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

In Re Petition of

Octatron, Inc. and Chang Industry, Inc.

ET Docket No. 05-356

For Waiver of Sections 15.247(b),
15.247(e), and 15.249(a) of the Rules and
Regulations

Via the ECFS

COMMENTS OF IEEE 802.18

IEEE 802.18, the Radio Regulatory Technical Advisory Group (“the RR-TAG”) within IEEE 802¹ hereby submits its Comments in the above-captioned Proceeding. This document was prepared and approved by the RR-TAG, and also was reviewed by the IEEE 802 Executive Committee.²

The members of the RR-TAG that participate in the IEEE 802 standards process are interested parties in this proceeding. We appreciate the opportunity to provide these comments to the Commission.

INTRODUCTION

1. On November 28, 2005, Octatron, Inc. and Chang Industry, Inc. filed a request for waiver of Sections 15.245(b), 15.247(e), and 15.249(a) of the Commission’s rules in order to permit the authorization, importation and operation

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

² This document represents the views of IEEE 802.18. It does not necessarily represent the views of the IEEE as a whole or the IEEE Standards Association as a whole.

of its video and audio surveillance systems known as the “Dragon Egg System” and as the “Pole Camera System.”

2. The petitioners request a waiver of the emission limits in Section 15.245(b) and of the spectral density in Section 15.247(e) of the Commission’s rules to permit the operation of its analog system at a EIRP of 1 watt. The petitioners also request a waiver of the power limits in Section 15.249(a) for the surveillance systems.

IEEE 802.18 OPPOSES THE REQUESTED WAIVER OF PART 15.247(E) AND PART 15.249 RULES

3. Since the beginning of Commission’s rulemakings leading to the creation of Part 15.247, the goal has been to permit operation of devices using some form of spread spectrum modulation at transmit power levels up to 1 Watt. Initially, the Commission approved frequency hopping and direct sequence spread spectrum modulations as the spreading method, and later approved digital modulations as another acceptable form of spectrum spreading.
4. In creating and evolving the Part 15.247 rules to include digital modulations, the Commission has wisely restricted power densities to less than 8 dBm/3 kHz for digital modulations, which effectively prevents narrowband, fixed frequency, high power signals from jamming other devices in the band, improving coexistence among different devices.
5. In both these instances, the initial creation of the rules, and the later inclusion of digital modulations, the Commission has retained the essential idea of energy spreading to promote a modest level of coexistence between devices.
6. The subject request for waiver proposes abandoning the Commission’s efforts to promote coexistence between heterogeneous devices operating under Part 15.247 by permitting a disruptive narrowband technology to be introduced into the US market, a technology inconsistent with the direction the Commission has taken to date in regulating and approving unlicensed devices under Part 15.247. We believe this does not serve either the broad public interest or the economic interests of vendors of existing devices meeting Part 15.247 requirements.

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7. We further believe that granting this waiver will create a precedent for future approval of other high power, narrowband devices which bypass the existing restrictions of 15.247, leading to further economic harm to manufacturer's of devices using energy spreading techniques operating in the 902-928 MHz band.
 8. IEEE 802 has created a standard, IEEE 802.15.4, which includes the specification of network devices operating in the 902-928 MHz band targeted at low data rate applications like sensor networks. Devices conforming to IEEE 802.15.4 are beginning to be applied to a wide range of home, and industrial monitoring applications in the US, and may include applications which affect public safety, such as smoke detection systems, intrusion alarm systems, etc. The operation of these devices depend in part on an electromagnetic environment where the energy of contending signals from other devices are spread over all or part of the 902-928 MHz spectrum at reasonable power densities.
 9. If approved, the subject waiver would create a situation where the operation of sensor networks similar to those specified in IEEE 802.15.4 could be effectively jammed by the operation of the proposed devices. We believe these sensor networks will, as time goes on, become widely distributed in the US, and reliable operation of these networks will become a more pressing economic and social need as they are applied to an increasingly wide range of tasks.
 10. We believe that there are compelling reasons to maintain a reasonably circumscribed emissions environment supporting the operation of sensor networks for home, industrial, and public safety applications, and to support the operation of other devices in the 902-928 MHz band which use energy spreading as a means of coexistence. Therefore, we strongly urge that the Commission reject this waiver.

Respectfully submitted,

Michael Lynch

/s/

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