

March 10, 2006

Via Hand Delivery

Mr. James Burtle
Chief, Experimental Licensing Branch
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

RECEIVED - FCC

MAR 10 2006

Federal Communication Commission
Bureau / Office

**Re: Lockheed Martin Corporation
File No. 0059-EX-RR-2006
Call Sign WD2XBU**

Dear Mr. Burtle:

Mobile Satellite Ventures Subsidiary LLC ("MSV"), the United States L band Mobile Satellite Service ("MSS") licensee, hereby requests that the Office of Engineering and Technology ("OET") clarify in acting on the above-captioned renewal application that (i) use of loaned¹ L band frequencies or any other frequencies coordinated for MSV or Mobile Satellite Ventures (Canada) Inc. is prohibited, and (ii) to the extent Lockheed Martin Corporation ("Lockheed") applies to operate the terminals at issue here with uncoordinated Inmarsat-4 satellites, it is subject to the same terms and conditions OET and the International Bureau have recently imposed on grants of authority to operate with the uncoordinated Inmarsat 4F2 satellite.²

Use of Loaned Frequencies. The above-referenced experimental authorization permits Lockheed to operate throughout the 1.6 GHz MSS L band (1626.5-1660.5 MHz), which necessarily includes "loaned" L band frequencies, as that term is defined by the International Bureau. The current use of these frequencies by Inmarsat and perhaps Lockheed is blocking the operations of MSV and MSV Canada today and is preventing them from using those frequencies to test and deploy new, hybrid system technologies using their current satellites. Accordingly, MSV urges OET to clarify that this experimental authorization does not permit the use of loaned frequencies or any other frequencies coordinated for MSV and MSV Canada.

Use of Inmarsat-4 Satellites. The above-referenced experimental authorization permits Lockheed to test and demonstrate terminals (non-BGAN) with an Inmarsat satellite in the L

¹ The Bureau has defined "loaned" L band frequencies as "those bandwidth segments that were loaned to Inmarsat by MSV and [Mobile Satellite Ventures (Canada) Inc.], 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 Exhibit A.

² See Exhibits A and B.

band. The original authorization was granted in 2003, prior to the November 8, 2005 launch of the uncoordinated Inmarsat 4F2 satellite, which covers North America, including the United States. The application did not propose operation with an Inmarsat-4 satellite. Nonetheless, one of the conditions attached to the grant of this application states that Lockheed is permitted to communicate with an “Inmarsat satellite.” MSV is concerned that this vague condition may be interpreted by Lockheed as permitting operation with any Inmarsat satellite, including the uncoordinated Inmarsat 4F2 satellite.³

As MSV has explained in other proceedings, the Inmarsat-4 satellites have not been coordinated among the North American L band operators and, as a result, present a significant risk of interference.⁴ OET and the International Bureau have recognized this by imposing conditions on authorizations permitting access to the uncoordinated Inmarsat 4F2 satellite. On January 18, 2006, the International Bureau granted Special Temporary Authority (“STA”) to operate certain earlier-generation terminals with the uncoordinated Inmarsat 4F2 satellite, but subject to a number of conditions intended to ensure that other L band operators do not suffer harmful interference (“*IB Conditions*”). See Exhibit A. Among other things, the conditions (i) require that operations pursuant to the STA be conducted on an unprotected and a non-interference basis; (ii) mandate that certain EIRP densities cannot be exceeded; (iii) make clear that grant of the STA is not based on a finding that Inmarsat’s L band operations are consistent with operation on a non-interference basis; and (iv) specify that grant of the STA is without prejudice to any future determination that the Commission may make as to whether Inmarsat’s L band operations are consistent with operation on a non-interference basis. *Id.* On February, 23, 2006, OET authorized Inmarsat to test BGAN terminals with the uncoordinated Inmarsat 4F2 satellite, but subject to a number of conditions, including the requirements to (i) immediately shut down in the event interference is caused; (ii) notify MSV prior to commencing operations and identify a point of contact for interference complaints; and (iii) ensure that adequate guard bands are provided between the band edges of Inmarsat’s carriers and the band edges of MSV’s operations in order to preclude the possibility of unacceptable interference to MSV’s operations (“*OET Conditions*”). See Exhibit B. To the extent Lockheed applies to operate the terminals at issue here with the uncoordinated Inmarsat 4F2 satellite, MSV requests that OET apply both the *IB Conditions* and the *OET Conditions* to any grant of this license.

³ Lockheed must receive approval to modify its experimental authorization before it is permitted to add an Inmarsat-4 satellite as an authorized Point of Communication. See, e.g., 47 C.F.R. § 5.77 (requiring prior approval for change in experimental operation that results in operations inconsistent with any term of outstanding authorization); 47 C.F.R. §§ 25.117; 25.118 (requiring prior approval for addition of new satellite to existing earth station license).

⁴ See Mobile Satellite Ventures Subsidiary LLC, Petition to Hold in Abeyance, File No. SES-LFS-20051123-01634 (January 13, 2006) (“*MSV Petition*”) (attached as Exhibit C).

Ms. Marlene H. Dortch
March 10, 2006
Page 3

Please contact the undersigned with any questions.

A handwritten signature in black ink, reading "Jennifer A. Manner", is positioned above a horizontal line.

Jennifer A. Manner
Vice President, Regulatory Affairs
**MOBILE SATELLITE VENTURES
SUBSIDIARY LLC**
10802 Parkridge Boulevard
Reston, Virginia 20191
(703) 390-2700

Of counsel:

Bruce D. Jacobs
David S. Konczal
PILLSBURY WINTHROP SHAW PITTMAN LLP
2300 N Street, NW
Washington, DC 20037-1128
(202) 663-8000

Exhibit A

Telenor Satellite Inc.

IBFS File Nos. SES-STA-20051216-01756, SES-STA-20051216-01757, SES-STA-20051216-01758, SES-STA-20051216-01759; SES-STA-20060118-00055; SES-STA-20060118-00056; SES-STA-20060118-00057; SES-STA-20060118-00058; SES-STA-20060119-00064

The request of Telenor Satellite, Inc. (Telenor) for special temporary authority (STA) IS GRANTED. Accordingly, Telenor is authorized from January 19, 2006 to March 19, 2006 to continue operations on the Inmarsat 4F2 satellite using hub earth stations and mobile earth terminals (METs) previously authorized under call signs KA312, WB36, WA28, KA313, E000280, E000282, E000283, E000284, and E000285 to communicate with the Inmarsat 3F4 satellite in accordance with the terms, conditions, and technical specifications set forth in the Commission's rules and this document.

1. Neither the aggregate uplink EIRP densities in the direction of any other L-band satellite serving the United States, nor the downlink EIRP densities at any geographical point within the United States, shall be increased as a result of continuance on the Inmarsat 4F2 satellite of operations previously authorized on the Inmarsat 3F4 satellite.
2. Operations on the Inmarsat 4F2 satellite shall be on an unprotected basis. Telenor shall not claim protection from, and is required to accept interference from, other lawfully operating satellites or radiocommunication systems.
3. No later than February 17, 2006 a report must be submitted addressing whether, given the increased capacity of the Inmarsat 4F2 satellite relative to the Inmarsat 3F4 satellite, there would be any discontinuance of, or degradation of the reliability of, existing operations should access to the "loaned" spectrum be terminated. In the event that the report asserts that such discontinuation or degradation may occur, the report must include a detailed, quantitative explanation of the basis of this assertion. Any such explanation must also include a list of the end-users, including any U.S. government end-users, using METs that may operate in the "loaned" spectrum under this STA, a point of contact (name and telephone number) for each such end-user, and the number of METs associated with each such end-user. Any such explanation, to the extent that it claims that termination of operations on the "loaned" spectrum would degrade service on other frequencies, must include a list of the potentially affected end-users, including any U.S. government end-users, using METs operating under this STA, a point of contact (name and telephone number) for each such end-user, and the number of METs associated with each such end-user. Should the U.S. government users not authorize disclosure of frequencies or services used on the "loaned" spectrum, the report must include a point of contact (name and telephone number) for the associated end-user who can verify the government's use. For purposes of this condition, "loaned" spectrum is defined 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.
4. Any action taken or expense incurred as a result of operations pursuant to this special temporary authority is solely at Telenor's own risk.
5. The grant of this STA is not based on a finding that Inmarsat's L-band operations are consistent with operation on a non-interference basis.
6. The grant of this STA is without prejudice to any future determination that the Commission may make as to whether Inmarsat's L-band operations are consistent with operation on a non-interference basis.
7. This STA may be terminated or modified at the International Bureau's discretion, without a hearing, if conditions warrant.

Telenor Satellite Inc.

IBFS File Nos. SES-STA-20051216-01756, SES-STA-20051216-01757, SES-STA-20051216-01758, SES-STA-20051216-01759; SES-STA-20060118-00055; SES-STA-20060118-00056; SES-STA-20060118-00057; SES-STA-20060118-00058; SES-STA-20060119-00064

8. Telenor must notify its customers in writing no later than February 17, 2006 that operations on the Inmarsat 4F2 satellite are pursuant to a 60-day grant of special temporary authority that may be terminated or modified at any time.
9. Authority granted in this STA is without prejudice to the disposition of the underlying modification applications in IBFS File Nos. SES-MFS-20051202-01665, SES-MFS-20051122-01614, SES-MFS-20051122-01615, SES-MFS-20051122-01616, SES-MFS-20051122-01617, SES-MFS-20051122-01618, SES-MFS-20051123-01626, SES-MFS-20051123-01627, SES-MFS-20051123-01629, SES-MFS-20051123-01630, SES-MFS-20051207-01709, SES-MFS-20060118-00050, SES-MFS-20060118-00051, SES-MFS-20060118-00052, and SES-MFS-20060118-00053.
10. Authority granted in this STA is without prejudice to possible enforcement action in connection with any prior unauthorized operation of Inmarsat-C terminals.
11. This grant is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and is effective immediately.
12. Telenor is afforded thirty days from the date of release of this action to decline this special temporary authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the special temporary authorization as conditioned.

Exhibit B

Frequency Information

San Francisco (SAN FRANCISCO), CA - NL 37-46-12: WL 122-27-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1639.2-1639.5 MHz	FX	31K2G7W	51.8 W (ERP)	
1642.5-1642.7 MHz	FX	156KD7W 156KG7W 31K2D7W 31K2G7W	51.8 W (ERP)	
1642.8-1643 MHz	FX	156KD7W 156KG7W 31K2D7W 31K2G7W	51.8 W (ERP)	
1643.9-1644.3 MHz	FX	156KD7W 156KG7W 31K2D7W 31K2G7W	51.8 W (ERP)	
1646.5-1647.7 MHz	FX	156KD7W 156KG7W 31K2D7W 31K2G7W	51.8 W (ERP)	

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) POINT OF COMMUNICATION: INMARSAT 4F2 Satellite.
- (3) Hughes Network Systems, sub LLC shall assure that adequate guard bands are provided between the band edges of its carriers and the band edges of MSV's operations in order to preclude the possibility of unacceptable interference to MSV's operations.

Special Conditions:

- (4) Neither the aggregate uplink EIRP densities in the direction of any other L-band satellite serving the United States, nor the downlink EIRP densities at any geographical point within the United States, shall be increased as a result of the addition of experimental BGAN operations on the Inmarsat 4F2 satellite over those densities previously authorized on the Inmarsat 3F4 satellite.
- (5) Hughes Network Systems, sub LLC shall notify MSV prior to commencing operations and identify its point of contact.
- (6) This license SUPERSEDES the previously issued license with the same call sign and file number: changes authorized frequencies and adds several special conditions.

Exhibit C



RECEIPT COPY

Jennifer A. Manner
Vice President,
Regulatory Affairs

PHONE: 703 390-2730
FAX: 703 390-2777
EMAIL: jmanner@msvip.com

PUBLIC COPY (REDACTED)

January 13, 2006

RECEIVED

JAN 13 2006

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

Federal Communications Commission
Office of Secretary

**Re: Petition of Mobile Satellites Ventures Subsidiary LLC to Hold in Abeyance
Application of MVS USA, Inc.
File No. SES-LFS-20051123-01634
(Call Sign E050348)**

Dear Ms. Dortch:

Mobile Satellites Ventures Subsidiary LLC ("MSV") hereby files this redacted public version of a Petition to Hold in Abeyance the above-referenced application of MVS USA, Inc. ("MVS") to operate Broadband Global Area Network ("BGAN") terminals in the United States with an uncoordinated Inmarsat-4 L band satellite (Inmarsat 4F2).¹ 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 and MSV.³ When considering other applications to use Inmarsat satellites in the United States,

¹ See Application of MVS USA, Inc., File No. SES-LFS-20051123-01634 (Call Sign E050348) (November 23, 2005) ("*MVS Application*").

² 47 C.F.R. § 0.459(b).

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.

PUBLIC COPY (REDACTED)

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 Petition to Hold in Abeyance the above-referenced MVS application.

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*.

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.

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.*

PUBLIC COPY (REDACTED)

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.

Ms. Marlene H. Dortch
January 13, 2006
Page 4

PUBLIC COPY (REDACTED)

Please contact the undersigned with any questions.

Very truly yours,



Jennifer A. Manner

PUBLIC COPY (REDACTED)

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

In the matter of	)	
	)	
MVS USA, Inc.	)	File No. SES-LFS-20051123-01634
Application for Blanket License to Operate	)	(Call Sign E050348)
Mobile Earth Terminals with Inmarsat 4F2 at	)	
52.75°W	)	

PETITION TO HOLD IN ABEYANCE

Bruce D. Jacobs
David S. Konczal
**PILLSBURY WINTHROP
SHAW PITTMAN LLP**
2300 N Street, NW
Washington, DC 20037-1128
(202) 663-8000

Jennifer A. Manner
Vice President, Regulatory Affairs
**MOBILE SATELLITE VENTURES
SUBSIDIARY LLC**
10802 Parkridge Boulevard
Reston, Virginia 20191
(703) 390-2700

January 13, 2006

PUBLIC COPY (REDACTED)

Summary

The Bureau should hold in abeyance the application filed by MVS to operate terminals in the United States with an uncoordinated Inmarsat satellite until the conclusion of a coordination agreement that results in a more efficient assignment of L band spectrum among the existing operators, including the assignment of contiguous and wider frequency blocks. Inmarsat's attempt to operate its new satellite and to provide new services without first coordinating them threatens the operation of the current MSS systems of MSV and MSV Canada and creates uncertainty for the development of their next generation systems, which are poised to revolutionize the MSS industry.

In evaluating whether the grant of an earth station application to use a non-U.S. licensed satellite will serve the public interest, *DISCO II* requires the Bureau to assess whether the satellite will cause interference to U.S.-licensed systems and whether there is sufficient spectrum available to permit operation of the foreign-licensed system in the United States. If there is an international coordination agreement in place between the United States and the licensing administration for the foreign satellite, the Commission can generally be assured that permitting the foreign licensed satellite to serve the United States will not raise concerns regarding interference or spectrum availability. But this is not the case in the L band because there is no international coordination agreement pertaining to the operation of Inmarsat 4F2. While the *Mexico City MoU* contemplates the operation of replacement satellites, Inmarsat 4F2 is technically different than Inmarsat-3 which precludes it from being considered a replacement.

In the absence of an international L band coordination agreement covering the Inmarsat 4F2 satellite, there is no basis for the Bureau to conclude that permitting the satellite to serve the United States will not raise concerns regarding interference and spectrum availability. There are three kinds of interference presented by Inmarsat's new satellite that neither Inmarsat nor MVS

PUBLIC COPY (REDACTED)

has addressed. The first is interference on spectrum that MSV and MSV Canada coordinated for their own use and loaned temporarily to Inmarsat, and that Inmarsat now refuses to relinquish. Inmarsat's current operations on this disputed spectrum are blocking MSV's operations *today* and grant of the instant application, to the extent it authorizes Inmarsat operations on the disputed spectrum, would do the same.

The second kind of interference results from the fact that Inmarsat 4F2 is technically different than the Inmarsat-3 satellites, and its technical characteristics are in no way contemplated in the 1999 Spectrum Sharing Arrangement among the L band operators or any other Agreement or Understanding between the United States and Inmarsat's licensing administration, the United Kingdom. The available evidence, which includes the Commission's own review of the satellite's characteristics and Inmarsat's own characterization of the satellite's susceptibility, indicates that Inmarsat 4F2 cannot operate and provide the proposed new services without causing interference to and receiving interference from other systems in the L band.

The third kind of interference is that threatened by Inmarsat's claim that it is entitled, contrary to its earlier commitments to operate only on spectrum it had coordinated pursuant to the 1999 SSA, to operate wherever it chooses in the L band. Inmarsat has never explained how Inmarsat 4F2 in actual practice could possibly operate on all L band frequencies without resulting in mutual interference among L band operators.

The Commission's most important role is that of spectrum "traffic cop," enforcing reasonable rules of the road, in this case that new satellites must be coordinated before they are permitted to provide United States service. Such enforcement is entirely within its authority under the *WTO Basic Telecom Agreement* and *DISCO II* principles, and is consistent with Commission precedent. While in some cases the Bureau is reasonably able to conclude that an

PUBLIC COPY (REDACTED)

applicant will be able to complete coordination before operating or will be able to operate on a non-interference basis until coordination is complete, that is not the case here. Given the evidence of interference that Inmarsat 4F2 will cause and receive, it is not a solution for the Bureau to grant applications to operate with Inmarsat 4F2 now, hope that a coordination agreement can be reached in the future, and that in the interim there will not be greater interference among L band systems that embroils the Commission and the operators in interference disputes. As the current impasse in the L band indicates, a *post hoc* approach to coordination disserves the public interest and impedes the full and efficient use of L band spectrum. Accordingly, the MVS application should be held in abeyance until an L band coordination agreement is concluded.

Lack of international coordination notwithstanding, the MVS application raises additional issues that warrant further scrutiny, including (i) whether Inmarsat 4F2 qualifies as a replacement satellite; (ii) the failure of Inmarsat 4F2 to comply with the Bureau's interpretation of the Commission's longitudinal station keeping rule; and (iii) the national security and law enforcement concerns presented by operation of terminals in the United States in conjunction with gateway earth stations located overseas.

PUBLIC COPY (REDACTED)

Table of Contents

Summary	i
Table of Contents	iv
Background	1
Discussion	7
I. The Bureau Should Hold the MVS Application in Abeyance Until the Conclusion of an L Band Coordination Agreement	7
II. The MVS Application Raises Additional Issues That Warrant Further Scrutiny	19
Conclusion	23

PUBLIC COPY (REDACTED)

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

In the matter of	)	
	)	
MVS USA, Inc.	)	File No. SES-LFS-20051123-01634
Application for Blanket License to Operate	)	(Call Sign E050348)
Mobile Earth Terminals with Inmarsat 4F2 at	)	
52.75°W	)	

PETITION TO HOLD IN ABEYANCE

Mobile Satellite Ventures Subsidiary LLC ("MSV") hereby files this Petition to Hold in Abeyance the above-referenced application filed by MVS USA, Inc. ("MVS") for a Title III blanket license to operate terminals in the United States with an uncoordinated Inmarsat-4 L band satellite.¹ The International Bureau ("Bureau") should not grant the application unless and until the new Inmarsat satellite is coordinated.

Background

MSV. MSV is the entity authorized by the Commission in 1989 to construct, launch, and operate a United States Mobile Satellite Service ("MSS") system in the L band.² MSV's licensed satellite (AMSC-1 or MSAT-2) was launched in 1995, and MSV began offering service in 1996. MSV is also the successor to TMI Communications and Company, Limited Partnership ("TMI") with respect to TMI's provision of L band MSS in the United States. Today, MSV

¹ As one of the L band Mobile Satellite Service ("MSS") operators in North America which could be subjected to harmful interference from grant of this application, MSV is a "party in interest" with standing to file this Petition. *See* 47 U.S.C. § 309(d)(1). Moreover, MSV has standing as a competitor in the MSS market. *See FCC v. Sanders Brothers Radio Station*, 309 U.S. 475, 477 (1940).

² *Order and Authorization*, 4 FCC Rcd 6041 (1989); *remanded by Aeronautical Radio, Inc. v. FCC*, 928 F.2d 428 (D.C. Cir. 1991); *Final Decision on Remand*, 7 FCC Rcd 266 (1992); *aff'd, Aeronautical Radio, Inc. v. FCC*, 983 F.2d 275 (D.C. Cir. 1993); *see also AMSC Subsidiary Corporation, Memorandum Opinion and Order*, 8 FCC Rcd 4040 (1993).

PUBLIC COPY (REDACTED)

offers a full range of land, maritime, and aeronautical satellite services, including voice and data, using both its own U.S.-licensed satellite and the Canadian-licensed L band satellite (MSAT-1) licensed to Mobile Satellite Ventures (Canada) Inc. ("MSV Canada"). In January 2005, the Bureau licensed MSV to launch and operate an L band MSS satellite at 63.5°WL (called "MSV-SA") to provide MSS in South America.³ In May 2005, the Bureau licensed MSV to launch and operate a replacement L band MSS satellite at 101°WL (called "MSV-1").⁴

This past Wednesday, MSV announced that it had entered into a contract with Boeing Satellite Systems, Inc. for the construction and delivery of three next generation, transparency class L band satellites to serve the Western Hemisphere.⁵ The satellites will be among the largest and most powerful commercial satellites ever built. Each satellite's primary antenna will be twice as large as any previous commercial satellite, and the satellites will have significantly more power available over the U.S. compared to any other MSS system providing or seeking to provide service to the United States. The satellites will be used to provide advanced mobile broadband services to devices that are virtually identical to cell phone handsets in terms of aesthetics, cost, and functionality, in stark contrast to the laptop-sized BGAN terminals at issue here. MSV is ahead of the Commission's milestone schedule and is planning to launch these satellites beginning in 2009. Among the keys to exploiting this advancement in satellite technology are regulatory certainty, protection from harmful interference, and access to

³ See *Mobile Satellite Ventures Subsidiary LLC, Order and Authorization*, DA 05-50 (January 10, 2005) ("MSV-SA Order").

⁴ See *Mobile Satellite Ventures Subsidiary LLC, Order and Authorization*, DA 05-1492 (May 23, 2005) ("MSV-1 Order").

⁵ See MSV Press Release, "Mobile Satellite Ventures Engages Boeing to Develop Next Generation Satellites" (dated January 11, 2006) (available at: http://www.msvlp.com/pr/news_releases_view.cfm?id=80).

PUBLIC COPY (REDACTED)

contiguous spectrum blocks. Harmful interference (such as that presented by the operation of uncoordinated satellites, including Inmarsat-4, and Inmarsat's refusal to honor its prior coordination commitments, including the return of the loaned spectrum) and inefficient spectrum assignments (such as that presented by the current assignment of non-contiguous slivers in the L band) will only impede the development of these MSV next generation networks and their benefits for consumers throughout the Western Hemisphere.

Inmarsat. Inmarsat is a provider of MSS in the L band and is licensed by the United Kingdom. Inmarsat was established in 1976 as a legal monopoly owned largely by foreign government post, telephone, and telegraph ("PTT") administrations. From its base as a monopoly, Inmarsat gradually built a fleet of satellites to provide global service, primarily to large, oceangoing vessels. As the first entrant into the MSS market and as a result of its ties to foreign governments, Inmarsat has developed a dominant share of the MSS market.⁶ Inmarsat currently operates a fleet of nine in-orbit second generation (Inmarsat-2) satellites and third generation (Inmarsat-3) satellites.⁷ Inmarsat has also launched two fourth-generation (Inmarsat-4) satellites and is in the process of constructing and launching its third Inmarsat-4 satellite. The Inmarsat-4 satellites support the Broadband Global Area Network ("BGAN") terminals at issue here. These terminals use wider bandwidth carriers than terminals operating with Inmarsat-3

⁶ See Inmarsat Finance plc, Form F-4 Registration Statement -- Exchange Offer for 7 5/8% Senior Notes due 2012 (May 25, 2004) ("*Inmarsat May 2004 SEC Form F-4*"), at 2 ("In the maritime sector, we believe we are the leading provider of global mobile satellite services, with 2002 revenues in excess of 30 times those of our nearest competitor."); *id.* ("We believe we are also the market leader in the provision of high-speed data services to the maritime and land sectors, with 2002 data revenues of more than 15 times those of our nearest competitor."); Inmarsat Global Ltd., Form F-20 (April 29, 2005), at 28, 33, 34, and 35 (stating that Inmarsat is the "leading provider" of MSS in the land, maritime, and aeronautical sectors) (available at: <http://www.sec.gov/Archives/edgar/data/1291401/000104746905012474/0001047469-05-012474-index.htm>) ("*Inmarsat April 2005 Form F-20*").

⁷ See Comments of Inmarsat Ventures plc, IB Docket No. 01-185 (Oct. 19, 2001), at 3.

PUBLIC COPY (REDACTED)

satellites and may require larger guard bands to protect other L band operators. Inmarsat has not provided the information needed for MSV to determine whether, or discussed with other L band operators how, the Inmarsat-4 satellites will avoid causing or suffering interference with respect to other L band satellites.

L band coordination process. Spectrum in the L band in North America is shared primarily among five operators: MSV, MSV Canada, Inmarsat, and Mexican and Russian systems.⁸ The five Administrations that license these systems reached an agreement in 1996 for a framework for future coordination of the L band spectrum in North America, called the Mexico City Memorandum of Understanding ("*Mexico City MoU*").⁹ Under the *Mexico City MoU*, the L band operators are each assigned certain specific frequencies to use on their specific satellites through multi-party operator agreements, called Spectrum Sharing Arrangements ("SSA"). Under the 1999 SSA, which was based on operation of narrowband carriers only, spectrum is divided among the five L band operators in largely non-contiguous slivers. The *Mexico City MoU* and the subsequent SSAs have never contemplated the operation of satellites such as Inmarsat 4F2 at any orbital locations or the provision of L band traffic requiring bandwidth wider than 30 kHz (wideband carriers).

Under the *Mexico City MoU*, the L band operators are required to ensure that spectrum is

REDACTED

⁸ The L band spectrum in North America is also shared with Japan's MTSAT satellite, but only in and near the Pacific Ocean.

⁹ 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 ("*Mexico City MoU*").

PUBLIC COPY (REDACTED)

REDACTED

Since 1999, all the L band operators, only recently with the exception of Inmarsat, have been operating on a non-interference basis using spectrum assignments listed in the 1999 SSA for specific satellites, orbital locations, earth stations, services (carriers types and emission levels), satellite antenna beams and the associated main beam and sidelobe roll-off, and service areas.

REDACTED

¹⁰

REDACTED

as is the

statement it made in its April 2005 securities filing that “the amount of spectrum available to each operator is currently frozen at the levels agreed in 1999.”¹¹

Despite these commitments, Inmarsat has continued to use certain L band frequencies that were coordinated for MSV and MSV Canada, temporarily loaned to Inmarsat, and then subsequently recalled.

REDACTED

¹⁰

REDACTED

Indeed, even more recently, the Commission was under the impression that “the parties continue to operate under the 1999 assignments pending further negotiations.” *See Flexibility for Delivery of Communications by MSS Providers, Report and Order*, IB Docket No. 01-185, 18 FCC Rcd 1962, n. 144 (February 10, 2003) (“ATC Order”).

¹¹ *Inmarsat April 2005 Form F-20* at 10.

PUBLIC COPY (REDACTED)

REDACTED

MSV and MSV Canada notified Inmarsat over 18 months ago that they needed to begin operations on this spectrum, but Inmarsat has refused to return the spectrum.¹² MSV and MSV Canada need access to this spectrum to implement their aggressive plans to begin testing and deploying their interim-generation and next-generation integrated satellite-terrestrial networks. While MSV believes that it has the unequivocal right to use these frequencies, it has refrained from doing so in order to protect Inmarsat's customers, which Inmarsat is cynically using as hostages.

MVS BGAN Application. In November 2001, the Commission authorized various entities to provide service in the United States using Inmarsat-3 satellites.¹³ The Commission granted the applications subject to the condition that operations be on a non-interference basis, using only those frequencies coordinated for Inmarsat-3 satellites under the 1999 SSA. *See COMSAT Order ¶ 115(c)-(d).*

In its above-referenced application, MVS seeks a Title III blanket license to operate BGAN terminals in the United States with an uncoordinated Inmarsat-4 satellite that will be located at 52.75°W (called "Inmarsat 4F2").¹⁴ MVS claims that this satellite is a replacement for an Inmarsat-3 satellite located at 54°W. *MVS Application*, Attachment 2 at 2 and Attachment A at 1-3. To support this claim, MVS alleges that the Inmarsat 4F2 will serve the same geographic area as the Inmarsat-3 satellite at 54°W and that the BGAN terminals operating with Inmarsat

¹² Inmarsat has acknowledged its refusal to return the loaned spectrum in a filing with the U.S. Securities and Exchange Commission ("SEC"). *See Inmarsat April 2005 Form F-20* at 48.

¹³ *See COMSAT Corporation et. al., Memorandum Opinion, Order and Authorization*, 16 FCC Rcd 21661 (2001) ("*COMSAT Order*").

¹⁴ *See MVS USA, Inc., Application*, File No. SES-LFS-20051123-01634 (Call Sign E050348) (November 23, 2005) ("*MVS Application*").

PUBLIC COPY (REDACTED)

4F2 will use the same frequencies that the Commission in the *COMSAT Order* authorized terminals to use with Inmarsat-3 satellites. *Id.*, Attachment A at 1-2.

MVS states that Inmarsat 4F2 will operate with $\pm 0.1^\circ$ East-West station-keeping, noting 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. *MVS Application*, Attachment A at 43. MVS explains that the gateway earth stations to be operated with Inmarsat 4F2 will be located in the Netherlands and Italy. *Id.*, Attachment A at 3. MVS states that it has entered into a revised agreement with the Department of Justice ("DOJ"), the Federal Bureau of Investigation ("FBI"), and the Department of Homeland Security ("DHS") to address the national security and law enforcement concerns presented by operation of the BGAN terminals in the United States in conjunction with gateway earth stations located overseas, but it has not included a copy of this revised agreement in the record of this proceeding. *Id.*, Attachment 3 at 4.

Discussion

I. THE BUREAU SHOULD HOLD THE MVS APPLICATION IN ABEYANCE UNTIL THE CONCLUSION OF AN L BAND COORDINATION AGREEMENT

In *DISCO II*, the Commission established a framework for evaluating whether the grant of an earth station application to use a non-U.S. licensed satellite to provide service in the United States will serve the public interest.¹⁵ Among other things, the Commission will assess whether the foreign-licensed satellite will cause interference to U.S.-licensed systems and whether there is sufficient spectrum available to permit the operation of the foreign-licensed system in the

¹⁵ See *Amendment of the Commission's Regulatory Policies To Allow Non-U.S.-Licensed Space Stations To Provide Domestic and International Satellite Service in the United States, Report and Order*, 1B Docket No. 96-111, 12 FCC Rcd 24094 (1997) ("*DISCO II*").

PUBLIC COPY (REDACTED)

United States. *DISCO II* ¶ 150. The Commission found in *DISCO II* that this exercise of spectrum management authority is consistent with the Chairman's Note to the World Trade Organization ("WTO") Basic Telecommunications Agreement,¹⁶ 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.¹⁷

If there is an international coordination agreement in place between the United States and the licensing administration for the foreign satellite, the Commission can generally be assured that permitting the foreign licensed satellite to serve the United States will not raise concerns regarding interference or spectrum availability. This is not the case in the MSS L band because there is no coordination agreement among the L band operators covering Inmarsat 4F2 at 52.75°W or any other orbital location, or covering its technical and operational parameters. While MVS and Inmarsat claim that Inmarsat 4F2 is a replacement satellite under the Commission's satellite processing rules, which is doubtful, it certainly does not qualify as a replacement satellite under the *Mexico City MoU*.

REDACTED

¹⁶ Fourth Protocol to the GATS (April 30, 1996), 36 I.L.M. 354 (1997) ("WTO Basic Telecommunications Agreement").

¹⁷ 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 system's operations in the United States or, when conditions cannot remedy the interference, deny access.") (citing *DISCO II*).

PUBLIC COPY (REDACTED)

REDACTED

(i) it is not replacing another satellite;¹⁸ (ii) it has much larger L band on-board power and will cause greater aggregate interference to other L band operators (*see infra* pages 13-17); and (iii) it will require greater protection from other L band operators (*see infra* pages 15-17). In addition to these and other interference concerns, MVS states that Inmarsat 4F2 will have inefficient L band global beams, **REDACTED**¹⁹ Until coordination is complete, Inmarsat 4F2 is simply a rogue satellite that has no internationally recognized rights.

While the Commission has in the past licensed earth stations to operate with L band satellites on a non-interference basis in the absence of a coordination agreement, the spectrum management issues presented now are fundamentally different.²⁰ Unlike the Inmarsat 4F2 satellite at issue here, those L band satellites had already been coordinated in the past for narrowband carriers and were in the ITU Master Registry. The operators discussed the technical

¹⁸ Inmarsat and its distributors have told the Commission that Inmarsat will relocate the Inmarsat-3 satellite that Inmarsat 4F2 is allegedly replacing to 142°W on January 15, 2006. *See, e.g.,* Stratos Communications, Inc., Request for Special Temporary Authority, File No. SES-STA-20051216-01760 et al (December 16, 2005).

¹⁹ *MVS Application*, Attachment A at 12-13, 16-17;
REDACTED

²⁰ *See COMSAT Order* (authorizing Inmarsat satellites to provide service in the United States on a non-interference basis after concluding that operation pursuant to such a condition was possible); *Applications of SATCOM Systems, Inc., TMI Communications and Company, LP, et al., Order and Authorization*, 14 FCC Rcd 20798 (1999), *aff'd sub nom. AMSC Subsidiary Corp. v. FCC*, 216 F.3d 1154 (D.C. Cir. 2000) (authorizing Canadian-licensed satellite to provide service in the United States on a non-interference basis after concluding that operation pursuant to such a condition was possible).

PUBLIC COPY (REDACTED)

parameters of their respective systems, applied those parameters in extensive calculations of potential interference, and developed an initial sharing plan for interference-free operation by which, even after the annual meetings reached a stalemate, the operators agreed to abide. See *supra* note 10. The Commission and the L band operators could be reasonably assured that the systems would be operated on a non-interference basis, provided the operators adhered to the frequency assignments detailed in the 1999 SSA.

In this case, however, there is no similar arrangement which defines the frequency assignments for Inmarsat 4F2. Inmarsat is proposing to operate a satellite that is not covered by any coordination agreement, is largely different from a technical perspective from any satellite covered by the previous coordination agreement, has never been analyzed by other L band operators, and (according to Inmarsat) will not accept any limitations on the frequencies it will use for operation.

As the Bureau demonstrated in at least three previous cases, it will not authorize an uncoordinated satellite to provide service if there is evidence that interference will result, regardless of whether the satellite is domestic or foreign-licensed.²¹ In those cases, the Bureau refused to permit the satellites to operate until after a coordination agreement had been reached

²¹ See 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."); *MSV-SA Order* ¶ 8 (stating that the Commission "will not consider applications for new systems where the new system's operations would cause interference to licensed systems").

PUBLIC COPY (REDACTED)

with affected operators. Indeed, the Bureau has explained that imposing “a requirement that the [uncoordinated] satellite cannot operate at all will ensure that the satellite does not cause harmful interference to other satellites while coordination is being completed.”²² As proponents of providing service in the United States with an uncoordinated satellite, the burden falls squarely on Inmarsat and MVS to demonstrate that Inmarsat can operate its uncoordinated satellite on a non-harmful interference basis pending the conclusion of a coordination agreement. Inmarsat and MVS have utterly failed to meet this burden.

Interference resulting from Inmarsat's continued use of spectrum that it agreed to return to MSV and MSV Canada. The first type of interference is presented by Inmarsat's proposed use of frequencies on Inmarsat 4F2 that have been coordinated for use by MSV and MSV Canada under the 1999 SSA, then loaned to Inmarsat on a temporary basis, and that Inmarsat now refuses to relinquish or to refrain from using on Inmarsat 4F2. MSV and MSV Canada need access to this spectrum to implement their aggressive plans to deploy an interim-generation integrated satellite-terrestrial system. Inmarsat's current use of these frequencies prevents MSV and MSV Canada from using those frequencies to test and deploy their new, hybrid systems. This is a real, concrete example of interference that is already occurring today and that Inmarsat proposes to continue on Inmarsat 4F2.

Under the terms of the *COMSAT Order*, earth stations accessing Inmarsat satellites in the United States are permitted to operate only on a non-interference basis *and* only on those frequencies “coordinated for” Inmarsat in the “most recent annual L-Band operator-to-operator agreement,” which is a reference to the 1999 SSA. See *COMSAT Order* ¶ 115(c)-(d). The Commission granted these applications in 2001, well after the last SSA had been agreed to in

²² *Loral Orion Services, Inc., Order*, DA 99-2221, 14 FCC Rcd 18878, ¶ 18 (October 18, 1999).

PUBLIC COPY (REDACTED)

1999. Thus, the Commission was aware that a new SSA had not been negotiated since 1999. It also was aware that Inmarsat had **REDACTED**

²³ Thus, the Commission precluded earth stations from using portions of the L band that have not been “coordinated for” Inmarsat in the 1999 SSA, including spectrum that may have been temporarily loaned to Inmarsat but subsequently recalled by the lenders.²⁴ This condition is simple and straightforward, and should not be the subject of any reasonable dispute. Tellingly, neither Inmarsat nor the earth station licensees permitted to access Inmarsat satellites have ever sought reconsideration or clarification of this unambiguous condition. Moreover, the Commission has repeatedly confirmed that although a new SSA had not been negotiated since 1999, it continues to effectively govern the operations of L band MSS providers.²⁵ Inmarsat’s decision **REDACTED**

is also consistent with such a 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.”²⁶

²³

REDACTED

²⁴ L band frequencies that have been loaned between L band operators have not been “coordinated for” the borrowing operator. In order to have the right to “loan” frequencies, the lending operator must have “coordinated for” the right to use those frequencies in the first place. Thus, the terms of the *COMSAT Order* and similar decisions licensing L band earth stations only give the lending operator, and not the borrowing operator, the right to use loaned frequencies. The words “coordinated for” as used in the *COMSAT Order* and similar decisions licensing L band earth stations recognize the superior right the lending operator has to loaned frequencies and that the lending operator may exercise its right to use the loaned frequencies at some point in the future.

²⁵ See Exhibit A.

²⁶ *Inmarsat April 2005 Form F-20* at 10.

PUBLIC COPY (REDACTED)

Interference resulting from technically different nature of Inmarsat's new satellite relative to the satellites it has coordinated previously under the Mexico City MoU. The second type of interference results from the fact that, from a technical perspective, Inmarsat 4F2 is largely different than the Inmarsat-3 satellites, and is more likely both to cause interference to and to suffer interference from other L band systems. BGAN terminals operating with Inmarsat 4F2 will use wideband carriers **REDACTED**

. Inmarsat and other L band operators have never coordinated an envelope of frequency assignments, including necessary guard band requirements, within which Inmarsat can operate these wideband carriers while avoiding non-co-channel interference to other L band operators. The inappropriate placement of a broadband, uncoordinated carrier at frequencies too close to a band edge may result in an absolute level of non-co-channel emissions that result in harmful interference to other L band operators. Indeed, the wideband carriers Inmarsat operates today on its Inmarsat-3 satellites, including those used to provide its High Speed Data ("HSD") service, have never been coordinated and have resulted in interference to other L band operators.²⁷ Moreover, the aggregate EIRP ("AEIRP") of Inmarsat 4F2 is significantly higher

²⁷

REDACTED

Inmarsat has not yet undertaken this required coordination. Not surprisingly, MSV has suffered non-co-channel interference from Inmarsat's uncoordinated HSD transmissions due to Inmarsat's failure to provide sufficient guard bands with respect to MSV transmissions. In coordination of these MSS wideband carriers, the challenge is to suitably limit this interference risk while minimizing the size and number of guard bands in order to achieve the highest possible spectrum utilization efficiency. Moreover, the necessary guard bands must be equitably accommodated within the operators' frequency assignments. Establishment of the appropriate risk-efficiency balances and equitable placements of guard bands are not matters that should be decided unilaterally by Inmarsat.

Operation of wideband carriers on current-generation satellites is not the only example of operations Inmarsat has failed to coordinate despite its obligation to do so. According to its

PUBLIC COPY (REDACTED)

than that of Inmarsat-3, raising the potential for increased interference in the downlink to other L band operators. A BGAN forward link carrier may be radiated from the Inmarsat 4F2 satellite at 10 dB higher power, or more, relative to a coordinated narrowband Inmarsat-3 carrier, owing to the higher data throughput capability of the BGAN carrier being at least one order of magnitude higher compared to that of the narrowband Inmarsat-3 carrier. As such, absent coordination, out-of-channel and out-of-band emissions of the BGAN carrier are likely to cause harmful interference to other L band systems. In addition, while Inmarsat-3 satellites have been coordinated to account for their six (or less) larger regional beams, the Inmarsat-4 satellites will exhibit a 14-fold increase in the frequency reuse capability based upon the increase in the number of beams to support BGAN service. This dramatic increase in the number of beams 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 spot beams vis-à-vis the MSV and MSV Canada systems. This multilateral engineering process is required to ensure that multiple-entry co-channel interference between Inmarsat-4 and the current systems of MSV and MSV Canada is accurately quantified and consistent with the performance requirements of each system. The spectrum reuse matrix adopted in the 1999 SSA among the North American L band MSS operators does not account for this increase in the number of co-channel reuse beams or the change in the spot beam size and specific geographic coverage. These changes relative to the coordinated parameters, in conjunction with a significantly larger AEIRP of Inmarsat 4F2 relative to Inmarsat-3, could cause harmful

securities filings, Inmarsat also currently operates Inmarsat-2 satellites at 98°W and 142°W, and places to relocate an Inmarsat-3 satellite to 142°W, none of which have been coordinated with other North American L band operators. *Inmarsat April 2005 Form F-20* at 39.

PUBLIC COPY (REDACTED)

intersystem interference if the required engineering is not conducted and subscribed to multilaterally by the three operators through a formal and binding coordination agreement. Thus, while Inmarsat may claim that it can operate BGAN services over Inmarsat 4F2 within the “technical envelope” in which they are operated today, this “technical envelope” simply does not exist because Inmarsat has not diligently coordinated all of its operations in order to establish such an envelope. The fact is that the key technical parameters of Inmarsat 4F2 used to support BGAN services, such as its proposed use of loaned frequencies, increased number of co-channel reuse beams, higher AEIRP, and wideband carriers, have not been previously coordinated, thus making operation of Inmarsat 4F2 on a non-harmful interference basis relative to other L band systems unlikely. Absent prior coordination, it is unclear how Inmarsat intends to provide these services while avoiding interference to other L band operators.

The potential for interference is not limited to that caused to other L band systems because Inmarsat itself may suffer greater interference upon operation of its new satellite. Inmarsat 4F2 is far more susceptible than the Inmarsat-3 satellites to co-channel interference from operation of current-generation L band satellite terminals. The Commission has noted that uplink co-channel interference resulting from MSV’s current-generation satellite terminals will increase from 58.6% $\Delta T/T$ to 794.1% $\Delta T/T$ as Inmarsat transitions from the Inmarsat-3 satellites to the narrow spot beams on the Inmarsat-4 satellites used to support BGAN operations.²⁸

²⁸ See *ATC Order*, Appendix C2, Table 2.1.1.C. The Commission’s characterization of the interference environment is strictly limited to interference from satellite operations. The Commission’s decision to permit operation of an Ancillary Terrestrial Component considered separately the potential impact of such terrestrial operations, concluding that terrestrial operations would be permitted if they added no more than an additional 1% $\Delta T/T$ to the interference environment of co-channel operations of other, already-coordinated systems. See *Flexibility for Delivery of Communications by MSS Providers, Memorandum Opinion and Order and Second Order and Reconsideration*, IB Docket Nos. 01-185, FCC 05-30 (February 25, 2005)

PUBLIC COPY (REDACTED)

Moreover, while the technical parameters permitting co-channel sharing between Inmarsat and other North American L band operators are specified in the reuse matrix accompanying the 1999 SSA, the 14-fold increase in the frequency reuse capability based upon the increase in the number of beams to support BGAN service and the major differences in associated beam-coverage areas render this reuse matrix inapplicable to the Inmarsat-4 satellites. This interference problem would exist even if the Inmarsat-4F2 satellite were proposed to be positioned at the same 54.00°W orbital location of the Inmarsat-3 satellite, rather than 52.75°W. With respect to adjacent-band interference, Inmarsat has claimed in another proceeding that the Inmarsat 4F2 satellite has not been designed to accommodate the level of adjacent band interference that can exist from operation of current L band systems based on the system parameters contemplated when Inmarsat-3 was coordinated.²⁹ If this is the case (which MSV has reason to doubt),³⁰ then Inmarsat 4F2 is more susceptible to adjacent band interference than the Inmarsat-3 satellites. The result is that, even assuming Inmarsat operates within the confines of the 1999 SSA, it is unlikely to be able to operate on an unprotected, non-interference basis once

(“ATC Reconsideration Order”), ¶¶ 44-45. For uncoordinated systems such as the Inmarsat-4 satellites, the Commission left it to the operators to negotiate a combined interference limit and, in the absence of an agreement, indicated that it would permit a similar one percent additional rise in the noise floor, above whatever level the parties coordinate for satellite operations. *Id.*

²⁹ At the time the last L band coordination agreement was reached, Inmarsat was well aware of the potential for the U.S. and Canadian-licensed L-band satellites to support more than 1,000 METs transmitting simultaneously, allowing for voice activation. Given the 16 dBW maximum EIRP of these METs, there can be more than 46 dBW aggregate EIRP ($16 + 10 \cdot \log(1000)$) launched toward space from current L-band METs alone. *See* MSV, Opposition to Inmarsat Ventures Ltd. Petition for Partial Reconsideration and Clarification, IB Docket No. 01-185 (August 4, 2005), at 9-10 and Technical Appendix. In the ATC proceeding, however, Inmarsat has claimed that Inmarsat 4F2 has been designed to accommodate only 37 dBW from “MSV-related” sources of interference. *See* Inmarsat Ventures Ltd, Petition for Partial Reconsideration and Clarification, IB Docket No. 01-185 (May 13, 2005) (“*Inmarsat Petition*”), at 9.

³⁰ *See* Letter from Jennifer A. Manner, MSV, to Ms. Marlene H. Dortch, FCC, IB Docket No. 01-185 (November 15, 2005).

PUBLIC COPY (REDACTED)

Inmarsat 4F2 begins operation. Thus, if the Bureau permits Inmarsat-4 satellites to operate in the United States, operation on an unprotected, non-interference basis may not be possible without substantial Commission oversight and enforcement.

The third potential for interference results from Inmarsat's claim that it is entitled to operate on each and every frequency in the L band despite (i) its 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.³¹ Inmarsat provides no explanation as to how L band operators in actual practice could possibly operate on all L band frequencies and not cause mutual interference. Even assuming that the Commission did authorize Inmarsat-3 to operate on every L band frequency (which is not the case),³² this would no longer be sound spectrum management policy in the case of Inmarsat 4F2, which is technically different than Inmarsat-3 and is more likely to cause interference to, and to receive interference from, other L band operators.

Given the interference concerns presented by Inmarsat 4F2, requiring Inmarsat to coordinate prior to operation is both good spectrum management policy and consistent with precedent. *See supra* note 21. The technical issues presented by the proposed operation of

³¹

REDACTED

, 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." 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>).

³² COMSAT Order ¶ 115(c)-(d); *see supra* pages 11-12.

PUBLIC COPY (REDACTED)

Inmarsat-4 satellites can be resolved only through *a priori* frequency coordination among the L band operators and their licensing administrations, which has not yet occurred. Given the likelihood of operations of Inmarsat 4F2 to cause harmful interference to other L band operators and Inmarsat's refusal to abide by previous coordination agreements by returning loaned spectrum, it is not a solution for the Bureau to grant applications to operate with Inmarsat 4F2 now and hope that a coordination agreement can be reached in the future. As the current impasse in the L band indicates, a *post hoc* approach to coordination disserves the public interest and impedes the full and efficient use of spectrum.³³ If the Bureau were to permit Inmarsat 4F2 to provide service in the United States prior to a coordination agreement, the ability of L band operators to provide vital satellite services, including to the public safety community, will be threatened. L band operators will soon find themselves embroiled in interference disputes before the Commission, unable to take full advantage of this prime spectrum resource and depriving consumers of the benefits of innovative services that MSV will provide in the near future.

Accordingly, unless and until L band coordination discussions are finalized and a coordination agreement is reached, the Bureau should hold the MVS application in abeyance.³⁴ 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,

³³ As it has done numerous times in the past, MSV invites Inmarsat to participate in discussions to make the most efficient use of the L band spectrum.

³⁴ A Bureau decision holding the MVS earth station application in abeyance is consistent with its recent decisions authorizing MSV to operate next-generation satellites on a non-interference basis. *See MSV-1 Order; MSV-SA Order*. In MSV's case, the Bureau granted licenses for satellites that are years away from launch, not earth station licenses for imminent operation that are presented by MVS's application.

PUBLIC COPY (REDACTED)

will be thwarted.³⁵ Having said that, however, it is also reasonable to expect that if the parties commit to a good faith effort to complete a comprehensive regional coordination agreement, MSV's view is that it can be completed in a matter of a few months, well prior to the June 30, 2006 deadline MSV has proposed for the expiration of any STAs granted to permit operation of earlier-generation (non-BGAN) earth stations with Inmarsat 4F2.³⁶

II. THE MVS APPLICATION RAISES ADDITIONAL ISSUES THAT WARRANT FURTHER SCRUTINY

The lack of international frequency coordination for Inmarsat 4F2 notwithstanding, the MVS application raises additional issues that warrant further scrutiny. First, while MVS claims that Inmarsat 4F2 is a replacement for the Inmarsat-3 satellite at 54°W, there is insufficient evidence in the record to support this claim. While MVS claims that Inmarsat 4F2 will serve the same geographic area as the Inmarsat-3 satellite at 54°W, neither Inmarsat nor MVS has provided the coverage area for the Inmarsat-3 satellite in order to make that comparison.³⁷

³⁵ The Commission has identified the promotion of "efficient and effective" use of spectrum as one of its strategic objectives. *See FCC, Strategic Plan: 2006-2011* (September 30, 2005). The Commission has also recognized that assignment of contiguous frequency blocks will increase spectrum efficiency and redound to the benefit of the American public. *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 and Order, Third Notice of Proposed Rule Making, and Second Memorandum Opinion and Order*, 18 FCC Rcd 2223, ¶ 68 (2003).

³⁶ *See* MSV, Comments, File No. SES-STA-20051216-01760 et al (December 28, 2005) ("MSV STA Comments").

³⁷ While MVS states that Inmarsat 4F2 will "serve the same geographic regions" as the Inmarsat-3 satellite at 54°W, this leaves unanswered whether Inmarsat 4F2 will cover geographic regions beyond those covered by the Inmarsat-3 satellite at 54°W, which would disqualify Inmarsat 4F2 from being a replacement satellite. *See MVS Application*, Attachment A at 1; 47 C.F.R. § 25.165(e) ("A replacement satellite is one that is . . . [a]uthorized to be operated at the same orbit location, in the same frequency bands, and with the same coverage area as one of the licensee's

PUBLIC COPY (REDACTED)

Moreover, as recent STA requests from Inmarsat's distributors reveal, the Inmarsat-3 satellite that Inmarsat 4F2 is allegedly replacing will be transitioned to another orbital location beginning on January 15, 2006 to provide service in the Pacific Ocean region. *See, e.g., Stratos STA Request.* To the extent the Bureau finds that Inmarsat 4F2 is a replacement satellite under the Commission's rules despite these discrepancies, the Bureau should make clear that this decision does not mean that the Commission as the representative of the United States in international frequency coordination negotiations considers Inmarsat 4F2 to be a replacement satellite under the *Mexico City MoU*. As discussed above (*see supra* pages 8-9), Inmarsat 4F2 cannot be considered a replacement satellite under the *Mexico City MoU*.

Second, while MVS is correct when it states that the Commission rule requiring FSS satellites to operate with $\pm 0.05^\circ$ East-West station keeping does not apply to MSS satellites, it is incorrect when it implies that this is settled law.³⁸ In acting on MSV's application to operate an MSS satellite with $\pm 0.1^\circ$ East-West station keeping, the Bureau held that MSV was required to justify a waiver of the rule requiring FSS satellites to operate with $\pm 0.05^\circ$ East-West station keeping.³⁹ MSV has sought reconsideration of this decision, asking the Bureau to clarify that the rule requiring FSS satellites to operate with $\pm 0.05^\circ$ East-West station-keeping does not apply to MSS satellites.⁴⁰ This proceeding is pending. To the extent the Bureau authorizes Inmarsat 4F2

existing satellites."); *AfriSpace, Inc., Order and Authorization*, DA 06-4, ¶ 5 (Chief, International Bureau, January 3, 2006) (explaining that satellite does not satisfy the Commission's criteria for a replacement satellite because it will have different coverage area than satellite it is replacing).

³⁸ *MVS Application*, Attachment A at 43; *see* 47 C.F.R. § 25.210(j).

³⁹ *See MSV-1 Order* ¶ 21.

⁴⁰ *See* MSV, Petition for Clarification and Partial Reconsideration, File Nos. SAT-LOA-19980702-00066 et al (June 22, 2005).

PUBLIC COPY (REDACTED)

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. Conversely, if the Bureau on reconsideration of the *MSV-1 Order* upholds its decision that MSS satellites are required to comply with $\pm 0.05^\circ$ East-West station-keeping, the MVS application must be dismissed for failing to seek a waiver of this rule.⁴¹

Third, while MVS states that it has reached an agreement with the Executive Branch to address the admitted national security and law enforcement concerns presented by operation of the BGAN terminals, it has not filed this agreement in the record. *See MVS Application*, Attachment 3 at 4. Indeed, because MVS has never held an earth station license authorizing access to Inmarsat, the Bureau has never addressed the national security and law enforcement concerns presented by its operation with Inmarsat in the United States. The Commission has explained that in reviewing applications from foreign entities proposing to provide telecommunications services in the United States, it will assess any national security and law enforcement concerns raised by the application.⁴² While the Commission has stated that it will defer to the expertise of the Executive Branch in identifying these concerns, the application must provide the Bureau with the information it needs to perform its own public interest analysis by assessing whether national security and law enforcement efforts will be compromised by grant of

⁴¹ See Letter from Thomas S. Tycz, FCC, to John K. Hane, Pegasus Development Corporation, DA 03-3665 (November 19, 2003) (dismissing application for failing to seek waiver of Commission's East-West station-keeping rule).

⁴² *Rules and Policies on Foreign Participation in the U.S. Telecommunications Market, Report and Order and Order on Reconsideration*, 12 FCC Rcd 23891, ¶ 61 (November 26, 1997). In reviewing other applications to provide MSS in the United States, the Executive Branch has expressed concern with the national security and law enforcement implications of routing MSS traffic through a gateway earth station located in a foreign country. *See TMI Communications and Company, Limited Partnership*, 14 FCC Rcd 20798, ¶ 55 (1999) ("TMI Order").

PUBLIC COPY (REDACTED)

the application.⁴³ MVS's failure to provide a copy of the agreement it has reached with the Executive Branch deprives the Bureau and interested parties of vital information needed to assess whether grant of the application will serve the public interest. To the extent the Bureau does not require MVS to file its agreement, the Bureau must afford similar treatment to other MSS operators. Moreover, even assuming that MVS has reached an agreement with the Executive Branch, this is not sufficient to assure the Bureau that the application does not raise national security and law enforcement concerns. Given the Commission's recent decision directing the Network Reliability and Interoperability Council ("NRIC") to adopt recommendations for E911 for MSS,⁴⁴ the Bureau can only conclude that grant of the application will hamper law enforcement efforts and harm public safety given Inmarsat's stated position that the location of its gateway earth stations in Europe makes E911 compliance infeasible.⁴⁵ The Bureau must make clear that, to the extent the Commission eventually requires MSS operators to provide E911, Inmarsat's unilateral choice to locate gateway earth stations overseas does not excuse it from having to comply with any E911 requirements the Commission may adopt.

⁴³ In other cases, applicants proposing to route MSS traffic through a gateway earth station located in a foreign country have been required to provide the Bureau with a copy of the agreement entered into with the Executive Branch. *See, e.g., TMI Order; COMSAT Order; Motient Services Inc. and TMI Communications and Company, LP, Assignors, and Mobile Satellite Ventures Subsidiary LLC, Assignee, Order and Authorization*, DA 01-2732, 16 FCC Rcd 20469 (Int'l Bur. 2001).

⁴⁴ *See Second Report and Order*, CC Docket No. 94-102, IB Docket No. 99-67, FCC 04-201 (August 25, 2004).

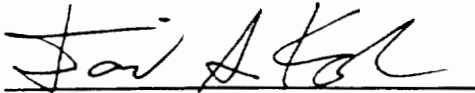
⁴⁵ *See Reply Comments of Inmarsat Ventures PLC*, IB Docket No. 99-67, at 8-11 (March 25, 2002). While the Commission has exempted MSS terminals that cannot be used in motion from E911 compliance, Inmarsat has admitted that at least some of its BGAN terminals must be E911 compliant. *See Inmarsat Ventures Limited, Reply*, File No. SAT-MOD-20031118-00333 (January 5, 2005), at 3 n.9 ("[T]he Commission *did not* exempt all BGAN terminals from E911 requirements.") (emphasis in original).

PUBLIC COPY (REDACTED)

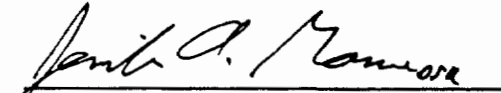
Conclusion

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

Respectfully submitted,



Bruce D. Jacobs
David S. Konczal
**PILLSBURY WINTHROP
SHAW PITTMAN LLP**
2300 N Street, NW
Washington, DC 20037-1128
(202) 663-8000



Jennifer A. Manner
Vice President, Regulatory Affairs
**MOBILE SATELLITE VENTURES
SUBSIDIARY LLC**
10802 Parkridge Boulevard
Reston, Virginia 20191
(703) 390-2700

Dated: January 13, 2006

PUBLIC COPY (REDACTED)

Exhibit A

Commission Statements Acknowledging that L Band Operators Are Limited to Frequencies Coordinated For Their Systems in the 1999 SSA

- *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’l 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)

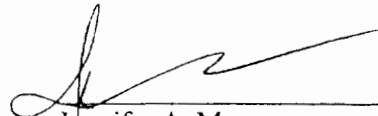
“The current coordination agreement under which Inmarsat and MSV share L-band spectrum was finalized in 1999. Ideally, the L-band MSS operators should renegotiate their coordination agreement every year. Indeed, changes to the existing coordination agreement could help avoid some of the potential interference 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)

PUBLIC COPY (REDACTED)

Declaration of Jennifer A. Manner

1. I am the Vice President, Regulatory Affairs of Mobile Satellite Ventures Subsidiary LLC.
2. I have read the foregoing Petition to Hold in Abeyance the application of MVS USA, Inc. for a blanket license to operate Broadband Global Area Network ("BGAN") terminals in the United States.
3. I have personal knowledge of the facts stated in the Petition to Hold in Abeyance. The facts set forth in the Petition, other than those of which official notice may be taken, are true and correct to the best of my knowledge, information, and belief.

I declare under penalty of perjury that the foregoing is true and correct.



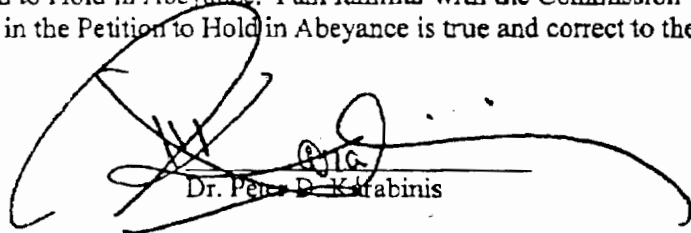
Jennifer A. Manner

Executed on January 13, 2006

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 Petition to Hold in Abeyance. I am familiar with the Commission's rules, and the information contained in the Petition to Hold in Abeyance is true and correct to the best of my knowledge and belief.



Dr. Peter D. Karabinis

Dated: January 13, 2006

PUBLIC COPY (REDACTED)

CERTIFICATE OF SERVICE

I, Julia Colish, of the law firm of Pillsbury Winthrop Shaw Pittman LLP, hereby certify that on this 13th day of January, 2006, served a true copy of the foregoing by first-class United States mail, postage prepaid, upon the following:

Roderick Porter*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Gardner Foster*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Richard Engelman*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

John Martin*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

James Ball*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Cassandra Thomas*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Karl Kensinger*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Fern Jarmulnek*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Robert Nelson*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Andrea Kelly*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Stephen Duall*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Howard Griboff*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Scott Kotler*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Lawrence J. Movshin
Wilkinson Barker Knauer, LLP
2300 N St. NW, Suite 700
Washington, DC 20037

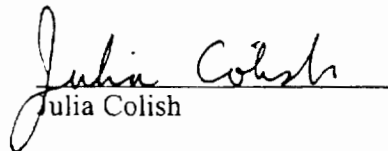
Counsel for MVS USA, Inc.

PUBLIC COPY (REDACTED)

Deborah Deffaa
MVS USA, Inc.
175 Rock Road
Glen Rock, NJ 07452

John P. Janka
Jeffrey A. Marks
Latham & Watkins LLP
555 Eleventh Street, N.W.
Suite 1000
Washington, DC 20004

Diane J. Cornell
Vice President, Government Affairs
Inmarsat, Inc.
1100 Wilson Blvd, Suite 1425
Arlington, VA 2220


Julia Colish

*By electronic mail

CERTIFICATE OF SERVICE

I, Sylvia A. Davis, hereby certify that on this 10th day of March 2006, I served a true copy of the foregoing by first-class United States mail, postage prepaid, upon the following:

Julius Knapp*
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

James Burtle*
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Roderick Porter*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Cassandra Thomas*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Richard Engelman*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Kathryn Medley*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Claude E. Wells
Lockheed Martin Corporation
195 Chesapeake Park Plaza
P.O. Box 4906
Baltimore, MD 21220-0906

Ira Keltz*
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Charles Iseman*
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

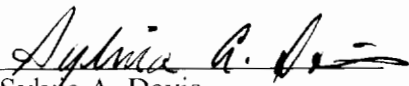
Gardner Foster*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Robert Nelson*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

John Martin*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Stephen Duall*
International Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Jennifer A. Warren
Lockheed Martin Corporation
1550 Crystal Drive
Suite 300
Arlington, VA 22202


Sylvia A. Davis

*By e-mail