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Chairman Ajit Pai  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

November 15, 2018

Subject: *ex parte* Comments on Docket 16-239 (Amateur Baud Rate NPRM)

Dear Chairman Pai:

I am writing out of concern for our national security, and for the protection and preservation of an important national hobby, amateur ("ham") radio, governed by the Commission's Part 97 rules.

I urge you and the other Commissioners to not take any action on the NPRM in Docket 16-239 until the proponents address some key issues relating to both homeland security and the future of self-monitoring in the Amateur Radio Service.

Part 97 governs the Amateur Radio Service, which is *not* the Amateur Cryptography Service. Part 97 rules have historically made clear in many places that all radio transmissions by US "hams" must be open, unobscured, freely listened to and interpreted by other hams as they use the public airways, must be personal in nature, and must not be used for business or for bypassing other commercially available telecommunication services.

The Amateur Radio Service is a vital hobby for our country, and was responsible for causing me and countless others to pursue a career in engineering – a career that plays an important role in advancing America's high tech competency and our economy. **The reason why amateur radio works reasonably well in discipline with very limited FCC involvement and enforcement is because of its self-policing nature of monitoring content over the airwaves, from peer pressure, which is made possible only by open and unobscured transmissions over the air.**

Expanding the use of certain digital transmission modes, such as Winlink used with Pactor, requires NSA-like skills for third parties to monitor for understanding, and will have long term domino effects on the entire amateur radio ecosystem, while enriching one manufacturer (SCS in the case of Pactor) with a *de facto* monopoly in the niche amateur radio market.

An alternative way to allow the use of Pactor with Winlink, and other proprietary Automated Repeat Request (ARQ) digital modes in the amateur bands, is to wait until its proponents make available to the public fully documented and verified open source software that decodes *all* transmissions, using existing and generally available hardware and software for rank and file hams. Such fully documented and verified open source decoding capabilities would provide the means to monitor the currently obscured over-the-air transmissions, and is needed to comply with the scope and spirit of amateur radio and Part 97, as is done routinely by other digital modes. Contrary to the SCS filing dated November 7, 2018, Pactor and Winlink *cannot* be deciphered by

rank and file hams over the air – the ARQ messages are obscured, and many other digital modes that work with Winlink are similarly obscured.

Mr. Ron Kolarik recently submitted a Proposal for Rulemaking that gets to the very heart of, and offers a cure, for Part 97 deficiencies on this important issue. Proponents of the NPRM have failed to consider the importance of national security and the need to maintain open, unobscured communications on the public airwaves, and have similarly ignored these important aspects in past proceedings such as RM-11708, RM-11306, and in the American Radio Relay League’s recent request to the Commission to expand Technician-class HF data privileges, as well as in its “Ad Hoc HF Digital Committee.”

The threat to our national security, and the current violations of Part 97 rules by current Pactor and Winlink operations, are kept at bay today by the existing 300 baud limit that NPRM 16-239 attempts to remove. Unless these offending digital modes can be made open, and made readily-decodable and intelligible over the air, as is the case with other amateur radio modes, they pose a real threat to the fabric of the amateur radio service, and pose a legitimate national security threat by enabling secret cross-border communications over shortwave (High Frequency) that cannot be readily monitored by other amateur operators or the FCC.

Sincerely,

A handwritten signature in black ink, appearing to read 'TSR', with a long horizontal flourish extending to the right.

Theodore S. Rappaport, N9NB  
David Lee/Ernst Weber Chair  
Director, NYU WIRELESS

Cc: Dr. Eric Burger, Jessica Rosenworcel, Rachael Bender, Matthew Berry, Jules Knapp

ECFS - Docket 16-239, 17-344, RM-11708, RM-11759