

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Allocation of Spectrum Below) ET Docket No. 94-32
5 GHz Transferred from)
Federal Government Use)

To: The Commission

COMMENTS

Introduction

IEEE 802, the LAN MAN Standards Committee (“the Committee”) respectfully submits the following comments in response to the Commission’s Notice of Proposed Rulemaking (“NPRM”), FCC 94-272, released November 8, 1994.

This NPRM proposes allocation of 50 MHz of spectrum that was identified by the Department of Commerce for transfer from Federal Government to private sector use. The Committee urges that one of the three segments comprising those 50 MHz remain usable by spread spectrum devices.

On November 10, 1994, the Committee decided that its current draft for a standard for short-distance radio and infra-red Local Area Networks (LANs) has reached a level of maturity, sufficient for a formal letter ballot. That draft standard uses the 2,400 - 2,483.5 MHz band for the transfer of computer data adhering to the Commission’s rules under 47 C.F.R § 15.247 and to comparable rules in over 40 countries. The draft standard contains specifications for both Frequency Hopping and Direct Sequence Spread Spectrum radio devices. The Committee has selected the band because of its wide availability throughout the globe for use by non-licensed devices.

Comments of IEEE P802 re FCC ET Docket 94-32

What is IEEE P802

The Institute of Electrical and Electronics Engineers, Inc (IEEE) is a USA-based international professional organization with more than 300,000 members representing a broad segment of the computer and communications industries. More than 58,000 members are from outside the USA.

The IEEE P802 LAN MAN Standards Committee (IEEE P802) is chartered by the Computer Society of the IEEE to produce interoperability standards for Local Area Networks (including Integrated Voice/Data Local Area Networks). The local area network standards provide for data transfer between computers and/or computer terminals at data rates of greater than 1 Mbit/s utilizing wire, optical and radio media. The International Organization for Standardization (ISO) has adopted several IEEE P802 standards as International Standards.

Since 1990, the Committee has worked on a standard for the Media Access Control protocol and for the Physical Layer. The first draft of this standard was agreed upon in its assembly of November 1994. During the time the participants have placed a major investment in the development of the draft. The Committee assembled 6 times a year to develop the draft with an average of 80 persons participating. The participants are employed by companies from industries such as manufacturers of computers, computer peripherals and chips and radio equipment and also from users such as automobile manufacturers, members of service industries, government agencies and a steel plant. In addition to participants from the USA, participants travelled to the assemblies from locations over the world, such as Europe, Japan, Israel, Korea and the Republic of China. The Committee will also develop a standard for conformance testing. The conformance testing standard will be in line with the requirements set by ISO's Open Systems Interconnection standards and will help provide globally unified test results. The project plan calls for proposing these standards as ISO standards.

There is a strong interest in wireless local area networking as evidenced by the number of individuals and corresponding company sponsorships in the IEEE P802 working group on wireless LANs. This working group has 105 voting members employed by 57 companies.

Detailed Comments

In § 18 of the NPRM, the Commission requests comments on retaining the segment 2,402-2,417 MHz of the 50 MHz for use by Part 15 devices. The Committee believes that such use should be allowed to continue. Removing 2,402-2,417 MHz from the band available in practice for Part 15 devices, however, would appear to prevent the use of the Committee's in the United States and would thus place the potential U.S. users of the standard in a worse competitive

position compared to similar users in other countries. If the Committee could only choose between the three options mentioned in § 18, it would take the option "Maintaining Part 15 use of the band while limiting licensed use of the band".

The Frequency Hopping Spread Spectrum specification of the Committee's draft standard utilizes one MHz wide channels as allowed by the FCC rules for Spread Spectrum operation in the 2,400-2,483.5 MHz band. As is feared by many, the auctioning of 2,402-2,417 MHz to primary licensees would make this band unusable for the Committee's devices. This concern is not only because of the interference the primary devices could cause those devices, but also because this new class of user might detect interference, regardless of how slight, from the Committee's devices, and request that the Committee's devices cease operating. This threat would reduce the usable portion of the band to less than 75 MHz. The Committee's devices need at least 75 MHz of spectrum to comply to FCC rules.

While it is conceivable that the FCC would change its spread spectrum rules, the initiative and momentum of the Committee's standards process, the draft of which is now out for letter ballot, would be seriously damaged and possibly terminated. The 802 committee urgently requests that the FCC does not auction the 2,402-2,417 MHz band to primary users.

The Committee's standards action represents an industrial investment to support the FCC initiative to utilize the ISM band for wide spread unlicensed communications services. The utility of that investment would be significantly enhanced if the FCC would take steps to increase the status of the Part 15 devices in the 2,400-2,483.5 MHz band to co-primary. The purpose of this request is not to protect Part 15 devices from interference, but to prevent primary users from demanding cessation of operation. The Committee appreciates the Commission's consideration of this request.

In § 16 the Commission invites comments on the use of the 2,390-2,400 MHz band. The Committee requests that this band be used for unlicensed data services.

In § 19 of the NPRM the Commission requests comments on two types of use of 2,402-2,417 MHz band, use by licensed services subject to technical rules similar to the rules for unlicensed Part 15 devices and use by MSS. While the Committee can not give detailed comment on the first of such use pending the availability of the rules, we regard the concept as potentially appropriate provided that the unlicensed devices are granted co-primary status. Coexistence studies performed by the proponents of MSS use are necessary before an informed decision can be made.

Conclusion

The usefulness of the entire 2,400-2,483.5 MHz band for spread spectrum Part 15 devices should not be impaired by decisions of the Commission. To protect the existence of Part 15 devices in the band, the status should be changed to co-primary status while the band 2,390-2,400 MHz should be allocated to unlicensed services.

Respectfully submitted,

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Dated