

HOGAN & HARTSON

COLUMBIA SQUARE
555 THIRTEENTH STREET NW
WASHINGTON, DC 20004-1109
202/637-5600

WRITER'S DIRECT DIAL NUMBER
202/637-5793

6701 ROCKLEDGE DRIVE
BETHESDA, MARYLAND 20817
301/493-0030

111 SOUTH CALVERT STREET
BALTIMORE, MARYLAND 21202
301/659-2700

8300 GREENSBORO DRIVE
MCLEAN, VIRGINIA, 22102
703/848-2600

SEP 25 1990

Domestic Facilities Dept.
Satellite Radio Branch

September 25, 1990

Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

64 - DSS - ~~AM~~ MISC-90

Service: Fixed Satellite Space Station
Application: Waiver of Authorization
Number: One (Space Station C-1)

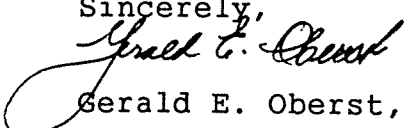
Dear Ms. Searcy:

Submitted herewith on behalf of GE American Communications, Inc. (GE Americom) is an application for temporary authorization to relocate its C-1 IR space station (Fee Code CRY). GE Americom is simultaneously filing an application to modify the authorization for its IR space station, in order to permit a permanent relocation of the orbital position for that space station (Fee Code BFY).

These two requests are set forth in the attached written request. A single written request is submitted because the two requests are interrelated. Because different fees are required for these two separate actions, we are submitting two cover sheets with separate checks made payable to the Federal Communications Commission. This is the transmittal sheet for the waiver request for space station C-1, and the \$500 fee is being submitted with the attached FCC Form 155.

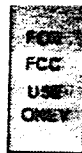
Please direct any questions concerning this matter to the undersigned counsel for GE Americom.

Sincerely,


Gerald E. Oberst, Jr.

cc: Fern Jarmulnek, Esq.

FEDERAL COMMUNICATIONS COMMISSION
FEE PROCESSING FORM



Please read instructions on back of this form before completing it. Section I MUST be completed. If you are applying for concurrent actions which require you to list more than one Fee Type Code, you must also complete Section II. This form must accompany all payments. Only one Fee Processing Form may be submitted per application or filing. Please type or print legibly. All required blocks must be completed or application/filing will be returned without action.

SECTION I

APPLICANT NAME (Last, first, middle Initial)
GE American Communications, Inc.

MAILING ADDRESS (Line 1) (Maximum 35 characters - refer to Instruction (2) on reverse of form)
c/o G. Oberst, Hogan & Hartson

MAILING ADDRESS (Line 2) (If required) (Maximum 35 characters)
555 Thirteenth Street, N.W.

CITY
Washington,

STATE OR COUNTRY (If foreign address) D.C.	ZIP CODE 20004	CALL SIGN OR OTHER FCC IDENTIFIER (If applicable) Space Station IR
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Enter in Column (A) the correct Fee Type Code for the service you are applying for. Fee Type Codes may be found in FCC Fee Filing Guides. Enter in Column (B) the Fee Multiple, if applicable. Enter in Column (C) the result obtained from multiplying the value of the Fee Type Code in Column (A) by the number entered in Column (B), if any.

(A) FEE TYPE CODE	(B) FEE MULTIPLE (if required)	(C) FEE DUE FOR FEE TYPE CODE IN COLUMN (A)	FOR FCC USE ONLY							
(1) <table border="1"><tr><td>B</td><td>F</td><td>Y</td></tr></table>	B	F	Y	<table border="1"><tr><td></td><td></td><td></td><td></td></tr></table>					\$ 5,000.00	
B	F	Y								

SECTION II — To be used only when you are requesting concurrent actions which result in a requirement to list more than one Fee Type Code.

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ADD ALL AMOUNTS SHOWN IN COLUMN C, LINES (1) THROUGH (5), AND ENTER THE TOTAL HERE. THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.



TOTAL AMOUNT REMITTED WITH THIS APPLICATION OR FILING \$ 5,000.00	FOR FCC USE ONLY
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Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

RECEIVED

SEP 2 1990

Domestic Facilities Division
Satellite Radio Branch

In the Matter of Application of)
GE AMERICAN COMMUNICATIONS, INC.) File No.
for Authority To Position and)
Operate Certain In-Orbit Fixed)
Satellites)

APPLICATION OF
GE AMERICAN COMMUNICATIONS, INC.
TO POSITION SATELLITES

GE American Communications, Inc. (GE Americom) requests (a) a modification of the license for its Satcom IR C-band satellite in order to position and operate it at 131° W.L. and (b) temporary authority to position and operate GE Americom's C-band C-1 satellite at 139°.

In November, 1990, GE Americom's C-1 satellite will be launched aboard an Arianespace rocket. This satellite will become GE Americom's in-orbit spare, providing inter-satellite protection to customers on GE Americom's other C-band satellites. That role is currently played by GE Americom's Satcom IR satellite now operating at 139° W.L. When C-1 becomes operational in January 1991, it will be available to perform the functions of Satcom IR.

At that time, GE Americom intends to use Satcom IR to replace the Satcom IIIR satellite, which is located at 131° W.L. Satcom IIIR is used exclusively to distribute cable television programming. The satellite was launched in November 1981 and, although still possessing fuel that permits continued station keeping, is beyond its nominal design life of eight years. Further, the satellite's remaining command receiver,

which is essential for maintenance of the satellite at its assigned orbital location, requires power levels in excess of its design specification in order to access the satellite. Also, because of the satellite's age, its solar arrays are slowly but irreversibly degrading to the point that they can no longer support the satellite's full load of transponders. We, therefore, plan to take the satellite out of service once a replacement for it is available.

The most efficient and least disruptive means of maintaining cable programming for customers on Satcom IIIR is to move the in-orbit spare satellite, Satcom IR, to the Satcom IIIR location at 131°.* Satcom IIIR's transponders transmit video programming destined for cable systems across all of the fifty states. Approximately 8,500 receive antennas at cable headends nationwide are pointed at the 131° W.L. orbital location. It would take several weeks of effort to coordinate the shifting of all of these antennas from the 131° W.L. position to 139° W.L., which is Satcom IR's assigned location. The average cost of repointing an antenna is approximately \$250, which would mean a total cost to customers of cable programming services of approximately \$2,125,000. Moreover, unless GE Americom could arrange dual uplink programming feeds to Satcom IR and Satcom IIIR during the time that the thousands of antennas are being shifted, our cable programming customers would suffer a serious disruption in service to their own customers - the cable systems. These systems, which number more than 6500, provide video programming from Satcom IIIR to approximately 50 million homes. A much more efficient, non-disruptive and highly favorable solution

* Satcom IR would then operate at the 131° W.L. position until the operational date of C-3, Satcom IIIR's authorized replacement, in the first quarter of 1993.

for the cable television industry is to move Satcom IR to the 131° location to transfer the cable programming to a more stable satellite.*

GE Americom has pioneered both the use of satellites for distribution of cable programming services and the protection of those services with an in-orbit spare satellite. It has historically been GE Americom's plan, if at all feasible, to move the in-orbit spare to the location of a failed cable satellite, rather than to disrupt customer services by attempting to shift those services to the location of the in-orbit spare.

The course of action requested in this Application should be wholly unobjectionable with respect to Satcom IR since that satellite is a conventional C-band satellite operating with moderate power levels. Each Satcom IR transponder operates in a wide full-CONUS beam mode with 8.5 watts of power. Moreover, Satcom IR and Satcom IIIR have very similar polarization schemes. Under these circumstances, operation of Satcom IR at the 131° W.L. location will not pose a risk of harmful interference to adjacent satellites, the nearest of which is three degrees away.** In the extremely

* The current plan for Satcom IIIR, subject to further review, is to turn the balance of its communications payload off and to maintain the satellite as a non-operational, in-orbit spare at 131° W.L.

** The Galaxy I satellite operates at 134° W.L. Although its assigned orbital location is 133° W.L. Galaxy I will not be required to move to 133° W.L. until GE Americom's C-4 satellite is launched into the 135° W.L. position in the third quarter of 1992. ASC 1 operates at 128° W.L. and will not have to move to its assigned position at 129° until the launch of the Spotnet 2 satellite, scheduled for September 1993.

unlikely event that operation of Satcom IR might result in harmful interference to adjacent spacecraft, GE Americom will coordinate with the operators of those spacecraft to eliminate the interference.

The moving of Satcom IR to replace Satcom IIIR at 131° W.L. will necessitate temporarily positioning GE Americom's C-1 satellite at 139° W.L., in lieu of immediately placing it at its permanent assignment at 137° W.L., in order to maintain service to the customers now receiving service on Satcom IR at the ~~139~~° W.L. location. These include several major radio networks which operate with more than 5,000 antennas located at radio stations across the country, including Alaska and Hawaii. Locating C-1 at 139° (and operating it in the vertical polarization to match the polarization of Satcom IR) would be less disruptive than placing C-1 at its assigned location at 137° W.L. (where it would have to operate horizontally polarized) and shifting these thousands of antennas to the new location as well as a different polarization.* The latter approach would inevitably result in major service disruptions and significant expense to users. As we noted earlier, the average cost of repointing a single antenna from one orbital location to another is estimated to be approximately \$250 resulting in an aggregate cost to users in this case of approximately \$1,250,000. Moreover, the affected customers will eventually take service on the Aurora II satellite to be launched in May, 1991 and located at the 139° W.L. position. If this application is not granted, in January 1991 thousands of customers' antennas will be repointed temporarily from 139° W.L. to 137° W.L. and their polarizations switched to operate with C-1 at 137° W.L. They would again have to be repointed and their polarization changed six months later to

* C-1 is equipped with polarization switching capability.

operate again at 139° W.L., this time with Aurora II. Thus, total cost to users of the FIR and Aurora II satellites, if this GE Americom request is not granted, is approximately \$2,500,000. A better solution is a no cost, no disruption alternative for the users which allows continuous operation at 139° W.L. first with C-1 and shortly thereafter with Aurora II when it becomes operational at that position.

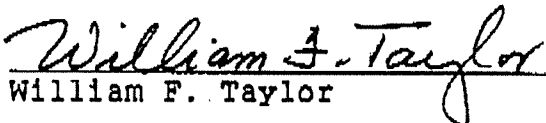
The operation of C-1 at 139° W.L. will be necessary for only a few months -- from its operational date, now planned for January, 1991, until July, 1991 when the Aurora II satellite, whose assigned location is 139° W.L., becomes operational. At that point, the services on C-1 will for the most part be transitioned to Aurora II, and C-1 will be moved to its permanent orbital position at 137° W.L.

As with the operation of Satcom IR at 131° W.L., temporary operation of C-1 at 139° W.L. as requested in this Application should be wholly unobjectionable. C-1 is equipped with a polarization switch so that it can remain cross-polarized with its neighbors if C-1 is located at either 137° W.L. or 139° W.L. C-1's designed power level (8.5 watts) is in fact lower than that of the satellite, Aurora II, that is assigned to the 139° W.L. position (10.0 watts). Hence, there is virtually no likelihood that operation of C-1 at 139° W.L. for the requested few months would cause harmful interference to any adjacent spacecraft. This is particularly true since during the time C-1 is operating at 139° W.L., the closest C-band satellite would be the Aurora I satellite, four degrees away at 143° W.L. Moreover, in the very remote chance that harmful interference might result from C-1's operation at 139°, GE Americom would coordinate with affected parties to resolve any problems that might occur.

GE Americom, therefore, respectfully requests that the Commission expeditiously authorize (a) the positioning and operation of GE Americom's Satcom IR satellite at 131° W.L. and (b) the temporary positioning and operation of GE Americom's C-1 satellite at 139° W.L. Rapid Commission action on this request is important because the launch of C-1 is scheduled for November 20, 1990 and GE Americom plans to begin the move of Satcom IR to 131° W.L. as soon as Satcom C-1 is operational and able to receive the traffic from Satcom IR which is scheduled for January 1991. In order to properly coordinate the transfer, and avoid expensive implementation of contingency plans to cover the eventuality that the Commission would not grant this request, GE Americom needs to know as early as possible but no later than early December that Satcom IR is authorized to operate at 131° W.L.

Respectfully submitted,


Philip J. Otero


William F. Taylor

GE American Communications, Inc.
4 Research Way
Princeton, N.J. 08540

September 25, 1990