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Wireless LANs

Letter to Secretary of FCC on Alternative Emission Limit for Microwave Lighting Devices

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Abstract

The proposed rules change now before the FCC would result in the proliferation of lighting devices which employ magnetrons as sources of RF energy. These devices would operate in the 2450 MHz band with no limit on RF emissions. IEEE 802.11 has previously endorsed a limit of 20 mV/meter at 3 meters. An alternative proposal has been proposed by other Part 15 interests. That proposal is described in document IEEE 802.11-99/068. The text for an additional letter to the Commission supporting this alternative proposal as an emission limit is presented for discussion by the Working Group.

Draft Text

March 10,1999

Magalie R. Salas, Esquire
Secretary
Federal Communications Commission
1919 M Street NW
Room 222
Washington DC 20554

Re: Microwave Lighting Devices, Docket No. 98-42

Dear Ms. Salas:

IEEE 802, the LAN/MAN Standards Committee ("the Committee"), supports the efforts of the Part 15 interests with regard to establishing emission levels for microwave lighting devices.

The Institute of Electrical and Electronics Engineers, Inc. (IEEE) is a USA-based international professional organization with more than 325,000 members. The IEEE 802.11 Working Group has developed a standard for Wireless Local Area Networking (WLAN) in the 2400-2483.5 MHz band ("the 2450 MHz band"). Approximately 58 companies have participated in the generation of this standard and the committee submitted a list of 16 companies that plan to provide devices complying with the standard.

The Committee has endorsed an earlier proposal by the Part 15 Interests establishing a peak field strength limit of 20 mV/m @ 3 m. The original proposal was presented to the RF lighting promoters, but was rejected without comment. In an effort to move discussion forward in this matter an alternative proposal has been endorsed by the Committee. The alternative proposal is described in detail in Attachment A.

There is a strong potential for interference from microwave lighting devices into wireless LANs. The potential

proliferation of microwave lighting devices and the widespread use of wireless LANs makes it necessary that all possible efforts be made to assure that the in–band emissions of the lighting devices be controlled. The emissions should interfere no more with wireless LAN devices than is necessary consistent with the potential economic and environmental benefits which the Commission recognizes in the lighting technology.

In addition to the two proposals on emission limits for RF lighting devices endorsed by the Committee thus far, comments were filed in the Commission's Notice of Proposed Rulemaking, ET Docket No. 98-42: 1998 Biennial Regulatory Review, Amendment of Part 18 of the Commission's Rules to Update Regulations for RF Lighting Devices in July 1998. The Committee also submitted a subsequent letter on the matter in November. The comments and subsequent letter requested that the Part 15 interests and the microwave lighting interests work together to establish in-band limits for the microwave lighting. The most recent proposal is a concrete demonstration of our sincere interest to resolve this issue through direct discussion with the promoters of RF lighting devices.

Respectfully,

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