

READ INSTRUCTIONS CAREFULLY  
BEFORE PROCEEDING

APPROVED BY OMB 3060-0589

FEDERAL COMMUNICATIONS COMMISSION

REMITTANCE ADVICE FCC/MELLON

SPECIAL USE

JAN 13 1998

FCC USE ONLY

PAGE NO. 1 OF 1

(1) LOCKBOX #

SECTION A - PAYER INFORMATION

(2) PAYER NAME (if paying by credit card, enter name exactly as it appears on your card)  
GE American Communications, Inc.

(3) TOTAL AMOUNT PAID (dollars and cents)  
\$ 6,075.00

(4) STREET ADDRESS LINE NO. 1  
Four Research Way

(5) STREET ADDRESS LINE NO. 2

(6) CITY  
Princeton

(7) STATE  
NJ

(8) ZIP CODE  
08540-6684

(9) DAYTIME TELEPHONE NUMBER (include area code)  
(609) 987-4000

(10) COUNTRY CODE (if not in U.S.A.)

IF PAYER NAME THE AND APPLICANT NAME ARE DIFFERENT COMPLETE SECTION B  
IF MORE THAN ONE APPLICANT, USE CONTINUATION SHEETS (FORM 159-C)

SECTION B - APPLICANT INFORMATION

(11) APPLICANT NAME (if paying by credit card, enter name exactly as it appears on your card)  
N/A

(12) STREET ADDRESS LINE NO. 1

74-SAT-MP/ML-98

(13) STREET ADDRESS LINE NO. 2

(14) CITY

(15) STATE

(16) ZIP CODE

(17) DAYTIME TELEPHONE NUMBER (include area code)

(18) COUNTRY CODE (if not in U.S.A.)

COMPLETE SECTION C FOR EACH SERVICE, IF MORE BOXES ARE NEEDED, USE CONTINUATION SHEETS (FORM 159-C)

SECTION C - PAYMENT INFORMATION

(19A) FCC CALL SIGN/OTHER ID  
GE-5

(20A) PAYMENT TYPE CODE (PTC)  
B F Y

(21A) QUANTITY  
1

(22A) FEE DUE FOR (PTC) IN BLOCK 20A  
\$ 6,075.00

FCC USE ONLY

(23A) FCC CODE 1

(24A) FCC CODE 2

(19B) FCC CALL SIGN/OTHER ID

(20B) PAYMENT TYPE CODE (PTC)

(21B) QUANTITY

(22B) FEE DUE FOR (PTC) IN BLOCK 20B  
\$

FCC USE ONLY

(23B) FCC CODE 1

(24B) FCC CODE 2

(19C) FCC CALL SIGN/OTHER ID

(20C) PAYMENT TYPE CODE (PTC)

(21C) QUANTITY

(22C) FEE DUE FOR (PTC) IN BLOCK 20C  
\$

FCC USE ONLY

(23C) FCC CODE 1

(24C) FCC CODE 2

(19D) FCC CALL SIGN/OTHER ID

(20D) PAYMENT TYPE CODE (PTC)

(21D) QUANTITY

(22D) FEE DUE FOR (PTC) IN BLOCK 20D  
\$

FCC USE ONLY

(23D) FCC CODE 1

(24D) FCC CODE 2

# HOGAN & HARTSON

L.L.P.

Writer's Direct Dial  
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WASHINGTON, DC 20004-1109  
TEL (202) 637-5600  
FAX (202) 637-5910

January 13, 1998

*BY HAND DELIVERY*

Magalie R. Salas  
Secretary  
Federal Communications Commission  
International Bureau - Satellites  
P.O. Box 358210  
Pittsburgh, PA 15251-5210

74-SAT-MP/ML-98

**Re: Application by GE American Communications, Inc. for  
Modification of Authority to Construct, Launch and  
Operate GE-5, an Expansion Hybrid C-/Ku-Band Satellite  
in the Fixed-Satellite Service at 79° W.L.**

Dear Ms. Salas:

GE American Communications Inc. ("GE Americom"), by its attorneys, hereby submits an original and nine copies of an application for modification of the authority it was granted in *GE American Communications, Inc.*, 11 FCC Rcd 15030 (Int'l Bur. 1996) ("*GE Americom Order*") to construct, launch, and operate GE-5, an expansion hybrid C-/Ku-band satellite in the fixed satellite service. Specifically, the enclosed application requests that the Commission modify the *GE Americom Order* to permit the use of two co-located spacecraft instead of one hybrid C-Ku-band satellite as originally proposed.

Also enclosed is a completed Form 159 and a check in the amount of \$6,075.00 to cover the applicable filing fee.

BRUSSELS BUDAPEST LONDON MOSCOW PARIS\* PRAGUE WARSAW

BALTIMORE, MD BETHESDA, MD COLORADO SPRINGS, CO DENVER, CO LOS ANGELES, CA McLEAN, VA

\\\\DC - 30764/1 - 0565835.01

\*Affiliated Office

HOGAN & HARTSON L.L.P

Ms. Magalie R. Salas

January 13, 1998

Page 2

Please contact the undersigned if you have any questions regarding this application.

Very truly yours,



Karis A. Hastings

Enclosures

cc: Thomas Tycz  
Fern Jarmulnek  
Harry Ng  
Michael McCoin  
Kathleen Campbell

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of Application by	)	
	)	
GE AMERICAN COMMUNICATIONS, INC.	)	File No.
	)	
For Modification of Authorization to	)	
Construct, Launch and Operate a	)	
Space Station in the Fixed-Satellite Service	)	

**APPLICATION FOR MODIFICATION OF  
GE AMERICAN COMMUNICATIONS, INC.**

By this application, GE American Communications, Inc. ("GE Americom") seeks modification of the authority it was granted in *GE American Communications, Inc.*, 11 FCC Rcd 15030 (Int'l Bur. 1996) (hereinafter, the "*GE Americom Order*") to construct, launch, and operate GE-5, an expansion hybrid C/Ku-band satellite in the fixed satellite service assigned to the 79° W.L. location.<sup>1</sup> Specifically, GE Americom requests that the Commission modify the *GE Americom Order* to permit the use of two co-located spacecraft to satisfy the GE-5 authorization instead of a single hybrid C-/Ku-band satellite as originally proposed.

One of the satellites GE Americom proposes to use is currently

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<sup>1</sup> As discussed below, the orbital assignment for GE-5 is subject to a pending petition for reconsideration in which GE Americom has requested the 83° W.L. location in lieu of 79° W.L.

operational, and the other is fully constructed and will be ready for launch in the fourth quarter of 1998. Accordingly, GE Americom seeks expedited action on this modification application. Grant of the instant application will permit GE Americom to begin operations pursuant to the GE-5 authorization much earlier than GE Americom would otherwise be able to do, thus speeding the delivery of services to customers.

In accordance with the requirements of Section 25.117(d) and (e) of the Commission's rules, 47 C.F.R. §§ 25.117 (d) and (e), a completed FCC Form 312 is attached. In addition, an appendix providing detailed technical information in support of the requested modification is attached as Exhibit A.

### **BACKGROUND**

The *GE Americom Order* granted GE Americom's application to construct, launch, and operate GE-5, a geostationary hybrid C-/Ku-band satellite, to provide fixed-satellite services. As proposed, GE-5 was intended to carry twenty-four 36 MHz transponders in the C-band and in the Ku-band. The *Order* required GE Americom to construct, launch, and successfully place GE-5 into orbit by December 30, 1999.

The Commission assigned GE-5 to the 79° W.L. location. However, GE Americom has requested that the Commission reconsider its orbital assignment

plan with respect to GE-5.<sup>2</sup> Specifically, GE Americom has asked that the Commission reassign GE-5 to 83° W.L. and reassign EchoStar's FSS 1 spacecraft from 83° W.L. to 79° W.L. This reassignment is necessary to address the threat of harmful interference from the high power EchoStar FSS 1 spacecraft to GE Americom's GE-2 satellite at 85° W.L. This reassignment is necessary to address the threat of harmful interference from the high power EchoStar FSS 1 spacecraft to GE Americom's GE-2 satellite at 85° W.L. In addition, the reassignment would result in a more compatible spacecraft (EchoStar FSS-1, rather than GE-5) occupying the 79° W.L. location adjacent to the high power Loral satellite assigned to 77° W.L. See Reply of GE American Communications, Inc. at 3-6 & Exhibit A.

Because of the uncertainty created by the interference issues raised by the Commission's assignments for GE-5 and FSS 1, GE Americom sought a deferral of the milestones for GE-5. GE Americom requested that the Commission set milestones for GE-5 after it had finally determined an orbital location for the spacecraft.

GE Americom's reconsideration petition request remains pending, and GE Americom continues to believe that the reassignment we have requested is mandated by Commission policies and by the public interest. However, the instant

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<sup>2</sup> See Petition for Reconsideration of GE American Communications, Inc., File Nos. 48-DSS-LA-94 *et al.*, (filed Dec. 23, 1996); Reply of GE American Communications, Inc. (filed Jan. 28, 1997).

modification application is completely independent of the pending reconsideration proceeding. Thus, we request that the Commission modify the GE-5 authorization as described herein and permit operations as modified at either 83° W.L. or 79° W.L., depending on the outcome of the reconsideration petition.

## PROPOSED MODIFICATIONS

GE Americom respectfully requests that the Commission modify the *GE Americom Order* to permit the use of two co-located spacecraft to provide the C- and Ku-band capacity of GE-5 as described below.

### A. Ku-Band Capacity

GE Americom requests authority to provide the Ku-band capacity authorized for GE-5 by using a Ku-band satellite constructed by Nahuelsat as a ground spare for the first Nahuelsat satellite. The major technical difference between the Nahuelsat spacecraft and the GE-5 authorization for Ku-band capacity is the transponder design. Rather than the twenty-four 36 MHz transponders GE Americom had proposed for GE-5, the Nahuelsat spacecraft carries sixteen transponders operating at 54 MHz bandwidth. The EIRP levels on the Ku-band transponders are the same or slightly lower than the authorized levels for GE-5.

The Nahuelsat spacecraft is fully constructed and will need only minor adjustments, such as modification of its antenna coverage and frequency plan, to provide the required coverage of the United States. These changes will be

completed within the next ten months, and GE Americom is planning to launch the satellite during the fourth quarter of 1998.

## **B. C-Band Capacity**

GE Americom requests authority to replace the C-band capacity authorized for GE-5 by co-locating Satcom SN-3 with the Nahuelsat spacecraft. Satcom SN-3 is a hybrid spacecraft that was originally assigned to 87° W.L. It was replaced at that location by GE-3 (originally referred to by the Commission in its authorization as GE-4) in September of this year. Satcom SN-3 is now temporarily located at the 83° W.L. location.<sup>3</sup> Its license expires in April of 1998, but its expected end of life is not until January 2000. GE Americom will plan for follow-on C-band capacity at the GE-5 location to replace Satcom SN-3 at the end of its useful life.

The transponder configuration of Satcom SN-3's C-band payload differs only slightly from the GE-5 authorization. Rather than twenty-four 36 MHz C-band transponders, Satcom SN-3 carries 18 C-band transponders, 12 of which operate at 36 MHz bandwidth, and six of which operate at 72 MHz bandwidth. However, GE Americom currently operates each 72 MHz transponder on Satcom SN-3 as if it were two 36 MHz transponders. In addition, the EIRP levels on Satcom SN-3 are somewhat lower than the levels originally proposed for the GE-5 spacecraft.

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<sup>3</sup> See File No. 107-SAT-ML-97.



## PUBLIC INTEREST SHOWING

Modification of the *GE Americom Order* to permit the use of the Nahuelsat and Satcom SN-3 satellites in place of the proposed hybrid GE-5 satellite will serve the public interest by both expediting and reducing the cost of establishing operations pursuant to the GE-5 authorization. As stated above, the Nahuelsat satellite is fully constructed and will require only minor adjustments to provide GE-5's Ku-band capacity. Satcom SN-3 is currently operational and can be moved without difficulty to the 79° W.L. slot if required.<sup>4</sup> As a result, grant of authority to use the Nahuelsat and Satcom SN-3 satellites in place of the proposed GE-5 satellite will permit GE Americom to initiate both the C- and Ku-band services contemplated by the GE-5 authorization much more quickly and more economically than would otherwise be the case. In fact, expeditious action on the instant application will permit initiation of service more than a year in advance of the current launch milestone in the GE-5 authorization. Thus, grant of the requested modification will both expedite the delivery of services to customers and enhance the efficiency with which GE Americom can meet customer needs. Furthermore, GE Americom will not expect any greater interference protection from adjacent satellites as a result of the modifications GE Americom proposes for GE-5.

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<sup>4</sup> As stated above, Satcom SN-3 currently is located at 83° W.L., only 4° from the 79° W.L. location assigned to GE-5. Obviously, however, if the Commission grants GE Americom's request on reconsideration that GE-5 be reassigned to 83° W.L., no relocation of Satcom SN-3 will be necessary.

Permitting these two spacecraft to be used in lieu of a hybrid for GE-5 will have no impact on the pending petition for reconsideration of that authorization. Both the Nahuelsat spacecraft and Satcom SN-3 can be used at either the 79° W.L. location originally assigned to GE Americom or the 83° W.L. location GE Americom requested on in its reconsideration pleadings. In fact, as discussed above, Satcom SN-3 is currently located at 83° W.L. on a temporary basis.

However, the Commission must resolve the reconsideration issue with respect to GE-5 well before launch of the Nahuelsat spacecraft, which is currently scheduled for the fourth quarter of 1998. Any further delay in a decision on the final location of GE-5 at least will hinder the ability of potential customers to commit to use of GE-5's capacity. In addition, GE Americom must know whether or not Satcom SN-3 will need to be moved. Accordingly, GE Americom respectfully requests resolution of reconsideration issues relating to GE-5's orbital assignment by March 13, 1998 to allow rational capacity planning by customers.

## CONCLUSION

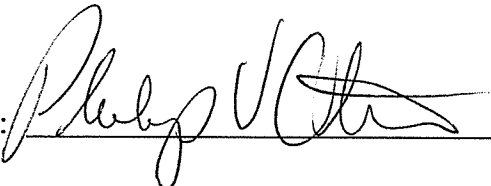
For the foregoing reasons, the Commission should modify the *GE Americom Order* to permit the use by GE Americom of the Nahuelsat and Satcom SN-3 satellites in lieu of the hybrid C-/Ku-band GE-5 satellite initially proposed and authorized in that decision.

Respectfully submitted,

GE AMERICAN COMMUNICATIONS, INC.

Of Counsel

Peter A. Rohrbach  
Karis A. Hastings  
Jennifer A. Purvis  
Hogan & Hartson L.L.P.  
555 Thirteenth Street, N.W.  
Washington, D.C. 20004-1109  
(202) 637-5600

By:  \_\_\_\_\_

Philip V. Otero  
Senior Vice President and General  
Counsel  
GE American Communications, Inc.  
Four Research Way  
Princeton, NJ 08540

January 13, 1998

**FCC 312**  
Main Form

**FEDERAL COMMUNICATIONS COMMISSION**  
**APPLICATION FOR SATELLITE SPACE AND EARTH STATION AUTHORIZATIONS**

Approved by OMB  
3060-0678  
Est. Avg. Burden Hours  
Per Response: 10 Hrs.

FCC Use Only  
File Number:  
Call Sign:

**PAYOR AND FILING FEE INFORMATION**

a. Payor Name GE American Communications, Inc.		b. Daytime Telephone Number (609) 987-4000	
c. Mailing Street Address or P.O. Box Four Research Way Princeton		d. FCC Account Number 0132849985	e. City Princeton
f. State NJ	g. Zip Code 08540-6684	h. Country Code (if not U.S.A.) N/A	
i. Payment Type Code BFY	j. Quantity 1	k. Fee Due for Payment Type Code in (i) \$6,075.00	l. Total Amount Paid \$6,075.00
FCC Use Only			

**APPLICANT INFORMATION**

1. Legal Name of Applicant GE American Communications, Inc.		2. Voice Telephone Number (609) 987-4000	
3. Other Name Used for Doing Business (if any) N/A		4. Fax Telephone Number (609) 987-4233	
5. Mailing Street Address or P.O. Box Four Research Way ATTENTION: Philip V. Otero		6. City Princeton	8. Zip Code 08540-6684
9. Name of Contact Representative (if other than applicant) Karis A. Hastings		7. State / Country (if not U.S.A.) NJ	
11. Firm or Company Name Hogan & Hartson L.L.P.		10. Voice Telephone Number (202) 637-5767	
13. Mailing Street Address or P.O. Box 555 Thirteenth Street, N.W. ATTENTION: N/A		12. Fax Telephone Number (202) 637-5910	14. City Washington
		15. State / Country (if not U.S.A.) DC	
		16. Zip Code 20004	

**CLASSIFICATION OF FILING**

17. Place an "X" in the box next to the classification that applies to this filing for both questions a. and b. Mark only one box for 17a and only one box for 17b.

<input type="checkbox"/> a1. Earth Station	<input type="checkbox"/> b1. Application for License of New Station	<input checked="" type="checkbox"/> b4. Modification of License or Registration
<input checked="" type="checkbox"/> a2. Space Station	<input type="checkbox"/> b2. Application for Registration of New Domestic Receive-Only Station	<input type="checkbox"/> b7. Notification of Minor Modification
	<input type="checkbox"/> b3. Amendment to a Pending Application	<input type="checkbox"/> b8. Other (Please Specify):

19. If this filing is an amendment to a pending application enter:  
Call sign of station: GE-5  
(a) Date pending application was filed: N/A  
(b) File number of pending application: N/A

**TYPE OF SERVICE**

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Place an "X" in the box(es) next to all that apply.

a. Fixed Satellite     b. Mobile Satellite     c. Radiodetermination Satellite     d. Earth Exploration Satellite     e. Other (please specify) \_\_\_\_\_

21. STATUS: Place an "X" in the box next to the applicable status. Mark only one box.

a. Common Carrier     b. Non-Common Carrier

22. If earth station applicant, place an "X" in the box(es) next to all that apply.    N/A

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

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

a. Connected to the Public Switched Network     b. Not connected to the 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) \_\_\_\_\_

**TYPE OF STATION**

25. CLASS OF STATION: Place an "X" in the box next to the class of station that applies. Mark only one box.

a. Fixed Earth Station     b. Temporary-Fixed Earth Station     c. 12/14 GHz VSAT Network     d. Mobile Earth Station     e. Space Station     f. Other Specify \_\_\_\_\_

If space station applicant, go to Question 27.

26. TYPE OF EARTH STATION FACILITY Mark only one box.    N/A

a. Transmit/Receive     b. Transmit-Only     c. Receive-Only

**PURPOSE OF MODIFICATION OR AMENDMENT**

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

<input type="checkbox"/>	a -- authorization to add new emission designator and related service
<input type="checkbox"/>	b -- authorization to change emission designator and related service
<input type="checkbox"/>	c -- authorization to increase EIRP and EIRP density
<input type="checkbox"/>	d -- authorization to replace antenna
<input type="checkbox"/>	e -- authorization to add antenna
<input type="checkbox"/>	f -- authorization to relocate fixed station
<input type="checkbox"/>	g -- authorization to change assigned frequency(ies)
<input type="checkbox"/>	h -- authorization to add Points of Communication (satellites & countries)
<input type="checkbox"/>	i -- authorization to change Points of Communication (satellites & countries)
<input type="checkbox"/>	j -- authorization for facilities for which environmental assessment and radiation hazard reporting is required
<input checked="" type="checkbox"/>	k -- Other (Please specify) <u>Authorization to use two satellites in lieu of one hybrid satellite</u>

**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 Exhibit A to this application.

A Radiation Hazard Study must accompany all applications as Exhibit B for new transmitting facilities, major modifications, or major amendments. Refer to OET Bulletin 65.

YES     NO

**ALIEN OWNERSHIP**

29. Is the applicant a foreign government or the representative of any foreign government?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
30. Is the applicant an alien or the representative of an alien?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
31. Is the applicant a corporation organized under the laws of any foreign government?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
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 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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as Exhibit C an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.	N/A	

**BASIC QUALIFICATIONS**

35. Does the applicant request any waivers or exemptions from any of the Commission's Rules? If Yes, attach as Exhibit D, copies of the requests for waivers or exceptions with supporting documents.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
36. Has the applicant or any party to this application 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 Exhibit E, an explanation of the circumstances.	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
37. Has the applicant, or any party to this application, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? See Exhibit K	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
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?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the proceeding two items?	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
40. By checking Yes, the undersigned certifies, that neither the 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.	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO

41. Description. (Summarize the nature of the application and the services to be provided).

GE American Communications, Inc. requests that the Commission modify the authority granted for its GE-5 satellite in GE-American Communications, Inc. Authorization to Construct, Launch and Operate a Space Station in the Domestic Fixed Satellite Service, DA 96-1939 (Int'l Bur. rel. Nov. 21, 1996) to permit the use of two co-located spacecraft instead of one hybrid C-/Ku-band satellite as originally proposed.

**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.

42. Applicant is a (an): (Place an "X" in the box next to applicable response.)

- a. Individual   
  b. Unincorporated Association   
  c. Partnership   
  d. Corporation   
  e. Governmental Entity   
  f. Other  
 (Please specify)

43. Typed Name of Person Signing

Philip V. Otero

44. Title of Person Signing

Senior Vice President and General Counsel

45. Signature



46. Date

January 13, 1998

**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).**

**EXHIBIT K**  
**(Question 37)**

1. United States of America v. General Electric Company, Hoyt P. Steele, Robert Naples, Twombly Inc., Schenectady Turbine Services Ltd. and Charles Mothon (Puerto Rico)

In 1981 General Electric Company ("GE") and others were convicted in the United States District Court in New Jersey (at Trenton) on charges of violations of certain provisions of the United States Criminal Code claimed to have resulted from an alleged bribe of an official of the Puerto Rico Water Resource Authority in connection with a contract for the supply and construction of a power plant. These convictions were reversed in 1982 by the U.S. Court of Appeals for the Third Circuit. Verdicts of acquittal were ordered on certain counts and other counts were remanded for retrial. In April 1983 GE pleaded nolo contendere to a general conspiracy count. This plea was accepted by the United States District Court and GE was fined \$10,000. The remaining counts against GE were dismissed.

2. United States of America v. General Electric Company (Re-Entry Systems)

On March 26, 1985 an indictment was returned against GE by a grand jury in the United States District Court for the Eastern District of Pennsylvania charging GE with 4 counts of making false claims and with 104 counts of making false statements in violation of the United States Criminal Code, in connection with work performed for the United States Air Force by GE's Re-Entry Systems Operation. On May 13, 1985, GE pleaded guilty to the various counts in the indictment and was fined a total of \$1,040,000 and paid an additional \$1,905,000 in civil fines and reimbursements.

3. United States of America v. General Electric Company d/b/a Management and Technical Services Co., Gerald A. Leo a/k/a "Bud" and James Badolato (MATSCO)

On February 2, 1990, a jury sitting in the United States District Court for the Eastern District of Pennsylvania found GE "vicariously liable" for the 1983 acts of two contract employees of a separate corporate subsidiary ("MATSCO") of GE. GE was found guilty of mail fraud and of violating the False Claims Act. This action arose from 1983 negotiations by MATSCO of a single contract with the Army for production of battlefield computer systems. A MATSCO contract employee was found to have failed to notify the Army that they had negotiated lower subcontract prices with vendors than had originally been projected. Following an internal



review, MATSCO promptly refunded \$3.69 million to the Government. The Government did not allege that any director or officer of GE had any knowledge of any withholding of information from the Army. On July 26, 1990, pursuant to a joint sentencing memorandum, GE and the Department of Justice settled the MATSCO civil and criminal cases and resolved several other civil matters from the early 1980's which were not the subject of litigation. Under the settlement, GE paid the Government \$13.9 million for unrelated contracting errors voluntarily disclosed to the Government by GE or agreed to by GE as a result of governmental and GE audits. GE also paid \$16.1 million in fines for the MATSCO civil and criminal cases.

4. United States ex rel. Taxpayers Against Fraud and Chester L. Walsh v. General Electric Company (Israel)

On November 15, 1990, an action under the federal False Claims Act, 31 U.S.C. §§ 3729-32, was filed under seal against GE in the United States District Court for the Southern District of Ohio. The qui tam action, brought by an organization called Taxpayers Against Fraud and an employee of GE's Aircraft Engines division ("GEAE"), alleged that GEAE, in connection with its sales of F110 aircraft engines and support equipment to Israel, made false statements to the Israeli Ministry of Defense ("MoD") causing MoD to submit false claims to the United States Department of Defense under the Foreign Military Sales Program. Senior GE management became aware of possible misconduct in GEAE's Israeli F110 program in December 1990. Before learning of the sealed qui tam suit, GE immediately made a voluntary disclosure to the Departments of Defense and Justice, promised full cooperation and restitution, and began an internal investigation. In August 1991, the federal court action was unsealed, and the Department of Justice intervened and took over responsibility for the case.

On July 22, 1992, after GE had completed its investigation and made a complete factual disclosure to the U.S. government as part of settlement discussions, the United States and GE executed a settlement agreement and filed a stipulation dismissing the civil action. Without admitting or denying the allegations in the complaint, GE agreed to pay \$59.5 million in full settlement of the civil fraud claims. Also on July 22, 1992, in connection with the same matter, the United States filed a four count information charging GE with violations of 18 U.S.C. § 287 (submitting false claims against the United States), 18 U.S.C. § 1957 (engaging in monetary transactions in criminally derived property), and 15 U.S.C. §§ 78m(b)(2)(A) and 78ff(a) (inaccurate books and records), and 18 U.S.C. § 371 (conspiracy to defraud the United States and to commit offenses against the United States). The same day, GE and the United States entered a plea agreement in which GE agreed to waive indictment, plead guilty to the information, and pay a

fine of \$9.5 million. GE was that day sentenced by the federal court in accordance with the plea agreement.

5. Except for the foregoing, GE has not and, to the best of GE's knowledge, none of the directors and executive officers of GE has been, during the last fifteen years, convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

**EXHIBIT A**

**TECHNICAL APPENDIX**

**IN SUPPORT OF GE-5**

**SATELLITE SYSTEM**

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## **1.0 GENERAL SYSTEM DESCRIPTION**

GE Americom proposes to employ two spacecraft, instead of a single C/Ku-band hybrid, to satisfy the authorization for GE-5. For Ku-band services, GE Americom proposes to use a spacecraft originally intended for use as a ground spare for Nahuelsat's first satellite. The spacecraft coverage area will be the Continental United States (CONUS). The proposed satellite is 3-axis stabilized spacecraft to be built by Aerospatiale. It is designed to be compatible with either a dedicated or shared Ariane 4 or Ariane 5. The spacecraft will have sixteen 54 MHz Ku-band transponders utilizing twenty two (22) 55 Watt TWTA's arranged in two groups of 11 for 8 redundancy. The spacecraft will be designed for a minimum life of 12-years.

The spacecraft will operate within the Ku-band uplink bands of 14.0-14.5 GHz as well as the downlink spectrum in the 11.7-12.2 GHz. Temporarily GE Americom will operate Satcom SN3, formerly Spacenet 3 (currently at 83° W.L.) to provide the C-band payload to meet the requirements of the original allocation. GE Americom will provide for additional C-band capacity at this location at a later date.

## **2.0 COMMUNICATIONS PAYLOAD DESCRIPTION**

### **2.1 TRANSPONDER CHARACTERISTICS**

GE-5 will be equipped with sixteen 54 MHz Ku-band transponders utilizing 55 watt TWTA's, with a maximum EIRP of 52 dBW. Satcom SN3 has six 72 MHz transponders operating with 16 watts TWTA's and twelve 36 MHz C-band channels operating with 8.5 watt SSPA's, with a

maximum EIRP of 39.5 dBW<sup>1</sup>. Tables 2-1 and Table 2-2 show the frequency plan for the Ku-band transponders for GE-5 and C-Band frequency plan of Spacenet 3, respectively.

**TABLE 2-1**

***KU-BAND FREQUENCY PLAN***

***Standard Ku-Band***

***GE-5 (79° W.L.)***

Frequencies are nominal center frequencies in Megahertz.

Vertical polarization is E-field parallel to the pitch axis.

Channel Number	Receive		Transmit	
	Freq.	Polar.	Freq.	Polar.
1	14,030	H	11,730	V
2	14,043	V	11,743	H
3	14,091	H	11,791	V
4	14,104	V	11,804	H
5	14,152	H	11,852	V
6	14,185	V	11,885	H
7	14,213	H	11,913	V
8	14,226	V	11,926	H
9	14,274	H	11,974	V
10	14,287	V	11,987	H
11	14,335	H	12,035	V
12	14,348	V	12,048	H
13	14,396	H	12,096	V
14	14,409	V	12,109	H
15	14,457	H	12,157	V
16	14,470	V	12,170	H

<sup>1</sup> Satcom SN3's Ku band payload will be turned off.

**TABLE 2-2**

**C-BAND FREQUENCY PLAN**

**SN-3 (79° W.L.)**

Frequencies are nominal center frequencies in Megahertz.

Vertical polarization is E-field parallel to the pitch axis.

Channel Number	Receive		Transmit	
	<u>Freq.</u>	<u>Polar.</u>	<u>Freq.</u>	<u>Polar.</u>
1	5945	V	3720	H
2	5985	V	3760	H
3	6025	V	3800	H
4	6065	V	3840	H
5	6125	V	3880	H
6	6145	V	3920	H
7	6185	V	3960	H
8	6225	V	4000	H
9	6265	V	4040	H
10	6305	V	4080	H
11	6345	V	4120	H
12	6385	V	4160	H
13	5985	H	3760	V
14	6065	H	3840	V
15	6145	H	3920	V
16	6225	H	4000	V
17	6305	H	4080	V
18	6385	H	4160	V



## 2.2 EMISSION DESIGNATORS

The emission designators for communications, command, and downlink beacon signals as well as typical communications carriers are shown in Table 2-3.

*TABLE 2-3*

### *EMISSION DESIGNATORS*

<b>Signal</b>	<b>Emission Designator</b>
Command	300KF9DXX
Telemetry/Ranging	120KF9DXX
Telemetry /Ranging GE-5	64KFDDXX
Digital Compressed Television	27M0G7W
Digital Compressed Television	24M0G7W
FM Television	36M0F3F
FM Television	27M0F3F
High Definition Television	36M0F8W
Single Channel Per Carrier (SCPC)Analog FM-SCPC	50K0F3F
Digital SCPC - FDMA 56 kbps, QPSK Modulated	100KG1D
T1 (1.544 MBps),QPSK Modulated	1M60G1D
High Speed Digital Data (50 MBps) QPSK Modulated	29M0G1D
Digital SCPC/QPSK Compressed Digital TV	6M00G7D
Digital Compressed Television	27M0G7D

## **2.3 COMMUNICATIONS COVERAGE**

The antenna subsystem shall provide for the reception and transmission of mutually orthogonal polarized waves received at the proposed orbital location of 79° W.L. They will provide coverage of the Continental United States (CONUS).

### **2.3.1 C-Band**

The SN-3 C-band transponders will be operated either at 8 or 16 watts, depending on the transponder bandwidth. Attached hereto as Attachment A are the coverage maps showing power contours of the C-band transponders operating at the maximum of 16 watts for the 79° W.L. orbital positions. For the contours shown in Attachment A, the maximum Effective Isotropic Radiated Power (EIRP) from each C-band antenna beam will be 39.5 dBW.

### **2.3.2 Ku-Band**

The power contour patterns for the GE-5 Ku-band transponders provide coverage over the contiguous United States ("CONUS"). Coverage maps showing the power contours are attached hereto as Attachment B.

The Maximum EIRP produced by each antenna beam will be 53.0 dBW.

## **2.4 NOISE TEMPERATURES**

For C-band services, the noise temperature of the C-band receiving system on Satcom SN3 is 645°K for the 36 MHz transponders and 925°K for the 72 MHz transponders. For the GE-5 Ku-band services, the noise temperature of the receiving system will be 708 °K for the horizontally polarized and 698°K for the vertically polarized transponders.

## 2.5 GAIN

The satellite receiving antenna gain of the spacecraft is determined by the following formula:

$$G = (G/T)_{\text{satellite}} + T_{\text{system}}$$

The peak and edge of coverage G/T of the spacecraft will be as follows in Table 2-4:

*TABLE 2-4*

*GAIN-TO-NOISE TEMPERATURE RATIO*

<b>Coverage Area</b>	<b>G/T Peak (dB/K)</b>	<b>G/T (EOC) (dB/K)</b>
SN3 CONUS C-Band ( 36 MHz)	-1.0	-6.0
SN3 CONUS C-Band (72 MHz)	2.0	-3.0
GE-5 CONUS Ku-Band	7.0	1.0

Using the C- Band and Ku-band receiving noise temperatures, the receiving antenna gain of the C Band and Ku-band system will be as set forth in Table 2-5:

**TABLE 2-5**

**RECEIVE ANTENNA GAIN**

<b>Coverage Area</b>	<b>Receive Gain Peak (dB)</b>	<b>Receive Gain (EOC) (dB)</b>
SN3 CONUS C-Band (36 MHz)	29.2	27.9
SN3 CONUS C-Band (72 MHz)	30.1	28.1
GE-5 CONUS Ku-Band	32.0	26.0

## 2.6 FLUX CONTROL ATTENUATORS

Each GE- 5 transponder is equipped with a flux control attenuator (FCA) which provides control of the value of flux density, which is needed to saturate a transponder. The FCAs are ground commandable over a range of 0 to 18 dB and selectable in 1 dB steps.

## 2.7 SATURATION FLUX DENSITY

Saturation Flux Density ("SFD") for the SN 3 C-band transponders is related to gain-to-temperature ratio according to the following formula:

$$SFD = -95.7 - (G/T) + FCA$$

where FCA is the Flux control attenuator setting, in dB. For the 36 MHz C-band transponders, the transponder saturation flux density is ground commandable to a nominal value of -86 or -80 dBW/m<sup>2</sup> corresponding to a G/T of -5dB/K. For the 72 MHz C-band transponders, the transponder saturation flux density is ground commandable to a nominal value of -86 or -80 dBW/m<sup>2</sup> corresponding to a G/T of -2dB/K.

Saturation flux density ("SFD") for the GE-5 Ku -Band transponders is related to gain-to-temperature ratio according to the following formula:

$$SFD = -90 - (G/T) + FCA$$

where FCA is the flux control attenuator setting, in dB. With the application of the foregoing formula, the maximum SFD of the transponders of the spacecraft, with the flux control attenuator set to 6 dB, will be -85dBW/m<sup>2</sup>.

## 2.8 SPURIOUS EMISSIONS

Spurious emissions outside the usable bandwidth of each transponder meet FCC Part 25.202.

For the SN3 C- band and GE-5 Ku-band, spurious emissions are controlled as shown in Table 2-6.

*TABLE 2-6*

### *SPURIOUS EMISSIONS*

<b>Frequency Relative to Channel Center</b>	<b>Minimum Attenuation Relative to Channel Center (dB)</b>
In any 4 kHz band, for any frequency removed from the assigned frequency by 50 to 100%	≥25dB
In any 4 kHz band, for any frequency removed from the assigned frequency by 100 to 250%	≥35dB
In any 4 kHz band, for any frequency removed from the assigned frequency by more than 250%	≥ (Transmitter power in dBW +43) dB