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Robert A. Mansbach  
General Attorney



COMSAT

Domestic Facilities Division  
Satellite Radio Branch

COMSAT General  
Corporation

Communications  
Satellite Corporation

PUBLIC REFERENCE COPY

KS38 SAT-MOD-19900919-00051  
MCI Telecommunications Corporation  
SBS-3

September 19, 199

Ms. Donna Searcy  
Secretary  
Federal Communications Commission  
1919 M Street, N.W., Rm: 222  
Washington, D.C. 20554

63-DSS-ML-90

Dear Ms. Searcy:

Enclosed for filing with the Commission is an Application of COMSAT General Corporation for consent to 1) the assignment of the SBS-3 satellite construction permit, license and all other authorizations from MCI Telecommunications Corporation ("MCI") to COMSAT General; and 2) modification of the existing SBS-3 construction permit, license and authorizations to enable COMSAT General's operation of SBS-3 at 95° W.L. through the end of its 1992 license term in conjunction with the COMSAT Maneuver.

COMSAT General's October 10, 1986 Assignment Agreement with MCI and Satellite Business Systems, filed with the Commission on January 30, 1987, provides that MCI will transfer its ownership of SBS-3 to COMSAT General with all permits, licenses and authorizations by December 1, 1990. COMSAT General therefore respectfully requests FCC consent to the assignment as expeditiously as possible in order to facilitate an orderly transfer by that date.

The requisite fee is attached hereto.

Respectfully submitted,

COMSAT General Corporation

By: Robert A. Mansbach

Robert A. Mansbach  
Its Attorney

cc Cecily Holiday, Esq.  
Fern Jarmulnek, Esq.  
Geraldine Matise, Esq.

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Domestic Facilities Division  
Satellite Radio Branch

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SEP 25 1967  
Domestic Facilities Division  
Satellite Radio Branch

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

In the Matter of )  
 )  
COMSAT GENERAL CORPORATION )  
 )  
Application for Consent to )  
Assignment of the SBS-3 )  
Domestic Fixed Satellite )  
Radio Station Construction )  
Permit and License )

FCC File No.

In the Matter of )  
 )  
COMSAT GENERAL CORPORATION )  
 )  
Application for Modification of )  
the SBS-3 Domestic Fixed )  
Satellite Space Station )  
Construction Permit, License )  
and Other Authorizations )

FCC File No.

APPLICATION FOR CONSENT TO ASSIGNMENT AND MODIFICATION

COMSAT General Corporation ("COMSAT General") herein seeks FCC consent to (1) the assignment of the SBS-3 satellite construction permit, license and all other authorizations from MCI Telecommunications Corporation ("MCI") to COMSAT General; and (2) modification of the existing SBS-3 construction permit, license and authorizations to enable COMSAT General's operation

of SBS-3 at 95° W.L. through the end of its 1992 license term in conjunction with the "COMSAT Maneuver".<sup>1/</sup> In support of its Application, COMSAT General submits the following information:

COMSAT General executed an Agreement ("Assignment Agreement") on October 10, 1986 with Satellite Business Systems ("SBS") and MCI which provides inter alia, for the assignment of ownership of SBS-3 to COMSAT General, subject to Commission approval.<sup>2/</sup>

The Assignment Agreement provides that MCI will transfer its ownership of SBS-3 to COMSAT General with all permits, licenses and authorizations by December 1, 1990.<sup>3/</sup> COMSAT General therefore respectfully requests FCC consent to the assignment as expeditiously as possible to facilitate an orderly transfer by that date.

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<sup>1/</sup>The modification requested herein is contingent on grant of the requested assignment of the construction permit and license to COMSAT General. For this reason, the requests are combined in a single pleading. Any FCC rule waivers necessary to process and grant this integrated application are hereby requested.

<sup>2/</sup>The Assignment Agreement was submitted to the Commission with a request for confidential treatment on January 30, 1987 concurrently with COMSAT General's request for consent to the assignment of SBS-1 and SBS-2. See File No. 1367-DSS-AL-87.

<sup>3/</sup>Attachment A contains FCC Form 702 (Application for Consent to Assignment of Radio Station Construction Permit on License) and the SBS-3 construction permit.

COMSAT General intends to provide satellite transmission services via SBS-3 to a variety of users, including private companies, government entities, common carriers, specialized common carriers and resale and value added carriers who have needs for transferring larger or moderate volumes of information among geographically diverse locations. The range of transmission services which COMSAT General plans to offer and the flexibility with which these services can be connected with customer terminal devices will enable these users to select combinations of service arrangements which best meet their particular requirements. COMSAT General also plans to offer a wide range of video and associated audio transmission services to its customers for multipoint distribution applications.

COMSAT General, a non-dominant carrier, whose legal, financial and technical qualifications to acquire and operate the SBS-3 satellite are a matter of record before the Commission,<sup>4/</sup> proposes to operate the satellite at its current location of 95° W.L. through the remainder of its license term. Thereafter, COMSAT General proposes to operate SBS-3 at 95° W.L. pursuant to Special Temporary Authority until the Commission assigns another satellite to that location.

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<sup>4/</sup>See COMSAT General Corporation, 2 FCC Rcd at 4574 n.19.

Upon consummation of the assignment, COMSAT General proposes to begin operating SBS-3 using the COMSAT Maneuver.<sup>5/</sup> COMSAT General's previously submitted Technical Appendix to the SBS-1 Modification Application describes the COMSAT Maneuver in full and demonstrates that its use will result in compliance with all FCC requirements, including those for adjacent satellite interference with two degree spacing.<sup>6/</sup> COMSAT General herein incorporates by reference this Technical Appendix and the discussion of the COMSAT Maneuver in the SBS-1 Modification Application, of which the analyses and conclusion are equally applicable to the operation of SBS-3 using the COMSAT Maneuver.<sup>7/</sup>

COMSAT General's operation of SBS-3 in conjunction with the COMSAT Maneuver to extend the lifetime of the satellite will promote the Commission's goal of offering

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<sup>5/</sup>See Application of COMSAT General Corporation for Modification, filed August 27, 1987 ("SBS-1 Modification Application").

<sup>6/</sup>Pursuant to FCC Authorization, COMSAT General has operated SBS-1, SBS-2 and the COMSTAR D-2/D-4 satellites for a number of years using the COMSAT Maneuver. During operations, no adjacent satellite interference has been observed in either space or ground segment with satellites spaced two degrees apart.

<sup>7/</sup>Attachment B contains FCC Form 403 (Application for Modification of Radio Station License) and a draft radio station construction permit incorporating the requested modifications.

a reasonable opportunity for multiple entities to demonstrate how any operational and economic characteristics particular to satellite technology can be used to provide existing and new specialized services more economically and effectively....<sup>8/</sup>

Grant of this Application will promote the public interest by enabling COMSAT General to apply its innovative satellite technologies to the specialized needs of a broad segment of the public in a manner which will produce more economical and efficient marketplace solutions.

For the foregoing reasons, COMSAT General submits that its acquisition of SBS-3 and the requested modification of the SBS-3 construction permit and the other authorizations will be in the public interest and should be granted.

Respectfully submitted

COMSAT GENERAL CORPORATION

By



Lawrence H. Westerlund  
Vice President and  
General Manager

Robert A. Mansbach  
950 L'Enfant Plaza, S.W.  
Its Attorney  
202-863-6163

September 19, 1990

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<sup>8/</sup>Establishment of Domestic Communications Satellite Facilities by Non-Government Entities, 35 FCC 2d 844,846 (1972).

FCC Form 702  
December 1988

DO NOT USE THIS BOX  
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SEP 25 1990  
FCC/MELLON  
Domestic Facilities Division  
Satellite Radio Branch

Approved by OMB  
3060-0068  
Expires 9/30/91

Number of permit  
or license 9-DSS-P-76

Call letters SBS-3 (KS-38)

File No. ....

Class of service Domestic Fixed  
Satellite

FEDERAL COMMUNICATIONS COMMISSION  
Washington, D. C. 20554

# APPLICATION FOR CONSENT TO ASSIGNMENT OF RADIO STATION CONSTRUCTION PERMIT OR LICENSE

(FOR STATIONS IN SERVICES OTHER THAN BROADCAST)

(Must be fully executed on typewriter or ink and submitted in duplicate direct to the Federal Communications Commission, Washington, D.C. 20554 in AMPLE TIME to be acted upon by the Commission prior to date of required completion of construction in permit or expiration of license).

If any information or documents which are already on file with the Commission are required to be filed with the application, proper reference thereto may be made herein in lieu of refileing, together with a statement that there has been no change therein since date of filing thereof.

## PART I

(To be executed by assignor [the present permittee or licensee], wherever the legal right to construct or to control the use and operation of station is to be transferred to assignee by VOLUNTARY ACT OF ASSIGNOR, as by contract or other agreement.)

September 19, 1990  
(Date)

I hereby transfer and assign to COMSAT General Corporation  
(Assignee)

subject to the approval of the Commission, all my right, title, and interest in and to Construction Permit License and Authorization  
(See\* Below)

No. \_\_\_\_\_, dated \_\_\_\_\_, granted to me to construct  
operate } the transmitting apparatus (SBS-3)

located at N5. 95 degrees W.L. Street, \_\_\_\_\_ City

or Town State, or any similar permit  
license } subsequently granted. See Exhibit 1

Assignor represents that said permit requires completion of construction on November 11, 1992  
license expires (Insert the date required,

or the last extension thereof heretofore granted)

I request that the Commission grant its written consent to the foregoing assignment.

MCI Telecommunications Corporation  
(Name of present grantee)

1133 19th Street, N.W.

Washington, D.C. 20036

By Michael T. Lopez  
(Authorized officer or agent)<sup>1</sup>

(Post office address)

<sup>1</sup>If signed by an agent other than the authorized officer of assignor, power of attorney or other authority of agent to sign must be attached.

NOTE.—In addition to the information called for by this form the Commission will require the furnishing of such additional information as in its judgment may be necessary for its consideration of this application. Before the radio equipment described herein may be used by the assignee, approval by the Commission must be obtained. See Section 310, Communications Act of 1934, as amended.

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PART II

Is this application made for consent to voluntary or involuntary assignment of permit or license? \_\_\_\_\_

If involuntary, state name of present licensee \_\_\_\_\_ Call letters Voluntary

If assignee has obtained the legal right to construct, or to control the use and operation of station as a result of involuntary act of assignor, assignee represents that there is attached a certified copy of court order or other legal instrument by which assignee has obtained such right.

(To be executed by assignee who is to obtain the legal right to construct or to control the use and operation of station, as a result of VOLUNTARY ACT [contract or other agreement], or INVOLUNTARY ACT [death or legal disability] of grantee of permit or license, or by involuntary assignment of the physical property constituting the station under decree of court in bankruptcy proceedings, or other court order, or by operation of law in any other manner.)

1. Name of assignee<sup>2</sup> COMSAT General Corporation

2. Post office address: City Washington, D.C. State \_\_\_\_\_ Zip Code 20024

Street and number 950 L'Enfant Plaza, S.W.

3. What is transferee's principal business? Telecommunications

(a) What other business or businesses is applicant directly or indirectly interested in? Explain fully

COMSAT General is the principal owner of the MARISAT satellites and is the owner of the COMSTAR satellite system.

(b) If applicant is a corporation, what other business or businesses are the officers, directors, or principal stockholders directly or indirectly interested in? Explain fully. (Attach additional sheets, if necessary.) Information related to the businesses of the officers

and directors of COMSAT General Corporation is on file with the FCC.

Information related to Communications Satellite Corporation is on file with the FCC.

4. Is assignee a citizen of the United States? N/A

If so, state whether by birth or naturalization \_\_\_\_\_

5. Is assignee a representative of an alien or of a foreign government? No

6. State whether assignee is a corporation, partnership, or association Corporation

7. If assignee is a corporation,—

(a) Under laws of what State or country is it organized? District of Columbia

(A certified copy of the articles of incorporation shall be attached if not heretofore filed with the Commission.)

(b) Is more than one-fifth of capital stock owned of record or may it be 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? No

(c) Is any director or officer an alien? No If so, state name and position of each \_\_\_\_\_

(d) Give names and addresses of all stockholders owning and/or voting 10 percent or more of assignee's stock and percentage of stock held by each \_\_\_\_\_

COMSAT General Corporation is a wholly-owned subsidiary of

Communications Satellite Corporation.

<sup>2</sup>If a corporation, state corporate name; if a partnership, state names of all partners and the name under which the partnership does business; if an unincorporated association, state the name of an executive officer, the office held by him, and the name of the association. The same name or names should be signed in the place provided at the end of application, except that in the case of a partnership the application may be signed in the name of the partnership by one of the partners.



8. If assignee is a corporation, is assignee directly or indirectly controlled by any other corporation?.....

YES

(a) If so, give name and address of such controlling corporation .....

Communications Satellite Corporation

(b) Under laws of what State or country is such corporation organized? .....

District of Columbia - Articles on file with the FCC.

(A certified copy of the articles of incorporation shall be attached if not heretofore filed with the Commission.)

(c) Is more than one-fourth of capital stock of such corporation owned of record or may it be 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? No

(d) Is any director or officer of such corporation an alien? No If so, state name and position of each

(e) Is the above-described controlling corporation in turn a subsidiary? No If so, attach additional sheets answering question 8 (a) to (d), inclusive, for each company to and including the organization having final control.

9. If application is made in behalf of an unincorporated association, state—

(a) Purpose of the association N/A (A certified copy of the articles of association, or bylaws, shall be attached if not heretofore filed with the Commission.)

(b) The number of members .....

(c) Whether any members are aliens .....

(d) If so, state name and position of each .....

10. (a) Is assignee directly or indirectly, through stock ownership, contract, or otherwise, interested in the ownership or control of any other radio stations? Yes

If so, state call letters and location of such stations Call letters and locations of radio stations are on file with the FCC.

(b) Has the assignee in the past fifteen years been directly or indirectly interested in the ownership or control of any radio stations other than those referred to under (a)? No

If so, state classes of stations and exact names of licensees

11. (a) State assignee's relation to station (whether assignee is to be owner or lessee, and, if neither owner nor lessee, state nature of assignee's interest in use and control of station) Owner

(If not owner, a copy of agreement showing assignee's interest in station must be attached if not heretofore filed with the Commission.)

(b) If assignee is not to be owner of station, who is? N/A

(c) Will assignee have absolute control of station, both as to physical operation and service conducted?

Yes

If not, attach copy of any contract which may in any way affect assignee's right to do so.

12. (a) State definite facts showing assignee's financial responsibility with respect to construction and/or operation of station Financial qualifications are on file with the FCC

(b) State whether stock is to be sold for purpose of raising money to construct and/or operate station:

No

13. (a) Has the assignee been finally adjudged guilty by any Federal Court of unlawfully monopolizing, or attempting unlawfully to monopolize, radio communication directly or indirectly through control of manufacture or sale of radio apparatus, exclusive traffic arrangements, or any other means, or of unfair methods of competition? No

(b) Is assignee directly or indirectly controlled by any party finally adjudged guilty as above stated?

No

14. State definite facts why the construction and/or operation of the station will be in the public convenience, interest, or necessity See Application attached hereto

15. The assignor's most recent applications for Construction Permit and/or License are to be considered as part of this application, and the truth of the statements therein contained is hereby reaffirmed by the assignee, except insofar as the contrary expressly appears herein, and in the following particulars:

N/A

16. The assignee 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 that written consent be granted to assign the Construction Permit or License herein mentioned to him.
17. The assignee, subject to the granting of such written consent, assumes all the obligations and agrees to abide by all the conditions imposed upon the assignor under the above-mentioned Construction Permit or License except that he shall not be liable for any act done by, or any right accrued or any suit or proceeding had or commenced against, the assignor prior to said assignment.

CERTIFICATION

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Signed and dated this 19<sup>th</sup> day of September, 1990

COMSAT GENERAL CORPORATION

Name of Applicant (must correspond with item I, part II)

By [Signature]  
Signature (designate appropriate classification below)

WILLFUL FALSE STATEMENTS  
MADE ON THIS FORM ARE  
PUNISHABLE BY FINE AND  
IMPRISONMENT. U. S. CODE,  
TITLE 18, SECTION 1001

- Individual Applicant
- Member of Applicant Partnership
- Officer of Applicant Corporation or Association

BE SURE ALL NECESSARY INFORMATION IS FURNISHED

NOTICE

Sections 301, 303, and 308 of the Communications Act of 1934, as amended, (licensing powers) authorized the FCC to request the information on this application. The purpose of the information is to determine your eligibility for a license. The information will be used by FCC staff to evaluate the application, to determine station location, to provide information for enforcement and rulemaking proceedings and to maintain a current inventory of licensees. No authorization can be granted unless all information requested is provided. Failure to provide all requested information will delay the processing of the application. Information requested by this form will be available to the public. Response to the information requested is required to obtain the requested authorization.

The foregoing Notice is required by the Privacy Act of 1974, P.L. 93-597, December 21, 1974, 5 U.S.C. 552(a)(e)(3) and the Paperwork Reduction Act of 1980, P.L. 96-511, December 11, 1980, 44 U.S.C. 3504(c)(3)(C).

Exhibit 1

The information requested in Part of Form 702 concerning the SBS-3 satellite (KS-38) is as follows:

The file numbers and release date of the authorizations to be assigned relating to SBS-3 are:

<u>File Numbers</u>	<u>Release Date</u>
9-DSS-P-76 et al. *	January 18, 1971

See also associated authorizations: 3-DSS-MP-78; 14-DSS-MP-78; 1842-DSS-P/L-79; 882-DSS-MP-80; 1691-DSS-MP-80; 638-DSS-LA-82; 1091-DSS-MP/ML-83.

File SBS Orig Sloto  
- SBS-3

United States of America  
FEDERAL COMMUNICATIONS COMMISSION  
RADIO STATION CONSTRUCTION PERMIT  
COMMON CARRIER

Domestic Fixed Satellite  
(Nature of Service)

KS38  
(Call Sign)

Space Station  
(Class of Station)

9-DSS-P-76  
(File No.)

Permittee: Satellite Business Systems

Subject to the provisions of the Communications Act of 1934, the Communications Satellite Act of 1962, subsequent acts, and treaties, and all present and future rules and regulations made by this Commission, and further subject to the conditions and requirements set forth in this permit, authority is hereby granted to construct the radio station to be operated in accordance with the specifications and parameters set forth below.

## 1. PARTICULARS OF OPERATION

Frequency (MHz)		Emissions	Maximum e.i.r.p.	Special Provisions
Transmit	Receive			
4197.25	--	70F9	0 dBw	1,6
4197.75	--	70F9	0 dBw	1,6
--	5925-6425	5000F9	--	2,3,5,6
11701.0	--	70F9	12 dBw	1
12199.0	--	70F9	12 dBw	1
	14000-14500	5000F9	--	2,3,5
11731.0	14031.0	54000F9Y	42 dBw	4
11792.0	14092.0	54000F9Y	42 dBw	4
11853.0	14153.0	54000F9Y	42 dBw	4
11914.0	14214.0	54000F9Y	42 dBw	4
11975.0	14275.0	54000F9Y	42 dBw	4
12036.0	14336.0	54000F9Y	42 dBw	4
12097.0	14397.0	54000F9Y	42 dBw	4
12158.0	14458.0	54000F9Y	42 dBw	4

## 2. POINTS OF COMMUNICATIONS

Earth stations located in the 48 contiguous United States

Franklin Lakes, New Jersey earth station (WD44) for tracking, telemetry and command (TT&C)

Agoura, California earth station (KD76) for tracking, telemetry and command

## 3. TECHNICAL SPECIFICATIONS

## (a) Orbital Parameters

Type	:	Geostationary
Locations	:	Ground Spare
Stationkeeping Limits	:	$\pm 0.05^\circ$ in longitude $\pm 0.05^\circ$ in inclination

## (b) Antennas

- (1) Frequency Range : 3700-4200 MHz (tracking and telemetry)  
Type : To be specified  
Polarization : Linear, horizontal  
Beamwidth : To be specified  
Gain : To be specified
- (2) Frequency Range : 5925-6425 MHz (command)  
Type : To be specified  
Polarization : Linear, vertical  
Beamwidth : To be specified  
Gain : To be specified  
Receiving System  
Noise Temperature : To be specified
- (3) Frequency Range: : 11700-12200 MHz (tracking and telemetry)  
Type : To be specified  
Polarization : Linear, horizontal  
Beamwidth : To be specified  
Gain : To be specified
- (4) Frequency Range : 11700-12200 MHz (communications)  
Type : To be specified  
Polarization : Linear, horizontal  
Beamwidth :  $2.8^{\circ}$   
Gain : 30.5 dB
- (5) Frequency Range : 14000-14500 MHz (command)  
Type : To be specified  
Polarization : Linear, vertical

- Beamwidth : To be specified
- Gain : To be specified
- Receiving System Noise Temperature : To be specified
- (6) Frequency Range: : 14000-14500 MHz (communications)
- Type : To be specified
- Polarization : Linear, vertical
- Beamwidth : 2.8°
- Gain : 30.5 dB
- Receiving System Noise Temperature : 1410° K

(c) Power Flux Density Limits

- (1) Frequency Band: 3700-4200 MHz

Power Flux Density Limit:

$-152 \text{ dBw/m}^2$  in any 4 KHz band for  $0^\circ \leq \theta \leq 5^\circ$

$-152 + (\theta - 5)/2 \text{ dBw/m}^2$  in any 4 KHz band  
for  $5^\circ \leq \theta \leq 25^\circ$

$-142 \text{ dBw/m}^2$  in any 4 KHz band for  $25^\circ \leq \theta \leq 90^\circ$ .

where  $\theta$  is in the angle of arrival in degrees above the horizontal plane on the earth's surface assuming free space propagation conditions

- (2) Frequency Band: 11700-12200 MHz

Power Flux Density Limit: none

4. SPECIAL PROVISIONS

- (1) Tracking and Telemetry.
- (2) Command.
- (3) Maximum e.i.r.p. not applicable.



- (4) Communication, carrier quaternary phase-shift modulated by a digital signal, maximum of 50 megabits per second.
- (5) Carrier frequency band and particulars of modulation characteristics to be specified.
- (6) The use of frequencies in the 3700-4200 MHz and 5925-6425 MHz bands for TT&C purposes is limited to transfer orbit operations, and to emergency back-up TT&C capabilities while the satellite is in orbit, subject to appropriate coordination with other satellite operations in these bands. Use of these frequencies shall be secondary to all satellites using these bands on a regular basis.

5. GENERAL PROVISIONS

- (A) The hours of operation of the station are not limited.
- (B) The authority granted by this station authorization is limited to the construction and operation of the transmitting and receiving facilities described above, and does not include any authority under Section 214 of the Communications Act to establish channels of communication for the provision of communications services.
- (C) This authorization is issued pursuant to the Commission's Second Report and Order adopted June 16, 1972 (35 FCC 2d 844) and Memorandum Opinion and Order adopted December 21, 1972 (38 FCC 2d 665) in Docket No. 16495 and the Commission's Memorandum Opinion, Order, Authorization and Certification adopted January 18, 1977 (FCC 77-64) in applications File Nos. 7-DSS-P-76 et al. and is subject to the policies, terms, and conditions set forth in those decisions.

- (D) This authorization is subject to the provisions of footnote NG-105 of the Commission's Table of Frequency Allocations, Section 2.106 of the Rules and Regulations, which states:

Pending adoption of specific rules concerning sharing of the band 11.7-12.2 GHz between the Broadcasting - Satellite and Fixed - Satellite Services, systems in the latter service may be authorized on a case-by-case basis subject to the condition that adjustments in certain system design or technical parameters (including but not limited to orbital location, channel use, etc.) may become necessary during the system lifetime in order to accommodate use of the band by systems of the same or other service.

In addition, this authorization is expressly made subject to any additional terms and conditions which the Commission may deem appropriate to bring this system into compliance with the Final Acts of the World Administrative Radio Conference-Satellite Broadcasting, Geneva 1977.

- (E) This station authorization is subject to compliance with any action the Commission may take on service to the offshore points of Hawaii, Alaska, and Puerto Rico. See paragraphs 166 to 174 of the Commission's Memorandum Opinion, Order, Authorization and Certification adopted January 18, 1977 and released February 8, 1977 regarding applications File Nos. 7-DSS-P-76 et al. (FCC 77-64).

After construction has been completed, the permittee shall file an appropriate application with the Commission for authority to launch and position the satellite at least sixty days prior to the scheduled launch date, together with a showing that all the terms, conditions, and obligations set forth in the application and in this permit have been fully met and that appropriate arrangements for the launch of the satellite have been completed. Upon such showings and application, and upon a finding by the Commission that since the granting of this permit no cause or circumstance has arisen which in the judgement of the Commission, makes the launching, positioning, or operation of such station against the public interest, such a launch authorization including the assignment of an orbital location for such satellite, shall be issued. Upon successful launch and positioning of such satellite, the permittees shall certify to the Commission that the in-orbit operation of such satellite conforms to the specifications set forth in the application, in this permit, and in the launch authorization and that such satellite is fully capable of providing commercial services. Upon such showing and an appropriate application, a radio station license for such satellite will be issued.

This permit shall not vest in the permittee any right to operate the station, nor any right to a license authorizing the use of the particular frequencies and emissions, or the particular longitude in the geostationary orbit, or the amount of power, or the time of operation specified above. The Commission, in issuing this permit, reserves the right to assign whatever frequencies and emissions, orbital locations, power and time of operation it deems best calculated to serve the public interest, convenience or necessity. The terms of that license as to frequencies, emissions, orbital locations power, time of operation and scope of communication are expressly made subject to the exercise of this reserved right.

Neither this permit nor the right granted by this permit shall be assigned or otherwise transferred to any person, firm, company, or corporation without the written consent of the Commission. This authorization is subject to the right use or control by the government of the United States conferred by Section 606 of the Communications Act of 1934. Operations of this station are governed by Part 25 of the Commission's Rules and Regulations.

Date of required completion of construction and expiration  
date: August 18, 1979

Date this 18th day of January, 1977

FCC/MELLON SEP 20 1989

Federal Communications Commission Washington, D. C. 20554  <b>APPLICATION FOR RADIO STATION LICENSE                  OR                  MODIFICATION THEREOF                  UNDER PARTS 23 OR 25</b>	<b>APPLICANT SHOULD NOT USE THIS BLOCK</b>	
	File Number	Call Sign

**INSTRUCTIONS**

A. Submit TWO COPIES of this application direct to the Federal Communications Commission, Washington, D. C. 20554, for radio licenses in the following services (check appropriate box below).

- FCC Rules Part 23 - International Fixed Public Radiocommunication Services**       **FCC Rules Part 25 - Satellite Communications**

B. It is recommended that, before submitting application, applicant refer to the appropriate rule part which governs the class of station applied for. Copies of the rules may be purchased from the Superintendent of Documents, Government Printing Office, Washington, DC 20402.

C. Use additional sheets only where necessary. Such sheets must be marked as exhibits and referred to in the application.

Notice: The information requested by this form will be used by Federal Communications Commission staff to determine eligibility for issuing authorizations in the use of frequency spectrum and to effect the provisions of regulatory responsibilities rendered the Commission by the Communications Act of 1934, as amended. Information requested by this form will be available to the public. Response to the information requested is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Federal Communications Commission, Office of Managing Director, Washington, DC 20554, and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (3060-0019), Washington, DC 20503.

The foregoing Notice is required by the Privacy Act of 1974, P.L. 93-579, December 31, 1974, 5 U.S.C. 552a(e)(3) and the Paperwork Reduction Act of 1980, P.L. 96-511, December 11, 1980, 44 U.S.C. 3504(c)(3)(C).

1(a) Name of Applicant:  <p style="text-align: center;">COMSAT General Corporation</p>	(c) Purpose of application: License to cover construction permit <input type="checkbox"/>  Modification of License <input checked="" type="checkbox"/> Present File No. <u>9-DSS-P/L-76 et al.</u>
(b) Mailing Address (number, street, city, state, Zip Code): 950 L'Enfant Plaza, S.W. Washington, D.C. 20024	(d) If for modification of license indicate proposed change: Change in frequencies <input type="checkbox"/> Change in authorized power <input type="checkbox"/> Change(s) of control point(s) <input type="checkbox"/> Change in points of communication <input type="checkbox"/> Change in other particulars <input checked="" type="checkbox"/>
2(a) Class of Station and Call Sign:  <p style="text-align: center;">Space Station (KS 38)</p>	
(b) Nature of Service:  <p style="text-align: center;">Domestic Fixed Satellite</p>	

3(a) List the outstanding construction permit(s), if any, which this application covers:

File Number	Date	Call Sign	Manufacturer of Transmitter	Type No.	Serial No.
9-DSS-P/L-76	1/18/77	KS-38			

(b) If licensed transmitters are being deleted or replaced, show the following with respect to such transmitters:

Manufacturer	Type No.	Serial No.
N/A		

(c) When was the construction specified in 3(a) completed? \_\_\_\_\_

(d) Is the station now ready for operation? . . . . . YES  NO

(e) Have all the terms of the construction permit(s) listed in 3(a) been met? . . . . . YES  NO

(f) Are all the statements made in the applications for the construction permits or the modifications thereof mentioned in 3(a) still true as of the date of this application? . . . . . YES  NO

(g) If the answer to either or both 3(d) and 3(e) above is "no", the discrepancies must be shown in appropriate places in this form or listed separately in exhibits and submitted as a part of this form.

Indicate method of submission below:

Numbers of paragraphs containing corrected data \_\_\_\_\_ N/A \_\_\_\_\_

Identification of exhibits containing corrected data \_\_\_\_\_

4. Specify in the table all particulars of operation exactly as they are desired in the license or modification thereof.

(1) FREQUENCIES AND ANTENNA POLARIZATION	(2) POWER	(3) EMISSION	(4) MODULATING FREQUENCY (Cycles)	(5) TRANSMISSION SPEED (Bauds)	(6) POINTS OF COMMUNICATION
See, Exhibit I, Draft Radio Construction Permit, attached hereto.					
See also Narrative Application					

**COLUMN NOTES:**

- (1) List all frequencies, indicating whether kilohertz or megahertz, and polarization of radiated signal.
- (2) Specify whether watts or kilowatts. In the Experimental Radio Services specify effective radiated power and in case of pulse emission peak power.
- (3) List all types of emission desired for each frequency. Describe special emission in space below. Give maximum modulating frequency for each type of emission involved.
- (4) Give maximum transmission speed employed in normal operation opposite each type of emission involved. To convert transmission speed of Continental Morse to bauds, multiply the number of words per minute by 0.8.
- (5) speed of Continental Morse to bauds, multiply the number of words per minute by 0.8.
- (6) Show below the operating agency at each point of communication.

5. If this application is for authority to operate with an operator on duty at control point(s) other than the transmitter location -

(a) What will be the location of the control point(s)?

State Maryland County Montgomery

City or Town Clarksburg Street and No. COMSAT Drive

(b) What will be the airline distance between transmitter location and the control point(s)? N/A

(c) By what means will the station be monitored while in operation?

TT&C earth stations in Castle Rock, Colorado and Clarksburg, Maryland

(d) Can the transmitter be shut down by the licensed operator at the control point so as to prevent operation from other point(s)? . . . . . YES  NO

(e) How will unauthorized persons be prevented from having access to the transmitter?

N/A

6. Proposed location of transmitter: N/A

(a) If portable:  mobile:  (check one, if applicable) give geographical area of proposed operation:

.....  
.....

(b) If permanently located at a fixed location, give: N/A

State \_\_\_\_\_ County \_\_\_\_\_

City or town \_\_\_\_\_ Street and number \_\_\_\_\_

N. Latitude: Degrees \_\_\_\_\_, minutes \_\_\_\_\_, seconds \_\_\_\_\_

W. Longitude: Degrees \_\_\_\_\_, minutes \_\_\_\_\_, seconds \_\_\_\_\_  
(Give latitude and longitude correct to seconds.)

7. Note any alteration in transmitter (s) or antenna systems not previously reported to the Commission.

N/A

8. (a) Have there been any changes in the data furnished in the application for construction permit covering ownership, citizenship, station control, business connections, and monopolistic practices? . . . . . YES  NO

(b) Have such changes been reported to the Commission? If not, such data must be submitted herewith . . . . . YES  NO

9. (a) Is station to be open to public correspondence? ..... YES  NO

If so, state hours during which station will be open for such service .....

.....

(b) Will any charge be made for handling public correspondence? ..... N/A YES  NO

If so, state schedules of charges .....  
The statement of rates required herein does not constitute a filing of schedules of charges required by Section 203 of the Communications Act of 1934, as amended, prior to commencing service.

(c) State basis of division of charges with other stations .....

10. If this application is for modification of license, state why the proposed change(s) is (are) deemed necessary and the purpose(s) it will serve.

. SEE Narrative Application. ....

.....

THE APPLICANT hereby 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 a station license in accordance with this application.

All the attached exhibits are a material part hereof and are incorporated herein as if set out in full in the application. All the answers on this application are a material part of the application.

### CERTIFICATION

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Signed and dated this 19<sup>th</sup> day of Sept, 1950.

COMSAT General Corporation

Name of Applicant (must correspond with item 1a)

By [Signature]  
Signature (designate by checkmark below appropriate classification)

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT. U. S. CODE, TITLE 18 SECTION 1001.

- INDIVIDUAL APPLICANT
- MEMBER OF APPLICANT PARTNERSHIP
- OFFICER OF APPLICANT CORPORATION OR OFFICER AND MEMBER OF APPLICANT ASSOCIATION

DRAFT RADIO CONSTRUCTION PERMIT

UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION  
RADIO STATION CONSTRUCTION PERMIT AND RADIO STATION LICENSE  
COMMON CARRIER

Domestic Fixed Satellite  
(Nature of Service)

KS 38  
(Call Sign)

Space Station  
(Class of Station)

(File No.)

Permittee: COMSAT GENERAL CORPORATION

Subject to the provision of the Communications Act of 1934, the Communications Satellite Act of 1962, subsequent acts, and treaties, and all present and future rules and regulations made by this Commission, and further subject to the conditions and requirements set forth in this permit, authority is hereby granted to construct the radio station to be operated in accordance with the specifications and parameters set forth below.



1. PARTICULARS OF OPERATION

Frequency (MHz)		Emissions	Maximum e.i.r.p.	Special Provisions
Transmit	Receive			
4198.5	--	1K00G2D	1.3 dBw	1,6
4199.5	--	1K00G2D	1.3 dBw	1,6
--	6423	800KP9D	--	2,3,5,6
12193.5	--	800KG2D	11.5 dBw	1
12196.5	--	800KG2D	11.5 dBw	1
	14497	5M00P9D	--	2,3,5
11725	14025	43MOP9W	44 dBw	4
11774	14074	43MOP9W	44 dBw	4
11823	14123	43MOP9W	44 dBw	4
11872	14172	43MOP9W	44 dBw	4
11921	14221	43MOP9W	44 dBw	4
11970	14270	43MOP9W	44 dBw	4
12019	14319	43MOP9W	44 dBw	4
12068	14368	43MOP9W	44 dBw	4
12117	14417	43MOP9W	44 dBw	4
12166	14466	43MOP9W	44 dBw	4

2. POINTS OF COMMUNICATIONS

All earth stations licensed by the the FCC for use in conjunction with the COMSAT General/NBC network and all future earth stations licensed for use with this space station.

3. TECHNICAL SPECIFICATIONS

(a) Orbital Parameters

Type : Geostationary  
 Locations : 95 ° W. L.  
 Stationkeeping Limits : +0.1° in longitude  
 : ±5.0 in inclination

(b) Antennas

(1) Frequency Range : 4198.5-4199.5 MHz  
 (tracking and telemetry)  
 Type : (PCM) Phase modulation

Polarization : Linear, horizontal  
 Beamwidth : +20°  
 EIRP : 1.3 dBw  
 (2) Frequency Range : 6423.0 MHz (command)  
 Type : FM Modulation  
 Polarization : Linear, vertical  
 Beamwidth : +35°  
 Flux Density : 40 to -90 dBw/m<sup>2</sup>  
 Receiving System Noise Temperature : 2000K  
 (3) Frequency Range : 12193.5-12196.5 MHz  
 (tracking and telemetry)  
 Type : (PCM) phase modulation  
 Polarization : Linear, horizontal  
 Beamwidth : +20°  
 EIRP : Spot - 11.5 dBw  
 (Region 3)  
 Omni - 10.6 dBw  
 (4) Frequency Range : 11700-12200 MHz  
 (communications)  
 Type : See Provision 4  
 Polarization : Linear, horizontal  
 Beamwidth : Conus  
 Gain : 28.8 dB (Region 3)  
 (5) Frequency Range : 14485-14500 MHz  
 (command)  
 Type : FM Modulation  
 Polarization : Linear, vertical

Beamwidth	:	<u>+35°</u>
Flux Density	:	-40 to -87 dBw/m <sup>2</sup>
Receiving System Noise Temperature	:	2000°K
(6) Frequency Range	:	14000-14500 MHz (communications)
Type	:	See Provision 4
Polarization	:	Linear, vertical
Beamwidth	:	Conus
Gain	:	27.5 dBw (Region 3)
Receiving System Noise Temperature	:	1000°K

#### 4. SPECIAL PROVISIONS

- (1) Tracking and Telemetry
- (2) Command
- (3) Maximum e.i.r.p. not applicable.
- (4) Communications, FM-TV frequency modulated television (FM, TV) one and two channels per transponder.  
Note: Emission 43MOP9W denotes - following
  - (a) A 36 MHz bandwidth carrier, frequency modulated by a composite television signal consisting nominally of a video carrier with a baseband of 10 Hz to 4.25 MHz and subcarrier(s) nominally between 5.8 and 7.4 MHz with typical basebands of 20 Hz to 15 KHz.
  - (b) A 56K KBPS BPSK status return channel with rate 1/2 FEC encoding (112 KBPS transmission rate).
  - (c) A 112 KBPS BPSK command channel with rate 1/2 FEC encoding (256 KBPS transmission rate)
- (5) Carrier frequency band and particulars of modulation characteristics to be specified.

- (6) The use of frequencies in the 3700-4200 MHz and 5925-6425 MHz bands for TT&C purposes is limited to emergency back-up TT&C capabilities while the satellite is in orbit, subject to appropriate coordination with other satellite operators in these bands. Use of these frequencies shall be secondary to all satellites using these bands on a regular basis.

5. GENERAL PROVISIONS

- (A) The hours of operation of the station are not limited.
- (B) The authority granted by this station authorization is limited to the construction and operation of the transmitting and receiving facilities described above, and does not include any authority under Section 214 of the Communications Act to establish channels of communication for the provision of communications services.
- (C) This authorization is subject to the provision of footnote NG-103 of the Commission's Table of Frequency Allocations, Section 2.106 of the Rules and Regulations, which states:

Pending adoption of specific rules concerning sharing of the band 11.7-12.2 GHz between the Broadcasting - Satellite and Fixed - Satellite Services, systems in the latter service may be authorized on a case-by-case basis subject to the condition that adjustments in certain system design or technical parameters (including but not limited to orbital location, channel use, etc.) may become necessary during the system lifetime in order to accommodate use of the band by systems of the same or other service.

This permit shall not vest in the permittee any right to operate the station, nor any right to a license authorizing the use of the particular frequencies and emissions, or the particular longitude in the geostationary orbit, or the amount of power, or the time of operation specified above. The Commission, in issuing this permit, reserves the right to assign whatever frequencies and emissions, orbital locations, power and time of operation it deems best calculated to serve the public interest, convenience or necessity. The terms of that license as to frequencies, emissions, orbital locations power, time of operation and scope of communication are expressly made subject to the exercise of this reserved right.

Neither this permit nor the right granted by this permit shall be assigned or otherwise transferred to any person, firm, company, or corporation without the written consent of the Commission. This authorization is subject to the right use or control by the government of the United States conferred by Section 606 of the Communications Act of 1934. Operations of this station are governed by Part 25 of the Commission's Rules and Regulations

Date of required completion of construction and expiration date: \_\_\_\_\_

Date this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_