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

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Bruce Franca
Acting Chief
Office of Engineering and Technology
Federal Communications Commission
445 12th Street S.W.
Washington, DC 20554

Reference 1: Further Notice of Proposed Rulemaking, Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz, and 48.2-50.2 GHz Frequency Bands; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz [Bands] for Government Operations, IB Docket No. 97-95, RM-88-11, IRAC Doc. No. 31731/2

Reference 2: Letter from Mr. William T. Hatch to Mr. Bruce Franca, dated March 2, 2001.

Dear Mr. Franca:

The National Telecommunications and Information Administration (NTIA) generally agrees with the proposals made in the Federal Communication Commission's (Commission) Further Notice of Proposed Rulemaking (FNPRM). However, the following comments are furnished for the Commission's consideration.

1. Paragraphs 16 and 32. *Government Mobile-Satellite Service allocation in 40.5-41.0 GHz*

NTIA supports the proposals for adding mobile-satellite allocations to the 40.5-41.0 GHz band for both Federal Government and non-Federal Government users. The Commission also notes correctly the NATO commitment for possible future mobile-satellite operations in the 39.5-40.0 GHz band and the concomitant requirement to retain the Federal Government allocation for mobile-satellite service in this band.

2. Paragraphs 18-21. *Protection for Space Research*

As noted in Paragraph 20, the Commission, at the request of the NTIA, revised its initial proposed allocation to the fixed-satellite service (FSS) from 37.5-38.5 GHz to 37.6-38.6 GHz to reduce the overlap with the Federal Government's space research allocation at 37.0-38.0 GHz.

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Yet again, the Commission proposes to allocate the 37.5-37.6 GHz portion of the band for fixed-satellite services.

NTIA prefers not to have this additional overlap. As previously noted, sharing problems with the Government's space research service operations would be reduced by allowing only gateway, fixed-satellite service operations with geostationary orbit (GSO) satellites in that 100 MHz portion. Reference 2 indicated that the National Aeronautics and Space Administration (NASA) earth station at Goldstone, CA needed to be protected from terrestrial and space station transmissions. To support the Space Very Long Baseline Interferometry (SVLBI) missions, the earth station receivers in the NASA Deep Space Communication Complex located at Goldstone, CA and the orbital VLBI site at Green Bank, WV, require protection against harmful interference in the 37.5-38.0 GHz band. A power spectral density level of -217 dB(W/Hz), not to be exceeded for more than 0.1% of time is adequate to protect these national assets. The corresponding protection level in terms of power flux-density is -130 dB(W/m$^2$) in any 1 MHz band from a single satellite in a typical constellation of FSS satellites within the 37.5-38 GHz band.

In the future, both sites will receive 1-Gbps SVLBI data from a new mission called ARISE, being planned for launch around 2015. To receive this data rate, the entire 37-38 GHz band will be required. Therefore, if this 100 MHz portion is reallocated to the fixed-satellite service, then NTIA requests that it be for GSO satellites and gateway earth stations with adequate protection for Goldstone and Green Bank.

3. Paragraphs 28-31. *Spectrum Swap.*

As noted in Paragraph 29, NTIA and the Commission agreed to exchange one gigahertz of spectrum to accommodate the proposed high altitude platform service, and to assure spectrum space for future Federal Government operations above 40 GHz. The 42.5-43.5 GHz band remains appropriate for government operations because of its proximity to the government satellite band at 43.5-45.5 GHz, and could accommodate an expansion of government Earth-to-space operations. Further, NTIA has encouraged Federal agencies to use the 42.5-43.5 GHz band as a substitute for the 37-38.6 GHz band when necessary. Currently there are some Federal operations in the band. Finally, the National Science Foundation conducts extensive radio astronomy observations in the band. Although NTIA recognizes that there is a degree of merit in harmonizing the 42.5-43.5 GHz bands globally, we believe that commercial operations are viable in the 47.2-48.2 GHz band. Therefore, in light of the above information, NTIA requests that the allocations of the 42.5-43.5 GHz and the 47.2-48.2 GHz bands remain *status quo*.

4. Paragraphs 33 and 34. *Protection of Radio Astronomy in the 42.5-43.5 GHz band.*

NTIA supports the Commission's proposal not to allocate the 42.0-42.5 GHz band to the FSS, in order to provide protection to radio astronomy observations in the 42.5- 43.5 GHz band. Further, NTIA believes that it may be difficult or impossible to reduce out-of-band emissions into the 42.5 -43.5 GHz band to the degree specified in S5.551G if the broadcasting-satellite service (BSS) allocation in the 42.0-42.5 GHz band were to be implemented. In this regard, the

provisional limit adopted at WRC-2000 may not protect radio astronomy operations. NTIA believes that the deletion of the BSS allocation in the 42.0 - 42.5 GHz band, along with a suitably modified version of footnote USXXX, should be sufficient to fully protect radio astronomy.

Sincerely,

William T. Hatch
Associate Administrator
Office of Spectrum Management