

Before the Federal Communications Commission

Washington DC 20554

In the Matter of RM-11831,

Amendment of Part 97 of the Commission's Amateur Radio Service Rules to Reduce Interference and Add Transparency to Digital Data Communications

Comments of Robert W Rennard, N7WY

I am writing to ask the FCC to consider the subject RM as a wakeup call for the FCC to modernize outdated portions of 47 CFR Part 97, the rules applicable to US amateur radio operators.

Background

I was first licensed in 1961 while I was in high school. Subsequently I earned a generalized BSEE and a MSEE with major emphasis on statistical communications theory. That lead to my being assigned to the initial cadre of what later became the GPS Joint DoD Program Office. I am a member of the GPS Originators Team that was awarded the Robert H Goddard award for contributions to the US Space Program about a decade ago. I authored the documents that lead during WARC 1979 to the assignment of the frequencies used by GPS. After GPS, I earned a PhD in another engineering discipline, and then became the USAF engineering development manager for the low data rate payload for the multi-satellite MILSTAR 1 communications system.

The GPS Interface Control Drawings which include the frequency plan, CDMA technique, Hamming error detection method, data message content, mathematics for using the data content, etc.; but do not provide the means for implementing a GPS receiver have been open to the public for 40 years. The exotic coding, interleaving, and other techniques employed by MILSTAR to achieve robust communications in the presence of natural and man-made challenges; e.g., jamming are not open to the public.

§97.113 Prohibited transmissions. Subparagraph (4) prohibits, "...messages encoded for the purpose of obscuring their meaning, ...". I believe that prior to the application of modern techniques in the amateur radio domain, this rule was meant to preclude sending encrypted messages via Morse code, RTTY, or the like.

In his comments to the FCC regarding the subject RM, Theodore Rapport argues that, "Winlink and Pactor are "effectively encrypted" in that, while no actual encryption is used, the effect is the same." I believe that if jurors recruited from the public at large were empaneled to listen to the arguments of the purists on both sides of this argument, after brief discussion, the jury would decide that, "If it quacks like a duck, it probably is a duck". The communications might not be encrypted from the viewpoint of a purist, but the consequence of the employed encoding and/or compression is that it might as well be encrypted.

In his comments regarding the RM, Philip Karn is "... sympathetic to the underlying principle that amateur radio must remain open, non-commercial and self-policing". In their comments regarding the

RM, the creators of PACTOR, SCS argues that it is possible to monitor PACTOR communications using one of their modems placed in PMON mode. The FCC and the ARRL have recently created a Volunteer Monitor program which should be activated later this year. SCS seems to be arguing that monitoring is possible, but obviously not without substantial expense. So, how will a VM be able to ensure that, also from (4), "...obscene or indecent words or language; or false or deceptive messages, signals or identification...." are not present on the amateur bands? This is particularly challenging from the perspective of monitoring for violations of the subparagraphs of §97.219.

Karn expresses concern that adopting RM-11831 would immediately cause radio systems employing DVSI AMBE to immediately be banned. This is an extreme conclusion, but points out that FCC should be more responsive in regulating proprietary, emerging technologies that migrate to amateur radio application.

I suggest that the FCC needs to change the wording of §97.113 so that even if the purpose of encoding is not to obscure the content, but that the result is that the content is obscured such that proprietary techniques for extracting the content must be employed, that method cannot be used by amateur radio operators.

Respectfully submitted,

Robert W Rennard, PhD, N7WY