

## IEEE 802

Local and Metropolitan Area Network Standards Committee  
Homepage at <http://ieee802.org/>

November 19, 2002

To: Ms. Marlene H. Dortch, Esq.  
Secretary  
Federal Communications Commission  
236 Massachusetts Ave., NE, Suite 110  
Washington, DC 20002  
VIA the ECFS

Reply to: Carl R. Stevenson  
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From: Paul Nikolich,  
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Dear Ms. Dortch:

Please find attached both a *Motion to Accept Late-filed Comments* and the *Reply Comments of IEEE 802* in ET Docket No. 02-312.

Should you have any questions regarding this filing, please feel free to contact Mr. Carl R. Stevenson, the Chair of the IEEE 801.18 Radio Regulatory Technical Advisory Group (“TAG”).

Respectfully submitted,

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

In the Matter of	)	
	)	
2002 Biennial Review of	)	ET Docket No. 02-312
Telecommunications Regulations within	)	
Purview of the Office of Engineering	)	
And Technology	)	
	)	
To: The Commission	)	

**MOTION TO ACCEPT LATE-FILED COMMENTS**

On behalf of the IEEE 802.18 Radio Regulatory Technical Advisory Group, the IEEE 802.11, 802.15, and 802.16 Working Groups, and the IEEE 802 Local and Metropolitan Network Standards Committee, I respectfully request that the Commission accept the attached late-filed *Reply Comments of IEEE 802* in ET Docket No. 02-312.

While we understand that the stated filing deadline for comments in this Proceeding was November 8, 2002, it was impossible for us to meet that deadline for the following reasons:

1. IEEE 802 held its plenary meeting from November 11-15, 2002 in Koloa, Kauai, Hawaii.
2. Under IEEE 802's operating rules, which are designed to assure that documents such as the attached comments represent the consensus views of a significant majority of our members, after a document such as this is prepared, it must be approved by the Working Groups and then by the IEEE 802 Sponsor Executive Committee ("SEC") before it can be presented on behalf of IEEE 802.
3. The attached document was drafted by a committee of designated experts during the plenary meeting week, but could only be approved by the Working Groups during their closing plenary sessions and then approved by the SEC at its closing meeting on the afternoon and evening of Friday, November 15, 2002. (Due to the time difference between Hawaii and Washington, DC, this meeting closed well after the close of business on November 15<sup>th</sup>.)
4. After SEC approval, a modest amount of time was required for final formatting and preparation for submission.

Therefore, I again respectfully request that the Commission and its Office of Engineering and Technology accept and consider the attached *Reply Comments of IEEE 802* in ET Docket No. 02-312.

Respectfully submitted,

/s/

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**REPLY COMMENTS OF IEEE 802**

IEEE 802<sup>1</sup> hereby submits its Reply Comments in the above-captioned Proceeding.

IEEE 802 and its members that participate in the IEEE 802 standards process are interested parties in this proceeding. IEEE 802, as a leading consensus-based industry standards body, produces IEEE 802 standards<sup>2</sup> for wireless networking devices, including wireless local area networks (“WLANs”), wireless personal area networks (“WPANs”), and wireless metropolitan area networks (“Wireless MANs”) that are designed to operate in compliance with Part 15 of the Commission’s rules.

We appreciate the opportunity to provide these comments to the Commission.

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<sup>1</sup> The IEEE Local and Metropolitan Area Networks Standards Committee (“IEEE 802” or the “LMSC”)

<sup>2</sup> The IEEE 802.11b, 802.11g, 802.15.1, 802.15.3, and 802.15.4 standards all currently use, or are targeted to soon use, the 2.4 GHz Part 15 bands. Additionally the 802.15.4 standard incorporates an alternate physical layer (“PHY”) that is targeted to the 902-928 MHz band. The IEEE 802.11a and 802.16a standards currently use, or are targeted to soon use the 5 GHz “U-NII” bands.

## **INTRODUCTION**

1. IEEE 802 commends the Commission for undertaking this review to assure that its rules are in alignment with the continual advancement of technology.
2. By doing so, the Commission will stimulate further innovation and both allow and encourage industry to bring new applications and services to the public at a timely pace, in a cost-effective manner, and with a minimum of regulatory barriers.
3. We appreciate the Commission's continued willingness to go beyond its Congressional mandate and review ALL of its rules biennially. With the rapid advancement of technology, we believe that this approach will benefit both industry and consumers.

## **SECTION 15.31 MEASUREMENT STANDARDS**

4. IEEE 802 supports the comments of Cisco Systems ("Cisco"), International Business Machines Corporation ("IBM"), and the Information Technology Industry Council ("ITI") regarding this section of the Commission's rules and encourages the Commission to amend Section 15.31(a)(6) of its rules to reflect the more recent version "American National Standards Institute (ANSI) C63.4-2001" as applicable.
5. We also join the aforementioned commenters in urging the Commission to further amend Section 15.31 of its rules to accept CISPR 22:1997 (as amended) as an alternate measurement procedure to ANSI C63.4-2001 for measurement of information technology equipment, since the two test specifications are very similar in requirements and supporting figures and produce very similar results.

6. Acceptance of the CISPR test procedures will eliminate an unnecessary “dual test” burden that manufacturers will face in 2003, when virtually the entirety of the rest of the world will require CISPR-based testing.

#### **15.203 ANTENNA REQUIREMENT**

7. IEEE 802 also supports the comments of Cisco, IBM, and ITI with regards to the “unique coupling” requirement of Section 15.203 of the Commission’s rules. We agree with observations that illegal antenna replacement does not appear to be a widespread problem and that this rule amounts to an ineffective deterrent to illegal antenna replacement whose only practical effect is to increase costs for both manufacturers and consumers.

8. We therefore respectfully request that the Commission eliminate the “unique connector” requirement implied in Section 15.203 of its rules (and elaborated and modified in several Public Notices over the years).

#### **SECTION 15.407(d) INTEGRAL ANTENNA REQUIREMENT**

9. IEEE 802 also supports previously filed comments to the effect that the operational limitations set forth for U-NII devices in the 5150-5250 MHz band adequately address any potential for interference to MSS feeder links and that there is no need to further restrict the ways in which manufacturers satisfy the limits.

10. We likewise believe that the integral antenna requirement of Section 15.407(d) of the Commission’s rules is unnecessary for the same reasons and that this requirement places unnecessary burdens on manufacturers that ultimately result in increased costs to consumers, with no apparent regulatory benefit.

11. We therefore respectfully request that the Commission eliminate the integral antenna requirement of Section 15.407(d) of its rules.

**ALIGNING SECTION 15.247 WITH THE RECENT PUBLIC NOTICE ON U-NII MEASUREMENTS VIS A VIS MULTI-CARRIER MODULATION FORMATS SUCH AS OFDM**

12. IEEE 802 also observes, as was noted by Cisco in its comments, that the Commission's recent Public Notice<sup>3</sup> (the "U-NII Peak Power PN"), which updated measurement methods applied to 5 GHz U-NII devices employing multi-carrier technologies such as OFDM, does not address the recent Second Report and Order in ET Docket No. 99-231<sup>4</sup>, wherein the Commission amended its rules to allow non-DSSS modulation techniques such as OFDM in the 2.4 GHz band.

13. We agree fully with that the procedures given in the U-NII Peak Power PN are equally applicable to 2.4 GHz multi-carrier devices.

14. IEEE 802 therefore respectfully requests that the Commission expeditiously issue a public notice that would apply the same peak transmit power measurement procedures to devices designed to operate in the 2.4 GHz band.

**ELECTRONIC LABELING**

15. IEEE 802 supports the comments of ITI with respect to "electronic labeling."

16. The increasing integration of radio capabilities into a wide variety of "host" products is making this a necessity and the technology to implement electronic labeling in suitable product configurations is available and affordable.

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<sup>3</sup> See, Public Notice DA 02-2138 (August 30, 2002).

17. We therefore recommend that the Commission amend its rules to permit electronic labeling of embedded radio capabilities in any device that contains sufficient display capability to display the required information on start-up or on demand while in use.

### **SAR LIMITS**

18. IEEE 802 disagrees strongly with the comments of Professor Richard W. Ziolkowski of the University of Arizona, ECE Department, who requests that the Commission lower the SAR standard of Section 2.1093 of its rules from 1.6 Watts/Kg to 0.5 Watts/Kg or lower.

19. We do not believe that Professor Ziolkowski has provided any conclusive scientific evidence, *nor even a preponderance of evidence*, indicating that the current SAR standard needs to be changed.

20. In the absence of any compelling reason, lowering the SAR standard, as Professor Ziolkowski (*alone*) requests, would be contrary to the public interest, because the reductions in allowable transmitted field strength that would be necessary would adversely impact communications range, efficiency, and achievable data rates.

21. This would result in the need to deploy significantly larger numbers of base stations in cellular networks, access points in wireless computer networks, and similar systems at great cost to consumers and for no compelling reason based in scientific fact.

22. IEEE 802 therefore requests that the Commission reject Professor Ziolkowski's unsupported request.

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<sup>4</sup> See, Second Report and Order, FCC 02-215 (May 30, 2002).

23. Moreover, we agree with the comments of Cisco that the Commission's current SAR limits should be applied uniformly and that the Commission should adopt a firm policy making it clear that when test results are at or below the specified limits, the device passes and approval should not be delayed.

24. We also support Cisco's recommendation that the Commission develop a protocol for testing modular devices that facilitates generic, once-and-for-all testing of modular components intended for use in a wide variety of consumer applications.

25. We agree that testing the same module over and over again in large numbers of substantially identical "host platforms" serves little or no useful purpose from a SAR perspective, introduces significant delays in the introduction of different models of substantially identical devices (such as notebook computers), and unnecessarily presents a significant cost burden to both manufacturers and consumers.

26. We also believe that a better approach would be for the Commission to publish guidelines on a reasonable variety of generic host platforms in which modular devices might be tested and we encourage the Commission to do so as expeditiously as possible.

Respectfully submitted,

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