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

In the Matter of

Use of Spectrum Bands Above 24 GHz For Mobile
Radio Services

GN Docket No. 14-177

Establishing a More Flexible Framework to Facilitate
Satellite Operations in the 27.5-28.35 GHz and 37.5-
40 GHz Bands

IB Docket No. 15-256

Petition for Rulemaking of the Fixed Wireless
Communications Coalition to Create Service Rules
for the 42-43.5 GHz Band

RM-11664

Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and
101 To Establish Uniform License Renewal,
Discontinuance of Operation, and Geographic
Partitioning and Spectrum Disaggregation Rules and
Policies for Certain Wireless Radio Services

WT Docket No. 10-112

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 Frequency 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 for Government
Operations

IB Docket No. 97-95

Via the ECFS

COMMENTS OF IEEE 802

1. IEEE 802¹ respectfully submits its Comments in the above-captioned Proceeding².
2. IEEE 802, as a leading consensus-based industry standards body, produces standards for wireless networking devices, including wireless local area networks (“WLANs”), wireless personal area networks (“WPANs”), wireless metropolitan area networks (“Wireless MANs”), and wireless regional area networks (“WRANs”). Included in our standards development activity is an emphasis on coexistence, which is the focus of our Wireless Coexistence working group. We appreciate the opportunity to provide these comments to the FCC.

PREFACE

3. On October 22, 2015, the Commission issued a Notice of Proposed Rulemaking, under GN Docket No. 14-177 and others, in which the Commission seeks to “continue our examination of higher frequency bands for mobile and other uses.” IEEE 802 is pleased to submit these comments in response to this proceeding.

1 The IEEE Local and Metropolitan Area Networks Standards Committee (“IEEE 802” or the “LMSC”).

2 This document represents the views of IEEE 802. It does not necessarily represent the views of the IEEE as a whole or the IEEE Standards Association as a whole.

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I. Introduction

4. In submitting these comments, IEEE 802 is particularly interested in promoting increased availability of unlicensed spectrum at frequencies above 57 GHz. IEEE 802 has published amendments to the IEEE 802.11 (“802.11”) and the IEEE 802.15 (“802.15”) standards which detail both Physical (“PHY”) and Media Access Control (“MAC”) layers suitable for implementation in the 60 GHz bands. There are new 60 GHz initiatives underway for both standards groups. Working Group (“WG”) IEEE 802.11 has established a Task Group (“TG”) IEEE 802.11ay which is looking at improvements to the previous 60 GHz standard, IEEE 802.11ad-2012, encompassing a range of new applications while also looking at performance enhancements of existing ones. IEEE 802.15 TG 3e is developing an amendment to enable large files to be exchanged rapidly between two devices at very close range. IEEE 802.15 TG 3d is developing an amendment to enable 100 Gbps point-to-point links at the frequency bands 252 to 325 GHz.

II. 60 GHz Bands (57-64 GHz and 64-71 GHz)

5. In the NPRM, the Commission points out that current rules permit unlicensed operation in 57 to 64 GHz band under Part 15, and proposes to extend the spectrum band to 71 GHz creating a contiguous band from 57 to 71 GHz for Part 15 operation. IEEE 802 sees this extension of the 60 GHz band as a positive change to the Commission’s rules, and recommends that the Commission proceed with extending the band to cover 57 to 71 GHz under the same Part 15 general provisions that allow operation in the currently authorized 60 GHz band.
6. Maintaining the same uniform emissions limits across the 57 to 71 GHz band that are specified for the 57 to 64 GHz band will permit manufacturers to apply the same uniform limits to their products. We believe that this will not only support economies of scale but also support new applications for both indoors and outdoors. Further, as the Commission noted, maintaining same power levels would allow longer ranges in the extended band due to the properties of the spectrum. This is particularly helpful in point-to-point and point-to-multipoint outdoor applications.
7. For the emissions limits applicable to lower power rules (Part 15.255 (b)(1)(i)), we would like the Commission to consider raising the existing emission limits by 10 dB. Specifically, we recommend the EIRP limit be raised to 50 dBm for average emissions and 53 dBm for peak emissions. This proposed increase will enhance indoor performance for a variety of consumer applications.

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8. The Commission noted the joint work (collaboration) between industry and the government inside the aircraft cabin for consumer use. IEEE 802 believes that given the intended usage, properties of the spectrum, and fuselage attenuation of emission, there should no interference to radio astronomy and EESS operation.
 9. In a related matter, the Commission asked whether an on-board aircraft usage restriction be applied to the 64 to 71 GHz extension band. IEEE 802 believes no such restrictions should be placed on the extension band.
 10. The Commission has proposed to remove section 15.255(d) which sets aside a publicly accessible coordination channel at 57.00 to 57.05 GHz due to little or no use. We support Commission's proposal to make additional 50 MHz available for any purpose.

III. Conclusion

11. IEEE 802 supports the Commission's concept of extending the existing Part 15 unlicensed rules to increase the 60 GHz band from the present 57 to 64 GHz to 57 to 71 GHz.
12. IEEE 802 thanks the Commission the opportunity to respond to this Notice of Proposed Rule Making.

Respectfully submitted,

/s/ Paul Nikolich

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