



March 28, 2006

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PUBLIC COPY - REDACTED

Via Hand Delivery

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

Re:

Reply of Mobile Satellites Ventures Subsidiary LLC File No. SES-MFS-20060118-00050 (Call Sign E000280) File No. SES-MFS-20060118-00051 (Call Sign E000282) File No. SES-MFS-20060118-00052 (Call Sign E000283) File No. SES-MFS-20060118-00053 (Call Sign E000285)

Dear Ms. Dortch:

Mobile Satellites Ventures Subsidiary LLC ("MSV") hereby files this redacted, public version of a Reply to Oppositions to MSV's Petition to Hold in Abeyance the above-referenced applications of Telenor Satellite, Inc. ("Telenor") to shift the operations of certain of its currently authorized earth stations in the United States from a coordinated Inmarsat satellite to an uncoordinated Inmarsat satellite (Inmarsat 4F2). Exhibit A of the this Reply was filed previously with the Commission on February 14, 2006 with a request for confidentiality. This information should continue to be treated confidentially for the reasons set forth in Exhibit A.³

¹ See Telenor Satellite, Inc., Applications for Modification of Blanket Licenses, File Nos. SES-MFS-20060118-00050 (Call Sign E000280), SES-MFS-20060118-00051 (Call Sign E000282), SES-MFS-20060118-00052 (Call Sign E000283), SES-MFS-20060118-00053 (Call Sign E000285) (January 18, 2006) ("Telenor Applications").

² See Letter from Jennifer A. Manner, MSV, to Ms. Marlene H. Dortch, FCC, File No. SES-MFS-20051207-01709 (Call Sign E030055), File No. SES-MFS-20051202-01665 (Call Sign E020074) (February 14, 2006).

³ 47 C.F.R. § 0.459(b).

Please contact the undersigned with any questions.

Very truly yours,

David S. Konczal

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

In the matter of)
Telenor Satellite, Inc. Application for Modification of Blanket License to Operate Inmarsat M-4 Mobile Earth Terminals with Inmarsat 4F2 at 52.75°W) File No. SES-MFS-20060118-00050) (Call Sign E000280))
Telenor Satellite, Inc. Application for Modification of Blanket License to Operate Inmarsat Mini-M Mobile Earth Terminals with Inmarsat 4F2 at 52.75°W) File No. SES-MFS-20060118-00051) (Call Sign E000282))
Telenor Satellite, Inc. Application for Modification of Blanket License to Operate Inmarsat M Mobile Earth Terminals with Inmarsat 4F2 at 52.75°W) File No. SES-MFS-20060118-00052) (Call Sign E000283))
Telenor Satellite, Inc. Application for Modification of Blanket License to Operate Inmarsat B Mobile Earth Terminals with Inmarsat 4F2 at 52.75°W) File No. SES-MFS-20060118-00053) (Call Sign E000285))

REPLY TO OPPOSITIONS TO PETITION TO HOLD IN ABEYANCE

Mobile Satellite Ventures Subsidiary LLC ("MSV") hereby files this Reply to the Oppositions of Telenor Satellite, Inc. ("Telenor") and Inmarsat Ventures Limited ("Inmarsat") to MSV's Petition to Hold in Abeyance the above-referenced applications. Telenor seeks to shift its operations in the United States from a coordinated Inmarsat satellite to an uncoordinated Inmarsat satellite (Inmarsat 4F2). As MSV explained in its Petition, the International Bureau ("Bureau") should not grant the applications unless and until the new Inmarsat satellite has been coordinated, due to the harmful interference that would otherwise occur. In their Oppositions, Telenor and Inmarsat repeat arguments they have made in previous proceedings. MSV hereby

attaches and incorporates by reference its reply to these arguments in those previous proceedings. MSV addresses briefly below the additional arguments made by Inmarsat.

Inmarsat's new arguments attempt to deflect MSV's demonstrably legitimate interference concerns. For instance, Inmarsat argues that the burden has been on MSV to demonstrate interference before Inmarsat is required to coordinate its new services.² Inmarsat cites no support for this position, which would turn the international coordination process on its head. Moreover, Inmarsat's argument ignores that MSV in fact has suffered harmful interference from Inmarsat's operation of uncoordinated High Speed Data carriers.³

Inmarsat also tries to argue that its responsiveness to interference complaints somehow makes coordination unnecessary, but this is both irrelevant and untrue. *Inmarsat Opposition* at 3, 5. In its Petition, MSV explained that MSV and MSV Canada have notified Inmarsat of two recent incidents of interference caused by Inmarsat's placement of its own carriers too close to the band edge. *MSV Petition* at 19.⁴ With respect to interference to MSV Canada, Inmarsat responds by stating that it was not the cause, but the fact is that the return link noise decreased only after Inmarsat modified its operations. With respect to interference to MSV, Inmarsat claims that it took action to eliminate any interference, but again the fact is that Inmarsat's carrier is still in the same location and is still causing interference.

¹ See Mobile Satellite Ventures Subsidiary LLC, Reply, File No. SES-MFS-20051207-01709 (Call Sign E030055), File No. SES-MFS-20051202-01665 (Call Sign E020074) (February 14, 2006) (attached as Exhibit A).

² See Inmarsat Ventures Limited, Opposition, File No. SES-MFS-20060118-00050 et al (March 16, 2006) ("Inmarsat Opposition"), at 3.

³ See Mobile Satellite Ventures Subsidiary LLC, Petition to Hold in Abeyance, File No. SES-MFS-20060118-00050 et al (March 3, 2006) ("MSV Petition"), at 16 n.35.

⁴ These recent cases of interference, as well as interference resulting from Inmarsat's continued use of loaned frequencies, rebut Inmarsat's claim that operation of the Inmarsat 4F2 satellite has not resulted in harmful interference. *Inmarsat Opposition* at 7.

Inmarsat cites the interference resolution procedures in the Commission's rules, apparently as a substitute for coordination, but these procedures are intended to be followed only in what should be rare instances when – despite coordination — interference occurs. *Inmarsat Opposition* at 3, 5 (citing 47 C.F.R. § 25.274). These procedures are not intended as an alternative to the obligation of an operator to coordinate its satellite and services. Indeed, as MSV has demonstrated, the operation of the uncoordinated Inmarsat 4F2 satellite will result in a significant increase in interference events, requiring MSV to continually urge Inmarsat to revise its operations to cure interference being caused to MSV's customers. *MSV Petition* at 13-20. This unfairly places MSV at the mercy of its competitor. From a spectrum management perspective, the more appropriate and customary policy is to require satellite operators to coordinate prior to commencing operation of new satellites and services, thereby ensuring that mutual interference will not occur.⁵

Inmarsat also cites several cases for the unremarkable proposition that the Commission does not require international coordination as a prerequisite to authorization of new satellites and services.⁶ This is true, but it does so only when there is a reasonable basis for the Commission to

⁵ For example, in *Outerlink*, the Bureau permitted an MSV customer to operate using frequencies coordinated for Inmarsat only after Inmarsat consented to these operations based on its conclusion after bilateral coordination discussions that harmful interference would not occur due to the unique attributes of the Outerlink service. *See Outerlink, Inc., Order and Authorization*, DA 01-664 (April 16, 2001); *Outerlink, Inc., Order and Authorization*, DA 02-1525 (July 2, 2002); *see also* Letter from Donald M. Kennedy, Inmarsat, to Mr. Thomas S. Tycz, FCC, File No. SES-LIC-19980415-00436 (December 19, 2000), at 1 ("As a result of technical discussions and observations, Inmarsat has concluded that uplink transmissions from Outerlink mobile earth stations are not expected to cause harmful interference to Inmarsat's uplink operations."); *cf. Inmarsat Opposition* at n.21. The Bureau did not simply permit MSV to operate using these frequencies and hope that MSV and Inmarsat would resolve the inevitable interference disputes that would occur absent coordination.

⁶ Inmarsat Opposition at 7, 9 (citing MSV-1, Order, DA 05-1492 (May 23, 2005) ("MSV-1 Order"); MSV-SA, Order, DA 05-50 (January 10, 2005) ("MSV-SA Order"); Amendment of the

conclude that harmful interference will not occur in the absence of international coordination.⁷ Indeed, in the *MSV-1* and *MSV-SA* cases upon which Inmarsat relies so heavily, no entity claimed that these satellites would cause harmful interference. Moreover, there is ample time for MSV to fulfill any international coordination obligations in advance of operation of MSV-1 and MSV-SA.⁸ It was thus entirely reasonable for the Bureau to license these satellites in advance of coordination. Conversely, the cases MSV cited in its Petition demonstrate that the Commission will not authorize uncoordinated satellites or services when there is evidence that harmful interference might occur.⁹ This is precisely the scenario presented by the operation of the uncoordinated Inmarsat 4F2 satellite.

.....

Commission's Rules to Establish Rules and Policies Pertaining to MSS in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, 9 FCC Rcd 5936, ¶ 211 (1994) ("Big LEO Order"); Establishment of Policies and Service Rules for MSS in the 2 GHz Band, 15 FCC Rcd 16127 (2000) ("2 GHz Order")).

⁷ In the *Big LEO* case Inmarsat cites, the Commission specifically stated that "until [Big LEO operators] successfully complete coordination, they cannot cause harmful interference." *Big LEO Order* ¶ 211. The Bureau cannot impose such a condition in the case of Inmarsat 4F2 given the evidence provided by MSV demonstrating that operation on a non-harmful interference basis is not possible in the absence of prior coordination.

⁸ The MSV-1 and MSV-SA satellites are years away from launch, thus making it reasonable for the Commission 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 satellite and the resulting harmful interference are imminent. Moreover, in granting the MSV-1 and MSV-SA licenses, the Bureau specifically stated that any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination with other Administrations. *See* 47 C.F.R. 25.111(b); *see also MSV-1 Order* ¶ 79; *MSV-SA Order* ¶ 58.

⁹ MSV Petition at 12 n.28. Inmarsat claims that none of these cases pertain to a replacement satellite operating within the technical envelope of its predecessor, but those facts do not apply to Inmarsat 4F2 either. Inmarsat Opposition at 5-6. First, Inmarsat has not coordinated all of its operations in order to establish such a "technical envelope." See MSV Petition at 15-17. Second, even if a technical envelope for the Inmarsat-3 satellite were to exist, Inmarsat 4F2 is a technically different satellite. The increased number of regional beams, higher aggregate EIRP, and wideband carriers used on the Inmarsat 4F2 satellite all make it infeasible for Inmarsat to

Inmarsat also continues to raise the red herring that preventing harmful interference is somehow inconsistent with the obligations of the United States to provide market access to foreign-licensed satellites. *Inmarsat Opposition* at 8. Inmarsat cannot honestly claim that MSV or the Commission is somehow precluding Inmarsat from providing service in the United States, especially considering that Inmarsat has been providing service in the United States since 2001. Rather, by holding the applications to operate with Inmarsat 4F2 in abeyance until the conclusion of a coordination agreement, the Commission will be exercising its authority to prevent harmful interference. This is not an "exclusionary arrangement" as Inmarsat alleges, but a rational exercise of the Commission's authority to manage spectrum domestically.

operate within the technical envelope of the Inmarsat-3 satellite. *Id.* Third, even if a technical envelope did exist and Inmarsat 4F2 were capable of operating within it, Inmarsat's current operations have caused harmful interference to MSV, meaning this interference will continue if Inmarsat operates within the technical envelope of the Inmarsat-3 satellite. *Id.* Similarly, while Inmarsat claims that the ITU Radio Regulations permit it to operate a new satellite within the "technical umbrella" of another satellite that has been coordinated, these assumptions do not apply to the operation of Inmarsat 4F2. *Inmarsat Opposition* at 6. Given the technically different nature of Inmarsat 4F2 relative to the Inmarsat-3 satellites, along with the fact that services provided over Inmarsat-3 satellites have resulted in harmful interference, Radio Regulation No. 9.6 *et seq* requires prior coordination of Inmarsat 4F2. *See* Exhibit A at 11 n.24 and 20 n.42.

¹⁰ Despite Inmarsat's claim, MSV's only interest in objecting to the pending applications to operate with Inmarsat 4F2 is to ensure that L band spectrum can be used in an efficient and equitable manner by all L band operators without having to endure mutual interference. *Cf. Inmarsat Opposition* 1-2.

¹¹ See Chairman of the World Trade Organization Group on Basic Telecommunications, Chairman's Note, Market Access Limitations on Spectrum Availability, 36 I.L.M. at 372 ("under the GATS each Member has the right to exercise spectrum/frequency management"); Space Imaging, LLC, Declaratory Order and Order and Authorization, DA 05-1940, ¶ 18 (Chief, International Bureau, July 6, 2005) ("In DISCO II, the Commission determined that, given the scarcity of orbit and spectrum resources, it would consider spectrum availability as a factor in determining whether to allow a foreign satellite to serve the United States. This is consistent with the Chairman's Note to the WTO Basic Telecom Agreement, which states that WTO Members may exercise their domestic spectrum/frequency management policies when considering foreign entry. Thus, in DISCO II, we stated that when grant of access would create interference with U.S.-licensed systems, we may impose technical constraints on the foreign

Conclusion

Based on the foregoing, the Commission should hold in abeyance the Telenor applications until the conclusion of an L band coordination agreement.

Respectfully submitted,

Bruce D. Jacobs David S. Konczal

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Dated: March 28, 2006

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Vice President, Regulatory Affairs

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Exhibit A

Mobile Satellite Ventures Subsidiary LLC, Reply, File No. SES-MFS-20051207-01709 (Call Sign E030055), File No. SES-MFS-20051202-01665 (Call Sign E020074) (February 14, 2006)



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February 14, 2006

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Ms. Marlene H. Dortch
Secretary
Federal Communications Commission

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Federal Communications Commission Office of Secretary

Re: Reply of Mobile Satellites Ventures Subsidiary LLC to the

Oppositions of SkyWave Mobile Communications, Corp., Satamatics, Inc.,

and Inmarsat Ventures Limited

File No. SES-MFS-20051207-01709 (Call Sign E030055) File No. SES-MFS-20051202-01665 (Call Sign E020074)

Dear Ms. Dortch:

Mobile Satellites Ventures Subsidiary LLC ("MSV") hereby files this redacted, public version of a Reply to the Oppositions of SkyWave Mobile Communications, Corp. ("SkyWave"), Satamatics, Inc. ("Satamatics"), and Inmarsat Ventures Limited ("Inmarsat") to MSV's Petition to Hold in Abeyance the above-referenced applications of SkyWave and Satamatics to shift the operations of certain of its currently authorized earth stations in the United States from a coordinated Inmarsat satellite to an uncoordinated Inmarsat satellite (Inmarsat 4F2). As discussed herein, certain information provided in the attached Petition should be treated as confidential.²

47 C.F.R. § 0.459(b)(1) -- Identification of the specific information for which confidential treatment is sought

MSV requests confidential treatment of information relating to the *Mexico City*Memorandum of Understanding and the on-going international L band frequency coordination process which is confidential to the parties to that coordination, which includes the Commission

¹ See SkyWave Mobile Communications, Corp., Application, File No. SES-MFS-20051207-01709 (Call Sign E030055) (December 7, 2005) ("SkyWave Application"); Satamatics, Inc., Application, File No. SES-MFS-20051202-01665 (Call Sign E020074) (December 2, 2005) ("Satamatics Application").

² 47 C.F.R. § 0.459(b).

and MSV.³ When considering other applications to use Inmarsat satellites in the United States, the Commission has acknowledged the confidentiality of this information and has afforded it confidential treatment.⁴

47 C.F.R. § 0.459(b)(2) -- Identification of the Commission proceeding in which the information was submitted or a description of the circumstances giving rise to the submission

This information is being filed in MSV's Reply to the Oppositions of SkyWave, Satamatics, and Inmarsat to MSV's Petition to Hold in Abeyance the above-referenced applications of SkyWave and Satamatics.

47 C.F.R. § 0.459(b)(3) -- Explanation of the degree to which the information is commercial or financial, or contains a trade secret or is privileged

As the Commission has acknowledged, the *Mexico City Memorandum of Understanding* and related coordination documents are confidential.⁵

47 C.F.R. § 0.459(b)(4) -- Explanation of the degree to which the information concerns a service that is subject to competition

The information contained herein concerns the market for wireless services, in which MSV faces competition from other MSS providers as well as from terrestrial wireless operators.

47 C.F.R. § 0.459(b)(5) -- Explanation of how disclosure of the information could result in substantial competitive harm

Disclosure of the information for which confidential treatment is sought would result in violation of the *Mexico City Memorandum of Understanding*.

³ See Memorandum of Understanding for the Intersystem Coordination of Certain Geostationary Mobile Satellite Systems Operating in the Bands 1525-1544/1545-1559 MHz and 1626.5-1646.5/1646.5-1660.5 MHz, Mexico City, Mexico, 18 June 1996.

⁴ See COMSAT Corporation et. al., Memorandum Opinion, Order and Authorization, 16 FCC Rcd 21661, ¶¶ 111 (2001) ("COMSAT Order") ("The Mexico City Agreement and related coordination documents, such as minutes of coordination meetings, are considered confidential.").

⁵ *Id*.

Ms. Marlene H. Dortch February 14, 2006 Page 3

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47 C.F.R. § 0.459(b)(6)

Identification of any measures taken by the submitting party to prevent unauthorized disclosure

Disclosure to third parties of the information for which confidential treatment is sought has been strictly pursuant to non-disclosure agreements.

47 C.F.R. § 0.459(b)(7)

Identification of whether the information is available to the public and the extent of any previous disclosure of the information to third parties

The information for which confidential treatment is sought is not publicly available. Disclosure to third parties of the information for which confidential treatment is sought has been strictly pursuant to non-disclosure agreements.

47 C.F.R. § 0.459(b)(8)

Justification of the period during which the submitting party asserts that material should not be available for public disclosure

The information for which confidential treatment is sought should remain confidential indefinitely or until the parties to the *Mexico City Memorandum of Understanding* agree that it can be made publicly available.

47 C.F.R. § 0.459(b)(9)

Any other information that the party seeking confidential treatment believes may be useful in assessing whether its request for confidentiality should be granted

N/A.

Please contact the undersigned with any questions.

Very truly yours,

Jennifer A. Manner

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Summary

The responses to MSV's Petition have done nothing to refute the evidence that use of the uncoordinated Inmarsat 4F2 satellite to provide earlier-generation services will result in harmful interference in the L band. Indeed, the theme of the responses is "trust us" and "blame MSV" rather than an objective technical showing as to how interference will be avoided with the new, uncoordinated operation. With respect to each of the three specific concerns MSV described in its Petition, the record continues to provide compelling evidence either that harmful interference will definitely occur or cannot reasonably be expected to be avoided in advance of a coordination agreement covering Inmarsat's new satellite and services.

Inmarsat's continued illegal use of loaned-but-recalled spectrum. MSV demonstrated that Inmarsat's current operations on loaned spectrum are blocking MSV's operations today and that grant of the instant application, to the extent it authorizes Inmarsat operations on the loaned spectrum, would do the same. Inmarsat's response is that it is already using these frequencies today, and causing interference in the process, so it should not matter if it continues to do so in the future. Inmarsat's current illegal actions, however, in no way justify authorizing the same interference on new Inmarsat satellites.

Inmarsat's new satellite is technically different from the satellites Inmarsat has coordinated previously. MSV's Petition described that Inmarsat's new satellite has different technical characteristics than those Inmarsat has coordinated previously, it has not been coordinated, and its uncoordinated operation likely will result in harmful interference. While Inmarsat repeatedly claims that it will operate its new Inmarsat 4F2 satellite within the "technical envelope" of its old Inmarsat-3 satellite, this provides no comfort at all because (i) Inmarsat has not coordinated all of its operations in order to establish such a technical envelope; (ii) even if a technical envelope did exist, Inmarsat 4F2 is technically different than the Inmarsat-3 satellite,

making it impossible for Inmarsat to operate the new satellite within the technical envelope of its old satellite; and (iii) even if a technical envelope did exist and Inmarsat 4F2 was capable of operating within it, Inmarsat's current operations have caused harmful interference to MSV, meaning this interference will continue if Inmarsat operates Inmarsat 4F2 within the technical envelope of the Inmarsat-3 satellite.

Inmarsat claims the right to operate throughout the entire MSS L band. MSV's Petition questioned how Inmarsat could commit to operate without causing harmful interference when it is simultaneously claiming the right to operate using any L band frequency it chooses without any clear limitation. In a congested L band, where there are already disputes that are preventing MSV from using its licensed spectrum in order to avoid interference to Inmarsat customers, Inmarsat's claim is particularly alarming. Inmarsat and its distributors have failed to identify any "rules of the road" they will obey in order to effectively preclude harmful interference. As evidenced by its continued claim to be entitled to use the loaned spectrum, its ongoing use of global beams and older satellites that themselves have not been coordinated, and its plan to use the new satellites not to replace the older satellites but to supplement them, it would be unreasonable to expect that Inmarsat can and will operate its new satellite in a manner that does not lead to harmful interference.

Enforcing reasonable rules of the road to ensure that harmful interference will not occur from the operation of new satellites and services is entirely within the Commission's authority under the WTO Basic Telecom Agreement and DISCO II principles. The Bureau has demonstrated that it will exercise its spectrum management authority to refrain from authorizing an uncoordinated satellite when there is evidence that interference will result. While the Bureau has authorized foreign-licensed L band satellites in the past, in those cases the satellites in

question had completed the ITU coordination process, the operators had mutually committed to using specific frequencies and other operating parameters that would prevent harmful interference, and the terms of their earth station licenses limited them to those operating parameters. Enforcing reasonable rules of the road is also consistent with the recent decisions to license MSV's next-generation satellites. In those cases, there was no evidence that harmful interference would occur and, in any event, the satellites are years away from launch, meaning that any interference issues can be resolved through coordination prior to actual operation. In contrast, the new Inmarsat satellite has never been coordinated, there is evidence that harmful interference is already occurring and will only get worse in the future, the satellite is already launched and operating, Inmarsat claims the right to operate throughout the band including using loaned-but-recalled frequencies, and the applicants seek licenses that are similarly unlimited. Inmarsat also fails to rebut any of the several reasons MSV provided for why Inmarsat's new satellite is not a "replacement" satellite under the *Mexico City MoU* and is thus not entitled to be treated as coordinated.

MSV is not to blame for Inmarsat's failure to coordinate its satellite. It is MSV, not Inmarsat, which has been proactive in trying to advance the coordination process. In fact, the break down in coordination talks in 1999 was largely the result of Inmarsat's failure to reduce its use of spectrum inefficient global beams or to abide by its commitments to

REDACTED , in particular MSV's need for sufficient spectrum to serve several large wholesale customers. MSV and MSV Canada are in the process of constructing satellites that will provide hundreds of spot beams over North America, enabling much higher capacity broadband services to smaller and less expensive user devices than Inmarsat's system can provide. It is Inmarsat that has blocked MSV's efforts to develop its system. Inmarsat has

every incentive to take an anti-competitive position and continue to impede MSV's ability to gain stable, interference-free access to the spectrum needed for MSV's new system.

It is Inmarsat that has breeched the trust required for coordination, by refusing to recognize **REDACTED**, adding more satellites with inefficient global beams, causing unnecessary delay to the Commission's approval of ATC, refusing to return the spectrum it borrowed from MSV and MSV Canada, and, more recently, by refusing to negotiate for stable access to spectrum reconfigured into wider and more contiguous blocks consistent with the Commission's goal of promoting efficient use of spectrum. In its Opposition, Inmarsat continues to offer bogus excuses for why L band spectrum cannot be coordinated into more contiguous spectrum blocks. While Inmarsat blames L band operators in other regions of the world, the fact is that Inmarsat effectively controls the outcome of coordination as a result of its large fleet of satellites and its unique involvement in both of the regional coordination efforts. Rather than using this status to coordinate more spectrum-efficient assignments, Inmarsat has been content to perpetuate the current inefficiencies, which serve its interest of undermining the development of robust competition.

Inmarsat continues to threaten interference to its and MSV's customer base by its failure to coordinate its new satellite, just like it has done with its continued use of loaned spectrum.

Instead of giving in to these demands, the Bureau should put the responsibility where it belongs-on Inmarsat--to make a sincere and concerted effort to coordinate all of its existing and planned L band satellites and services with those operating and planned by the other North American L band operators. Such an effort, to which MSV is committed, can be completed in a few months and is the only way to produce long-lasting, positive results for public safety and others.

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CONSOLIDATED REPLY TO OPPOSITIONS

Mobile Satellite Ventures Subsidiary LLC ("MSV") hereby files this Consolidated Reply to the Oppositions filed by SkyWave Mobile Communications, Corp. ("SkyWave"), Satamatics, Inc. ("Satamatics"), and Inmarsat Ventures Limited ("Inmarsat")¹ to MSV's Petition to Hold in Abeyance² the above-referenced applications to shift the operations of currently authorized, earlier-generation L band earth stations in the United States from a coordinated satellite to an uncoordinated Inmarsat satellite ("Inmarsat 4F2"). By holding these applications in abeyance

¹ See Opposition of SkyWave Mobile Communications, Corp., File No. SES-MFS-20051207-01709 (Call Sign E030055) (February 2, 2006) ("SkyWave Opposition"); Opposition of Satamatics, Inc., File No. SES-MFS-20051202-01665 (Call Sign E020074) (February 9, 2006) ("Satamatics Opposition"); Opposition of Inmarsat Ventures Limited, File Nos. SES-MFS-20051207-01709 (Call Sign E030055), SES-MFS-20051202-01665 (Call Sign E020074) (February 2, 2006) ("Inmarsat Opposition").

² See Mobile Satellite Ventures Subsidiary LLC, Petition to Hold in Abeyance, File No. SES-MFS-20051207-01709 (Call Sign E030055) (January 20, 2006) ("MSV SkyWave Petition"); Mobile Satellite Ventures Subsidiary LLC, Petition to Hold in Abeyance, File No. SES-MFS-20051202-01665 (Call Sign E020074) (January 27, 2006) ("MSV Satamatics Petition").

³ See SkyWave Mobile Communications, Corp., Application, File No. SES-MFS-20051207-01709 (Call Sign E030055) (December 7, 2005) ("SkyWave Application"); Satamatics, Inc., Application, File No. SES-MFS-20051202-01665 (Call Sign E020074) (December 2, 2005) ("Satamatics Application").

until the conclusion of a coordination agreement, the Bureau will be appropriately exercising its spectrum management authority to prevent harmful interference.⁴

Discussion

- I. OPERATION OF INMARSAT 4F2 PRIOR TO COORDINATION WILL RESULT IN HARMFUL INTERFERENCE
 - A. Inmarsat and Its Distributors Have Failed to Rebut the Evidence of Harmful Interference that Will Occur

As proponents of providing service in the United States with an uncoordinated satellite, the burden falls squarely on Inmarsat and its distributors to demonstrate that Inmarsat can operate its uncoordinated satellite on a non-harmful interference basis. Inmarsat and its distributors have utterly failed to meet this burden. Not only do Inmarsat and the applicants fail to adequately explain how they intend to operate on a non-harmful interference basis, they fail to rebut the evidence of three separate types of harmful interference that will result both to other L band operators and to Inmarsat from operation of the Inmarsat 4F2 satellite prior to a coordination agreement. See MSV SkyWave Petition at 12-19; MSV Satamatics Petition at 12-19.

Interference resulting from Inmarsat's continued illegal use of loaned-but-recalled spectrum. The first type of interference would result from the use of Inmarsat 4F2 to operate on the loaned frequencies Inmarsat has refused to return to MSV and MSV Canada. See MSV

⁴ On January 18, 2006, the Bureau granted SkyWave and Satamatics Special Temporary Authority ("STA") to operate the above-referenced earth stations with Inmarsat 4F2 subject to a number of conditions, including the requirements (i) to operate on an unprotected, non-interference basis and (ii) to demonstrate by February 17, 2006 whether SkyWave and Satamatics are using loaned frequencies and, if so, what the impact would be if Inmarsat was required to terminate its use of loaned frequencies. See SkyWave STA Grant, SES-STA-20051222-01788 (Call Sign E030055) (January 18, 2006), at ¶ 5; Satamatics STA Grant, SES-STA-20051223-01790 (Call Sign E020074) (January 18, 2006), at ¶ 5. In granting the STA, the Bureau made clear that this grant should not be construed as constituting a finding that Inmarsat can operate Inmarsat 4F2 on a non-interference basis. Id.

SkyWave Petition at 12-13; MSV Satamatics Petition at 12-13. Inmarsat's current use of these loaned-but-recalled frequencies prevents MSV and MSV Canada from using those frequencies to test and deploy their integrated terrestrial and satellite system. This is a real, concrete example of interference that is already occurring today. Inmarsat responds by admitting that it is already illegally using these frequencies today, and causing interference in the process, so it should not matter if it continues to do so in the future. Inmarsat Opposition at 6, 12-14. This is a non-response. The fact that there is already interference from Inmarsat's operation of its existing satellites does not mean the Commission should authorize the same interference on new Inmarsat satellites.

⁵ The Bureau has recently taken action towards terminating Inmarsat's illegal use of loaned-but-recalled frequencies. See, e.g., SkyWave STA Grant ¶ 3; Satamatics STA Grant ¶ 3. In doing so, the Bureau has defined "loaned" L band frequencies as "those bandwidth segments that were loaned to Inmarsat by MSV and MSV Canada, either as part of the Revised 1999 Spectrum Sharing Arrangement (October 4, 1999), or later as bilateral arrangements between Inmarsat and MSV and Inmarsat and MSV Canada." See id.

⁶ Despite the claims of SkyWave and Satamatics that MSV's position in coordination is motivated solely by an interest in developing terrestrial service, MSV continues to limit its coordination efforts to gaining access to spectrum for its satellite operations, which it will reuse in the terrestrial component. *Cf. SkyWave Opposition* at 8; *Satamatics Opposition* at 8. From a business and a public interest perspective, there is no doubt that ATC is a critical element of the revolutionary new system that MSV is committed to building, but the ability to reuse satellite spectrum to increase efficiency and achieve economies of scale is an equally critical element of the new system.

⁷ MSV has not retracted its request that the Bureau preclude Inmarsat from using loaned frequencies. *Cf. Inmarsat Opposition* at 15 n.50. In an earlier filing, MSV stated that if the Bureau were to grant the applications to operate with Inmarsat 4F2 despite the overwhelming evidence of harmful interference that will occur, the Bureau should at least condition any license on Inmarsat not using loaned frequencies. *See* Mobile Satellite Ventures Subsidiary LLC, Petition to Hold in Abeyance or to Grant with Conditions, File Nos. SES-LFS-20050930-01352, SES-AMD-20051111-01564, ITC-214-20051005-00395 (November 23, 2005). MSV withdrew this alternative request in light of the failure of efforts by the Bureau and MSV to secure any commitment from Inmarsat to cease operations on the loaned frequencies. In light of Inmarsat's refusal to stop its illegal use of loaned frequencies, MSV specifically explained that it is critical for the Bureau both to deny any authority to use Inmarsat 4F2 as long as it remains uncoordinated and to deny authority for the use of any Inmarsat satellite on the loaned spectrum,

Inmarsat and its distributors do not dispute that Inmarsat presently uses loaned-but-recalled L band frequencies that have been coordinated and assigned for use by MSV and MSV Canada, nor do they dispute that Inmarsat will use these frequencies on Inmarsat 4F2;⁸ rather, they claim that the Commission has condoned such action by allegedly authorizing Inmarsat's existing satellites to operate on every L band frequency.⁹ Even if the Commission condoned such operation in the context of requests filed several years ago to use Inmarsat-3 satellites and other foreign-licensed satellites that had completed the coordination process and were in the ITU Master Register, those facts do not apply to the instant application to operate with the uncoordinated Inmarsat 4F2 satellite. See MSV SkyWave Petition at 12-13; MSV Satamatics Petition at 12-13. Moreover, their interpretation of Commission precedent is simply wrong. In the TMI and COMSAT Orders, the Commission authorized earth stations to operate with L band satellites subject to two conditions both of which are currently applicable: the Non-Interference Condition¹⁰ and the Spectrum Limitation Condition.¹¹ The same two conditions have been

not just the new Inmarsat satellite. See Mobile Satellite Ventures Subsidiary LLC, Petition, Reply, File Nos. SES-LFS-20050930-01352, SES-AMD-20051111-01564, ITC-214-20051005-00395 (December 19, 2005), at 1 n.1.

⁸ When Inmarsat states that the Inmarsat 4F2 satellite "will use the same portions of the L-Band that it has been using," it admits that it will continue to use loaned-but-recalled frequencies. *Inmarsat Opposition* at 14; see also id. at 6, 20.

⁹ See Inmarsat Opposition at 15-19 (citing Applications of SATCOM Systems, Inc., TMI Communications and Company, LP, et al., Order and Authorization, 14 FCC Rcd 20798 (1999) ("TMI Order"), aff'd sub nom. AMSC Subsidiary Corp. v. FCC, 216 F.3d 1154 (D.C. Cir. 2000) ("AMSC") and COMSAT Corporation et. al., Memorandum Opinion, Order and Authorization, 16 FCC Rcd 21661 (2001) ("COMSAT Order")); SkyWave Opposition at 8; Satamatics Opposition at 8.

¹⁰ COMSAT Order ¶ 115(d) ("[i]n the absence of a continuing annual L-band operator-to-operator coordination agreement, operations of METs in the 1525-1559 and 1626.5-1660.5 MHz bands will be on a non-interference basis until a future operator-to-operator agreement is concluded"); TMI Order ¶ 64.

Exhibit A. This has the practical effect of limiting each L band operator to using only those L band frequencies it "coordinated for" its satellites in the 1999 Spectrum Sharing Arrangement ("SSA"). The Spectrum Limitation Condition was essential because mandating operations pursuant to the spectrum assignments coordinated in the 1999 SSA (*i.e.*, the "most recent" operator-to-operator agreement) was the only way the Commission could rationally conclude that operation in the L band on a non-interference basis was possible. Conversely, if L band operators were permitted to operate using any L band frequencies they desired without regard to the 1999 SSA, interference would inevitably occur.

Inmarsat, however, claims that the Spectrum Limitation Condition applies only when there is a coordination agreement in effect that assigns specific frequencies to specific operators.

Inmarsat Opposition at 15-16.¹³ The plain language of the Spectrum Limitation Condition,

¹¹ COMSAT Order ¶ 115(c) ("[o]perations shall be limited to the portions of the 1525-1559 and 1626.5-1660.5 MHz band coordinated for the Inmarsat satellite system in the most recent annual L-Band operator-to-operator agreement"); TMI Order ¶ 64.

¹² As MSV explained in its Petition, L band frequencies that have been loaned between L band operators have not been "coordinated for" the borrowing operator. *MSV SkyWave Petition* at n.30; *MSV Satamatics Petition* at n.30.

¹³ Rather than relying on the plain language of the Commission's decisions, Inmarsat cites *dict*a from *AMSC v. FCC* to support its claim that the Spectrum Limitation Condition only applies when there is a coordination agreement in effect that assigns specific frequencies to specific operators. *Inmarsat Opposition* at 7-8 (citing *AMSC v. FCC*, 216 F.3d at 1159). In fact, in the statement Inmarsat quotes, the court was merely characterizing the facts of the case as presented by AMSC; this was not the court's holding in the case. *See AMSC v. FCC*, 216 F.3d at 1158.

In another section of its Opposition, Inmarsat again takes language out of context in an attempt to support its misguided claim that all L band operators are authorized to use any L band frequency. *Inmarsat Opposition* at 18 (citing COMSAT Order). Inmarsat cites the Commission's explanation in the COMSAT Order that specific L band frequency assignments fluctuate from year to year, but the Commission was describing what had been the dynamic frequency assignment process resulting from the annual sharing arrangements contemplated in the Mexico City MoU. The Commission was not describing the situation that would result if the

however, reveals that it applies even when there is no such coordination agreement in effect. The COMSAT Order unambiguously restricts Inmarsat to those portions of the L band "coordinated for" Inmarsat in the "most recent annual L-Band operator-to-operator agreement," which refers to the 1999 SSA. COMSAT Order at ¶115(c) (emphasis added). If the Commission had intended to require that the agreement be in effect at the time of the order, the use of the "most recent" modifier would have been unnecessary because, by definition, any effective operator-to-operator agreement would be the "most recent" one. It is also significant that the Commission imposed the Spectrum Limitation Condition in 2001, with the full knowledge that the 1999 SSA – the "most recent" operator-to-operator agreement – had not been renegotiated. In light of this historical context, the interpretation suggested by Inmarsat is illogical, as it would render the Spectrum Limitation Condition a nullity. Inmarsat's own

operators were unable to reach a new agreement. As Inmarsat itself has stated, when a new SSA is not negotiated, spectrum assignments are "frozen" at what was negotiated in the last SSA. See infra note 14.

¹⁴ Despite Inmarsat's claim, the only legal significance of the failure to negotiate a new SSA is that it triggers the additional Non-Interference Condition. Cf. Inmarsat Opposition at 15-16. This Condition requires that in the absence of a "continuing annual L-band operator-to-operator coordination agreement," operations in the L band will be on a "non-interference basis." Nothing in the Non-Interference Condition expands the scope of spectrum on which Inmarsat may provide service in the United States. Inmarsat implies there would not be a need for a Non-Interference Condition if L band operators were restricted to the frequencies coordinated in the 1999 SSA. Inmarsat Opposition at 15-17. Inmarsat is wrong. First, in the absence of an international coordination agreement, the Commission's rules require operations to be conducted on a non-interference basis. See 47 C.F.R. § 25.111(b). The Non-Interference Condition is simply a reiteration of the Commission's rules. Second, the Non-Interference Condition provides additional protection governing L band operations in the event that an L band operator operating within the 1999 SSA nonetheless causes interference to another operator. While MSV had previously asked the Commission to provide substance to the Non-Interference Condition (Inmarsat Opposition at 17), the Commission's eventual ruling that the condition is sufficiently clear demonstrates that the Non-Interference Condition and the Spectrum Limitation Condition must work in conjunction. See COMSAT Order ¶ 74. Otherwise, if L band operators were "free to operate on any frequency," as Inmarsat mistakenly contends, the Commission could not have reasonably concluded that operation on a non-interference basis was possible.

actions since 1999 demonstrate that it shared the view that the Spectrum Limitation Condition applies even if the operators fail to renegotiate an annual SSA. Moreover, the Commission has repeatedly confirmed that although the 1999 SSA may have formally expired, it continues to effectively govern the operations of L band MSS providers. *See* Exhibit B. Accordingly, Inmarsat cannot legitimately claim that the Commission has endorsed the interference it is causing today and plans to continue to cause in the future. 16

While Inmarsat claims that this matter should be resolved pursuant to the *Mexico City*MoU multilateral dispute resolution process, Inmarsat 4F2 is not a replacement satellite under the

Mexico City MoU and thus this multilateral dispute resolution process is not applicable.

¹⁵ MSV SkyWave Petition at 13; MSV Satamatics Petition at 13 (noting that Inmarsat's REDACTED from MSV and MSV Canada is consistent with the Spectrum Limitation Condition, as is its statement in its April 2005 securities filing that "the amount of spectrum available to each operator is currently frozen at the levels agreed in 1999" (citing Inmarsat Global Ltd., Form F-20 (April 29, 2005), at 10 ("Inmarsat April 2005 Form F-20") (available at: http://www.sec.gov/Archives/edgar/data/ 1291401/000104746905012474/0001047469-05-012474-index.htm)). Inmarsat fails in its attempt to disavow its statement made less than 10 months ago that L band spectrum assignments are "frozen" at the levels agreed to in 1999. Cf. Inmarsat Opposition at n.60. The fact is that until only a recent about-face, Inmarsat had agreed to abide by the spectrum assignments coordinated for its system in the 1999 SSA, consistent with the actions of every other North American L band MSS operator.

¹⁶ The *Outerlink* cases, which Inmarsat cites in its Opposition, demonstrate that the Commission requires L band operators to comply with the 1999 SSA even though a new agreement has not been negotiated since 1999. In the *Outerlink* cases, the Bureau permitted an MSV customer to use frequencies "coordinated for" Inmarsat in the 1999 SSA, but only after Inmarsat consented to these operations based on its conclusion after bilateral coordination discussions that harmful interference would not occur due to the unique attributes of the Outerlink service. *See Outerlink, Inc., Order and Authorization*, DA 01-664 (April 16, 2001); *Outerlink, Inc., Order and Authorization*, DA 02-1525 (July 2, 2002); *see also* Letter from Donald M. Kennedy, Inmarsat, to Mr. Thomas S. Tycz, FCC, File No. SES-LIC-19980415-00436 (December 19, 2000), at 1 ("As a result of technical discussions and observations, Inmarsat has concluded that uplink transmissions from Outerlink mobile earth stations are not expected to cause harmful interference to Inmarsat's uplink operations."). In contrast, MSV and MSV Canada have not consented to Inmarsat's continued use of loaned-but-recalled frequencies.

Inmarsat Opposition at iii-iv, 13; SkyWave Opposition at 7.¹⁷ Inmarsat's distributors are currently using frequencies in the United States that they are not authorized to use under the terms of their licenses and which Inmarsat now proposes to use on its next-generation satellite. This is a simple case of the Commission enforcing an existing license condition and ensuring that it is obeyed in the future.

Interference resulting from technically different parameters of Inmarsat's new satellite and relative to the satellites it has coordinated previously. The second type of interference results from the technical differences between Inmarsat 4F2 relative to Inmarsat-3. MSV has demonstrated that these differences will result in greater interference both to other L band operators and to Inmarsat. See MSV SkyWave Petition at 14-17; MSV Satamatics Petition at 14-17.18

¹⁷ As MSV explained in its Petition (MSV SkyWave Petition at 9-10; MSV Satamatics Petition at 9-10), Inmarsat 4F2 is not a replacement under the Mexico City MoU because (i) it is not replacing another satellite (id. at 10); (ii) it has much larger L band on-board power and will cause greater aggregate interference to other L band operators, even when being used exclusively to provide earlier-generation services (id. at 14-15); and (iii) it will require greater protection from other L band operators, even when being used exclusively to provide earlier-generation services (id. at 16-17).

Inmarsat asserts that the alleged absence of interference to date is sufficient evidence that there will not be interference if the new application is granted. *Inmarsat Opposition* at 4, 20; *SkyWave Opposition* at 2; *Satamatics Opposition* at 2. As an initial matter, operations over the Inmarsat-3 satellite have resulted in actual harmful interference, including but not limited to interference resulting from Inmarsat's continued illegal use of loaned frequencies. *See MSV SkyWave Petition* at 12-13, 15 n.33; *MSV Satamatics Petition* at 12-13, 15 n.33. In any case, given that the technically different nature of Inmarsat 4F2 makes it more likely to cause interference in the absence of a coordination agreement than the Inmarsat-3 satellites, the alleged absence of interference to date is irrelevant. As discussed in MSV's Petition, there are material technical differences between the Inmarsat-3 and the Inmarsat 4F2 satellite that make operation on a non-harmful interference basis far more problematic. *See MSV SkyWave Petition* at 14-17; *MSV Satamatics Petition* at 14-17. Thus, Radio Regulation No. 9.6 *et seq* requires prior coordination of Inmarsat 4F2.

With respect to interference caused by Inmarsat 4F2 to other L band operators, MSV explained that the Inmarsat 4F2 satellite will exhibit a three-fold increase in the number of regional beams to support earlier-generation Inmarsat services. *MSV SkyWave Petition* at 14-15; *MSV Satamatics Petition* at 14-15. The number, size, and coverage of the regional beams on Inmarsat 4F2, in conjunction with a significantly larger aggregate EIRP, are not contemplated in the spectrum reuse matrix adopted in the 1999 SSA. *Id.*¹⁹ Moreover, these Inmarsat 4F2 parameters were not addressed in any 1992 U.S.-United Kingdom agreement that Inmarsat claims will enable prevention of harmful interference.²⁰ Accordingly, ensuring that Inmarsat 4F2 does not cause interference to L band operators requires new mutually-agreed calculations of interference levels, assessment of the acceptability of interference levels by each operator, and careful development of a new and substantially different co-channel reuse spectrum sharing matrix to govern the operation of Inmarsat-4 regional beams vis-à-vis the MSV and MSV Canada systems. *Id.*

At bottom, Inmarsat's sole defense to the evidence of harmful interference that will occur from the provision of earlier-generation services over its uncoordinated Inmarsat 4F2 satellite is its unsupported but often-repeated claim that it can operate within the "technical envelope" under which Inmarsat has "successfully coexisted" with MSV for years. *Inmarsat Opposition* at 4, 8, 20; see SkyWave Opposition at 10; Satamatics Opposition at 10. This is no comfort at all for other L band operators for three main reasons. First, Inmarsat has not diligently coordinated all of its operations in order to establish such a "technical envelope." See MSV SkyWave Petition at

¹⁹ In recently granting STAs to provide earlier-generation services with the Inmarsat 4F2 satellite, the Bureau acknowledged some of these concerns by restricting Inmarsat from increasing the aggregate uplink and downlink EIRP densities relative to those same services provided over the Inmarsat 3F4 satellite. SkyWave STA Grant ¶ 1; Satamatics STA Grant ¶ 1.

14-15; *MSV Satamatics Petition* at 14-15. Second, even if a technical envelope for the Inmarsat-3 satellite were to exist, Inmarsat 4F2 is a technically different satellite. The increased number of regional beams, higher aggregate EIRP, and wideband carriers used on the Inmarsat 4F2 satellite all make it infeasible for Inmarsat to operate within the technical envelope of the Inmarsat-3 satellite. While Inmarsat claims that the "technical envelope" under which Inmarsat will operate was established in a 1992 bilateral agreement between the U.S. and the United Kingdom, ²¹ Inmarsat has never provided a copy of this agreement in the record or to MSV. Third, even if a technical envelope did exist and Inmarsat 4F2 were capable of operating within it, Inmarsat's current operations have caused harmful interference to MSV, meaning this interference will continue if Inmarsat operates within the technical envelope of the Inmarsat-3 satellite. ²² As MSV explained in its Petition, the wideband carriers Inmarsat operates today on its Inmarsat-3 satellites, including those used to provide its High Speed Data ("HSD") services, have never been coordinated and have resulted in interference to other L band operators. *See MSV SkyWave Petition* at n.33; *MSV Satamatics Petition* at n.33.²³ Thus, given the interference

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²⁰ See Inmarsat Opposition at 6-7.

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As MSV explained in its Petition, the wideband carriers Inmarsat operates today on its Inmarsat-3 satellites, including those used to provide its HSD services, have never been coordinated and have resulted in interference to other L band operators. See MSV SkyWave Petition at n.33; MSV Satamatics Petition at n.33. Inmarsat's claim that it is not aware of this interference does not make the interference any less real and harmful. Cf. Inmarsat Opposition at n.30. Moreover, the interference MSV has suffered to date is more substantial than the "typical, occasional operational issues" Inmarsat claims are routine, and this interference can reasonably be expected to only get worse without a coordination agreement. Id.

²³ Inmarsat claims that it discussed its High Speed Data ("HSD") service with MSV in 1998, and that there is nothing in the 1999 SSA that required Inmarsat to conduct further coordination of its HSD services. *Inmarsat Opposition* n.39.

MSV has already recently suffered, Inmarsat's claim that it has "successfully coexisted" with MSV "for almost a decade" is simply not accurate. *Inmarsat Opposition* at iii.²⁴ Finally, Inmarsat also ignores that its plan is not to operate Inmarsat 4F2 as a replacement to its existing satellites in the region but as a supplement to them, thus creating an undefined but significant amount of additional interference even if it were possible to operate the new satellite in exactly the same way as its existing fleet.

With respect to interference caused to Inmarsat, MSV provided evidence that Inmarsat may suffer significant interference upon operation of its new satellite even when used exclusively to support earlier-generation services. *See MSV SkyWave Petition* at 16-17; *MSV Satamatics Petition* at 16-17. Inmarsat has told the Commission numerous times in the ATC rulemaking proceeding that the Inmarsat 4F2 satellite is far more susceptible than the Inmarsat-3 satellites to interference from the operation of current-generation L band satellite terminals

As the proponent of providing HSD services, the onus has been on Inmarsat to initiate this coordination, **REDACTED** and as required by ITU Radio Regulations. Its failure to do so does not excuse that failure, just as MSV's indulgence of that failure does not constitute a permanent waiver of the right to insist on such coordination.

As MSV discussed in its Petition, the technically different nature of Inmarsat 4F2 relative to the Inmarsat-3 satellite disqualifies Inmarsat 4F2 as a replacement satellite under the *Mexico City MoU*; thus, Inmarsat 4F2 has no rights under that agreement. *See MSV SkyWave Petition* at 9-10; *MSV Satamatics Petition* at 9-10. While Inmarsat claims that the ITU Radio Regulations permit it to operate a new satellite within the "technical umbrella" of another satellite that has been coordinated, these assumptions do not apply to the operation of Inmarsat 4F2. *Inmarsat Opposition* at 7-8. Given the technically different nature of Inmarsat 4F2 relative to the Inmarsat-3 satellites, along with the fact that services provided over Inmarsat-3 satellites have resulted in harmful interference, Radio Regulation No. 9.6 *et seq* requires prior coordination of Inmarsat 4F2. While Inmarsat claims that the ITU Radio Regulations do not require coordination when the technical characteristics of a "new or modified frequency assignment . . . are within the limits" of what has previously been coordinated, this too does not apply here because Inmarsat has not coordinated all of its current operations and, in any case, Inmarsat 4F2 is technically different than the Inmarsat-3 satellite, making it infeasible for Inmarsat to operate

operating with other L band systems. To be sure, Inmarsat's previous statements were made in the course of the ATC proceeding where it was in Inmarsat's best interests to exaggerate its vulnerability to interference so as to preclude MSV from receiving authority for ATC. Now that it is in Inmarsat's best interests to claim that its new satellite can operate on a non-harmful interference basis, Inmarsat not surprisingly tries to hide from these previous statements. Inmarsat is silent in response to evidence that it will suffer increased uplink interference when providing earlier-generation services resulting from the 5 dB higher antenna gain on Inmarsat 4F2 relative to the Inmarsat-3 satellite. MSV SkyWave Petition at 16; MSV Satamatics Petition at 16. Inmarsat also fails to respond when confronted with evidence that the three-fold increase in regional beams on Inmarsat 4F2 to support earlier-generation services and the major differences in associated beam coverage areas render the reuse matrix accompanying the 1999 SSA inapplicable to Inmarsat 4F2. Id. With respect to adjacent channel interference, Inmarsat continues to claim that it is in fact as vulnerable as it previously claimed, effectively conceding that significant interference will occur upon operation of its new satellite. Inmarsat Opposition at n.40.25 Inmarsat's only defense is the vaguely worded statement that "overall" the sensitivity of Inmarsat 4F2 to interference is "not much different" than it is with Inmarsat-3. Inmarsat Opposition at 11. Not only does this statement directly contradict what Inmarsat told the

the new satellite within the coordinated parameters of its old satellite. *Cf. Inmarsat Opposition* at 8 (citing ITU Radio Regulations, Appendix 5 (Rev. WRC-03), AP-5-2 at ¶ 6(b)).

MSV continues to dispute Inmarsat's characterization of its susceptibility to adjacent channel interference. MSV SkyWave Petition at nn.35, 36; MSV Satamatics Petition at nn.35, 36. As MSV explained, based on coordinated parameters, there can be more than 46 dBW aggregate EIRP launched toward space from current L-band METs alone. See id. While Inmarsat claims that MSV has "overestimated the level of interference likely to be produced by its current-generation system," this level is based on parameters agreed to by Inmarsat during coordination. Inmarsat Opposition at n.40. Inmarsat cannot simply dismiss these results when it was well aware of these system parameters at the time that the coordination agreements were made.

Commission previously in the ATC proceeding, it should also fail to instill confidence in the Bureau that Inmarsat will not be back to the Commission in the near future complaining that MSV's operations are causing interference to its customers.²⁶

Interference resulting from Inmarsat's proposal to operate throughout the entire MSS L band. The third, and perhaps most troubling, type of interference results from Inmarsat's claim to be entitled to use any and all L band frequencies, subject only to an empty commitment to do so on a "non-harmful interference basis." MSV SkyWave Petition at 17-18; MSV Satamatics Petition at 16-17. Neither Inmarsat nor its distributors even attempt to explain how this will be accomplished despite (i) Inmarsat's earlier commitments to operate only on spectrum it had coordinated pursuant to the 1999 SSA; (ii) the existing interference in the band; (iii) the new technical characteristics of the proposed satellite; and (iv) the contention among the operators regarding their need for additional spectrum. Moreover, there is nothing in the applications that contain any of the limits that would typically be negotiated in a coordination process to prevent interference. While Inmarsat claims that it will not use frequencies in the L band beyond those it already uses today, neither MSV nor the Bureau can be so sure. Inmarsat Opposition at 14. Indeed, MSV Canada earlier this month notified Inmarsat that MSV Canada has suffered a significant increase in its return link noise floor at the edge of certain of its coordinated band segments apparently caused by Inmarsat's placement of its own carriers too close to the band

Inmarsat expressed these same concerns in the *Outerlink* case when an MSV customer sought to use frequencies coordinated for Inmarsat. As Inmarsat explained in that proceeding, "Inmarsat is concerned that if Outerlink's Application is granted, Outerlink may attempt to use the license to claim protection from Inmarsat's operations and thereby limit Inmarsat's use of the [] L-band. If Outerlink were successfully able to claim protection from harmful interference, service to Inmarsat's customers . . . would suffer." *See* Letter from John P. Janka, Counsel for Inmarsat, to Mr. Thomas S. Tycz, FCC, File No. SES-LIC-19980415-00436 (April 23, 2002), at 3.

edge. Inmarsat has also applied to the Commission for an experimental license to operate using frequencies coordinated for MSV Canada in the 1999 SSA.²⁷ Given these recent actions by Inmarsat to encroach upon frequencies coordinated for other operators, as well as its continued claim to be entitled to use loaned spectrum, its ongoing use of satellites and services that have not been coordinated, and its plan to use the new satellites not to replace the older satellites but to supplement them, it would be unreasonable to expect that Inmarsat can and will operate its new satellite in a manner that does not lead to harmful interference.

B. Inmarsat and its Distributor Have Not Shown Any Precedent to Support Their Position

Despite the claims of Inmarsat and its distributors, Commission precedent does not establish an unequivocal right to operate an uncoordinated satellite in the United States on a non-harmful interference basis. *Inmarsat Opposition* at 20-25; *SkyWave Opposition* at 5-6; *Satamatics Opposition* at 5-6. As MSV explained in its Petition, the Bureau has demonstrated that it will not license an uncoordinated satellite conditioned on operation on a non-harmful interference basis if there is evidence that harmful interference will result.²⁸ Inmarsat's attempt to distinguish these cases is unavailing.²⁹

²⁷ See Application of Inmarsat, Inc., File No. 0059-EX-PL-2006 (February 7, 2006).

²⁸ See MSV SkyWave Petition at n.27; MSV Satamatics Petition at n.27 (citing Letter from Thomas S. Tycz, FCC, to Joseph A. Godles, Counsel for PanAmSat, File No. SAT-STA-19980902-00057 (September 15, 1998) (refusing to permit PanAmSat to operate C band payload until after coordinating with affected Administrations) ("PanAmSat Order"); Loral Orion Services, Inc., Order and Authorization, DA 99-2222, 14 FCC Rcd 17665, ¶ 10 (October 18, 1999) (refusing to permit Loral to provide commercial service because coordination had not yet been completed and harmful interference would occur absent coordination); BT North America Inc., Order, DA 00-162, 15 FCC Rcd 15602 (February 1, 2000) (granting earth station applications to operate with foreign-licensed satellite only after foreign-licensed satellite operator reached a coordination agreement with affected U.S.-licensed operator); see also AfriSpace, Inc., Order and Authorization, DA 06-4, ¶ 12 (Chief, International Bureau, January 3, 2006) ("[T]he Commission will not authorize new systems that would cause interference to licensed U.S.

systems."); Mobile Satellite Ventures Subsidiary LLC, Order and Authorization, DA 05-50 (January 10, 2005), at ¶ 8 (stating that the Commission "will not consider applications for new systems where the new system's operations would cause interference to licensed systems") ("MSV-SA")).

²⁹ Inmarsat Opposition n.76. As an initial, Inmarsat claims that its "network in the Atlantic Ocean Region" has been coordinated. As discussed above, however, Inmarsat 4F2 has no status under the Mexico City MoU, and ITU Radio Regulation No. 9.6 et seq requires prior coordination of Inmarsat 4F2 due to its technically different nature relative to the Inmarsat-3 satellites. See supra note 23. Until coordination is complete, Inmarsat 4F2 is simply a rogue satellite that has no internationally recognized rights.

Inmarsat attempts to distinguish the cases cited by MSV by making the irrelevant point that none of these cases involve the L band or frequencies subject to an agreement like the *Mexico City MoU*. The fact is that in all of these cases, the Bureau refused to permit an uncoordinated satellite to operate when there was evidence that harmful interference would result. The nature of the frequencies at issue was irrelevant. Moreover, the Bureau's decisions authorizing MSV's next-generation satellites do not serve as precedent for grant of the earth station applications to operate with the uncoordinated Inmarsat 4F2 satellite. *See infra* pages 17-18.

Inmarsat next claims that none of these cases involved a replacement satellite that will operate within the "technical umbrella" of an existing satellite that has operated "interference free" for years. The proposed operation of Inmarsat 4F2, however, does not present these facts either. Rather, Inmarsat 4F2 is not a replacement satellite under the relevant coordination agreement; the evidence demonstrates that it will cause interference; a technical envelope has not been coordinated for the existing satellite; and services provided over the existing satellite have resulted in harmful interference. Under such circumstances, Bureau precedent is clear that prior coordination is required.

Inmarsat claims that the *PanAmSat* case is inapposite because PanAmSat agreed to refrain from operating its C band payload prior to coordination, but the salient fact is that the Bureau did not authorize PanAmSat to launch its satellite until *after* PanAmSat made this concession.

Inmarsat claims that the *BT North America* case does not apply here because the foreign-licensed satellite operator reached a coordination agreement prior to the Bureau's decision. But that is precisely why the case is relevant here -- the Bureau did not authorize operations with the foreign-licensed satellite until *after* the parties had reached a coordination agreement that addressed the interference concerns.

Inmarsat claims that the *Loral* case does not apply here because harmful interference in that case was a certainty. There is no basis to assume, however, that the interference that will result from operation of Inmarsat 4F2 prior to coordination is any less of a certainty, especially given that Inmarsat is already causing interference today. *See MSV SkyWave Petition* at n.33; *MSV Satamatics Petition* at n.33.

The facts of the *TMI* and the *COMSAT Orders*, which Inmarsat cites, are far different than those presented here. *See Inmarsat Opposition* at 24-25. In those cases, it was reasonable for the Commission to conclude that operation on a non-harmful interference basis was possible because the satellites at issue had been coordinated, ³⁰ the operators had committed to using specific frequencies, ³¹ and the terms of their earth station licenses limited them to those frequencies. ³² By contrast, in this case, Inmarsat is proposing to operate a satellite that is not covered by any coordination agreement, is technically different than any satellite covered by the previous coordination agreement, has never been analyzed by other L band operators using specific technical parameters verified by Inmarsat, and will not accept any limitations on the frequencies it will use. Thus, the proposed operation of Inmarsat 4F2 presents a far different question than that presented in the *TMI* and *COMSAT* cases.

The Outerlink case Inmarsat cites demonstrates that the Bureau will not authorize uncoordinated services in the L band in the face of evidence that harmful interference will occur

that it made this commitment, but claims that its prior commitment became irrelevant once the L band operators failed to renegotiate a new SSA. *Inmarsat Opposition* at n.24. In fact, Inmarsat's commitment to operate in accordance with the 1999 SSA was made in October 1999 simultaneous with the impasse in negotiating a new SSA. Until only recently, Inmarsat's actions have demonstrated that it would continue to fulfill its commitment to comply with 1999 SSA. *See supra* note 15. The Commission knew of this outstanding commitment when it permitted Inmarsat to provide service in the United States in 2001.

³⁰ The Commission in the *TMI* and *COMSAT Orders* was asked to allow foreign-licensed satellites already subject to the *Mexico City MoU* to provide service in the United States. Here, there is no coordination agreement that covers Inmarsat 4F2. *See supra* note 17 (explaining why Inmarsat 4F2 is not a replacement satellite under the *Mexico City MoU*).

³¹ At the time the Commission issued its *TMI* and *COMSAT Orders*, **REDACTED**

³² COMSAT Order ¶ 115(c) ("[o]perations shall be limited to the portions of the 1525-1559 and 1626.5-1660.5 MHz band coordinated for the Inmarsat satellite system in the most recent annual L-Band operator-to-operator agreement"); TMI Order ¶ 64.

unless and until the services are coordinated among affected L band operators. *Inmarsat Opposition* at 22-23.³³ In *Outerlink*, the Bureau permitted an MSV customer to provide service using frequencies coordinated for Inmarsat in the 1999 SSA, but only after Inmarsat consented to the operation after concluding, based on bilateral coordination discussions with MSV, that harmful interference would not occur to Inmarsat and that the MSV customer would not claim protection from interference.³⁴ Unfortunately, MSV is unable to reach the same conclusion with respect to the operation of the uncoordinated Inmarsat 4F2 satellite because of the technically different nature of the satellite, Inmarsat's failure to discuss the technical parameters of the satellite with other L band operators, and Inmarsat's refusal to refrain from using loaned-but-recalled frequencies.

The Bureau's decisions to license MSV's next-generation satellites conditioned on operation on a non-harmful interference basis do not serve as precedent for grant of the present earth station applications to operate with the launched but uncoordinated Inmarsat 4F2 satellite.

Inmarsat Opposition at 20-22; SkyWave Opposition at 6. In the case of MSV-1 and MSV-SA, no entity claimed that the satellites would cause interference, thus there was no reason for the Bureau to refrain from licensing the satellites until after a coordination agreement was reached. In contrast, there is significant evidence here that operation of Inmarsat 4F2 prior to coordination

³³ Outerlink, Inc., Order and Authorization, DA 02-1525 (July 2, 2002).

As Inmarsat explained in that proceeding, "Inmarsat opposes the grant of Outerlink's Application, unless and until the Outerlink service is coordinated between Inmarsat and MSV. The problem here is simple. Inmarsat and MSV have not coordinated the provision of Outerlink's service." *See* Letter from John P. Janka, Counsel for Inmarsat, to Mr. Thomas S. Tycz, FCC, File No. SES-LIC-19980415-00436 (April 23, 2002), at 1.

³⁵ While Inmarsat now claims that operation of MSV's next-generation satellites may present an interference concern that the Bureau did not consider (*Inmarsat Opposition* at iii, 21), neither Inmarsat nor any other entity ever raised any interference issues for the Bureau to consider.

will result in harmful interference. Moreover, the MSV-1 and MSV-SA satellites are years away from launch.³⁶ Where launch of the satellite is years away, it is reasonable for the Commission to conclude that any interference issues will be resolved through coordination prior to actual operation.³⁷ Conversely, an earth station application such as that presented here is fundamentally different because it means that operation of the satellite is imminent. In the case of Inmarsat 4F2, the satellite is already in orbit and there is evidence that the satellite will cause interference. When operation of a satellite for service in the United States is imminent, the Bureau cannot simply authorize the service and hope that the interference is someday resolved. Finally, as the Bureau stated in the MSV-1 and MSV-SA Orders, any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments with other Administrations.³⁸

Accordingly, because no entity claimed that operation of MSV's next generation satellites will result in interference, the satellites are years away from launch, and the Bureau has not yet had to consider an earth station application to operate with MSV's next-generation satellites, the Bureau will not violate or otherwise act inconsistently with the national treatment obligations of the United States under the WTO Basic Telecom Agreement if it were to hold earth station applications to operate with Inmarsat 4F2 in abeyance pending the outcome of a

³⁶ The Bureau licenses domestic satellites several years prior to launch so that operators have the certainty needed to develop their systems as well as to establish construction and launch milestones and complete any necessary international frequency coordination.

³⁷ Similarly, in the 1993 AMSC Order, which Inmarsat cites in its Opposition (Inmarsat Opposition at 5 n.17), the satellite at issue was years away from actual operation, meaning that it was reasonable for the Commission to conclude that interference issues would be resolved through coordination prior to actual operation. See AMSC Subsidiary Corp., Memorandum Opinion and Order, 8 FCC Rcd 4040 (June 14, 1993) ("1993 AMSC Order").

 $^{^{38}}$ See 47 C.F.R. 25.111(b); see also Mobile Satellite Ventures Subsidiary LLC, Order and Authorization, DA 05-1492 (May 23, 2005) ("MSV-1 Order"), at \P 79; MSV-SA Order \P 58.

coordination agreement covering Inmarsat 4F2. *Cf. Inmarsat Opposition* at iv; 4; *SkyWave Opposition* at 6; *Satamatics Opposition* at 6.³⁹ Indeed, the fact that the Bureau has already authorized earlier-generation services over the coordinated Inmarsat-3 satellites demonstrates that the Bureau will permit foreign-licensed entities to provide L band service in the United States, consistent with the *WTO Basic Telecom Agreement*, provided it can be assured that harmful interference will not result.⁴⁰

C. Inmarsat Must Bear Responsibility for Failing to Coordinate Its Satellite in a Timely Manner

Having failed in its legal case to establish that it has a right to operate an uncoordinated satellite despite the evidence of harmful interference, Inmarsat reverts to blaming MSV for its coordination difficulties. *Inmarsat Opposition* at 3, 8-9, 25. This is wrong as to both the problems with the existing coordination and Inmarsat's failure to coordinate its new satellite. Inmarsat was the cause for the breakdown in L band coordination discussions in 1999 by refusing to abide by the terms of the *Mexico City MoU* **REDACTED**

While Inmarsat claims that the Commission has established a "very clear L band spectrum management policy" of authorizing operations on a non-harmful interference basis (*Inmarsat Opposition* at 24), this policy only applies in the cases of L band satellites that have been coordinated (as in the cases of AMSC-1, MSAT-1, and the Inmarsat-3 satellite) or where the Commission has not been presented with any evidence that harmful interference will occur (as in the cases of MSV-1 and MSV-SA). This policy does not apply in the case of a satellite such as Inmarsat 4F2, which is uncoordinated and, as the record evidence demonstrates, will cause and suffer harmful interference.

⁴⁰ In general, the Bureau's exercise of its spectrum management authority to hold this application in abeyance is consistent with the Chairman's Note to the World Trade Organization ("WTO") Basic Telecommunications Agreement, which states that WTO Members may exercise their domestic spectrum and frequency management policies when considering whether to allow foreign-licensed satellites to service the U.S. market. See MSV SkyWave Petition at 8-9; MSV Satamatics Petition at 8-9 (citing Chairman of the World Trade Organization Group on Basic Telecommunications, Chairman's Note, Market Access Limitations on Spectrum Availability, 36 I.L.M. at 372 ("under the GATS each Member has the right to exercise spectrum/frequency management")).

; in this case, spectrum needed by MSV to satisfy the requirements of large wholesale customers that, with sufficient spectrum access, were prepared to invest in the development of new facilities and services.⁴¹ To make matters worse, Inmarsat persisted in continuing to use substantial amounts of spectrum for inefficient global beam service and to operate an uncoordinated Inmarsat-2 satellite that had been moved to 98°W,

REDACTED

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Moreover, the *Mexico City MOU* supplements rather than supplants the ITU Radio Regulations and does nothing to absolve Inmarsat of its treaty obligations to bilaterally coordinate with the United States.

If operation of Inmarsat 4F2 in the United States is delayed due to the interference concerns presented here by MSV, this is the fault of Inmarsat and not MSV. Inmarsat has had ample opportunity over the past several years while the Inmarsat-4 satellites were being constructed to complete coordination with other L band operators. Indeed, MSV has been more than willing to discuss coordination with Inmarsat and has reached out to Inmarsat on numerous

41 REDACTED

⁴² Apart from the *Mexico City MoU*, the administration of the United Kingdom, as the satellite licensing authority for Inmarsat, is required to coordinate the new Inmarsat 4F2 satellite network prior to its implementation. *See* ITU Radio Regulations, No. 9.6 *et seq*. Inmarsat fails to explain why this treaty obligation should be waived for Inmarsat 4F2. *See supra* note 23. Instead, the record demonstrates that this coordination obligation is essential, especially in this case where Inmarsat is asking to be allowed to unilaterally decide spectrum usage and interference issues that normally are subject to negotiation. *See supra* notes 17, 22, and 23.

⁴³ Despite the claims of Inmarsat and its distributor, MSV is not raising these interference issues in order to gain leverage in coordination. *Cf. Inmarsat Opposition* at iv; *SkyWave Opposition* at 2; *Satamatics Opposition* at 2. MSV's only interest is to ensure that L band spectrum can be used in an efficient and equitable manner by all L band operators without having to endure mutual interference.

occasions to discuss coordination issues on a bilateral or a trilateral basis. The blame for the failure to make any progress towards coordinating the Inmarsat-4 satellites in North America rests solely with Inmarsat, which continues to make unreasonable demands, such as its refusal to stop its illegal use of loaned spectrum.⁴⁴ It is Inmarsat – not MSV or the Bureau – that holds the key to coordinating Inmarsat-4 satellites and thus permitting their use in the United States.

Inmarsat's motivation is obvious. The satellites MSV and MSV Canada will launch will have several times more power than Inmarsat's satellite and will put hundreds of spot beams over North America and coastal waters, at a look angle that will permit delivery of maximum power. As a result, MSV will be able to efficiently provide 20-30 times more service to United States customers, who will be able to use small, handheld terminals, similar in size to terrestrial mobile devices. By depriving its competitor, MSV, of stable access to spectrum and refusing to engage in serious discussions about improving the utility of the L band for broadband services by coordinating wider and more contiguous frequency blocks, Inmarsat apparently hopes to choke investment in MSV's new system. The Commission has identified the promotion of "efficient and effective" use of spectrum as one of its strategic objectives, and it has recognized the assignment of contiguous frequency blocks as a means of achieving this efficiency. In its

⁴⁴ While Inmarsat claims that MSV has not responded to Inmarsat's recent efforts to coordinate (*Inmarsat Opposition* at 25), MSV has tried to initiate coordination discussions with Inmarsat on numerous occasions. Inmarsat's continued illegal use of loaned frequencies has prevented these discussions from progressing.

⁴⁵ See Letter from Randy Segal, MSV, to Ms. Marlene H. Dortch, FCC, File No. SAT-PPL-20050926-00184, IB Docket No. 05-220, IB Docket No. 05-221 (December 1, 2005).

⁴⁶ See FCC, Strategic Plan: 2006-2011 (September 30, 2005).

⁴⁷ See generally Improving Public Safety Communications in the 800 MHz Band, Report and Order, 19 FCC Rcd 14969 (August 6, 2004); Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, Third Report

Opposition, Inmarsat blames L band operators in other regions of the world for not coordinating more contiguous frequency assignments. *Inmarsat Opposition* at 2-3. The fact is that Inmarsat effectively controls the outcome of coordination as a result of its large fleet of satellites and its unique involvement in both of the regional coordination efforts. Rather than using this status to coordinate more spectrum-efficient assignments, Inmarsat has been content to perpetuate the current inefficiencies, which serve its interest of undermining competition.

Needless to say, if the Bureau authorizes the use of Inmarsat's new satellite without insisting that it first complete coordination, there are no reasonable prospects that such coordination will ever be successfully completed. The Commission's goals of increasing efficient use of spectrum and promoting broadband services, particularly in rural areas and for the public safety community, will be thwarted.

II. THE BUREAU SHOULD ADDRESS THE OTHER ISSUES PRESENTED BY THE SKYWAVE AND SATAMATICS APPLICATIONS

Inmarsat and and its distributors are non-responsive on the additional issues raised by MSV that warrant further scrutiny. First, they continue to argue that Inmarsat 4F2 is a replacement under the Commission's satellite processing rules, while failing to refute MSV's point that Inmarsat 4F2 cannot properly be considered a replacement satellite under the *Mexico City MoU. See supra* note 17. Accordingly, the Bureau should make clear that whatever decision it may make regarding whether Inmarsat 4F2 is a replacement satellite under the Commission's rules, it should clarify that such a decision does not mean the satellite is a replacement under the *Mexico City MoU*.

and Order, Third Notice of Proposed Rule Making, and Second Memorandum Opinion and Order, 18 FCC Rcd 2223, ¶ 68 (2003).

Second, while MSV agrees with Inmarsat and its distributors that the Commission's rule requiring Fixed Satellite Service ("FSS") satellites to operate with $\pm 0.05^{\circ}$ East-West station keeping does not apply to MSS satellites, MSV's concern here is only that the Bureau apply this rule consistently. Thus, to the extent the Bureau authorizes Inmarsat 4F2 for service in the United States with $\pm 0.1^{\circ}$ East-West station keeping without seeking a waiver, the Bureau must afford similar treatment to other MSS satellites proposing to serve the U.S. market, such as MSV-1 and MSV-SA.

Conclusion

Based on the foregoing, the Bureau should hold in abeyance the SkyWave and Satamatics applications until the conclusion of an L band coordination agreement.

Respectfully submitted,

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Exhibit A

Spectrum Limitation Conditions and Non-Interference Conditions Imposed on L Band MET Licenses

MET Licenses to Access Inmarsat

- COMSAT Corporation et. al., Memorandum Opinion, Order and Authorization, FCC 01-272, ¶ 115(c)-(d) (2001) (granting application of Stratos, Telenor (f/k/a COMSAT Mobile), Honeywell, and Deere to operate with Inmarsat):
 - "115. IT IS FURTHER ORDERED that the applications listed in Appendix C to operate mobile earth terminals to provide domestic and international Mobile Satellite Service via the privatized Inmarsat system ARE GRANTED subject to the following conditions:

. . .

- c. Operations shall be limited to the portions of the 1525-1559 and 1626.5-1660.5 MHz band coordinated for the Inmarsat satellite system in the most recent annual L-Band operator-to-operator agreement;
- d. In the absence of a continuing annual L-band operator-to-operator coordination agreement, operations of METs in the 1525-1559 and 1626.5-1660.5 MHz bands will be on a non-interference basis until a future operator-to-operator agreement is concluded. In this instance, each licensee must notify the other four operators in these frequency bands that it will be operating on a non-interference basis. Each licensee must notify its customers that its operations are on a non-interference basis."
- Richtec Incorporated, Order and Authorization, 18 FCC Rcd 3295 (Chief, Satellite Division, International Bureau, March 7, 2003) (granting application to operate D+ terminals with Inmarsat):
 - "17. IT IS FURTHER ORDERED that Richtec's mobile earth station operations shall be limited to the portions of the 1525-1544 and 1626.5-1645.5 MHz band coordinated for the satellite being accessed in the most recent annual L-band operator-to-operator agreement. In the absence of a continuing annual L-band operator-to-operator coordination agreement, Richtec's operation in the 1525-1530 MHz, 1530-1544 MHz, 1626.5-1645.5 MHz frequency bands (lower L-bands) will be on a non-interference basis until a future operator-to-operator agreement is concluded. Richtec shall not cause harmful interference to any other lawfully operating satellite or radio facility and shall cease operations upon notification of such interference. Furthermore, Richtec must notify all other operators in these frequency bands that it will be operating on a non-interference basis. Richtec must also notify its customers in the United States that its operations are on a non-interference basis."

MET Licenses to Access MSV and MSV Canada L Band Satellites

- Vistar Data Communications, Inc., Order and Authorization, 17 FCC Rcd 12899 (Deputy Chief, Satellite Division, International Bureau, July 2, 2002) (granting authority to operate half-duplex METs with MSV):
 - "17. IT IS FURTHER ORDERED that Vistar Data Communications, Inc.'s MET operations shall be limited to the portions of the 1525-1559 and 1626.5-1660.5 MHz band coordinated for the satellite being accessed in the most recent annual L-band operator-to-operator agreement.
 - 18. IT IS FURTHER ORDERED that in the absence of a continuing annual operator-to-operator coordination agreement, Vistar Data Communications, Inc.'s operation in the 1525-1559 and 1626.5-1660.5 MHz band will be on a non-harmful interference basis. Consequently, in the absence of a coordination agreement, Vistar Data Communications, Inc. shall not cause harmful interference to any other lawfully operating satellite or radio facility and shall cease operations upon written notification of such interference. Furthermore, Vistar Data Communications, Inc. must notify all other operators in these frequency bands that it will be operating on a non-harmful interference basis. Vistar Data Communications, Inc. must also notify its customers in the United States that its operations are on a non-harmful interference basis."
- Mobile Satellite Ventures Subsidiary LLC, Memorandum Opinion, Order and Authorization, 19 FCC Rcd 4672 (Chief, International Bureau, March 12, 2004) (granting authority to operate additional half-duplex METs with MSV and MSV Canada satellites):
 - "7. IT IS FURTHER ORDERED that Mobile Satellite Ventures Subsidiary LLC's MET operations shall be limited to 2.0 MHz of spectrum in each direction of the 1626.5-1645.5 MHz and 1530-1544 MHz band coordinated for the satellite being accessed in the most recent annual L-band operator-to-operator agreement, and that no additional spectrum will be requested or used.
 - 8. IT IS FURTHER ORDERED that, in the absence of a continuing annual operator-to-operator coordination agreement, Mobile Satellite Ventures Subsidiary LLC's operation in the 1626.5-1645.5 MHz and 1530-1544 MHz band will be on a non-harmful interference basis. Consequently, in the absence of a coordination agreement, Mobile Satellite Ventures Subsidiary LLC shall not cause harmful interference to any other lawfully operating satellite or radio facility and shall cease operations upon written notification of such interference. Furthermore, Mobile Satellite Ventures Subsidiary LLC must notify all other operators in these frequency bands that it will be operating on a non-harmful interference basis. MSV, Inc. must also notify its customers in the United States that its operations are on a non-harmful interference basis."

- Mobile Satellite Ventures Subsidiary LLC, Memorandum Opinion and Order, 17 FCC Rcd 12894 (Deputy Chief, Satellite Division, International Bureau, July 2, 2002) (granting authority to operate additional half-duplex METs with MSV):
 - "9. IT IS FURTHER ORDERED that Mobile Satellite Ventures Subsidiary LLC's MET operations shall be limited to the portions of the 1525-1559 and 1626.5-1660.5 MHz band coordinated for the satellite being accessed in the most recent annual L-band operator-to-operator agreement.
 - 10. IT IS FURTHER ORDERED that, in the absence of a continuing annual operator-to-operator coordination agreement, Mobile Satellite Ventures Subsidiary LLC's operation in the 1525-1559 and 1626.5-1660.5 MHz band will be on a non-harmful interference basis. Consequently, in the absence of a coordination agreement, Mobile Satellite Ventures Subsidiary LLC shall not cause harmful interference to any other lawfully operating satellite or radio facility and shall cease operations upon written notification of such interference. Furthermore, Mobile Satellite Ventures Subsidiary LLC must notify all other operators in these frequency bands that it will be operating on a non-harmful interference basis. MSV, Inc. must also notify its customers in the United States that its operations are on a non-harmful interference basis."
- National Systems & Research Co., Order and Authorization, 17 FCC Rcd 12011 (Deputy Chief, Satellite Division, International Bureau, June 28, 2002) (granting authority to operate METs with MSV):
 - "11. IT IS FURTHER ORDERED that National Systems & Research Co.'s MET operations shall be limited to the portions of the 1525-1559 and 1626.5-1660.5 MHz band coordination for the satellite being accessed in the most recent annual L-band operator-to-operator agreement.
 - 12. IT IS FURTHER ORDERED that in the absence of a continuing annual operator-to-operator coordination agreement, National Systems & Research Co.'s operation in the 1525-1530 MHz, 1530-1544 MHz, 1626.5-1645.5 MHz frequency bands (lower L-band) and the 1545-1559 MHz and 1646.5-1660.5 MHz (upper L-band) frequency bands will be on a non-interference basis until a future operator-to-operator agreement is concluded. National Systems & Research Co. shall not cause harmful interference to any other lawfully operating satellite or radio facility and shall cease operations upon written notification of such interference. Furthermore, National Systems & Research Co. must notify all other operators in these frequency bands that it will be operating on a non-interference basis. National Systems & Research Co. must also notify its customers in the United States that its operations are on a non-harmful interference basis."
- Infosat Communications, Inc., Order and Authorization, 17 FCC Rcd 1610 (January 25, 2002) (granting authority to operate METs with MSV Canada satellite):
 - 14. IT IS FURTHER ORDERED that Infosat Communications, Inc. IS AUTHORIZED to operate in the 1525-1530 MHz, 1530-1544 MHz, and 1626.5-1645.5 MHz frequency bands (lower L-band) subject to the following conditions:

- b. Operations shall be limited to the portions of the lower L-band coordinated for TMI satellite network in the most recent annual L-band operator-to-operator agreement;
- 15. IT IS FURTHER ORDERED that in the absence of a continuing annual L-band operator-to-operator coordination agreement, Infosat's operations of METs in the 1530-1559 and 1631.5-1660 MHz band will be on a non-harmful interference basis until a future operator-to-operator agreement is concluded. Infosat Communications, Inc. shall not cause harmful interference to any other lawfully operating satellite or radio facility and shall cease operations upon notification of such interference. Furthermore, Infosat Communications, Inc. must notify all other operators in these frequency bands that it will be operating on a non-harmful interference basis. Infosat Communications, Inc. must also notify its customers in the United States that its operations are on a non-harmful interference basis."
- TMI Communications and Company, L.P., Order and Authorization, 15 FCC Rcd 18117 (Chief, Satellite and Radiocommunication Division, September 25, 2000) (granting authority to operate METs with TMI):
 - "8. Accordingly, IT IS ORDERED that Application File No.SES-LIC-19990318-00435 IS GRANTED and TMI Communications and Company, L.P. IS AUTHORIZED to operate up to 100,000 full-duplex tracking and asset management data services mobile earth terminals through the Canadian licensed MSAT-1 space station in portions of the 1545-1558.5 and 1646.5-1660 MHz band coordinated for the TMI satellite network in the most recent annual L-band operator-to-operator coordination agreement, in accordance with the technical specifications set forth in its application and its Radio Station Authorization, and consistent with the Commission's rules.
 - 9. IT IS FURTHER ORDERED that in the absence of an annual operator-to-operator coordination agreement, TMI's operation in the 1545-1558.5 and 1646.5-1660 MHz band will be on a non-interference basis. Consequently, in the absence of a coordination agreement, TMI shall not cause harmful interference to any other lawfully operating satellite or radio facility and shall immediately cease operations upon notification of such interference. Furthermore, TMI must notify the other four space station operators in these frequency bands that it will be operating on a non-interference basis. TMI must also notify its customers in the United States that TMI's operations are on a non-interference basis."
- SatCom Systems, Inc., Order and Authorization, 14 FCC Rcd 20798 (November 30, 1999) (granting authority to operate METs with MSV Canada satellite):
 - "63. Accordingly, IT IS ORDERED that Application File Number 647-DSE-P/L-98; IBFS File Number SES-LIC-19980310-00272E9808159 IS GRANTED and SatCom Systems, Inc. IS AUTHORIZED to operate up to 25,000 mobile earth terminals through the Canadian licensed MSAT-1 space station in the portions of the 1545-1558.5 and 1646.5-1660 MHz band coordinated for the TMI satellite network in the most recent

annual L-band operator-to-operator coordination agreement, to the extent indicated herein, in accordance with the technical specifications set forth in its application and its Radio Station Authorization, and consistent with the Commission's rules. In the absence of a continuing annual L-band operator-to-operator coordination agreement, SatCom's operation in the 1545-1558.5 and 1546.5-1660 MHz bands will be on a non-interference basis until a future operator-to-operator agreement is concluded. In this instance, SatCom must notify the other four operators in these frequency bands that it will be operating on a non-interference basis. SatCom must also notify its customers that SatCom's operations are on a non-interference basis.

64. IT IS FURTHER ORDERED that Application File Number 730-DSE-P/L-98; IBFS File No. SES-LIC-19980330-00339E980179 IS GRANTED and TMI Communications and Company, L.P. IS AUTHORIZED to operate up to 100,000 mobile earth terminals through the Canadian licensed MSAT-1 space station in the portions of the 1545-1558.5 and 1646.5-1660 MHz band coordinated for the TMI satellite network in the most recent annual L-band operator-to-operator coordination agreement, to the extent indicated herein, in accordance with the technical specifications set forth in its application and its Radio Station Authorization, and consistent with the Commission's rules. In the absence of a continuing annual operator-to-operator coordination agreement, TMI's operation in the 1545-1558.5 and 1646.5-1660 MHz band will be on a non-interference basis until a future operator-to-operator agreement is concluded. In this instance, TMI must notify the other four operators in the these frequency bands that it will be operating on a non-interference basis. TMI must also notify its customers in the United States that TMI's operations are on a non-interference basis."

Exhibit B

Commission Statements Acknowledging Applicability of Spectrum Limitation Condition

• Flexibility for Delivery of Communications by MSS Providers, Report and Order, IB Docket No. 01-185, 18 FCC Rcd 1962 (February 10, 2003) ("ATC Order").

"The parties to the MoU last revised spectrum assignments in 1999 and, pending further negotiations, continue to operate under those assignments today." (¶ 92)

"Although annual meetings were to have taken place under the terms of the Mexico City MoU, these meetings have not occurred since the parties last agreed to a complex spectrum-sharing arrangement in London in 1999; therefore, the parties continue to operate under the 1999 assignments pending further negotiations." (n. 144)

• Mobile Satellite Ventures Subsidiary LLC, Order and Authorization, DA 04-3553 (Int'1 Bur. 2004):

"The parties to the MOU last revised the spectrum assignments in 1999 and, pending further negotiations, continue to operate with those assignments today." (n.8)

• Flexibility for Delivery of Communications by MSS Providers, Memorandum Opinion and Order and Second Order and ATC Reconsideration Order, IB Docket Nos. 01-185, FCC 05-30 (February 25, 2005) ("ATC Reconsideration Order"):

"These negotiations have not occurred since 1999, and the 1999 coordination agreement remains in effect." (¶ 38)

"The current coordination agreement under which Inmarsat and MSV share L-band spectrum was finalized in 1999. Ideally, the L-band MSS operators should renegotiate their coordination agreement every year. Indeed, changes to the existing coordination agreement could help avoid some of the potential interference issues that could arise from deployment of MSS/ATC. At the same time, however, we acknowledge that it could take a great deal of time and effort to conduct further coordination negotiations. For this reason, in the case of any L-band frequency that is currently the subject of a coordination agreement and is shared between an MSS operator and an MSS/ATC operator, we will permit an MSS/ATC to cause a small increase in interference to another MSS operator's system above the coordinated interference level when the coordinated interference level is already greater than $6\% \Delta T/T$. This measure accounts for the reality that MSS is currently operating in the L-band, and that it may be necessary and appropriate to allow a slightly higher level of interference than currently coordinated levels allow in order to permit ATC to begin operations. When L-band MSS operators enter into a new coordination agreement, this additional interference allowance will no longer apply, and MSS/ATC operators will be required to operate its ATC within the limits coordinated by the parties." (¶ 44) (emphasis added)

Technical Certification

I, Dr. Peter D. Karabinis, Senior Vice President and Chief Technical Officer 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.

Dr. Peter D. Karabinis

Dated: February 14, 2006

CERTIFICATE OF SERVICE

I, Sylvia A. Davis of the law firm of Pillsbury Winthrop Shaw Pittman LLP, hereby certify that on this 14th day of February 2006, I served a true copy of the foregoing PUBLIC VERSION upon the following:

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I, Sylvia A. Davis, a secretary with the law firm of Pillsbury Winthrop Shaw Pittman LLP, hereby certify that on this 28th day of March 2006, I served a true copy of the foregoing by first-class United States mail, postage prepaid, upon the following:

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