this will result in harmful interference to its users. Indeed, given the Commission's conclusions that Inmarsat METs are unlikely to be used where ATC base stations will be located (*2005 ATC Order* ¶ 56), Inmarsat METs are more resistant to interference than the Commission previously assumed (*id.* ¶ 55) and can be made even more resistant in the future (*id.*), a new coordination agreement would result in more contiguous blocks of spectrum (*id.* ¶ 57), and Inmarsat can operate METs in the 1541.5-1547.5 MHz frequency band where ATC base stations are subject to stricter power limits (*id.* ¶ 57), it follows logically that any claimed increase in power resulting from wider carrier bandwidth technologies will go unnoticed by Inmarsat consumers.<sup>6</sup>

Despite Inmarsat's failure to demonstrate that use of wider carrier bandwidths will result in increased interference, MSV offered, as an additional safety valve against potential interference, to notify Inmarsat of any ATC base station using a protocol with a carrier bandwidth in excess of 200 kHz that will exceed an EIRP or power flux density ("PFD") of a baseline GSM-based base station and to accept an obligation to coordinate if Inmarsat could demonstrate that its METs are used continuously within the vicinity of the subject base station and suffer actual harmful interference from operation of the subject base station. *MSV Opposition* at 5-6.

In response, Inmarsat accuses MSV of impermissibly shifting the burden to Inmarsat to demonstrate that it will suffer interference. *Inmarsat Reply* at 2, 4-5. Inmarsat is wrong. The Commission carefully crafted its rules for base station EIRP and PFD limits to protect Inmarsat METs from harmful interference while accommodating newer technologies that use wider carrier bandwidths. The results of the Commission's analysis and extensive testing are reflected in the Commission's rules, which include a "per 200 kHz" reference bandwidth for base station EIRP and PFD. By limiting MSV to the EIRP and PFD limits specified in its rules, the Commission has already taken the steps necessary to protect Inmarsat from harmful interference. The safety valve MSV has proposed is an additional protection in the unlikely event Inmarsat's users suffer harmful interference despite the base station power limits specified in the Commission's rules. The type of safety valve MSV has proposed does not represent an impermissible burden shift as Inmarsat claims. Rather, it is a common means of interference mitigation that has been used by the Commission in the past and has been recently upheld on appeal.<sup>7</sup>

---

<sup>6</sup> See *Northpoint Technology, Ltd. v. FCC*, FCC 02-1194 (D.C. Cir. 2005) ("[T]here is a logical argument that if MVDDS increases that small number of interruptions—which the DBS providers do not contest the consumers do not notice now—to a level at which they still do not notice the interruptions, the 47 C.F.R. § 2.1 [defining 'harmful interference'] dictate that DBS service not be seriously degraded will be satisfied.").

<sup>7</sup> *Memorandum Opinion and Order and Second Report and Order*, 17 FCC Rcd 9614, ¶ 85 (2002) (adopting a "safety valve" that allows DBS operators to petition the FCC to revise EPFD

Ms. Marlene H. Dortch

November 15, 2005

Page 4

Please direct any questions regarding this matter to the undersigned.

Very truly yours,

/s/Jennifer A. Manner

Jennifer A. Manner

cc: Fred Campbell  
Emily Willeford  
John Branscome  
John Giusti  
Barry Ohlson  
Donald Abelson  
Howard Griboff  
Kathryn Medley  
Sean O'More  
Roderick Porter  
Cassandra Thomas

---

Footnote continued from previous page

limits for MVDDS operations if the DBS provider can “demonstrate a tangible detrimental impact on DBS caused by MVDDS operations”); *see Northpoint* (concluding that “through this safety valve, the FCC can ensure that MVDDS causes no harmful interference even if, contrary to the FCC’s predictions, operation under existing parameters produces noticeable service interruptions in some limited number of areas”).

## TECHNICAL CERTIFICATION

I, Dr. Peter D. Karabinis, Senior Vice President & Chief Technical Officer of Mobile Satellite Ventures Subsidiary LLC (“MSV”), certify under penalty of perjury that:

I am the technically qualified person with overall responsibility for preparation of the technical information contained in the foregoing. The information contained herein is true and correct to the best of my belief.

/s/Dr. Peter D. Karabinis

Dr. Peter D. Karabinis

Senior Vice President & Chief Technical Officer

November 15, 2005