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

In Re Petition of

The American Radio Relay League,
Incorporated RM-11325

Amendment of the Amateur Service Rules to
Facilitate Use of Spread Spectrum
Communications Technology

Via the ECFS

COMMENTS OF IEEE 802.18

IEEE 802.18, the Radio Regulatory Technical Advisory Group ("the RR-TAG") within IEEE 802[1] hereby submits its Comments in the above-captioned Proceeding. This document was prepared and approved unanimously 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 March 13, 2006, The American Radio Relay League, Incorporated (ARRL) filed a Petition for Rule Making requesting deletion of sentences two, three and four of Section 97.311(d) of the Commission's rules. The effect of the rule change would be to eliminate an automatic power control provision.

[1] The IEEE Local and Metropolitan Area Networks Standards Committee ("IEEE 802" or the "LMSC")

IEEE 802.18 OPPOSES THE REQUESTED CHANGE OF PART 97.311(D) RULES

2. Despite ARRL's claim, Automated Transmitter Power Control (ATPC) has been demonstrated to be a viable technology that is operational in many consumer products such as CDMA cellular phones and some Wireless Local Area Network (WLAN) devices. .
3. The miniaturization of computing technology into microcontrollers has led the way for more intelligent control of RF energy emissions to minimize the potential un-necessary emissions beyond that required to maintain desired communications. This is accomplished by providing a closed path system where the receiver is able to feedback data to the transmitter to maintain a quality signal without the use of excessive power.
4. Use of ATPC, smart antenna and other technologies, reduce RF emission coverage areas, permitting spectrum reuse. A prime example of ATPC is with CDMA cellular phones that interactively change transmitted power levels to maintain communications while allowing frequency reuse in nearby cells.
5. Cognitive Radio systems utilize this cooperative interaction to permit multiple RF links to transfer data without mutual degradation. .
6. Spread Spectrum as defined in 97.3(c)(8) specifies that the emission characteristics shall use
   - the first symbol of A,C,D, F, G, H, J, R
   - a second symbol as X
   - a third symbol as X as defined in 2.201(d)

   Section 2.201(d) specifies emission characteristics as follows:

   For the second symbol:

   - 2 is for 'A single channel containing quantized or digital information with the use of a modulating sub-carrier, excluding time-division multiplex'
   - X is for 'Cases not otherwise covered'

   For the third symbol:

   - D specifies 'Data transmission, telemetry, telecommand'
   - X as ' Cases not otherwise covered'
7. Given the existence of a digital feedback path, it is possible for the receiver to indicate when signal levels are in excess of that required for communications, altering the modulation,

[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.

coding and transmitter power levels on a packet by packet basis as the data is sent to different receiver stations. This would be in line with Section 97.313(a) which states that "[a]n amateur station must use the minimum transmitter power level necessary to carry out the desired communications."

CONCLUSION

We believe available technology can be implemented providing ATPC as demonstrated by CDMA cellular phones. Retaining the ATPC requirement aids and promotes efficient use of the spectrum. Therefore, we recommend that the Commission reject this petition.

Respectfully submitted,

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/s/
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