

ET 94-124

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

May 21, 1997

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Federal Communications Commission
Office of Secretary

Mr. Fred Thomas
Office of Engineering and Technology
FCC Liaison Representative, IRAC
2000 M. Street, N.W., Suite 230
Washington, DC 20554

Dear Mr. Thomas:

The IRAC has completed its review of the FCC's draft Second Report and Order & Third NPRM, ^{ET}~~EB~~ Docket 94-124 (Above 40 GHz), and furnishes the following comments as the views of the Executive Branch agencies that are members of the IRAC.

The IRAC noted that the draft Second Report and Order opens 2 GHz of spectrum for commercial licensed use in the 41.5-42.5 GHz ("41 GHz") band, and the 47.2-48.2 GHz ("47 GHz") band. The previous Order under this docket opened the 46.7-46.9 GHz (vehicle radar) and the 59-64 GHz bands for unlicensed services. The FCC approved a partial Order on May 2, 1997, that allocates the 47.2-48.2 GHz band for licensed use. The IRAC had no advance notice of this occurrence, but comments in this letter are relevant to that Order also.

The Third NPRM proposes service rules for these bands, and proposes the 50.4-51.4 GHz band for commercial licensed operation.

The current coordination between the FCC and the Federal agencies within the IRAC's Frequency Assignment Subcommittee for assignment of individual frequencies has worked well in the past. However, FCC licenses issued on the basis of area-wide licenses and won by competitive bidding will by-pass this process. Licensees will build out radiocommunications systems without notification of frequencies used or transmitter locations. Neither the FCC nor NTIA will have a data base of spectrum management information on these systems. Further, the process of competitive bidding will raise the expectations regarding exclusive access associated with these licenses. Under these conditions, future Government access to spectrum to support national missions may be jeopardized.

Sharing between the future Government fixed, mobile, and satellite operations and non-Government terreflex operations in the 47.2-48.2 GHz and 50.4-51.4 GHz bands will be necessary in the future, probably after commercial presence has been established in the bands.

The FCC should be aware of a joint Federal Aviation Administration/Department of Defense/Industry program that is currently underway to develop and test "synthetic vision" systems intended for use in the airport environment during poor visibility. These systems are being developed in the frequency range around 94 GHz. NTIA has commented in the past on the potential for the second harmonic of systems in the 46-47.5 GHz band to cause interference to this aviation system. Therefore, some geographical separation of systems

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operating in the 47.2-47.5 GHz bands from airports at which the synthetic vision system will be used may be required, pending further study on the interference threshold of this system. Further, the Department of Defense is developing other radiolocation systems that will operate at 94 GHz.

The United States has future military requirements for satellite services in the 50.4-51.4 GHz band in accordance with the NATO Joint Frequency Agreement (NJFA). The NJFA identifies existing, planned, and future military spectrum requirements by the NATO nations. Agreement to implement these requirements, to the maximum extent possible, in national frequency allocation tables has been coordinated among the military and civilian frequency management authorities of the NATO nations. These requirements include spectrum requirements harmonized in NATO Europe and includes ITU Region 2 (United States and Canada) as follows: in the 36-37 GHz band for fixed and mobile systems; in the 37-39.5 GHz band for existing and future fixed systems; in the 39.5-40.5 GHz band for future fixed- and mobile-satellite downlinks (paired with 50.4-51.4 GHz); in the 43.5-45.5 GHz band for essential satellite uplinks and for mobile systems; and in the 50.4-51.4 GHz band for future satellite uplinks.

In light of this treaty obligation, the 50.4-51.4 GHz band must be available in the future to establish FSS and MSS operations in support of NATO forces. The FCC must not proceed with any rule making that would preclude the United States from satisfying treaty obligations in the 50.4-51.4 GHz band since sharing between high-density terrestrial services and fixed- and mobile-satellite services in the 50.4-51.4 GHz band could prove to be infeasible if radio noise received at the satellites is sufficient to mask uplink signals from earth stations. This situation would constrain the development of both fixed- and mobile-satellite services.

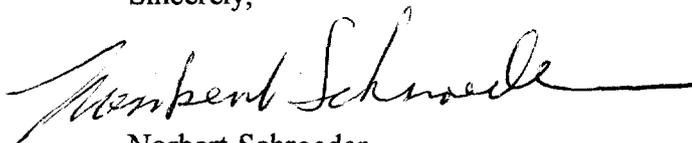
Mitigation of such interference from stations licensed under an area-wide licensing process will be difficult, and may require innovative technical requirements. One approach would be for the FCC to consider e.i.r.p. constraints sufficient to guarantee that a viable fixed- and mobile-satellite service can develop. These limits will be proposed by NTIA at a later date, based on the results of technical studies performed by the Government.

Further, in considering rules regarding non-Government use of the 50.4-51.4 GHz band, the FCC is requested to limit unwanted emissions in the 50.2-50.4 GHz band to -166 dBW/m²/100 MHz (see ITU-R Rec. SA.1029), assuming that the fixed and mobile allocations will be deleted from this band by actions at the WRC-97, and the band will be for passive use only.

Finally, the Federal Government retains the rights afforded by the National Table of Frequency Allocations to construct and operate Government systems in coordination with existing commercial users.

The IRAC looks forward to working with the FCC on these spectrum issues.

Sincerely,

A handwritten signature in black ink, appearing to read "Norbert Schroeder", with a long horizontal flourish extending to the right.

Norbert Schroeder
Acting Chairman