

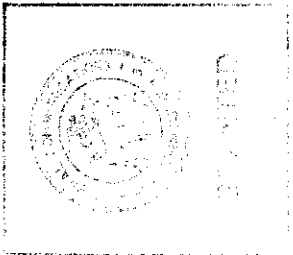
File # SAT-MOD-20060821-00090
 with attached conditions

Call Sign S2590 Grant Date 12/20/2006
 (or other identifier)

Approved by OMB
 3060-0678

Term Dates
 From See Conditions To See Conditions
 Approved [Signature] Chief Satellite Division
Robert G. Nelson

Date & Time Filed: Aug 21 2006 2:48:29:426PM
 File Number: SAT-MOD-20060821-00090



FCC APPLICATION FOR SPACE AND EARTH STATION: MOD OR AMD - MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION

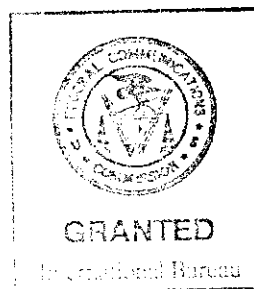
Enter a description of this application to identify it on the main menu:
 Modification to the Petition for Declaratory Ruling, to add the Solidaridad 2 satellite to the Permitted Space Station List, to change the satellite orbital location from 113

1-8. Legal Name of Applicant			
Name:	Satelites Mexicanos S. A. de C. V.	Phone Number:	1152-55-2629-5871
DBA Name:		Fax Number:	1152-55-2629-5865
Street:	Rodolfo Gaona No. 86, Piso 4, Col. Lomas de Sotelo C.P.	E-Mail:	apicazo@satmex.com
City:	Mexico City	State:	
Country:	Mexico	Zipcode:	
Attention:	Mr. Alonso A Picazo		

ATTACHMENT
Conditions of Authorization
IBFS File No.
SAT-MOD-20060821-00090
December 20, 2006

Pursuant to Sections 303(r), 308, 309, and 310 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 303(r), 308, 309, and 310, and Sections 0.261 and 25.137(c) of the Commission's rules, 47 C.F.R. §§ 0.261, and 25.137(c), Satélites Mexicanos, S.A. de C.V.'s request to modify its existing Permitted List authorization (*see* Satellites Mexicanos, S.A. de C.V., Petition for Declaratory Ruling, *Order*, IBFS File No. SAT-PDR-19991214-00131, 15 FCC Rcd 19,311 (Sat. Div., Int'l Bur. 2000), *erratum* 19 FCC Rcd. 20,427 (Sat. Div., Int'l Bur. 2004) to change the orbital location of SOLIDARIDAD 2 IS GRANTED. Accordingly, each earth station with "ALSAT" designated as a point of communication may provide Fixed Satellite Services (FSS) and FSS Direct-to-Home Service (DTH) to, from, or within the United States, by accessing the SOLIDARIDAD 2 satellite at the 114.9° W.L. orbital location in the 5925-6425 MHz (Earth-to-space), 3700-4200 MHz (space-to-Earth), 11.7-12.2 GHz (space-to-Earth) and 14.0-14.5 GHz (Earth-to-space) frequency bands, in accordance with the technical specifications set forth in the petition for declaratory ruling, the Commission's Rules, and subject to the following conditions:

1. Communications between ALSAT-designated earth stations and the SOLIDARIDAD 2 satellite shall be in compliance with coordination agreements reached between Mexico and other Administrations.
2. Communications between ALSAT-designated earth stations and the SOLIDARIDAD 2 satellite shall be in compliance with the operator arrangement reached between Satmex and Telesat Canada in 2003, and any future modifications to which the parties agree.
3. Satmex's request for waiver of Section 25.210(a)(3), 47 C.F.R. 25.210(a)(3), of the Commission's rules is GRANTED on the condition that it must operate SOLIDARIDAD 2 consistently with adjacent operator arrangements. If no such arrangements have been reached, Satmex must operate SOLIDARIDAD 2 on a non-interference basis relative to two-degree compliant operations. That is, SOLIDARIDAD 2's operations shall not interfere with any system authorized to provide services to, from or within the United States that is two-degree spacing compliant nor shall Satmex claim protection from interference to SOLIDARIDAD 2's operations caused by such compliant systems.



File # SAT-MOD-20060821-00090
with attached conditions
Call Sign 52590 Grant Date 12/20/2006
(or other identifier)
Term Dates
From see conditions To see conditions
Approved: [Signature] Chief Satellite
Robert G. Nelson Division

9-16. Name of Contact Representative

Name: Dr. Richard J. Barnett **Phone Number:** 301-656-8969
Company: Telecomm Strategies Inc **Fax Number:** 240-465-0086
Street: 6404 Highland Drive **E-Mail:** Richard@telecommstrategies.com
City: Chevy Chase **State:** MD
Country: USA **Zipcode:** 20815-
Attention: Dr. Richard J. Barnett **Relationship:**

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- a1. Earth Station
- a2. Space Station

- (N/A) b1. Application for License of New Station
- (N/A) b2. Application for Registration of New Domestic Receive-Only Station
- (N/A) b3. Amendment to a Pending Application
- (N/A) b4. Modification of License or Registration
- b5. Assignment of License or Registration
- b6. Transfer of Control of License or Registration
- (N/A) b7. Notification of Minor Modification
- (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite
- (N/A) b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
- (N/A) b10. Other (Please specify)

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier
- Non-Common Carrier

22. If earth station applicant, check all that apply.

- Using U.S. licensed satellites
- Using Non-U.S. licensed satellites

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network
- Not connected to a Public Switched Network
- N/A

24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz)
- b. Ku-Band (12/14 GHz)
- c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: Frequency Upper: (Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- a. Fixed Earth Station
- b. Temporary-Fixed Earth Station
- c. 12/14 GHz VSAT Network
- d. Mobile Earth Station
- e. Geostationary Space Station
- f. Non-Geostationary Space Station
- g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY:

- Transmit/Receive
- Transmit-Only
- Receive-Only
- N/A

"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)

- a --- authorization to add new emission designator and related service
- b --- authorization to change emission designator and related service
- c --- authorization to increase EIRP and EIRP density
- d --- authorization to replace antenna
- e --- authorization to add antenna
- f --- authorization to relocate fixed station
- g --- authorization to change frequency(ies)
- h --- authorization to add frequency
- i --- authorization to add Points of Communication (satellites & countries)
- j --- authorization to change Points of Communication (satellites & countries)
- k --- authorization for facilities for which environmental assessment and radiation hazard reporting is required
- l --- authorization to change orbit location
- m --- authorization to perform fleet management
- n --- authorization to extend milestones
- o --- Other (Please specify)

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.

Yes No

ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30–34.

29. Is the applicant a foreign government or the representative of any foreign government?

Yes No

30. Is the applicant an alien or the representative of an alien?

Yes No N/A

31. Is the applicant a corporation organized under the laws of any foreign government?

Yes No N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?

Yes No N/A

<p>33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country?</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A </p>
<p>34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.</p>	<p style="text-align: right;">Question 34</p>

BASIC QUALIFICATIONS

<p>35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes <input type="radio"/> No </p> <p style="text-align: center;">Technical Narrative</p>
<p>36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.</p>	<p style="text-align: right;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>

<p>37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.</p>	<p style="text-align: center;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>
<p>38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances</p>	<p style="text-align: center;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>
<p>39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.</p>	<p style="text-align: center;"> <input type="radio"/> Yes <input checked="" type="radio"/> No </p>
<p>40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer.</p> <p style="text-align: right;">Question 40</p>	

<p>41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes.</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes <input type="radio"/> No </p>
<p>42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43.</p>	<p style="text-align: right;"> <input checked="" type="radio"/> Yes <input type="radio"/> No </p> <p style="text-align: center;">Question 42a</p>
<p>42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station? Mexico</p>	
<p>43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Modification to the Petition for Declaratory Ruling, to add the Solidaridad 2 satellite to the Permitted Space Station List, to change the satellite orbital location from 113W.L. to 114.9W.L.</p> </div> <p>Main Narrative Sol-2</p>	

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing
Carmen Ochoa

46. Title of Person Signing
General Counsel

→

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to jboley@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104-13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Satélites Mexicanos, S.A. de C.V.)	File No. SAT-PDR-19991214-00131
Modification to Petition for)	Call Sign: S2590
Declaratory Ruling To Add)	File No. SAT-MOD-_____
Solidaridad 2 to the)	
Permitted Space Station List)	

MODIFICATION

Satélites Mexicanos, S.A. de C.V. (“Satmex”), a Mexican corporation, respectfully files this Modification to the above captioned Petition for Declaratory Ruling to add its C- and Ku-band satellite, Solidaridad 2, to the Permitted Space Station List.¹ Satmex modifies the above captioned application to change the satellite orbital location from 113°W to 114.9°W.

A. Background

The Commission, on October 2, 2000, adopted an Order that placed the Satmex satellites, Solidaridad 2 and Satmex 5, located at 113.0°W and 116.8°W orbital locations respectively, on the Permitted Space Station List². Since that date the Solidaridad 2 satellite has been providing services to and from the U.S. and other parts of the Americas. The Satmex 6 satellite recently replaced the Solidaridad 2 satellite at the 113°W orbital location. On August 4, 2006 the Commission granted the Petition for Declaratory Ruling, filed by Satmex, as amended³, to add the Satmex 6 satellite to the Commission’s Permitted Space Station List at the 113°W orbital location. As described in the Satmex 6 filing Satmex has moved the Solidaridad 2 satellite to the 114.9°W orbital location and

¹ C-band refers to 3700-4200 MHz (space-to-Earth) and 5925-6425 MHz (Earth-to-space) and Ku band refers to 11.7 – 12.2 GHz (space-to-Earth) and 14.0 – 14.5 GHz (Earth-to-space).

² See FCC’s Order DA 00-1793.

³ See SAT-PPL-20060329-00030 and SAT-AMD-20060724-00080.

this application seeks to modify the Solidaridad 2 orbital location from 113°W to 114.9°W on the Permitted Space Station List.

The Commission allows non-U.S. licensed satellites to be included on the Permitted Space Station List upon demonstrating compliance with Sections 25.114 and 25.137 of the Commission's Rules, assuming there are no other public interest concerns. This Modification and its associated attachments, including the FCC Form 312 and Schedule S, provide the required information and demonstrate that the Solidaridad 2 satellite at the 114.9°W orbital location meets the requirements of Sections 25.114 and 25.137 of the Commission's rules⁴, and is thus eligible to be on the List.

B. Requirement of Sections 25.114 and 25.137 of the Commission's Rules

The Solidaridad 2 satellite is licensed by Mexico at the 114.9°W orbital location. As the Commission is aware the 114.9°W orbital location is covered under the trilateral agreement for C- and Ku-band frequencies among Canada, Mexico and the United States. As agreed between Canada and Mexico the 114.9°W orbital location is assigned to Mexico. In accordance with the trilateral agreement the Commission cannot license U.S. satellites in these frequency bands at this orbital location. Mexico is a member country of the WTO. In addition Mexico and the United States have reached a bilateral agreement that allows Mexican satellites to offer Direct-to-Home (DTH) service and Direct Broadcast Satellite (DBS) service in the United States, after those satellites have been coordinated with the United States for these services.⁵ As is currently the case for the Solidaridad 2 satellite at the 113°W orbital location, Satmex is requesting to provide FSS (Fixed-Satellite Services) covered by the WTO Telecom Agreement and FSS DTH services covered by the U.S. and Mexican Bilateral Agreement from the Solidaridad 2 satellite from the 114.9°W orbital location. Given Mexico's membership in the WTO and the existing Bilateral Agreement with the United States, Satmex is not required to

⁴ To the extent that certain rules are not met the appropriate waivers have been requested.

⁵ See Protocol Concerning the Transmission and Reception of Signals from Satellites for the Provision of Direct-to-Home Satellite Television Services in the United States of America and the United Mexican States, November 8, 1996. [See also Televisa Internaional, LLC, Order and Authorization, 13 FCC Rcd 100074, 10075-76 (para. 5) (Int'l Bur. 1997 (Televisa Order) (discussing DTH Protocol).]

make the effective competitive opportunities showing set out in Section 25.137. The relevant ITU network filing for the Solidaridad 2 satellite at the 114.9°W location has been submitted for coordination to the International Telecommunications Union (MEXSAT-114.9 C-Ku). Moreover, Satmex has completed all required coordinations with U.S. and Canadian satellite operators for the Solidaridad 2 satellite at 114.9°W orbital location. All traffic on the Solidaridad 2 satellite will be in accordance with these coordination agreements.

Formatted: Fc

The Solidaridad 2 satellite is already in-orbit and operating and therefore detailed financial information is not required for the Commission to determine that Satmex is financially capable of building, launching and operating this satellite.

Satmex requests a waiver of Section 25.210(a)(3) of the Commission's Rules. It is noted that the Commission has waived this rule in several cases for good cause for other non-U.S. licensed FSS operators requesting to add space stations to the Commission's Permitted Space Station List. Section 25.210(a)(3) of the Commission's rules requires that the C-band payload on the space station providing service to the U.S. be capable of switching polarity upon ground command. The Solidaridad 2 C-band transmission polarization sense is not switchable from the ground. As previously stated the Solidaridad 2 satellite will operate at the 114.9°W orbital location in accordance with the trilateral agreement. Additionally, Satmex has completed necessary coordination with all operators of adjacent satellites, taking into account the polarization of its C-band transmissions. The Commission has granted this waiver to several other non-U.S. satellite operators who have applied to be on the Permitted Space Station List under similar circumstances.⁶ In these Orders the Commission concluded "that waiving Section 25.210(a)(3) will not undercut the policies underlying the Commission's adoption of this rule..." and the Commission placed appropriate conditions on the waiver. Granting this waiver under Section 1.3 of the Commission's rules is therefore appropriate and will serve the public interest.

⁶ See DA 02-3490.

C. Adding the Solidaridad 2 Satellite to the Permitted Space Station List is in the Public Interest

The Commission previously found that adding the Solidaridad 2, Satmex 5 and Satmex 6 satellites to the Permitted Space Station List was in the public interest.⁷ Allowing the Solidaridad 2 satellite to offer additional FSS services in the U.S., including DTH, from the 114.9°W orbital location, will further enhance competition of these services, and so provide public interest benefits. Thus inclusion of the Solidaridad 2 satellite at 114.9°W on the Permitted Space Station List is in the public interest.

D. Conclusion

For the reasons stated herein, the Commission should add the Mexican-licensed Solidaridad 2 at the 114.9°W satellite to the Permitted Space Station List.

⁷ See DA 00-1793.

**FCC 312
Schedule S**

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
(Technical and Operational Description)**

S1. GENERAL INFORMATION Complete for all satellite applications.

a. Space Station or Satellite Network Name: SOLIDARIDAD 2	e. Estimated Date of Placement into Service: 8/1/2006	i. Will the space station(s) operate on a Common Carrier Basis: N
b. Construction Commencement Date:	f. Estimated Lifetime of Satellite(s): 14.5 Years	j. Number of transponders offered on a common carrier basis: 0
c. Construction Completion Date:	g. Total Number of Transponders: 34	k. Total Common Carrier Transponder Bandwidth: MHz
d1. Est. Launch Date Begin: 10/7/1994	d2. Est. Launch Date End:	l. Orbit Type: Mark all boxes that apply: <input checked="" type="checkbox"/> GSO <input type="checkbox"/> NGSO

**S2. OPERATING FREQUENCY BANDS Identify the frequency range and transmit/receive mode for all frequency bands in which this station will oper
Also indicate the nature of service(s) for each frequency band.**

Frequency Band Limits			e. T/R Mode	f. Nature of Service(s): List all that apply to this band
Lower Frequency (Hz)	Upper Frequency (Hz)	d. Unit (K/M/G)		
a. Numeric	b. Unit (K/M/G)	c. Numeric		
5925	M	6425	R	Fixed Satellite Service
3700	M	4200	T	Fixed Satellite Service
14000	M	14500	R	Fixed Satellite Service
11700	M	12200	T	Fixed Satellite Service

S3. ORBITAL INFORMATION FOR GEOSTATIONARY SATELLITES ONLY:

a. Nominal Orbital Longitude (Degrees E/W): 114.9 W	b. Alternate Orbital Longitude (Degrees E/W):	c. Reason for orbital location selection: The orbital location is consistent with the Trilateral Agreement between Canada, Mexico and the United States of America.
d. Longitudinal Tolerance or E/W Station-Keeping: Toward West: 0.05 Degrees Toward East: 0.05 Degrees	f. Inclination Excursion or N/S Station-Keeping Tolerance: 0.05 Degrees	g. Westernmost: h. Easternmost:
i. Reason for service are selection (Optional):		

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

S4. ORBITAL INFORMATION FOR NON-GEOSTATIONARY SATELLITES ONLY

- S4a. Total Number of Satellites in Network or System: S4c. Celestial Reference Body (Earth, Sun, Moon, etc.):
- S4b. Total Number of Orbital Planes in Network or System: S4d. Orbit Epoch Date:

For each Orbital Plane Provide:

(e) Orbital Plane No.	(f) No. of Satellites in Plane	(g) Inclination Angle (degrees)	(h) Orbital Period (Seconds)	(i) Apogee (km)	(j) Perigee (km)	(k) Right Ascension of the Ascending Node (Deg.)	(l) Argument of Perigee (Degrees)	Active Service Arc Range (Degrees)		
								(m) Begin Angle	(n) End Angle	(o) Other

S5. INITIAL SATELLITE PHASE ANGLE For each satellite in each orbital plane, provide the initial phase angle.

(a) Orbital Plane No.	(b) Satellite Number	(c) Initial Phase Angle (Degrees)

NO NGSO DATA FILED

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

S6. SERVICE AREA CHARACTERISTICS for each service area provide:

(a) Service Area ID	(b) Type of Associated Station (Earth or Space)	(c) Service Area Diagram File Name (GXT File)	(d) Service Area Description. Provide list of geographic areas (state postal codes or ITU 3-itr codes), satellites or Figure No. of Service Area Diagram.
SA1	S		-6 dB contour of beam C1UH
SA2	S		-6 dB contour of beam C1DV
SA3	S		-6 dB contour of beam C2UH
SA4	S		-6 dB contour of beam C2DV
SA5	S		-6 dB contour of beam C3UH
SA6	S		-6 dB contour of beam C3DV
SA7	S		-6 dB contour of beam C4UV
SA8	S		-6 dB contour of beam C4DH
SA9	S		-6 dB contour of beam K1UV
SA10	S		-6 dB contour of beam K1UH
SA11	S		-6 dB contour of beam K1DH
SA12	S		-6 dB contour of beam K1DV
SA13	S		-6 dB contour of beam K2UV
SA14	S		-6 dB contour of beam K2DH
SA15	S		Visible Earth

FEDERAL COMMUNICATIONS COMMISSION
 SATELLITE SPACE STATION AUTHORIZATIONS
 FCC Form 312 - Schedule S: (Technical and Operational Description)

S7. SPACE STATION ANTENNA BEAM CHARACTERISTICS For each antenna beam provide:

(a) Beam ID	(b) T/R Mode	Isotropic Antenna		(e) Pointing Error (Degrees)	(f) Rotational Error (Degrees)	(g) Min. Cross-Polarization (dB)	(h) Polarization Switchable? (Y/N)	(i) Polarization Alignment Rel. Equatorial Plane (Degrees)	(j) Service Area ID	Transmit		Receive				
		(c) Peak (dB)	(d) Edge (dB)							(k) Input Losses (dB)	(l) Effective Output Power (W)	(m) Max. EIRP (dBW)	(n) System Noise Temp (K)	(o) G/T Max. Gain Pt. (dB/K)	(p) Min. Saturation Flux Density (dBW/m ²)	(q) Max. Value
C1U	R	37	31	0.13	0	33	N	0	SA1			465	10.3	-96	14	2
C1D	T	32.9	26.9	0.13	0	33	N	90	SA2	6.9	41.3					
C2U	R	33.4	27.4	0.13	0	33	N	0	SA3			450	6.8	-93	14	2
C2D	T	30.9	23.9	0.13	0	33	N	90	SA4	9.5	40.7					
C3U	R	35.4	29.4	0.13	0	33	N	0	SA5			580	7.8	-93	14	2
C3D	T	31.1	25.1	0.13	0	33	N	90	SA6	6.6	39.3					
C4U	R	35.9	29.9	0.13	0	33	N	90	SA7			650	7.8	-94	14	2
C4D	T	33.8	27.8	0.13	0	33	N	0	SA8	9.8	43.7					
K1UV	R	38.8	32.8	0.13	0	33	N	90	SA9			685	10.5	-97	22	2
K1U	R	38.8	32.8	0.13	0	33	N	0	SA10			685	10.5	-97	22	2
K1D	T	36.7	30.7	0.13	0	33	N	0	SA11	31.6	51.7					
K1DV	T	36.7	30.7	0.13	0	33	N	90	SA12	31.6	51.7					
K2UV	R	40.2	34.2	0.13	0	33	N	90	SA13			740	11.5	-94	22	2
K2D	T	38.5	32.5	0.13	0	33	N	0	SA14	27.5	52.9					
OMNI	R	2	0	0.13	0	30	N	0	SA15			9600	-37.8			
OMNI	T	2	0	0.13	0	30	N	90	SA15	3.8	7.8					

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

S8. ANTENNA BEAM DIAGRAMS For each beam pattern provide the reference to the graphic image and numerical data:
Also provide the power flux density levels in each beam that result from the emission with the highest power flux density.

(a) Beam ID	(b) T/R Mode	(c) Co-or Cross Polar Mode ("C" or "X")	(d) GSO Ref. Orbital Longitude (Deg. E/W)	(e) NGSO Antenna Gain Contour Description (Figure/Table/ Exhibit)	(f) GSO Antenna Gain Contour Data (GXT File)	Max. Power Flux Density (dBW/M2/Hz)						
						(g) 5 Deg	(h) 10 Deg	(i) 15 Deg	(j) 20 Deg	(k) 25 Deg		
C1U	R	C	-114.9		C1UH.gxt							
C1D	T	C	-114.9		C1DV.gxt	-169	-168.9	-168.8	-168.7	-168.6		
C2U	R	C	-114.9		C2UH.gxt							
C2D	T	C	-114.9		C2DV.gxt	-157.6	-156.8	-155.7	-154.3	-152.9		
C3U	R	C	-114.9		C3UH.gxt							
C3D	T	C	-114.9		C3DV.gxt	-152	-151.7	-151.3	-151	-150.7		
C4U	R	C	-114.9		C4UV.gxt							
C4D	T	C	-114.9		C4DH.gxt	-168.6	-168.4	-166.3	-166.2	-166.1		
K1UV	R	C	-114.9		K1UV.GXT							
K1U	R	C	-114.9		K1UH.GXT							
K1D	T	C	-114.9		K1DH.GXT							
K1DV	T	C	-114.9		K1DV.GXT							
K2UV	R	C	-114.9		K2UV.gxt							
K2D	T	C	-114.9		K2DH.gxt							
OMNI	T	C	-114.9			-167.7	-167.7	-167.7	-167.7	-167.7		-167.7

S9. SPACE STATION CHANNELS For each frequency channel provide: S10. SPACE STATION TRANSPONDERS For each transponder provide:

(a) Channel No.	(b) Assigned Bandwidth (kHz)	(c) T/R Mode	(d) Center Frequency (MHz)	(e) Polarization (H, V, L, R)	(f) TTC or Comm Channel (T or C)
CU001	36000 R	R	5945	H	C
CU002	36000 R	R	5985	H	C
CU003	36000 R	R	6025	H	C
CU004	36000 R	R	6065	H	C
CU005	36000 R	R	6105	H	C
CU006	36000 R	R	6145	H	C
CU007	36000 R	R	6185	H	C
CU008	36000 R	R	6225	H	C
CU009	36000 R	R	6265	H	C
CU010	36000 R	R	6305	H	C
CU011	36000 R	R	6345	H	C
CU012	36000 R	R	6385	H	C
CU013	72000 R	R	5985	V	C
CU014	72000 R	R	6065	V	C
CU015	72000 R	R	6145	V	C
CU016	72000 R	R	6225	V	C
CU017	72000 R	R	6305	V	C
CU018	72000 R	R	6385	V	C
CD001	36000 T	T	3720	V	C
CD002	36000 T	T	3760	V	C
CD003	36000 T	T	3800	V	C
CD004	36000 T	T	3840	V	C
CD005	36000 T	T	3880	V	C
CD006	36000 T	T	3920	V	C
CD007	36000 T	T	3960	V	C
CD008	36000 T	T	4000	V	C
CD009	36000 T	T	4040	V	C
CD010	36000 T	T	4080	V	C
CD011	36000 T	T	4120	V	C
CD012	36000 T	T	4160	V	C

(a) Transponder ID	(b) Transponder Gain (dB)	Receive Band		Transmit Band	
		(c) Channel No.	(d) Beam ID	(e) Channel No.	(f) Beam ID
C0001	105	CU001	C1UH	CD001	C1DV
C0002	105	CU002	C1UH	CD002	C1DV
C0003	105	CU003	C1UH	CD003	C1DV
C0004	105	CU004	C1UH	CD004	C1DV
C0005	105	CU005	C1UH	CD005	C1DV
C0006	105	CU006	C1UH	CD006	C1DV
C0007	105	CU007	C1UH	CD007	C1DV
C0008	105	CU008	C1UH	CD008	C1DV
C0009	105	CU009	C1UH	CD009	C1DV
C0010	105	CU010	C1UH	CD010	C1DV
C0011	105	CU011	C1UH	CD011	C1DV
C0012	105	CU012	C1UH	CD012	C1DV
C0013	105	CU013	C4UV	CD013	C4DH
C0014	105	CU014	C4UV	CD014	C4DH
C0015	105	CU015	C4UV	CD015	C4DH
C0016	105	CU016	C4UV	CD016	C4DH
C0017	105	CU017	C4UV	CD017	C4DH
C0018	105	CU018	C4UV	CD018	C4DH
C0019	106	CU006	C1UH	CD006	C2DV
C0020	106	CU008	C1UH	CD008	C2DV
C0021	106	CU010	C1UH	CD010	C2DV
C0022	106	CU012	C1UH	CD012	C2DV
C0023	105	CU005	C1UH	CD005	C3DV
C0024	105	CU007	C1UH	CD007	C3DV
C0025	105	CU009	C1UH	CD009	C3DV
C0026	105	CU011	C1UH	CD011	C3DV
C0027	107	CU006	C2UH	CD006	C2DV
C0028	107	CU008	C2UH	CD008	C2DV
C0029	107	CU010	C2UH	CD010	C2DV
C0030	107	CU012	C2UH	CD012	C2DV

CD013	72000	T	3760	H	C	C
CD014	72000	T	3840	H	C	C
CD015	72000	T	3920	H	C	C
CD016	72000	T	4000	H	C	C
CD017	72000	T	4080	H	C	C
CD018	72000	T	4160	H	C	C
KU001	54000	R	14030	V	C	C
KU002	54000	R	14091	V	C	C
KU003	54000	R	14152	V	C	C
KU004	54000	R	14213	V	C	C
KU005	54000	R	14274	V	C	C
KU006	54000	R	14335	V	C	C
KU007	54000	R	14396	V	C	C
KU008	54000	R	14457	V	C	C
KU009	54000	R	14043	H	C	C
KU010	54000	R	14104	H	C	C
KU011	54000	R	14165	H	C	C
KU012	54000	R	14226	H	C	C
KU013	54000	R	14287	H	C	C
KU014	54000	R	14348	H	C	C
KU015	54000	R	14409	H	C	C
KU016	54000	R	14470	H	C	C
KD001	54000	T	11730	H	C	C
KD002	54000	T	11791	H	C	C
KD003	54000	T	11852	H	C	C
KD004	54000	T	11913	H	C	C
KD005	54000	T	11974	H	C	C
KD006	54000	T	12035	H	C	C
KD007	54000	T	12096	H	C	C
KD008	54000	T	12157	H	C	C
KD009	54000	T	11743	V	C	C
KD010	54000	T	11804	V	C	C
KD011	54000	T	11865	V	C	C
KD012	54000	T	11926	V	C	C
KD013	54000	T	11987	V	C	C
KD014	54000	T	12048	V	C	C
KD015	54000	T	12109	V	C	C
KD016	54000	T	12170	V	C	C
TC1	600	R	5935	V	T	T

C0031	105	CU005	C2UH	CD005	C3DV
C0032	105	CU007	C2UH	CD007	C3DV
C0033	105	CU009	C2UH	CD009	C3DV
C0034	105	CU011	C2UH	CD011	C3DV
C0035	105	CU006	C3UH	CD006	C2DV
C0036	105	CU008	C3UH	CD008	C2DV
C0037	105	CU010	C3UH	CD010	C2DV
C0038	105	CU012	C3UH	CD012	C2DV
C0039	103	CU005	C3UH	CD005	C3DV
C0040	103	CU007	C3UH	CD007	C3DV
C0041	103	CU009	C3UH	CD009	C3DV
C0042	103	CU011	C3UH	CD011	C3DV
K0001	118	KU001	K1UV	KD001	K1DH
K0002	118	KU002	K1UV	KD002	K1DH
K0003	118	KU003	K1UV	KD003	K1DH
K0004	118	KU004	K1UV	KD004	K1DH
K0005	118	KU005	K1UV	KD005	K1DH
K0006	118	KU006	K1UV	KD006	K1DH
K0007	118	KU007	K1UV	KD007	K1DH
K0008	118	KU008	K1UV	KD008	K1DH
K0009	118	KU009	K1UH	KD009	K1DV
K0010	118	KU010	K1UH	KD010	K1DV
K0011	118	KU011	K1UH	KD011	K1DV
K0012	118	KU012	K1UH	KD012	K1DV
K0013	118	KU013	K1UH	KD013	K1DV
K0014	118	KU014	K1UH	KD014	K1DV
K0015	118	KU015	K1UH	KD015	K1DV
K0016	118	KU016	K1UH	KD016	K1DV
K0017	113	KU006	K2UV	KD006	K2DH
K0018	113	KU008	K2UV	KD006	K2DH
TC1		TC1	C4UV		
TC2		TC2	OMNIH		
TM1				TM1	C4DH
TM2				TM2	C4DH
TM3				TM3	OMNIV
TM4				TM4	OMNIV
BCN1				BCN1	K1DH
BCN2				BCN2	K1DV

TC2	600	R	6415	H	T
TM1	350	T	3700.6	H	T
TM2	350	T	3701.1	H	T
TM3	350	T	3700.6	V	T
TM4	350	T	3701.1	V	T
BCN1	25	T	11701	H	T
BCN2	25	T	11701	V	T

S11. DIGITAL MODULATION PARAMETERS For each digital emission provide:

(a) Digital Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) No. of Phases	(e) Uncoded Data Rate (kbps)	(f) FEC Error Correction Coding Rate	(g) CDMA Processing Gain (dB)	(h) Total C/N Performance Objective (dB)	(i) Single Entry C/I Objective (dB)
D1	146KG7W	145.9	4	128	0.5		5.9	18.1
D2	1M56G7W	1556.5	4	2048	0.75		8.2	20.4
D3	5M56G7W	5563.2	4	7320	0.75		8.2	20.4
D4	36M0G7W	36000	4	41468	0.691		6.1	18.3

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S12. ANALOG MODULATION PARAMETERS For each analog emission provide:

(a) Analog Mod. ID	(b) Emission Designator	(c) Assigned Bandwidth (kHz)	(d) Signal Type	(e) Channels per Carrier	Multi-channel Telephony			(j) Video Standard NTSC, PAL, etc.	(k) Video Noise- Weighting (dB)	(l) Video and SCPC/FM Modulation Index	(m) SCPC/FM Compander, Preemphasis, and Noise Weighting (dB)	(n) Total C/N Performance Objective (dB)	(o) Single Entry C/I Objective (dB)
					(f) Ave. Companded Talker Level (dBm0)	(g) Bottom Baseband Freq. (MHz)	(h) Top Baseband Freq. (MHz)						
A1	36M0F9F	36000	TV/FM	1				NTSC	12.8	1.29		12	26

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS

FCC Form 312 - Schedule S: (Technical and Operational Description)

S13. TYPICAL EMISSIONS For each planned type of emission provide:

Associated Transponder ID Range	Modulation ID		(e) Carriers per Transponder	(f) Carrier Spacing (kHz)	(g) Noise Budget Reference (Table No.)	(h) Energy Dispersal Bandwidth (kHz)	Receive Band (Assoc. Transmit Stn)			Transmit Band (This Space Station)			
	(a) Start	(b) End					(c) Digital (Table S11)	(d) Analog (Table S12)	(i) Assoc. Stn. Max. Antenna Gain (dBi)	(j) Min.	(k) Max.	(l) Min.	(m) Max.
C0001	C0012	D1	180	200	146k C1-C1.d		47.5	-7.5	-1.5	7.4	13.4	-164.6	24.6
C0001	C0012	D2	17	2100	1.56M C1-C1.d		47.5	2.8	8.8	17.7	23.7	-164.5	28.5
C0001	C0012	D3	4	7500	5.56M C1-C1.d		47.5	8.6	14.6	23.5	29.5	-164.3	28.5
C0001	C0012	D4	1		36M C1-C1.doc		53.5	16	22	34.7	40.7	-161.2	24.6
C0001	C0012	A1	1		TV C1-C1.doc	2000	53.5	19.3	25.3	35.3	41.3	-148	28.5
C0013	C0018	D1	360	200	146k C4-C4.d		47.5	-5.5	-0.5	9.8	15.8	-162.1	24.6
C0013	C0018	D2	34	2100	1.56M C4-C4.d		47.5	4.8	10.8	20.1	26.1	-162.1	28.5
C0013	C0018	D3	8	7500	5.56M C4-C4.d		47.5	10.6	16.6	25.9	31.9	-161.8	28.5
C0013	C0018	D4	2	36000	36M C4-C4.doc		53.5	14.5	20.5	35.3	41.3	-160.5	24.6
C0013	C0018	A1	2	36000	TV C4-C4.doc	2000	53.5	18.8	24.8	35.5	41.5	-147.7	28.5
C0019	C0022	D1	180	200	146k C1-C2.d		47.5	-7.5	-1.5	6.8	12.8	-165.1	24.6
C0019	C0022	D2	17	2100	1.56M C1-C2.d		47.5	2.8	8.8	17.1	23.1	-165.1	28.5
C0019	C0022	D3	4	7500	5.56M C1-C2.d		47.5	8.6	14.6	22.9	28.9	-164.9	28.5
C0019	C0022	D4	1		36M C1-C2.doc		53.5	16	22	34.1	40.1	-161.8	24.6
C0019	C0022	A1	1		TV C1-C2.doc	2000	53.5	20.1	26.1	34.7	40.7	-150.7	28.5
C0027	C0030	D1	180	200	146k C2-C2.d		47.5	-4.5	1.5	6.8	12.8	-165.1	24.6
C0027	C0030	D2	17	2100	1.56M C2-C2.d		47.5	5.8	11.8	17.1	23.1	-165.1	28.5
C0027	C0030	D3	4	7500	5.56M C2-C2.d		47.5	11.6	17.6	22.9	28.9	-164.9	28.5
C0027	C0030	D4	1		36M C2-C2.doc		53.5	19	25	34.1	40.1	-164.9	24.6
C0027	C0030	A1	1		TV C2-C2.doc	2000	53.5	21.5	27.5	34.6	40.6	-148.7	28.5
C0035	C0038	D1	180	200	146k C3-C2.d		47.5	-4.5	1.5	6.8	12.8	-165.1	24.6
C0035	C0038	D2	17	2100	1.56M C3-C2.d		47.5	5.8	11.8	17.1	23.1	-165.1	28.5
C0035	C0038	D3	4	7500	5.56M C3-C2.d		47.5	11.6	17.6	22.9	28.9	-164.9	28.5
C0035	C0038	D4	1		36M C3-C2.doc		53.5	19	25	34.1	40.1	-161.8	24.6
C0035	C0038	A1	1		TV C3-C2.doc	2000	53.5	21.5	27.5	34.6	40.6	-148.7	28.5
K0001	K0016	D1	270	200	146k K1-K1.d		43.2	-6.3	-0.3	17.7	23.7		27.3
K0001	K0016	D2	25	2100	1.56M K1-K1.d		51.2	2.2	8.2	28.1	34.1		29.2
K0001	K0016	D3	7	7500	5.56M K1-K1.d		53	6.2	12.2	33.9	39.9		29.2
K0001	K0016	D4	1		36M K1-K1.doc		54.7	16.5	22.5	45.7	51.7		21.3

K0001	K0016		A1		1		TV K1-K1.doc	2000	54.7	21.3	27.3	45.7	51.7		28.7
K0017	K0018	D1		270	200	146k K2-K2.do			43.2	-6.3	-0.3	18	24		27.3
K0017	K0018	D2		25	2100	1.56M K2-K2.d			51.2	3.8	9.8	28.1	34.1		29.2
K0017	K0018	D3		7	7500	5.56M K2-K2.d			53	9.2	15.2	35.1	41.1		29.2
K0017	K0018	D4		1		36M K2-K2.doc			54.7	16.3	22.3	46.7	52.7		21.3
K0017	K0018		A1	1		TV K2-K2.doc	2000		54.7	20.3	26.3	46.1	52.1		28.7

**FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)**

S14. Is the space station(s) controlled and monitored remotely? If Yes, provide the location and telephone number of the TT and C control point(s): Yes

FEDERAL COMMUNICATIONS COMMISSION
SATELLITE SPACE STATION AUTHORIZATIONS
FCC Form 312 - Schedule S: (Technical and Operational Description)

S15. SPACECRAFT PHYSICAL CHARACTERISTICS:

	Spacecraft Dimensions (meters)	Probability of Survival to End of Life (0.0 - 1.0)
S15a. Mass of spacecraft without fuel (kg): 1278		
S15b. Mass of fuel and disposables at launch (kg): 1513		
S15c. Mass of spacecraft and fuel at launch (kg): 2791	S15f. Length (m): 7	S15i. Payload: 0.9
S15d. Mass of fuel, in orbit, at beginning of life (kg): 402	S15g. Width (m): 3.14	S15j. Bus: 0.85
S15e. Deployed Area of Solar Array (square meters): 32.9	S15h. Height (m): 21	S15k. Total: 0.765

S16. SPACECRAFT ELECTRICAL CHARACTERISTICS:

Spacecraft Subsystem	Electrical Power (Watts) At Beginning of Life		Electrical Power (Watts) At End of Life	
	At Equinox	At Solstice	At Equinox	At Solstice
Payload (Watts):	(a): 2470	(f): 2454	(k): 2470	(p): 2454
Bus (Watts):	(b): 673	(g): 523	(l): 544	(q): 462
Total (Watts):	(c): 3143	(h): 2977	(m): 2998	(r): 2932
Solar Array (Watts):	(d): 4288	(i): 3954	(n): 3519	(s): 3256
Depth of Battery Discharge (%):	(e) 73.7 %	(l) %	(o) 73.7 %	(t) %

S17. CERTIFICATIONS:

a. Are the power flux density limits of § 25.208 met?:	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
b. Are the appropriate service area coverage requirements of § 25.143(b)(ii) and (iii), or § 25.145(c)(1) and (2) met?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> X N/A
c. Are the frequency tolerances of § 25.202(e) and the out-of-band emission limits of § 25.202(f)(1), (2) and (3) met?	<input checked="" type="checkbox"/> X YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A

In addition to the information required in this Form, the space station applicant is required to provide all the information specified in Section 25.114 of the Commission's rules, 47 C.F.R. § 25.114.

Exhibit 1 of Form 312
Question 34

EXHIBIT 1

ALIEN OWNERSHIP¹

Satélites Mexicanos, S.A. de C.V. (“Satmex”) is a Mexican corporation. Principia S.A. de C.V. a Mexican Corporation organized under the laws of Mexico, is a stock owner of Satmex and has 51% of the voting rights.

¹ Satmex informs the FCC that the Company is currently undergoing financial restructuring which may change the ownership of the Company. The FCC will be notified of any such changes that may occur.

Solidaridad 2

ATTACHMENT A

Technical Information to Supplement Schedule S

A.1 Scope



This Attachment contains additional information required by §25.114(c) and other sections of the FCC §25 rules that cannot be entered into the Schedule S submission.

A.2 General Description

(§25.114(d)(1))

The Solidaridad 2 satellite operates at the 114.9° W.L. The Solidaridad 2 is a hybrid satellite which provides a range of FSS services to various countries within Region 2 using the conventional C- and Ku-band frequencies. The satellite employs 18 C-band transponders and 16 Ku-band transponders. At C-band, there are twelve transponders with a bandwidth of 36 MHz and six transponders with a bandwidth of 72 MHz. All Ku-band transponders have a bandwidth of 54 MHz. The satellite's frequency plan provides dual frequency re-use in both the C-band and Ku-band.

The satellite has four C-band beams and two Ku-band beams, all employing linear polarization. The designation of each beam and a description of its coverage area are provided below:

- C1 beam: Mexico and southern U.S.
- C2 beam: Southern U.S down through northern South America;
- C3 beam: South America
- C4 beam: Mexico and southern U.S.
- K1 beam: Mexico and southern U.S.
- K2 beam: Sub-CONUS

A.3 Predicted Space Station Antenna Gain Contours
(§25.114(d)(3))

The Solidaridad 2 antenna gain contours for all receive and transmit beams, as required by §25.114(d)(3), are given in GXT format and embedded in the associated Schedule S submission.

A.4 Services to be Provided
(§25.114(d)(4))

The Solidaridad 2 satellite will provide a variety of FSS services ranging between narrowband to wideband digital services as well as analog TV services.

Typical emission designators and their allocated bandwidths are:

- 146KG7W (145.9 kHz)
- 1M56G7W (1.556 MHz)
- 5M56G7W (5.56 MHz)
- 36M0G7W (36 MHz)
- 36M0F9F (36 MHz)

Typical C-band earth station antennas range between 4.5 m and 9 m. Typical Ku-band earth station antennas range between sub-meter and 9 m.

Representative link budgets, which include details of the transmission characteristics, performance objectives and earth station characteristics, are provided in the associated Schedule S submission.

A.5 TT&C Characteristics
(§25.114(c)(4)(i) and §25.114(c)(9))

The information provided in this section complements that provided in the associated Schedule S submission.

The Solidaridad 2 TT&C sub-system provides for communications during pre-launch, transfer orbit and on-station operations, as well as during spacecraft emergencies. C-band telecommand transmissions are received by the spacecraft through a near omni-directional antenna and through the C4 beam. C-band telemetry carriers are transmitted via the near omni-directional antenna as well as the C3 beam. Ku-band beacon carriers are transmitted by the K1 beam.

TT&C operations will be conducted from Mexican territory. Satmex does not seek Commission authorization for TT&C transmissions.

A.6 Satellite Transponder Frequency Responses
(§25.114(c)(4)(vii))

The worst case receive and transmit channel filter response performance is given in Tables A.6-1 through A.6-3 for C-band (36 MHz), C-band (72 MHz) and Ku-band, respectively. The receive response is measured from the satellite receive antenna up to the input of the SSPA. The transmit response is measured from the input of the SSPA to the satellite transmit antenna.

Table A.6-1 - C-Band Typical Receiver and Transmitter Filter Responses (36 MHz)

Frequency offset from channel center	Gain relative to channel center frequency (dB)		Comments
	Receive	Transmit	
CF±16 MHz	-1	-1	<u>In-Band</u> Value does not exceed these p-p values
CF±18 MHz	-1	-1.5	
CF±26 MHz	-30	-18	<u>Out-of-Band</u> Attenuation is not less than these values
CF±30 MHz	-40	-25	
CF±50 MHz	-45	-30	

Table A.6-2 - C-Band Typical Receiver and Transmitter Filter Responses (72 MHz)

Frequency offset from channel center	Gain relative to channel center frequency (dB)		Comments
	Receive	Transmit	
CF±26 MHz	-1	-1	<u>In-Band</u> Value does not exceed these p-p values
CF±36 MHz	-1.5	-2.5	
CF±60 MHz	-30	-18	<u>Out-of-Band</u> Attenuation is not less than these values
CF±80 MHz	-40	-25	
CF±100 MHz	-45	-30	

Table A.6-3 - Ku-Band Typical Receiver and Transmitter Filter Responses

Frequency offset from channel center	Gain relative to channel center frequency (dB)		Comments
	Receive	Transmit	
CF±20 MHz	-1	-2	<u>In-Band</u> Value does not exceed these p-p values
CF±27 MHz	-2	-3.5	
CF±40 MHz	-25	-20	<u>Out-of-Band</u> Attenuation is not less than these values
CF±70 MHz	-40	-30	
CF±100 MHz	-50	-35	

A.7 Cessation of Emissions
(§25.207)

Each active satellite transmission chain (channel amplifiers and associated SSPA) can be individually turned on and off by ground telecommand, thereby causing cessation of emissions from the satellite, as required.

A.8 Interference and PFD Analyses
(§25.140(b)(2) and §25.114(c)(8))

The interference and PFD analyses are contained in Annex 1 of this Attachment.

A.9 Orbital Debris Mitigation Plan
(§25.114(d)(14))

A.9.1 Spacecraft Hardware Design

Satmex can confirm that the satellite will not undergo any planned release of debris during its operation. In conjunction with the satellite manufacturer, Satmex has assessed and limited the probability of the satellite becoming a source of debris by collisions with small debris or meteoroids of less than one centimeter in diameter that could cause loss of control and prevent post-mission disposal. Satmex has taken steps to limit the effects of such collisions through shielding, the placement of components, and the use of redundant systems.

The Solidaridad 2 satellite includes separate TT&C and propulsion subsystems that are necessary for end-of-life disposal. The spacecraft TT&C system, vital for orbit raising, is extremely rugged with regard to meteoroids smaller than 1 cm, by virtue of its redundancy, shielding, separation of components and physical characteristics. Omni-directional antennas are mounted on opposite sides of the spacecraft. These antennas, each providing greater than hemispherical coverage patterns, are extremely rugged and capable of providing adequate coverage even if struck, bent or otherwise damaged by a small or medium sized particle. Either one of the two omni-directional antennas, for both command and telemetry, will be sufficient to enable orbit raising. The command receivers and decoders and telemetry encoders and transmitters are located within a shielded area and are totally redundant and physically separated. A single rugged thruster and shielded propellant tank provide the energy for orbit-raising. Otherwise, there are no single points of failure in the system.

A.9.2 Minimizing Accidental Explosions

In conjunction with the spacecraft manufacturer, Satmex has assessed and limited the probability of accidental explosions during and after completion of mission operations. The satellite manufacturer has taken steps to ensure that debris generation will not result from the conversion

of energy sources on board the satellite into energy that fragments the satellite. In particular, the satellite manufacturer has advised that burst tests were performed on all pressure vessels during qualification testing to demonstrate a margin of safety against burst. Bipropellant mixing is prevented by the use of valves that prevent backwards flow in propellant lines and pressurization lines. Pyrotechnics are nominally used in the mission only as part of the initial deployment process. After orbit-raising to the disposal orbit, all unfired pyrotechnics will be fired as part of the final satellite decommission. All batteries and fuel tanks are monitored for pressure and temperature. Excessive battery charging or discharging is limited by a monitoring and control system which will automatically limit the possibility of fragmentation. Corrective action, if not automatically undertaken, will be immediately undertaken by the spacecraft operator to avoid destruction and fragmentation. Thruster temperatures, impulse and thrust duration are carefully monitored, and any thruster may be turned off via redundant valves. Consequently, there is no possibility of explosion during the operating mission. The spacecraft manufacturer has also conducted a failure mode effects and criticality analysis as part of the design process.

At the end of the satellite's life, all residual fuel will be consumed. All fuel latch valves will be placed in an "open" position, and any pressurized system will be vented. Spacecraft battery trickle charge and all automatic battery charging sequences will be disabled.

A.9.3 Safe Flight Profiles

In considering current and planned satellites that may have a station-keeping volume that overlaps the Solidaridad 2 satellite, Satmex has reviewed the lists of FCC licensed satellite networks, as well as those that are currently under consideration by the FCC. In addition, non-Mexican networks for which a request for coordination has been published by the ITU within ± 0.2 degrees of 114.9° W.L. have also been reviewed. Only those networks that either operate, or are planned to operate, and have an overlapping station-keeping volume with the Solidaridad 2 satellite, have been taken into account in the analysis.

Based on our review, XM Radio Inc. (“XM”) has Commission authorization to operate at 115° W.L. and New ICO Satellite Services (“ICO”) has a pending application before the Commission to operate at 114.75° W.L. There are currently no other systems under consideration to be licensed by the Commission in the immediate vicinity of 114.9° W.L.

With regard to ITU filings within ± 0.2 degrees of 114.9° W.L., the ITU has published requests for coordination for the following non-Mexican FSS networks:

- the Australian PAS-ENDEAVOUR-115W and PAS-ENDEAVOUR-115WKA networks at 115° W.L.;
- the UK IOMSAT-11 and IOMSAT-11A networks at 115° W.L.;
- the Papua New Guinea LOGOHU-V-245E network at 115° W.L.;
- the USA V-band USASAT-40J network (unassigned) at 115° W.L.;
- numerous Canadian networks at 114.9° W.L.;

Satmex can find no evidence that satellite construction contracts have been awarded for any of these networks, nor does the Federal Aviation Administration Commercial Space Station Second Quarter 2006 Report show any pending satellite launches for the other networks.

Satmex operates the Solidaridad 2 satellite with a maximum East-West station keeping tolerance of $\pm 0.05^\circ$ and both XM and ICO have stated that their respective satellites will be operated with a $\pm 0.05^\circ$ East-West station keeping tolerance. These tolerances are sufficient to ensure there is no station keeping volume overlap between any of the three satellites. Satmex therefore concludes there is no requirement to physically coordinate the Solidaridad 2 satellite with another satellite operator.

A.9.4 Post Mission Disposal Plan

At the end of the operational life of the Solidaridad 2 satellite, Satmex will maneuver the satellite to a disposal orbit with a minimum perigee of 300 km above the normal GSO operational orbit. This will require 5.5 kg of propellant that will be reserved, taking account of all fuel measurement uncertainties, to perform the final orbit raising maneuvers.

A.10 Estimated Operational Lifetime and Reliability

The satellite was designed for a lifetime of 14.5 years. The probability of the entire satellite successfully operating through its design lifetime is estimated at 0.765 based upon a bus reliability of 0.85 and a payload reliability better than 0.9. These numbers are based on a detailed reliability analysis performed by the spacecraft manufacturer of all critical components in the satellite bus and payload.

**CERTIFICATION OF PERSON RESPONSIBLE FOR PREPARING
ENGINEERING INFORMATION**

I hereby certify that I am the technically qualified person responsible for preparation of the engineering information contained in this application, that I am familiar with Part 25 of the Commission's rules, that I have either prepared or reviewed the engineering information submitted in this application and that it is complete and accurate to the best of my knowledge and belief.

/s/

Stephen D. McNeil
Telecomm Strategies Canada, Inc.
Ottawa, Ontario, Canada
(613) 270-1177

ANNEX 1

INTERFERENCE AND PFD ANALYSES

1.0 Two-Degree Compatibility Analyses

There are no C-/Ku-band operational satellites exactly two degrees away from the 114.9° W.L. orbital location. Satmex operates the Satmex 6 satellite at 113° W.L. and the Morelos 2 satellite at 116.8° W.L., both 1.9 degrees away. In order to show two-degree compatibility, the transmission parameters of the Solidaridad 2 satellite have been assumed as both the wanted and victim transmissions. Tables 1 and 2 provide summaries of the C-band and Ku-band transmission parameters, respectively, derived from the Solidaridad 2 link budgets that are embedded in the Schedule S form. C/I calculations were performed for both the C-band and Ku-band using the parameters listed in these tables.

Table 3 shows the results of the C-band calculations and Table 4 shows the results of the Ku-band calculations. These tables provide the overall C/I margins and are provided in a format similar to that of the output of the Sharp Adjacent Satellite Interference Analysis program. The interference calculations assumed a 1 dB advantage for topocentric-to-geocentric conversion, all wanted and interfering carriers are co-polarized and all earth station antennas conform to a sidelobe pattern of $29-25 \log(\theta)$.

The C/I calculations were performed on a per Hz basis for those cases of digital carriers interfering into digital carriers.

For interference caused by, and received by TV/FM carriers, the methodologies of Recommendation ITU-R S.741-2 were employed, coupled with the C/I criterion of Recommendation ITU-R S.671-3, when appropriate. All victim digital carriers were assumed to have the same center frequency as the interfering TV/FM carrier (i.e., no frequency offset from the energy dispersal bandwidth of the TV/FM carrier).

Table 1. Solidaridad 2 Typical C-band Transmission Parameters

Carrier ID	Emission Designator	Occupied / E.D. Bandwidth (MHz)	Tx E/S Gain (dBi)	Uplink EIRP (dBW)	Downlink EIRP (dBW)	Rx E/S Gain (dBi)	C/I Criterion (dB)
1	146KG7W	0.146	47.5	43.0	10.4	43.7	18.1
2	1M56G7W	1.556	47.5	53.3	20.7	47.5	20.4
3	5M56G7W	5.56	47.5	59.1	26.5	47.5	20.4
4	36M0G7W	36	53.5	72.5	37.7	43.7	18.3
5	146KG7W	0.146	47.5	46.0	9.8	43.7	18.1
6	1M56G7W	1.556	47.5	56.3	20.1	47.5	20.4
7	5M56G7W	5.56	47.5	62.1	25.9	47.5	20.4
8	36M0G7W	36	53.5	75.5	37.1	43.7	18.3
9	146KG7W	0.146	47.5	45.0	12.8	43.7	18.1
10	1M56G7W	1.556	47.5	55.3	23.1	47.5	20.4
11	5M56G7W	5.56	47.5	61.1	28.9	47.5	20.4
12	36M0G7W	36	53.5	71.0	38.3	43.7	18.3
13	146KG7W	0.146	47.5	43.0	9.8	43.7	18.1
14	1M56G7W	1.556	47.5	53.3	20.1	47.5	20.4
15	5M56G7W	5.56	47.5	59.1	25.9	47.5	20.4
16	36M0G7W	36	53.5	72.5	37.1	43.7	18.3
17	146KG7W	0.146	47.5	46.0	9.8	43.7	18.1
18	1M56G7W	1.556	47.5	56.3	20.1	47.5	20.4
19	5M56G7W	5.56	47.5	62.1	25.9	47.5	20.4
20	36M0G7W	36	53.5	75.5	37.1	43.7	18.3
21	36M0F9F	2.0	53.5	75.8	38.3	47.5	26.0
22	36M0F9F	2.0	53.5	78.0	37.6	47.5	26.0
23	36M0F9F	2.0	53.5	75.3	38.5	47.5	26.0
24	36M0F9F	2.0	53.5	76.6	37.7	47.5	26.0
25	36M0F9F	2.0	53.5	78.0	37.6	47.5	26.0

Table 2. Solidaridad 2 Typical Ku-band Transmission Parameters

Carrier ID	Emission Designator	Occupied / E.D. Bandwidth (MHz)	Tx E/S Gain (dBi)	Uplink EIRP (dBW)	Downlink EIRP (dBW)	Rx E/S Gain (dBi)	C/I Criterion (dB)
1	146KG7W	0.146	43.2	39.9	20.7	47.7	18.1
2	1M56G7W	1.556	51.2	56.4	31.1	49.6	20.4
3	5M56G7W	5.56	53.0	62.2	36.9	49.6	20.4
4	36M0G7W	36	54.7	74.2	48.7	41.7	18.3
5	146KG7W	0.146	43.2	39.9	21.0	47.7	18.1
6	1M56G7W	1.556	51.2	58.1	31.1	49.6	20.4
7	5M56G7W	5.56	53.0	65.2	38.1	49.6	20.4
8	36M0G7W	36	54.7	74.0	49.7	41.7	18.3
9	36M0F9F	2.0	54.7	79.0	48.7	47.7	26.0
10	36M0F9F	2.0	54.7	78.0	49.1	47.7	26.0

Table 3. Overall C-Band C/I Margins.

Carrier ID	Interfering Carriers																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	3.6	3.6	3.3	1.1	2.8	2.8	2.5	0.9	1.3	1.3	1.0	0.6	4.0	4.0	3.7	1.6	2.8	2.8	2.5	0.9	15.4	15.6	15.5	15.2	15.6
2	3.7	3.6	3.4	1.8	2.1	2.1	1.8	1.0	1.4	1.4	1.1	1.7	3.9	3.9	3.6	2.2	2.1	2.1	1.8	1.0	-8.5	-9.3	-8.4	-8.5	-9.3
3	3.9	3.9	3.6	2.1	2.4	2.3	2.1	1.3	1.7	1.7	1.4	1.9	4.2	4.2	3.9	2.5	2.4	2.3	2.1	1.3	-7.6	-8.5	-7.6	-7.7	-8.5
4	7.3	7.3	7.0	4.5	6.9	6.9	6.6	4.6	5.0	5.0	4.7	4.0	7.8	7.8	7.5	5.0	6.9	6.9	6.6	4.6	3.6	3.6	3.4	3.9	3.6
5	3.8	3.8	3.5	0.8	3.6	3.6	3.3	1.1	1.4	1.4	1.1	0.3	4.3	4.3	4.0	1.4	3.6	3.6	3.3	1.1	15.4	15.2	15.5	15.0	15.2
6	4.5	4.5	4.2	2.0	3.7	3.6	3.4	1.8	2.2	2.2	1.9	1.6	4.9	4.9	4.6	2.5	3.7	3.6	3.4	1.8	-7.8	-8.1	-7.9	-7.6	-8.1
7	4.8	4.8	4.5	2.3	3.9	3.9	3.6	2.1	2.5	2.4	2.2	1.9	5.2	5.2	4.9	2.8	3.9	3.9	3.6	2.1	-7.0	-7.3	-7.1	-6.8	-7.3
8	7.3	7.2	7.0	4.1	7.3	7.3	7.0	4.5	4.9	4.8	4.6	3.5	7.8	7.8	7.5	4.7	7.3	7.3	7.0	4.5	3.4	3.7	3.2	3.8	3.7
9	5.9	5.9	5.6	3.4	5.0	5.0	4.7	3.2	3.6	3.6	3.3	3.0	6.3	6.3	6.0	3.9	5.0	5.0	4.7	3.2	13.1	13.4	13.1	12.9	13.4
10	5.9	5.8	5.6	4.1	4.2	4.2	3.9	3.2	3.7	3.6	3.4	4.0	6.1	6.1	5.8	4.5	4.2	4.2	3.9	3.2	-6.2	-7.1	-6.1	-6.3	-7.1
11	6.1	6.1	5.8	4.4	4.5	4.5	4.2	3.5	3.9	3.9	3.6	4.3	6.4	6.4	6.1	4.8	4.5	4.5	4.2	3.5	-5.4	-6.3	-5.3	-5.5	-6.3
12	7.5	7.4	7.2	4.9	6.7	6.7	6.4	4.7	5.2	5.1	4.9	4.5	7.9	7.9	7.6	5.4	6.7	6.7	6.4	4.7	3.8	3.6	3.7	4.0	3.6
13	3.2	3.2	2.9	0.5	2.5	2.5	2.2	0.5	0.9	0.8	0.6	0.1	3.6	3.6	3.3	1.1	2.5	2.5	2.2	0.5	15.9	16.0	15.9	15.6	16.0
14	3.4	3.3	3.1	1.4	1.9	1.9	1.6	0.7	1.1	1.1	0.8	1.2	3.7	3.6	3.4	1.8	1.9	1.9	1.6	0.7	-8.8	-9.5	-8.8	-8.8	-9.5
15	3.6	3.6	3.3	1.6	2.2	2.1	1.9	0.9	1.4	1.4	1.1	1.4	3.9	3.9	3.6	2.1	2.2	2.1	1.9	0.9	-8.0	-8.7	-7.9	-8.0	-8.7
16	6.9	6.8	6.6	4.0	6.5	6.5	6.2	4.1	4.5	4.5	4.2	3.4	7.3	7.3	7.0	4.5	6.5	6.5	6.2	4.1	3.1	3.2	2.9	3.4	3.2
17	3.8	3.8	3.5	0.8	3.6	3.6	3.3	1.1	1.4	1.4	1.1	0.3	4.3	4.3	4.0	1.4	3.6	3.6	3.3	1.1	15.4	15.2	15.5	15.0	15.2
18	4.5	4.5	4.2	2.0	3.7	3.6	3.4	1.8	2.2	2.2	1.9	1.6	4.9	4.9	4.6	2.5	3.7	3.6	3.4	1.8	-7.8	-8.1	-7.9	-7.6	-8.1
19	4.8	4.8	4.5	2.3	3.9	3.9	3.6	2.1	2.5	2.4	2.2	1.9	5.2	5.2	4.9	2.8	3.9	3.9	3.6	2.1	-7.0	-7.3	-7.1	-6.8	-7.3
20	7.3	7.2	7.0	4.1	7.3	7.3	7.0	4.5	4.9	4.8	4.6	3.5	7.8	7.8	7.5	4.7	7.3	7.3	7.0	4.5	3.4	3.7	3.2	3.8	3.7
21	5.2	5.1	4.8	1.1	4.6	4.5	4.2	1.1	2.8	2.8	2.5	0.6	5.6	5.5	5.3	1.6	4.6	4.5	4.2	1.1	0.1	0.0	0.0	0.4	0.0
22	5.1	5.0	4.7	0.7	4.9	4.8	4.6	1.0	2.7	2.6	2.3	0.2	5.6	5.5	5.2	1.3	4.9	4.8	4.6	1.0	-0.1	0.1	-0.3	0.3	0.1
23	5.2	5.1	4.9	1.3	4.5	4.4	4.1	1.1	2.9	2.8	2.5	0.8	5.6	5.6	5.3	1.8	4.5	4.4	4.1	1.1	0.2	0.0	0.1	0.4	0.0
24	4.9	4.8	4.5	0.7	4.5	4.4	4.2	0.8	2.5	2.5	2.2	0.2	5.4	5.3	5.0	1.2	4.5	4.4	4.2	0.8	-0.3	-0.2	-0.4	0.1	-0.2
25	5.1	5.0	4.7	0.7	4.9	4.8	4.6	1.0	2.7	2.6	2.3	0.2	5.6	5.5	5.2	1.3	4.9	4.8	4.6	1.0	-0.1	0.1	-0.3	0.3	0.1

Table 4. Overall Ku-Band C/I Margins.

		Interfering Carriers									
		Carrier ID	1	2	3	4	5	6	7	8	9 TV/FM
Wanted Carriers	1	3.4	4.5	5.3	2.4	3.3	3.4	3.0	1.9	-15.8	-15.2
	2	5.8	6.5	6.9	3.7	5.6	5.8	5.0	2.9	-6.8	-6.5
	3	6.1	6.8	7.2	3.9	5.9	6.0	5.3	3.2	-6.0	-5.7
	4	6.4	6.4	6.3	2.7	6.1	6.3	5.0	1.8	2.3	2.1
	5	3.4	4.6	5.5	2.6	3.4	3.5	3.2	2.1	-15.7	-15.1
	6	6.6	7.1	7.3	4.0	6.3	6.5	5.6	3.2	-6.1	-5.9
	7	8.1	8.6	8.8	5.5	7.9	8.0	7.2	4.7	-4.0	-3.9
	8	7.2	7.3	7.2	3.7	6.9	7.1	5.8	2.7	3.1	3.0
	9 TV/FM	5.9	5.9	5.9	1.0	5.6	5.7	4.5	0.1	0.5	0.3
	10 TV/FM	6.0	6.1	6.1	1.3	5.7	5.8	4.7	0.4	0.6	0.5

1.1 Summary of the Interference Analyses

The C-band analysis shows that C/I margins are positive for all cases of digital carriers interfering into digital carriers. There are insignificant negative margins for a few cases of TV/FM carriers interfering into TV/FM carriers. The calculations of TV/FM carriers interfering into narrow-to-medium band digital carriers show the expected results of high negative margins. This arises from the assumption that the victim carriers are assigned the same center frequency as the TV/FM carrier.

The Ku-band analysis shows that C/I margins are positive for all cases of digital carriers interfering into digital carriers and TV/FM carriers interfering into TV/FM carriers. The calculations of TV/FM carriers interfering into narrow-to-medium band digital carriers again show the expected results of high negative margins.

2.0 C-Band PFD Analyses

The maximum PFD levels caused by the Solidaridad 2 satellite occur when TV/FM carriers are transmitted and hence this carrier type is used to demonstrate compliance with the PFD limits of §25.208. Table 5 shows the maximum PFD levels that will occur at various angles of arrival and demonstrates compliance with §25.208. The maximum downlink EIRPs contained in the table are the maximums that can be transmitted for TV/FM carriers emissions either due to saturated operation or PFD limit constraints. Satmex will operate the Solidaridad 2 satellite such that all downlink transmissions will comply with the PFD limits of §25.208.

Table 5. Maximum PFD Levels of the Solidaridad 2 C-Band Beams.

	Angle of Arrival	0°	5°	10°	15°	20°	25°	Beam Peak
Beam	Maximum EIRP for TV/FM Carriers (dBW)	PFD at angle of arrival (dBW/m ² /4 kHz)						
C1 (V)	41.3	-169.1	-169.0	-168.9	-168.8	-168.7	-168.6	-148.0
C2 (V)	40.7	-157.7	-157.6	-156.8	-155.7	-154.3	-152.9	-148.6
C3 (V)	39.1	-152.2	-152.0	-151.7	-151.3	-151.0	-150.7	-150.7
C4 (H)	43.7	-166.7	-166.6	-166.4	-166.3	-166.2	-166.1	-145.5

EXHIBIT 2

LIST OF STOCKHOLDERS, OFFICERS AND DIRECTORS¹

Names and Addresses of stockholder owning of record and/or voting 10% or more of the stock of Satélites Mexicanos, S.A. de C.V. (“Satmex”) are as follows²:

Principia S.A. de C.V.
Rodolfo Gaona 86 F
Col Lomas de Sotelo México D.F.
CP 11200
Citizenship: Mexican Corporation
Voting Rights: 51%

Loral Space & Communications Corporation
600 Third Avenue
New York, N.Y. 10016
Citizenship: USA Corporation
Voting Rights: 49%

The names, addresses and nationality of the officers and directors of Satmex are:

Position	Name	Address	Nationality
Chief Executive Officer	Sergio Autrey	Rodolfo Gaona 86 F Col Lomas de Sotelo México D.F. CP 11200	Mexican
General Counsel	Carmen Ochoa	Rodolfo Gaona 86 F Col Lomas de Sotelo México D.F. CP 11200	Mexican
Chief Financial Officer	Cynthia Pelini Addario	Rodolfo Gaona 86 F Col Lomas de Sotelo México D.F. CP 11200	American
Executive Vice-President Sales and Operations	Juan Manuel Pinedo	Rodolfo Gaona 86 F Col Lomas de Sotelo México D.F. CP 11200	Mexican
Regulatory Branch Director	Alonso Picazo Diaz	Rodolfo Gaona 86 F Col Lomas de Sotelo México D.F. CP 11200	Mexican

¹ Satmex informs the FCC that the Company is currently undergoing financial restructuring which may change the list of Stockholders, Officers and Directors of the Company. The FCC will be notified of any such changes that may occur.

² The Mexican Government owns 23.57% of the stock in Satmex but has no voting rights.

EXHIBIT 3

INFORMATION REQUIRED IN 47 C.F.R. Section 25.137

Satélites Mexicanos, S.A. de C.V. (“Satmex”), a Mexican corporation, respectfully files this Modification to its Petition for Declaratory Ruling to add its C- and Ku-band satellite, Solidaridad 2, to the Permitted Space Station List to change the satellite orbital location from 113°W to 114.9°W.

Section 25.137(a) – Competitive Analysis

Not required. Mexico, the licensing administration is a member of the World Trade Organization (“WTO”). Additionally the United States and Mexico have a bilateral agreement that covers additional services requested in this Petition. Satmex is not requesting authority to provide any service that is not covered under the WTO Telecom Agreement or under United States and Mexico bi-lateral agreements.

Section 25.137(b) – Legal and Technical Information

The required information is submitted in the Request for Declaratory Ruling, Form 312 and its associated Exhibits and in the electronically submitted Schedule S.

Section 25.137(d) – Financial Requirements

The Solidaridad 2 satellite is already in-orbit and operating and therefore detailed financial information is not required for the Commission to determine that Satmex is financially capable of building, launching and operating this satellite.