

## REPLY TO COMMENTS from Ron Kolarik K0IDT, ARRL Member

The comments on WT 16-239 are running 9 to 1 against the proposal as written. Those opposed have presented solutions to current and future problems, those in favor of the NPRM chose not to answer the questions posed by the Commission and instead veered off into why they *need* Pactor 4. No discussions were given by proponents about the increased congestion that the Commission recognizes in the NPRM, those few commenters in favor of the NPRM have only stated there would be “no negative impact” without offering supporting evidence. No proof is given by those in favor regarding the cost/benefit or how it would improve the amateur radio service beyond faster email service--only that all of amateur radio would benefit -- again, nothing is given to support that premise. Only a few in favor of the NPRM specified the need for a bandwidth limit-- most favored no bandwidth limit.

Those in favor of the original petition, RM-11708, and the NPRM think it's about legalizing Pactor 4 and not about the baud rate limit. Enacting the NPRM would clearly allow Pactor 4, but there still remains the huge question as to whether any Pactor mode beyond the original Pactor I is legal, according to FCC 97.309(a)(4), since the codes for Pactor II, Pactor III, and Pactor IV (explicitly desired by the few commenters in favor of NPRM) are not published or listed as a specified code. Perhaps the proposal should be withdrawn due to the misunderstanding.

Some in the amateur radio community seem to think amateur radio is an emergency service, and a recent ARRL emailing advertised licensing classes for the purpose of becoming an “emergency communicator”. The ARRL is a membership organization and it appears that ARRL is trying to increase membership by creating “emergency communicators”. While there's nothing wrong with recruiting new hams, the ARRL is misleading them as to what amateur radio is; both the ARRL and FCC have previously stated amateur radio is not an emergency service, FCC 97.1(a) doesn't say “shall provide”, but recognizes that amateur radio **has a value in emergency communications.**

Some in the hobby seem to think that amateur radio is an “email service provider” for ships at sea, and want Pactor 4 so they can send more data and use email and internet while at sea. What's obviously wrong with this position is that the primary organization, Winlink, will be in direct competition with SailMail and their Pactor 4 network which is a commercial service. With the advent of things like PiGate, <http://www.pigate.net/>, which is designed to be used in disaster areas, there is already the existing problem that anyone with a smart phone or tablet can use amateur spectrum to send emails without a license. Is this what the FCC wants for amateur radio? Is the hobby supposed to become an amateur email service?

A few commenters involved with emergency communications who are opposed to the NPRM recognize the danger posed by wide data given the current state of the HF amateur bands, and would probably jump at the chance to use digital on an established HF voice channel to pass whatever limited data they need to send. Emergency events are usually rare and local with very little proven need for HF frequencies (which travel great distances and are very poor performers over local distances – just the opposite for VHF and UHF), but where required for emergencies, it would be more efficient to have one station configured for voice and data, which is not possible under current rules. Depending on HF data during a local emergency is a very poor choice, with numerous failures documented in after-action reports and QST; for example a solar flare took out HF communications during hurricane Katrina and there's no evidence HF was used during hurricane Sandy. It may be preferable under a different petition to eliminate the RTTY/Data and Voice/Image designations and go with a maximum band width instead, perhaps limiting bandwidths to 200 Hz in the lowest 50 kHz of every HF band to protect the CW and

narrowband experimentation and low power and long distance DXing, and providing a limit of 400Hz in the segment of the current RTTY/Data subbands above the lowest 50 kHz of the subband, and 6kHz in the Voice/Image segment, allowing any legal mode as long as it meets the bandwidth limits.

ARRL again used 60m as an example of mixed mode usage in their comments to the NPRM, urging the allowance of any mode, no baud restrictions, but a 2.8kHz band width limit. There is virtually no Pactor or other wideband data mode used by amateurs on 60m because unattended operation is not allowed and this is the primary way Pactor is used on the rest of the amateur bands. There is no way to tell an unattended station the frequency is in use or for that station to effectively recognize that a primary 60m user is already on channel. Pactor 4 and automated messaging appear to be the fundamental goal of the ARRL's petitions. That's really what the ARRL's original RM 11708 petition, and its past RM 11306 petition, is all about if the proponents of the change were honest about it. There seems to be a need to stay connected that carries over from smart phones, is this the path amateur radio needs to follow or should we try to do more with less and utilize a very limited resource in a way that benefits more than a small minority of ACDS email servers/users who are obsessed with staying connected? The comments were over 90% against the NPRM. Those against the NPRM were very consistent and clear about the unintended consequences of interference as well as current violations and encryption that would only become worse through either NPRM or RM 11708.

ARRL stated in its comments to the NPRM that those opposed to the original RM, "offered no evidence that the relief proposed in the ARRL Petition would create a situation in which data transmissions will overwhelm the subband, precluding narrow bandwidth emission communications", yet the ARRL itself provided no evidence to support the removal of the 300 baud limit and adding 2.8KkHz bandwidth limit would prevent data transmissions from overwhelming the vast number of narrow bandwidth operations. They then state, "However, even 2.8 kHz could arguably permit usurpation of the subbands to the detriment of CW and other narrow-bandwidth emissions." That's contradictory and a bit confusing at best. The ARRL, in its filing, concedes there is a genuine and valid concern for the vast number of commenters against both NPRM and 11708, but then states without proof or evidence that 2.8 kHz is either the "magic" allowable bandwidth, or that it should not be considerably more narrow than 2.8 kHz. The ARRL's position of making 2.8 kHz the maximum allowable bandwidth for the entire RTTY/Data subbands on HF flies in the face of global IARU suggested band plans that separate wide and narrow emissions, even within the RTTY/Data subbands. Current amateur operations experience daily interference now with current data modes (Pactor II, Pactor III, Winmor) operating in clear violation of existing rules and are lacking good amateur practice, the large number of complaints in the comments should be sufficient evidence of this to the FCC (See also comments filed in RM 11708). Voluntary band plans as a solution? No-We need "defined by regulation" band plans, not something from an organization that has no regulatory power and only represents approximately 20% of the US amateur population and has a focused membership goal; a good portion of the ARRL membership is also not in agreement with everything the ARRL does, particularly RM-11708 and the way it was developed and presented.

I have yet to see a compelling argument as to the need for HF wideband digital modes in amateur radio. It would be helpful if those in favor would explain why they want wide band beyond the email aspect and if it should be allowed on the entire sub band. What kinds of data need to be sent on the amateur allocations require wide band emissions that can't be readily accommodated on another service or sent using currently available modes? If we must have wideband data there has to be some restriction on bandwidth and where it operates if the baud rate is relaxed. There must also be clear identification and the use of only published, easily decipherable modulations. Under 16-239 there is a limit to bandwidth, the edges of the RTTY/Data sub band – the entire band allocation effectively limits the signal

bandwidth, but there's no practically useful mode, outside of spread spectrum, that could possibly use that much spectrum and SS is not allowed on HF, so there clearly must be emission limits. As far as a bandwidth limit and where these wide modes are allowed to operate, they are claimed to be more efficient to allow use/reuse of frequency, there should be no problem restricting them to the current 97.221(b) sub bands, which represent 13.5% of the RTTY/Data sub bands, and would also act as a bandwidth limit. The key is that the FCC must ensure current violations are remedied on ACDS use and identification/encryption before allowing this wider band spectrum allocation, and then only in a small portion of each RTTY/Data sub band, so that narrow band users are protected and not interfered with.

It makes sense to restrict the wideband modes to the 97.221(b) sub bands, virtually all the Pactor 3 use is in these areas and Pactor 4, if allowed, should operate there along with other wide modes as it's clear from comments the only purpose for the new modes is store and forward mailbox use. If confined to current auto sub bands they will be limited only by the size of the sub band and with current HF networks only one user at a time may access a server to send traffic, no vertical stacking of users to time or frequency share which is not terribly efficient, it should not pose a hardship if someone has to wait for the channel to clear. Some low power enthusiasts do operate crystal control fixed frequency radios with limited frequency agility but it's a choice they make and if the channel is busy they wait. The rest of us have to determine if a channel is clear before transmitting and have the ability to move to find a clear spot or wait. The mailboxes operate on fixed channels, by choice and necessity, and should be capable of sharing their slice of the RTTY/Data sub bands with what's possibly less than 1% of the total US ham population involved in wide band experimenting or email. The manned stations are quite capable of squeezing multiple users in a small slice of spectrum and it's past time the ACDS stations develop adequate sharing methods to mitigate the present interference problems.

ARRL repeatedly referenced very narrow, cramped, heavily used MF/HF bands but yet want to add a new type of congestion. One proponent comment, <https://ecfsapi.fcc.gov/file/7521369608.pdf>, under the original RM stated that wide digital couldn't be placed in the phone sub bands because it would create a "new type of interference for SSB operators to deal with", but said nothing about the problems it would create if allowed in the narrower RTTY/Data segment. It would be helpful if the proponents would just admit their intended operation is going to cause problems and submit a workable solution.

ARRL comment

"9. Notwithstanding any of the foregoing, those who either opposed deletion of the symbol rate limit or supported that deletion but opposed the ARRL's proposed 2.8 kilohertz maximum bandwidth for locally and remotely controlled data emissions in the MF and HF bands **have a very valid concern that absolutely must be addressed.** They collectively express a predictive, unquantified fear that an increase in the number of data emissions in the RTTY/data subbands will create new incompatibility between data emissions and ongoing CW, RTTY and narrow bandwidth data modes (such as PSK-31) that are and have long been popular in the low ends of MF and HF bands. This concern must be addressed. Had the Commission proposed to enact both of the proposals in ARRL's Petition rather than just one, the fears expressed by these commenters would be overstated. As it is, those fears might well be realized."

This is very confusing, in one place we have an "unquantified fear" of an increase in data emissions and in another we have "a very valid concern that absolutely must be addressed" and only if the 2.8kHz limit is adopted then the "fears expressed by these commenters would be overstated". How is this possible? New wide band emissions would be allowed in the entire RTTY/Data sub band but it would be okay because they are limited to 2.8kHz? The original RM was a solution to a non-existent problem,

if unlimited wide band, 300 baud or less, emissions were a threat it would have been tried by now if the mode had some value in improving communications, amateurs tend to do things like that.

## Summary

Reasons why this should not go forward

1. Simply not needed in today's world where anyone can send messages and access the internet with a smart phone from almost anywhere on the globe. What is the massive amount of data that needs high speed transfer on HF amateur radio?
2. No protection for incumbent users, current rules are routinely violated.
3. No provision for monitoring the new modes for content compliance. ARQ modes billed as providing 100% error free messaging, but the link is not able to be monitored. Is this really necessary in amateur radio? It is amateur radio not amateur ISP or amateur text messaging.
4. Current questionable practices, creative rules interpretation of control operator, beacons become soundings, remote base to skirt 97.221(c) etc.
5. Faster data speeds open the door to internet portals set up as a remote base for private internet access. There's a real danger here; almost any connection to the internet is encrypted, https:, speeds similar to old dial up speeds or greater would be possible if the NPRM goes into effect.
6. Documented illegal data activity and abuse of amateur spectrum,  
<https://ecfsapi.fcc.gov/file/7520959821.pdf>  
<https://www.fcc.gov/ecfs/filing/10925839109476>  
<https://www.fcc.gov/ecfs/filing/1092719005718>  
Randall Evans, the only thing missing in this comment is a request for PokeMon GO!  
<https://ecfsapi.fcc.gov/file/7521315143.pdf>  
Has any action been taken against this individual or the ham that is letting him use his call?
6. If the requested removal of the baud rate is holding US amateurs back from joining the rest of the world then why aren't any wide modes beyond Pactor 4 in use worldwide?
7. Parkinsons law: The demand upon a resource tends to expand to match the supply of the resource. The reverse is not true. Broadband ISP's, with much greater available bandwidth, are routinely affected by the increase in streaming content, network slowdowns, service not available, and it will happen on the ham bands leading to more congestion and interference.

## Postscript

I was disappointed to see in the comments a general dismissal of opponents as wrong, don't understand it, delusional, dinosaurs and there is one instance of an ARRL official on video calling opposition to the original RM irrational. The fault lies with the proponents and petitioner for failing to get input for the original RM and not educating the masses on what it was intended to do; after the fact FAQ's and band plans are a poor way to manage things.

Thank you,  
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