



FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF
THE CHAIRMAN

June 28, 2002

In Reply Refer To:
File No.: SES-MOD-20000420-00658
Call Sign: E990402

Mr. Jason S. Robert
Attorney for Globecomm Systems, Inc.
IRWIN, Campbell & Tanneneald, P.C.
1730 Rhode Island Ave., N.W.
Suite 200
Washington, D.C. 20036-3101

Re: Application for Modification of Earth Station License (E990402) to add HISPASAT 1C Satellite as a point of communication and operate in the 13.75 to 14.00 GHz band shared between government and non-government entities

Dear Mr. Robert:

Your above referenced earth station application proposes operation in the 13.75 to 14.00 GHz band. This band is shared on a co-primary basis with the federal government. As the attached letter from the National Telecommunications and Information Administration (NTIA) indicates, operation of the earth station as proposed would not protect U.S. Navy radiolocation receivers. Consequently we are dismissing this application, without prejudice.

Sincerely,

A handwritten signature in cursive script that reads "Thomas S. Tycz".

Thomas S. Tycz
Chief
Satellite Division

Attachment - 1



UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and
Information Administration
Washington, D.C. 20230

JUN 20 2002

Mr. Fred Thomas
Liaison Representative
Federal Communications Commission
Office of Engineering and Technology
7-A 164 Portals II
445 12th St. SW
Washington, D.C. 20554

Dear Mr. Thomas:

The purpose of this letter is to confirm the requirements for the proposed HISPASAT applications in the fixed-satellite service (FSS) in the band 13.75-14 GHz. The United States Government conducts radiolocation operations aboard ships worldwide. In response to initiatives concerning homeland security, the U.S. Navy has increased responsibilities to protect littoral areas of the United States and an increased presence in our coastal regions. To protect radiolocation receivers, a power flux density (PFD) value of $-167 \text{ dBW/m}^2/4 \text{ kHz}$ at the shoreline is required. Geographical separations of the FSS earth station from the shoreline and/or combinations of distance and attenuation (e.g., terrain blockage, shielding, building attenuations) must be sufficient to yield this PFD value at the closest shoreline. However, any attenuation used must be verifiable for an analysis for review by NTIA and Navy. Based on the analysis performed by the Navy, it was determined that the PFD levels at the shoreline exceeded the protection criteria stated above.

Attached is a draft checklist of requirements for earth stations in the FSS in the 13.75-14 GHz band for your review and use. Further questions regarding this subject may be directed to Mr. Gordon Crandall at (202) 482-2191.

Sincerely,

A handwritten signature in black ink, appearing to read "Karl B. Nebbia".

Karl B. Nebbia
Deputy Associate Administrator
Office of Spectrum Management

**ISSUES TO BE CONSIDERED WHEN EVALUATING
FSS EARTH STATIONS APPLICATIONS
IN THE BAND 13.75-14 GHZ**

The FSS earth station shall be in conformance with the following US footnotes:

US356 In the band 13.75-14 GHz, an earth station in the fixed-satellite service shall have a minimum antenna diameter of 4.5 m and the e.i.r.p. of any emission should be at least 68 dBW and should not exceed 85 dBW. In addition the e.i.r.p., averaged over one second, radiated by a station in the radiolocation service towards the geostationary-satellite orbit shall not exceed 59 dBW. Receiving space stations in the fixed-satellite service shall not claim protection from radiolocation transmitting stations operating in accordance with the United States Table of Frequency Allocations. ITU Radio Regulation No. S5.43A does not apply.

US357 In the band 13.75-14 GHz, geostationary space stations in the space research service for which information for advance publication has been received by the ITU Radiocommunication Bureau (Bureau) prior to 31 January 1992 shall operate on an equal basis with stations in the fixed-satellite service; after that date, new geostationary space stations in the space research service will operate on a secondary basis. Until those geostationary space stations in the space research service for which information for advance publication has been received by the Bureau prior to 31 January 1992 cease to operate in this band:

- a) the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in geostationary-satellite orbit shall not exceed 71 dBW in any 6 MHz band from 13.77 to 13.78 GHz;
- b) the e.i.r.p. density of emissions from any earth station in the fixed-satellite service operating with a space station in non-geostationary-satellite orbit shall not exceed 51 dBW in any 6 MHz band from 13.77 to 13.78 GHz.

Automatic power control may be used to increase the e.i.r.p. density in any 6 MHz band in these frequency ranges to compensate for rain attenuation, to the extent that the power flux-density at the fixed-satellite service space station does not exceed the value resulting from use by an earth station of an e.i.r.p. of 71 dBW or 51 dBW, as appropriate, in any 6 MHz band in clear-sky conditions.

Protection of the Government radiolocation service:

In the original Report and Order that allocated FSS in the band 13.75-14 GHz (In the Matter of Amendment of Parts 2, 25 and 90 of the Commission's Rules to Allocate the 13.75-14.0 GHz Band to the Fixed-Satellite Service (FCC 96-177; ET Docket No. 96-20; RM-8638)) the following text appeared in paragraph 20:

"To facilitate this coordination process, upon the request of the IRAC, [Footnote: See IRAC Comments at 1. See also note 11, *supra*.] we provide the following information for prospective licensees:

The United States Government conducts radiolocation operations aboard ships worldwide. Although we are adopting ITU Footnote S5.502 as a basic sharing criteria between FSS uplinks and radiolocation, site selection for FSS earth stations must be coordinated and adjustments may be required to preclude harmful interference. A power flux density ("PFD") value of -167 dB(W/m²/4 kHz) is required to protect radiolocation receivers; geographical separation of the FSS earth stations from the radar must be sufficient to yield this value. These matters will be addressed during the coordination phase with the Government."

DoD will have to verify that they are satisfied that this limit is met to protect their radiolocation operations (the majority of these operations are maritime) that operate throughout the band 13.75-14 GHz.

Protection of the NASA receiving earth stations in the space research service:
 NASA has TDRSS-to-Earth operations in the band 13.75-14 GHz. NASA will have to verify that their earth station receivers are protected from the FSS earth station transmitters.

The operator of the FSS earth station shall be aware that:

1. US337 ("In the band 13.75-13.80 GHz, earth stations in the fixed-satellite service shall be coordinated on a case-by-case basis through the frequency assignment subcommittee in order to minimize harmful interference to the Tracking and Data Relay Satellite System's forward space-to-space link (TDRSS forward link-to-LEO).") was written because of the importance of this link, including the support of manned spaceflight and in exceptional circumstances FSS earth station operations may be requested to modify their operations.
2. While the dates in ITU Radio Regulation footnote S5.503A have passed,¹ NTIA noted that NASA's Tropical Rainfall Measuring Mission (TRMM) satellite system radar in the band 13.793-13.805 GHz is still operating.² Since TRMM is a highly valuable and visible U.S. asset, with a broad range of international users, NTIA has requested cooperation from the FCC and non-Federal Government entities in providing assistance in reducing interference with the TRMM radar.

¹ Footnote S5.503A states: "Until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the space research and Earth exploration-satellite services. Additionally, when planning earth stations in the fixed-satellite service to be brought into service between 1 January 2000 and 1 January 2001, in order to accommodate the needs of spaceborne precipitation radars operating in the band 13.793-13.805 GHz, advantage should be taken of the consultation process and the information given in Recommendation ITU-R SA.1071."

² See letter from Frederick Wentland, Acting Associate Administrator, Office of Spectrum Management, NTIA, to Don Ableson, Chief, International Bureau, FCC (February 28, 2002).