



0083-EX-ST-1998  
**ORIGINAL**

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December 9, 1998

Ms. Magalie R. Salas  
Secretary  
Federal Communications Commission  
Experimental Radio Service  
P.O. Box 358320  
Pittsburgh, PA 15251-5320

Re: COMSAT Corporation, Extension of Special Temporary  
Authority for a Maritime C-Band Radio Experiment,  
Call Sign WA9XBL, File No. S-3451-EX-1998

Attn: Office of Engineering and Technology

Dear Ms. Salas:

COMSAT Corporation, through its COMSAT Mobile Communications business unit ("CMC"), herein requests extension of the Special Temporary Authority ("STA") granted on July 6, 1998, in File No. S-3451-EX-1998. This STA authorizes CMC to conduct a maritime radio experiment at C-band for six months, under Sections 5.202(i) and 5.202(j) of the Rules, utilizing six shipboard earth stations installed on vessels traveling in the Caribbean and in the U.S. coastal waters, a temporary-fixed earth station at Ft. Lauderdale, Florida and Santa Paula, California, and the COMSTAR D-4 and GE Americom Aurora 2 satellites. The current STA is due to expire on January 6, 1999.

To date, CMC has successfully installed five C-band stabilized antennas on foreign registry cruise ships owned by Celebrity Cruise Lines and operated in the Caribbean and in U.S. coastal waters. Should the Commission decline to extend CMC's STA, its customers will suffer from interruption of their ongoing communications operations and investments. Such a result would not be in the public interest.

## 1.0 General

COMSAT Mobile Communications (CMC), a business unit of COMSAT, has been conducting an experiment to determine the viability of providing communications using C-band to ships in the Caribbean Sea and in U.S. coastal waters. The continuing technical results of this experiment are most promising. System performance and communications availability has been very high and meets customer expectations.

The following provides a summary of spacecraft performance and interference potential.

## 2.0 Spacecraft Performance

The COMSTAR D-4 spacecraft is performing to specification and has shown no sign of degradation since it was placed into inclined orbit. See COMSAT General Corp., 4 FCC Rcd 3820 (1989). The spacecraft is currently in an inclined orbit with a north/south inclination of approximately 10 degrees. A satellite life of at least four more years is expected. The anticipated rate of change in inclination per year was previously reported to the FCC (File No. 130/134-SAT-STA-96) as follows:

DATE	INCLINATION	INCLINATION GROWTH RATE
2/26/97	9.24 DEG	0.52 DEG/YEAR
2/26/98	9.76 DEG	0.46 DEG/YEAR
2/26/99	10.22 DEG	0.41 DEG/YEAR
2/26/00	10.63 DEG	0.37 DEG/YEAR

The Aurora 2 spacecraft continues to provide reliable service and excellent coverage of the waters around Alaska and along the Pacific coast during the Alaskan cruise season.

## 3.0 Interference Potential

There have been no reports of interference to other radio communications facilities due to the operation of this C-band experiment. Interference from other C-band radio communications facilities has not affected the performance of this C-band experiment.

**TEST REPORT**  
**for**  
**COMSAT MOBILE COMMUNICATIONS**  
**C-BAND EXPERIMENT**

**December 9, 1998**

Particulars in support of this request are set forth in File No. S-2769-EX-97, as well as in previous filings regarding the COMSTAR D-4 experiment. Attached to this request is a technical report describing the results of CMC's experimental operations over the past six months. As shown in the report, the two spacecraft have provided reliable service to shipboard earth stations and there have been no reports of interference to other radio communications facilities due to the operation of this experiment. Continuation of this experiment will serve the public interest by demonstrating the utility of the two spacecraft and the stabilized VSAT antennas in the provision of C-band service to maritime users.

The COMSTAR D-4 continues to operate in inclined orbit at 76° W.L. Grant of this request will not have a significant environmental impact and, thus, does not require an Environmental Statement under Section 1.1307 of the Commission's Rules. CMC certifies that neither the applicant nor any other party to this application is subject to a denial of Federal benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 853a.

Accordingly, CMC respectfully submits that the public interest would be served by extension of the requested experimental authorization for up to an additional six months until June 6, 1999.

Respectfully submitted,



Robert A. Mansbach

Attachment

cc: Carl Huie

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