# Before the Federal Communications Commission Washington, D.C. 20554

In the matter of	
Stratos Communications, Inc.	File No. SES-STA-20060310-00419 (Call Sign E050249)
Telenor Satellite, Inc.	File No. SES-STA-20060313-00430 (Call Sign E050276)
FTMSC US LLC )	File No. SES-STA-20060314-00438 (Call Sign E050284)
BT Americas, Inc.	File No. SES-STA-20060315-00445 (Call Sign E060076)
MVS USA Inc.	File No. SES-STA-20060316-00454 (Call Sign E050348)

#### REPLY TO OPPOSITION TO PETITION FOR CLARIFICATION

Mobile Satellite Ventures Subsidiary LLC ("MSV") hereby submits this Reply to the Opposition to its Petition for Clarification of the International Bureau's ("Bureau") May 12, 2006 decision granting the above-referenced requests for Special Temporary Authority ("STA") to operate Broadband Global Area Network ("BGAN") terminals using an uncoordinated Inmarsat satellite, Inmarsat 4F2 at 52.75°W.

In its Petition, MSV asked the Bureau to clarify some of the conditions imposed on the grants of the STA requests intended to help mitigate the harmful interference that will result to MSV's customers from Inmarsat's uncoordinated BGAN operations.<sup>1</sup> On June 19, 2006, Inmarsat Ventures Limited ("Inmarsat"), along with Telenor Satellite Inc., FTMSC US, LLC, BT Americas Inc., MVS USA, Inc., and Stratos Communications, Inc. (collectively, the "BGAN

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<sup>&</sup>lt;sup>1</sup> See Mobile Satellite Ventures Subsidiary LLC, Petition for Clarification, File No. SES-STA-20060310-00419 et al (June 12, 2006) ("MSV Petition") (attaching Letter from Ms. Jennifer A. Manner, MSV, to Ms. Marlene H. Dortch, FCC, File No. SES-STA-20060310-00419 et al. (May 26, 2006) at Exhibit A).

Distributors") filed a Joint Opposition to MSV's Petition.<sup>2</sup> As discussed herein, their objections to MSV's requested clarifications are baseless.

Condition 1. MSV requested that the Commission clarify that the condition limiting the "downlink EIRP densities" to a certain level is an aggregate limit. MSV Petition, Exhibit A at 1. Inmarsat concedes that this is an aggregate limit. Inmarsat et al Opposition at 2. As such, the Bureau should clarify this condition as requested. MSV, however, is concerned by Inmarsat's statement that an aggregate downlink EIRP limit is not necessary because Inmarsat will not illuminate a given geographic area with more than one co-frequency carrier as this would cause self-interference. *Id.* This statement demonstrates a fundamental and disturbing misunderstanding of the condition imposed by the Bureau, which warrants further clarification. The Bureau's intent in establishing an "aggregate" downlink EIRP density limit is to cap the EIRP coming down from a beam or beams used on Inmarsat 4F2, regardless of whether the beams cover the United States or whether the energy is transmitted via the skirt of the main lobe or the sidelobes of a number of beams that spill energy over the United States. Our understanding of the Bureau's condition is that it is intended to ensure that the narrow spot beams on Inmarsat 4F2 that reuse the frequencies coordinated for MSAT-1 and MSAT-2 outside of North America limit their aggregate co-channel reuse interference toward the coverage area of MSAT-1 and MSAT-2 to the levels coordinated for the Inmarsat 3F4 satellite at 54°W. The Bureau should promptly correct Inmarsat's misunderstanding to avoid interference to the operations of other L band MSS operators.

MSV also requested that the Bureau clarify that the aggregate uplink and aggregate downlink EIRP densities from all of Inmarsat's satellites, including Inmarsat 4F2, must not

<sup>&</sup>lt;sup>2</sup> See Inmarsat Ventures Limited et al., Joint Opposition to Petition for Clarification, File No. SES-STA-20060310-00419 et al (June 19, 2006) ("Inmarsat et al Opposition").

exceed the level that existed before the launch of Inmarsat 4F2. *MSV Petition*, Exhibit A at 1. Inmarsat avoids this issue by stating that the STAs pertain only to BGAN service and only to the Inmarsat 4F2 satellite. Thus, according to Inmarsat, there is no basis for extending limits to satellites that are not the subject of the STA requests. *Inmarsat et al Opposition* at 3. This clarification, however, is essential to ensure that operation of the uncoordinated Inmarsat 4F2 satellite does not result in interference to other L band operators. Inmarsat has proceeded to operate its new Inmarsat 4F2 satellite as well as other satellites in the United States without coordinating those satellites first with other L band operators.<sup>3</sup> Had Inmarsat coordinated these satellites with MSV, agreements would have been made to ensure that MSV would be protected from emissions from Inmarsat 4F2 as well as from the aggregate emissions from all of Inmarsat's other satellites operating over North America. Having failed to coordinate its satellites, Inmarsat cannot complain now if the Bureau attaches a condition intended to ensure that MSV is protected from interference from aggregate emissions of all of Inmarsat's coordinated and uncoordinated satellites.<sup>4</sup>

Conditions 2 and 5. MSV asked the Bureau to make clear that Inmarsat and the BGAN Distributors are jointly and severally responsible for immediately rectifying any interference caused by BGAN operations. MSV Petition, Exhibit A at 2. In addition, MSV asked the Bureau to explain that any action taken or expense incurred by Inmarsat as a result of operations pursuant to this STA is solely at Inmarsat's own risk. Id. In response, Inmarsat states that it has "ample incentive" to ensure that the BGAN Distributors comply with the STA conditions.

<sup>&</sup>lt;sup>3</sup> Inmarsat is operating uncoordinated satellites at 52.75°W, 98°W, 142°W, and 143.5°E.

<sup>&</sup>lt;sup>4</sup> While Inmarsat complains that the Bureau never imposed an aggregate EIRP density limit on the operations of MSV-1 and MSV-SA, Inmarsat never requested such a limit. In fact, Inmarsat never raised any objections to MSV's applications to operate MSV-1 and MSV-SA. The Bureau cannot be faulted for failing to adopt an interference limit when there was no record evidence to support such a limit. In any event, MSV has since surrendered its license for the MSV-SA satellite.

Inmarsat et al Opposition at 3-4. As the operator of the satellite used for BGAN service,
Inmarsat's own compliance with the STA conditions, especially the obligation to take immediate
action to rectify any interference, is essential to help mitigate the harmful interference from
uncoordinated BGAN operations. Given that Inmarsat has "ample incentive" to help the BGAN
Distributors comply with these conditions, it will not be burdened should the Bureau clarify that
Conditions 2 and 5 apply to Inmarsat as well.

Condition 3. MSV urged the Bureau to require each of the BGAN Distributors to submit a certification from Inmarsat declaring that Inmarsat has not and will not assign any unauthorized frequencies for operation of the earth stations covered by the STA. MSV Petition, Exhibit A at 2. Once again, Inmarsat claims that it has "every incentive" to ensure that the BGAN Distributors comply with this condition. *Inmarsat et al Opposition* at 4. As such, Inmarsat should have no concern with providing the BGAN Distributors with such a certification. Requiring such a certification will provide needed assurance to the Bureau, MSV, and the BGAN Distributors that Inmarsat is complying with this condition. There is precedent for such a requirement. For example, an applicant for a Fixed Satellite Service ("FSS") earth station that does not conform with the Commission's rules must submit with its application certifications from the operators of the satellites with which it intends to communicate demonstrating that all affected satellite operators have taken the non-routine operations into account in their coordination negotiations. 47 C.F.R. § 25.220. In adopting this requirement, the Commission explained that "since the earth station operator will be a customer of the target satellite operator, the target satellite operator has an incentive to obtain the certifications."<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> See Fifth Report and Order, 20 FCC Rcd 5666, ¶ 50 (March 15, 2005).

Condition 4. MSV requested that the Bureau specify a guard band of at least 50 kHz between the band edges of the carriers used by the BGAN service provider and the band edges of MSV's coordinated frequencies to mitigate harmful interference to MSV. MSV Petition, Exhibit A at 2. Inmarsat claims that this condition is unwarranted because it is unclear that 50 kHz is the appropriate guard band size. Inmarsat et al Opposition at 4-5. The fact is that BGAN operations are permitted only on a strictly non-interference and unprotected basis. As MSV explained in its Petition, its initial observation of experimental BGAN signals revealed that a minimum 50 kHz guard band is needed to protect MSV from interference. MSV Petition, Exhibit A at 2. While real world experience may demonstrate that a larger guard band is needed, specification of a 50 kHz guard band now in advance of coordination is a reasonable means to help mitigate harmful interference to MSV's customers. Inmarsat also complains that MSV is trying to "shift the entire operational burden of coordination to Inmarsat." Inmarsat et al Opposition at 5. Of course, MSV's request is not a substitute for coordination. The conditions attached to the STAs are temporary measures to minimize interference in the absence of a coordination agreement. Once Inmarsat takes the necessary steps to complete coordination of its satellite with MSV, the size and location of any guardbands can be determined more precisely.

Conditions 6, 7, and 10. MSV also urged the Bureau to explain that it expects Inmarsat to diligently conclude coordination of its Inmarsat 4F2 satellite with respect to the current and planned operations of MSV and MSV Canada before it can make a definitive determination that operation of the Inmarsat 4F2 satellite will not result in unacceptable interference and before it can grant the pending applications for full BGAN authority. MSV Petition, Exhibit A at 2-3. In response, Inmarsat claims that this condition is inappropriate because Inmarsat 4F2 is operating within the technical envelope coordinated with MSV. Inmarsat et al Opposition at 6. In fact,

this "technical envelope" simply does not exist because Inmarsat has not diligently coordinated all of its operations in order to establish such an envelope. The fact is that the key technical parameters of Inmarsat 4F2 used to support BGAN services, such as its proposed use of loaned frequencies, increased number of co-channel reuse beams, higher aggregate EIRP, and wideband carriers, have not been previously coordinated, thus making operation of Inmarsat 4F2 on a nonharmful interference basis relative to other L band systems unlikely.<sup>6</sup> Inmarsat also contends that this condition is unfair because it provides MSV with "sole control" over whether the Commission will ever grant full authority for BGAN service. *Inmarsat et al Opposition* at 6. MSV, however, has been and continues to be ready and willing to coordinate with Inmarsat. If the parties commit to making a good faith effort to complete a comprehensive regional coordination agreement, MSV's view is that coordination can be completed in a matter of a few months. Inmarsat next argues that completion of coordination is not a condition precedent to issuance of an authorization to provide MSS. Inmarsat et al Opposition at 6. In fact, the Bureau requires prior coordination unless there is a reasonable basis to conclude that harmful interference will not occur in the absence of international coordination. The Bureau will not authorize uncoordinated satellites or services when there is evidence that harmful interference might occur, as in the case of Inmarsat 4F2.7 Inmarsat also claims that such a condition is inconsistent with how the Bureau treated MSV in granting it licenses for its next-generation satellites. Inmarsat et al Opposition at 6. In those cases, however, no entity claimed that these satellites would cause harmful interference. It was thus entirely reasonable for the Bureau to

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<sup>&</sup>lt;sup>6</sup> See, e.g., Mobile Satellite Ventures Subsidiary LLC, Petition to Hold in Abeyance, File No. SES-LFS-20060303-00343, File No. SES-AMD-20060316-00448 (Call Sign E060076) (April 14, 2006), at 14-19. MSV incorporates this filing by reference.

<sup>&</sup>lt;sup>7</sup> See Letter from Thomas S. Tycz, FCC, to Joseph A. Godles, Counsel for PanAmSat, File No. SAT-STA-19980902-00057 (September 15, 1998); Loral Orion Services, Inc., Order and Authorization, DA 99-2222, 14 FCC Rcd 17665, ¶ 10 (October 18, 1999); BT North America Inc., Order, DA 00-162, 15 FCC Rcd 15602 (February 1, 2000).

license these satellites in advance of coordination. Conversely, in the case of the Inmarsat 4F2 satellite, its proposed use of loaned frequencies, as well as its wider bandwidth carriers, higher aggregate EIRP, and greater number of co-channel reuse beams relative to any satellite Inmarsat has operated previously means that harmful interference will occur absent prior coordination. In addition, MSV's next-generation satellite is years away from launch, making it reasonable for the Bureau to conclude that any interference issues will be resolved through coordination prior to actual operation. Conversely, an earth station application such as that presented here is fundamentally different because it means that operation of the uncoordinated Inmarsat 4F2 satellite and the resulting harmful interference are imminent. Moreover, in granting the MSV-1 and MSV-SA licenses, the Bureau specifically stated that an authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination with other Administrations.<sup>8</sup>

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<sup>&</sup>lt;sup>8</sup> See Mobile Satellite Ventures Subsidiary LLC, Order and Authorization, DA 05-1492 (May 23, 2005) ("MSV-1 Order"), at ¶ 79; Mobile Satellite Ventures Subsidiary LLC, Order and Authorization, DA 05-50 (January 10, 2005) ("MSV-SA Order"), at ¶ 58. MSV has since surrendered its license for the MSV-SA satellite.

### Conclusion

MSV requests that the Bureau adopt MSV's requested clarifications to the conditions imposed on the STAs granted for BGAN operations in the United States to improve their effectiveness in mitigating harmful interference to other L band operators.

Respectfully submitted,

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## **Technical Certification**

I, Richard O. Evans of Mobile Satellite Ventures Subsidiary LLC, certify under penalty of perjury that:

I am the technically qualified person with overall responsibility for the technical information contained in this Reply. I am familiar with the Commission's rules, and the information contained in the Reply is true and correct to the best of my knowledge and belief.

Richard O. Evans

Dated: June 29, 2006

#### **CERTIFICATE OF SERVICE**

I, Sylvia A. Davis, a secretary with the law firm of Pillsbury Winthrop Shaw Pittman LLP, hereby certify that on this 29th day of June 2006, I served a true copy of the foregoing by first-class United States mail, postage prepaid, upon the following:

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