

COMMENTS FCC OET 17-215 BY JANIS CARSON

INTERNET CB OR AN “REA” STYLE PROGRAM NEEDED TO SERVE INTERNET NEEDS OF VESSELS AND ISOLATED AREAS OF THE USA; PROBLEMS & SOLUTIONS

There are currently open proceedings at the FCC which address an urgent unsatisfied telecommunication need. These proceedings need to be expedited with a better sense of urgency. These proceedings, if pursued with the appropriate dispatch, would also fit well with a renewed sense of technical innovation, business development, job creation, and economic stimulus. They also fit within the purview of 17-215, under the statements:

“For instance, multi-stakeholder groups, such as the Wireless Innovation Forum, might be used to **manage the technical rules for supporting new services**. However, challenges must be addressed, including compliance with requirements that reference materials be publicly available and that changes made to referenced documents be subject to additional rule making processes.”

“7. How can FCC work processes best be improved? Increasing use is made of external multi-stakeholder groups to develop complex technical requirements, systems, and procedures necessary to implement Commission service rules. **How can the Commission leverage these efforts to accelerate the introduction of new technologies and services?**”

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Internet CB or something similar is needed. Current FCC rules and actions.

The FCC needs to partner with businesses, users, and other stakeholders to provide an under served and growing user base with an urgently needed Internet service. These users are coping with a problem that is currently using technologies that are truly antique by any measure. I refer to the following FCC proceedings and current rules:

<https://www.fcc.gov/rulemaking/12-354>

And quoting from:

https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=2dd346ae3b51f2866ab6fb907e755526&mc=true&r=PART&n=pt47.5.96#se47.5.96_15

“§96.11 Frequencies.

(a) **The Citizens Broadband Radio Service is authorized in the 3550-3700 MHz frequency band.**

- (1) General Authorized Access Users may operate in the 3550-3700 MHz frequency band.
 - (2) Priority Access Users may operate in the 3550-3650 MHz frequency band.
 - (3) Grandfathered Wireless Broadband Licensees may continue to use the 3650-3700 MHz band in accordance with §90.1338 of this chapter.
- (b) [Reserved]”

How to expand them and make it work for users.

If the current FCC measures are insufficient to address the problem, urgent action is needed to expand them to whatever is necessary. If the FCC does not have the resources to solve this problem, industry IT experts can be partnered with to provide the technical know how to get the job done properly. They will also have the expertise and manpower to implement the new infrastructure in a timely fashion.

The America of the 21st century **needs a program like the 1934 Rural Electrification and Telephone Act**, but this time for the Internet. There are many under served areas which are taking whatever measures the deem necessary to get the service they need. This is creating a real problem, which the FCC has not addressed through its inherent power and authority. We have survived an economic depression before, and here is one way we lifted ourselves by the boot straps and got out of it, by partnering with industry:

https://en.wikipedia.org/wiki/Rural_Electrification_Act

This especially needs to be managed by IT professionals, not politicians. A past Internet initiative under Clinton did not provide the intended result. **A lot of businesses ran fiber optic cable at tax payer expense. But they never lit up the cable. We cannot let this happen again. The FCC and IT professionals can get this done right this time.** I have fiber 1/4 mile away from me, and cannot get access to it. I have been told by the utility that owns it, that half of it is not even lit up. Luckily, there is finally a small local cable TV provider that got me back on line after I abandoned dial up, for a period of ten years. It is not fast, but it is much better than dial up. **There are many US citizens who are using an antique kludge for internet access that does not even provide dial up speeds.** The FCC needs to partner with SailMail or whoever else can provide dependable legal email and more to these users. Allowing amateur radio to undercut any revenue stream of a firm who might otherwise invest in a system and make just profit from it to support its installation and maintenance is **ILLEGAL** and in the end, counterproductive. It is counterproductive because even if the entire amateur HF spectrum were to be confiscated for this use, it cannot possibly provide sufficient band width to meet the need, regardless of the transmitter band width allowed. There are current proceedings that are headed in the wrong direction, and will perpetuate this predicament. They should be headed off before more damage is done. These proceedings fall under the 17-215 wording:

“1.Regulations that should be removed because they have become outdated, **inhibit innovation** or would be better handled by the involved parties. **What would replace such regulations if they are removed?”**

“7.How can FCC work processes best be improved? Increasing use is made of external multi-stakeholder groups to develop complex technical requirements, systems, and procedures necessary to implement Commission service rules. How can the Commission leverage these efforts to accelerate the introduction of new technologies and services?”

A pending rule making which should be stopped.

The FCC proceeding which should be stopped is WT 16-239.

Some interests (ARRL and Winlink) are trying to sell what they have, not what users actually need. Further, it is using a non commercial service for commercial purposes. The technologies being promoted are antique in their performance, and much better is needed. By competing with competent businesses which might provide the desired service, they are **stifling innovation. The clear solution is to provide a commercial, professionally engineered, stable, viable system which non technical citizens can employ for their valid internet and email needs. The users in question are as follows.**

Who needs this?

People who own ocean going vessels and travel the high seas or along the US coast line need a system for reliable personal and business related email, secure position reporting, and safety purposes. SailMail does not meet that need. There are constant complaints that there is insufficient connect time available, too few RMS stations to connect to reliably, and too much traffic for the infrastructure. While APRS position reporting (using 30 meter HF and VHF) and other ham radio linked technologies are used by vessels at sea, these are not secure, and could leave the users open to attack by pirates who are tracking them and targeting them when they enter dangerous areas of the world. **The Coast Guard and the FCC should have partnered with competent businesses to provide this service as well.** Users have turned to whatever means they can find to meet their needs, though it falls far short of their goals.

People in Alaska or other isolated land areas, some of them US military, and some of them Alaskan citizens living off the grid, need Internet connection, and have to resort to ham radio in some cases to get it. There is a special need in that case. The FCC has allocated voice channel frequencies OUTSIDE the ham bands around 5 MHz to help with some of the telephone short fall, and provide an emergency calling frequency (now programmed into many ham rigs). Some Alaskan citizens also have obtained amateur licenses, but the communications needs of the general public are not well served by that licensing system and its restrictions. Amateur licensing is geared to technical experimentation, or less politely, nerds. Nerds need some radio spectrum to have their kind of fun, just as people need National Parks to hike, camp, and enjoy the beauty of the American countryside. But for the average citizen needing internet service, they want something better.

THIS IS NOT THEIR FAULT. IT IS THE GOVERNMENT'S FAULT FOR NOT SPONSORING THE INFRASTRUCTURE IN A MEANINGFUL WAY. THE FCC SHOULD BE AT THE FOREFRONT OF THIS IMPORTANT WORK. IT WILL CREATE JOBS TO INSTALL IT AND MAINTAIN IT. THIS IS IMPORTANT INFRASTRUCTURE, JUST AS IMPORTANT AS ROADS AND BRIDGES, AND IT WILL STIMULATE OTHER COMMERCE SERVING THE NEEDS OF LAND AND MARINE BASED USERS. A WHISPER IN A CONGRESSPERSON'S EAR MIGHT GET THE FUNDS AND ACTION NEEDED, ESPECIALLY IF THAT CONGRESSPERSON'S CONSTITUENCY RESIDES IN ALASKA, OR ALONG THE SHORE OF THE LOWER 48 STATES, OR HAWAII OR PUERTO RICO. A lot of boaters have home ports in the coastal US areas and island territories. I believe a clever FCC administrator with some connections can arrange a lunch meeting to discuss some of these ideas.

How to get it done properly, with limited FCC resources and business partners.

Even if the FCC does not have the financial resources, it should make available spectrum for development of this infrastructure, and conduct a spectrum auction to make it happen. **FCC DOES HAVE CONTROL OF THE SPECTRUM, AND IT WOULD COST ABSOLUTELY NOTHING TO GIVE IT AWAY, IN A DE FACTO SUBSIDY, IF NECESSARY, TO A COMPANY OR CONSORTIUM COMPETENT TO PROPERLY DEVELOP IT FOR THESE USES. This needs to be put into the hands of experienced IT and telecommunications professionals, not amateurs who are tinkering with technology to learn something for their own purposes, in order to provide reliable, stable results for paying non amateur radio users. The current condition is an obsolete kludge at best, that serves no one well.**

Amateur Radio's contributions to Emergency Communications.

The same technology (HF short wave radio, voice, Morse code, or digital messaging) has long been promoted and used for emergency communication by amateur operators. In an emergency, ANY system that gets the job done is more than welcome. The most recent example of this is the "Force of 50" that ARRL sent to Puerto Rico in partnership with the Salvation Army's organizing oversight. The methods used were VHF voice repeaters to help relief workers and HF Winlink systems to send Health and Welfare messages posted to a Salvation Army bulletin board. It may still be useful for a time. Industry did some spectacular improvising in providing balloons to get microwave links operational for cell phone and internet service as well. Any service that amateur radio can provide in that sort of situation is enthusiastically supported by us hams. Extreme caution is exercised to avoid interference with relief communications. A popular radio contest was actually CANCELLED to prevent interference to Puerto Rico related traffic.

However, the ARRL and Winlink emphasis on HF operations, and HF Packet radio is certainly going to diminish in the very near future. The government is rolling out a program called FirstNet, which provides high speed digital capability for first responders. This will provide secure communication that agencies need to accomplish essential public safety goals. Here is a quote from the ARRL:

"Spawned by the 9/11 Commission Report of July 2004, the program responds to key Commission findings from the 2001 terrorist attacks: **first responders couldn't communicate with each other;** neighboring jurisdictions in New Jersey and northern Virginia **lacked interoperability** with the affected area, and **commercial networks failed almost immediately in the wake of the disaster**, without assistance from wind, rain, or fire."

"Beyond interoperability, the program seeks to expand geographic coverage, **especially the extension of LTE (Long-Term Evolution) service to rural areas, where relatively small chunks of investment can produce outsized results. Broadband, broadly distributed.**"

"**We must focus on the problem we are seeking to solve, not on the solutions we have at hand.** We must be facile, agile, and always forward-thinking with regard to the public's needs. What have we learned by observing all the entities that have hardened-up and upgraded since 9/11, Katrina, and Sandy? First responders and their patrons demand capabilities that cannot be satisfied simply by analog voice. If you believe that this applies only to large population centers, read about the geographic aspirations of FirstNet. It's coming to a location near you. In the 21st century, people want to communicate using the modes and devices they find most comfortable."

Quotes from ARRL QST magazine:

<http://www.arrl.org/files/file/QST/This%20Month%20in%20QST/June2017/Second%20Century%2006.pdf>

Clearly, a “top down” communications strategy is needed, with FCC and FEMA guidance rather than local governments bidding out systems to local contractors. FirstNet is the first step in the RIGHT direction for an effective NATIONAL strategy.

I hope the armed forces will rekindle their interest in MARS amateur activity. The military is the ONLY agency with the manpower and logistics to get a job as big as Puerto Rico relief done right. They could use trained ex military personnel to off load some of the communications. It would get done THEIR WAY, using their methods, such as STANAG, which will provide the right kind of interoperability. Amateur radio should not attempt to impose its methods or agenda.

Similarly, Red Cross and Salvation Army want help, some of it with communications. But they have their own methods, training, and traffic handling networks. We need to work with them and do it THEIR WAY.

And no one can blame them for not buying all of what the ARRL was selling.

This information is given in light of what was accomplished in Puerto Rico. Amateur radio will continue to work hard for this kind of good outcome. Winlink was a major contributor to that, and should be commended for its accomplishment.

VERY IMPORTANT: I DELIBERATELY PUT THIS FIRST, BECAUSE I DO NOT WANT TO BE ACCUSED OF JUST HATING ON WINLINK or the ARRL. But the truth needs to be spoken.

Existing FCC Part 97 rules to keep and enforce.

However, on a daily basis, as a substitute for a commercial provider, this exact same technology falls under existing FCC regulations that have apparently lost their authority. To be certain of the exact intent of my comments, I quote at length and **highlight certain portions of Part 97 rules that need to be kept and enforced properly**, and discuss them at length in the following pages:

§97.113 Prohibited transmissions.

(a) No amateur station shall transmit:

(2) Communications for hire or for material compensation, direct or indirect, paid or promised, except as otherwise provided in these rules;

(5) Communications, on a regular basis, which could reasonably be furnished alternatively through other radio services.

§97.115 Third party communications.

(c) No station may transmit third party communications while being automatically controlled except a station transmitting a RTTY or data emission.

(d) At the end of an exchange of international third party communications, the station must also transmit in the station identification procedure the call sign of the station with which a third party message was exchanged.

[54 FR 25857, June 20, 1989; 54 FR 39535, Sept. 27, 1989, as amended at 71 FR 25982, May 3, 2006; 71 FR 66462, Nov. 15, 2006]

§97.219 Message forwarding system.

(a) Any amateur station may participate in a message forwarding system, subject to the privileges of the class of operator license held.

(b) For stations participating in a message forwarding system, the control operator of the station originating a message is primarily accountable for any violation of the rules in this part contained in the message.

(c) Except as noted in (d) of this section, for stations participating in a message forwarding system, the control operators of forwarding stations that retransmit inadvertently communications that violate the rules in this part are not accountable for the violative communications. **They are, however, responsible for discontinuing such communications once they become aware of their presence.**

(d) For stations participating in a message forwarding system, the **control operator of the first forwarding station must:**

(1) Authenticate the identity of the station from which it accepts communications on behalf of the system; or

(2) Accept accountability for any violation of the rules in this part contained in messages it retransmits to the system.

[59 FR 18975, Apr. 21, 1994]

§97.309 RTTY and data emission codes.

(4) An amateur station transmitting a RTTY or data emission using a digital code specified in this paragraph may use any technique whose technical characteristics have been documented publicly, such as CLOVER, G-TOR, or **PacTOR**, for the purpose of facilitating communications.

(b) Where authorized by §§97.305(c) and 97.307(f), a station may transmit a RTTY or data emission **using an unspecified digital code**, except to a station in a country with which the United States does not have an agreement permitting the code to be used. RTTY and data emissions using unspecified digital codes must not be transmitted for the purpose of obscuring the meaning of any communication. When deemed necessary by a Regional Director to assure compliance with the FCC Rules, a station must:

(1) Cease the transmission using the unspecified digital code;

(2) Restrict transmissions of any digital code to the extent instructed;

(3) Maintain a record, convertible to the original information, of all digital communications transmitted.

[54 FR 25857, June 20, 1989, as amended at 54 FR 39537, Sept. 27, 1989; 56 FR 56172, Nov. 1, 1991; 60 FR 55486, Nov. 1, 1995; 71 FR 25982, May 3, 2006; 71 FR 66465, Nov. 15, 2006; 80 FR 53753, Sept. 8, 2015]

How applicable rules are not being enforced.

The common practice of operating on the edge of the letter of the law has escalated to where it is now viewed as perfectly OK. It is now viewed as an entitlement.

I now urge the FCC to take a fresh look at the part 97 law specifically enumerated above, and decide to retain it and enforce it as written. This comment is offered in support of retaining and enforcing the existing law, as the instructions for 17-215 state:

“Regulations that should be retained because they promote competition, protect incumbents from interference, regulate unlicensed frequencies, are necessary to comply with international agreements, or support the purpose of the FCC.”

The ARRL also has a memorandum of understanding with the US Power Squadrons. I had to dig for it, but I keep a copy on my home page, for reference.

<http://wireless-girl.com/ARRLmemoUSPS.pdf>

That is OK too. ARRL is promoting ham radio as a useful tool and fun hobby to them. They will make a few bucks from selling books and license manuals. OK too. Maybe some of the newcomers to amateur radio will join ARRL and pay dues and stay enrolled; maybe not.

Winlink does its job well as an emergency communications technology. It advertises that, and it is truthful about that. It also promotes the alternate use of Winlink for yachts. Yacht clubs have bankrolled a lot of the research and infrastructure. Their home page is:

<http://www.winlink.org/>

If you look at their home page, you see in the lower right corner, under the heading, “The 2000 to 2017 Platinum Club” of major contributors and sysops of RMS email relay stations:

California Yacht Club Radio Amateur Group, K6CYC, and Eric Oistad, KF6DZT
San Diego Yacht Club Amateur Radio Group, W6IM, and Rod McLennan, W6MWB

It is perfectly OK that Winlink knows what side their bread is buttered on, and they serve that constituency well.

On the same page, on the right hand side, you will see a heading: “Winlink Was There”

Under that heading, you will find a link to “HMS Bounty rescue” on the ARRL web site:

<http://www.arrl.org/news/robin-walbridge-kd4ohz-missing-at-sea-after-sinking-of-tall-ship-em-bounty-em-ship-s-electrician-dou>

Stay with me. Here is where the plot thickens. The Bounty was a replica of the historical ship that was involved in a famous mutiny. It was used in more than one movie, and then sold to various owners. Waldrige was its captain, and used Winlink for daily BUSINESS communications with its owners on a daily basis, as a substitute for legal commercial means commonly available. The ship was poorly maintained, and the captain was judged in a hearing as “negligent” due to the loss of the vessel and loss of life of the captain and one crew member. Lawsuits resulted later, including the ship's insurer. The original SatPhone had been replaced with a lower powered handheld. The only other radio on board was a HF ham rig equipped with Winlink modem. The microphone was not used normally for ham contacts, even for talking on 14.300 Maritime net. Maybe it failed due to salt water, or maybe it had not

worked in a long time. In any event, there were repeated attempts by the crew, begging Waldrige to call the coast guard before thunderstorm static crashes from the hurricane and propagation prevented contacting someone who could help. The HF ham radio never worked for except for Winlink. Most importantly, the claim of using Winlink initially to contact the Coast Guard is made, for the purposes of promoting Winlink. It is just not so. Only after it was certain the ship was doomed, did Waldrige send an email to the owners and managers on land as usual, and THEY contacted the Coast Guard. The land based people established initial contact.

I have provided a summary of the incident, with extracts from the actual Coast Guard hearing, not some news media story. Read it here:

<http://wireless-girl.com/BOUNTYcomments.html>

Or read the full Coast Guard transcript here:

<http://i2.cdn.turner.com/cnn/2014/images/06/12/bounty.pdf>

and here:

<https://www.nts.gov/investigations/AccidentReports/Reports/MAB1403.pdf>

Possible items of interest to the FCC are found starting on page 43, item 160 of the report, regarding life safety communications use of Winlink, and the EPIRB and Satphone on board at the time of the sinking. These are the sources I used in my historical investigations and summary. My summary also references the FCC licenses for the EPIRB for the vessel, which was essential in the recovery of the remaining crew.

The salient point of all of this is as follows:

Winlink was used for COMMERCIAL PURPOSES for the daily business operations of the Bounty. This was likely done as the funds for proper maintenance of the vessel and its life safety equipment were stretched too thin. This is no excuse for not complying with FCC rules, which I now quote:

§97.113 Prohibited transmissions.

(a) No amateur station shall transmit:

(2) Communications for hire or for material compensation, direct or indirect, paid or promised, except as otherwise provided in these rules;

(5) Communications, on a regular basis, which could reasonably be furnished alternatively through other radio services.

I am not the only one who has come to these conclusions. Someone who has sailing experience commented on it as well. The original article has disappeared from the internet, but I have archived it in its full form here:

<http://wireless-girl.com/TheHMSBountyAndWinlinkRescueStory.html>

Here are some quotes from his insightful article:

“As you read the NTSB report there is plenty of indication that **email was just how they normally communicated back and forth with their business office. That is fine as long as their non-emergency business communications were not being done over amateur radio spectrum which would likely violate FCC Part 97 rules.** We will touch on this topic later.

From reading the report it's pretty clear that at least one of the EPIRB units worked just fine when they choose to deploy it. I'm pretty sure the Coast Guard crews would tell us the EPIRB activation was more than enough for them to respond and that the "scene assessment" aircraft was vectored against it.

Later on the "we are abandoning ship" communications were done via radio up to the aircraft that had been standing by on-scene for SEVERAL HOURS. I am going to assume that the aircraft to ship communications were done on VHF marine radio which was apparently still functional too.

The report further opens the door to suspicions that Winlink may of been abused for routine commercial communication purposes on the ship prior to the emergency. Some would argue that would sure help explain the dodgy and dismissive behavior of some in Winlink leadership anytime the details of this story were questioned. Remember those emails supposedly went over amateur radio airwaves and as such they are not subject to any expectation of privacy.

Judging by the report, there were several operational emails flying around between the ship and its business office prior to the incident. One is left wondering what email system were those "business emails" being sent over? **There is plenty of room to speculate that Winlink HF email may have been the "default" communication method on the ship and thus they just used it out of habit.**

All that said, I would gladly tip my hat to Winlink had this story been even half of what the hype tried to sell us. Ham radio success stories are fine, but we don't need exaggerations (I'm being kind) like this one.

Simply read over the NTSB report while noting the sequence of events and visualize the scene on the ship that it lays out. Then go read the ARRL story and the Wikipedia entry on the incident. **Kind of hard to reconcile a lot of it** with what is detailed in the NTSB report. Enough said."

WA4ZKO

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I did exactly as the above author suggested, and came to the same conclusion. Here is the question we cannot get answered by Waldrige for sure, because he is dead. But the Bounty organization could. If they had used the proper legal business communication method, Sailmail or an internet equipped Satphone, the radio had to be capable of transmitting OUTSIDE the ham bands on Marine Commercial FCC frequencies to the mail servers of Sailmail. But there was no legal HF radio to do so. It was a ham rig, not an authorized Marine HF rig. Opening up a ham rig and modifying it to transmit out of band for this purpose is also illegal and unreliable. It is also foolish, because a commercial Marine radio is built to take the tough environment, and optimized with features that assure easy and effective use. A Marine radio is also designed to hail Coast Guard emergency HF calling frequencies on SSB voice.

Winlink should not be used for life safety communications. It is amateur radio. THE COAST GUARD ON ITS HOME PAGE SPECIFICALLY STATES THAT IT DOES NOT WANT PEOPLE USING EMAIL FOR EMERGENCY MAYDAY RESCUE SITUATIONS. THEY DO NOT MONITOR EMAIL. THEY DO MONITOR CERTAIN CALLING FREQUENCIES ON HF AND VHF.

Here is the Coast Guard web site with its instructions:

<https://www.uscg.mil/contact/>

It states unequivocally that:

This site is for public information only and is not a distress communication channel. People in an emergency and need of Coast Guard assistance should use: VHF-FM Channel 16 (156.8 MHz), dial 911, or call their nearest Coast Guard unit.

Here is the proper procedure to contact USCG from a vessel in distress (HF SSB voice channels):

<https://www.navcen.uscg.gov/?pageName=cgcommsCall>

CONCLUSIONS (Sorry it took so long to get here, but you need full legal proof.):

1. **Bounty ship and organization used Winlink for business communications, violating FCC rules.**
 - (a) **No amateur station shall transmit:**
 - (2) **Communications for hire or for material compensation, direct or indirect, paid or promised, except as otherwise provided in these rules;**
 - (5) **Communications, on a regular basis, which could reasonably be furnished alternatively through other radio services.**

Waldridge was paid by the Bounty organization as captain, and use amateur radio for it. He used Winlink via amateur radio to conduct communications, on a regular basis, which could reasonably be furnished alternatively through other radio services. Clear and simple.
2. ARRL and Winlink are using the tragic incident to promote Winlink, despite FCC policy to the contrary.
3. ARRL and Winlink are using the tragic incident to mislead vessel operators that Winlink is OK to use for contacting USCG for emergencies, contrary to well known USCG policy.
4. The incorrect use of Winlink as a substitute for proper radio and safety equipment was a contributing cause to loss of life and property. A vessel was lost at sea, along with 2 crew members as a direct result. USCG service members were unnecessarily put at risk during the rescue attempt. Will more follow as a result of this misinformation?

MORE INSTANCES OF ABUSE OF HF EMAIL:

In recent FCC filings relative to RM-11708, now in NPRM phase as **WT 16-239**, there was a filing by Randal Evans regarding his use of Winlink HF email. It is documented on the FCC ECFS in:

<https://ecfsapi.fcc.gov/file/7521315143.pdf>

“To: FCC - RM-11708

The **sailing forms are all encouraging us to file comments** in support of RM-11708. This is my first filing and if I mess this up, please see SailNet Forum at: <http://www.sailnet.com/forums/general-discussion-sailing-related/111746-us-citizensurged-support-fcc-rm-11708-a.html>

I have experienced very dependable service from the **amateur radio Internet Winlink** system. Its a great service because all of the other available Internet services cost money. Even when I am topside cruising (sic) **the system runs automatically below deck** publishing my position reports and **downloading my email**. I use the system for sending position reports, **ordering supplies, repairs, chatting with friends and posting to facebook**. My only complaint is that it needs to be much faster. **I am not a amateur radio operator yet but a friend lets me use his call** with a SIDD on the end. I hope to get my own ham call soon.

From what I read on the sailing forums, RM-11708 will allow Winlink eMail to run twice as fast. That is great and I am for that. Some of the technical folks are saying that if RM-11708 is published with no bandwidth we can get even faster Internet and **might be able to stream movies on the Winlink Internet.** I'm for passing RM-11708 into law with **no bandwidth limits.**"

-Randal Evans

If you go to the sailing forums, you may observe for yourself that this is in fact a common practice of use to order parts for your boat, as well as conduct any business communications you wish. Of course, Winlink tells people not to do that, but do ANY of the sysops running the RMS HF email servers check the nature of the communications they are responsible for? Do they preserve any records of the encoded transmissions? Is amateur radio now a "common carrier"?

(b) Where authorized by §§97.305(c) and 97.307(f), a station may transmit a RTTY or data emission **using an unspecified digital code....**

(3) Maintain a record, convertible to the original information, of all digital communications transmitted.

Original Pactor was useable as a keyboard human to human function, and was peer to peer and in the clear, decipherable by anyone monitoring on a radio channel. Pactor 2, 3, 4 and any subsequent ones coming are not. Whether the encoding is intentional or just the way the data compression and transmission works, it is still obscured with an unspecified digital code known only to SCS pactor, the developer. As long as they use that code for Sailmail, the law does not apply. When it is transmitted in the amateur frequency bands, it is an "undisclosed code" and subject to relevant laws.

For further proofs, consult the Ted Rappaport ex parte presentation on WT 16-239.

CONCLUSIONS:

The FCC rules have not caught up to this situation, and are therefore out of date and need to be revised or better enforced. Which is why all this tedious discussion and legal evidence is being presented. WHICH IS WHY THE FCC MUST PROVIDE THE NECESSARY HF FREQUENCIES OR MICROWAVE SATELLITES AND INFRASTRUCTURE OUTSIDE THE HAM BANDS TO SOLVE THE PROBLEM LEGALLY AND PROPERLY. AND DISMISS WT 16-239 AS WRITTEN.

I repeat a paragraph from earlier, because it is relevant. The vessel owners are not in the end the bad guys. They are just trying to get something they need. Sailmail apparently does not have a service plan that allows them to buy MORE MINUTES. It apparently does not have the infrastructure to support that much activity: **THIS IS NOT THE VESSEL OWNER'S FAULT IN THE END. IT IS THE GOVERNMENT'S FAULT FOR NOT SPONSORING THE INFRASTRUCTURE IN A MEANINGFUL WAY. THE FCC SHOULD BE AT THE FOREFRONT OF THIS IMPORTANT WORK. IT WILL CREATE JOBS TO INSTALL IT AND MAINTAIN IT. THIS IS IMPORTANT INFRASTRUCTURE, JUST AS IMPORTANT AS ROADS AND BRIDGES, AND IT WILL STIMULATE OTHER COMMERCE SERVING THE NEEDS OF LAND AND MARINE BASED USERS. A WHISPER IN A CONGRESSPERSON'S EAR MIGHT GET THE FUNDS AND ACTION NEEDED, ESPECIALLY IF THAT CONGRESSPERSON'S CONSTITUENCY RESIDES IN ALASKA, OR ALONG THE SHORE OF THE LOWER 48 STATES, OR HAWAII OR PUERTO RICO. A lot of boaters have home ports in the coastal US areas and island territories. I believe a clever FCC administrator with some connections can arrange a lunch meeting to discuss some of these ideas.**

Good stuff, and a way forward.

Amateur Radio will continue its role as described in FCC Part 97.1 Basis and Purpose, which defines what the amateur service IS. **It is a sort of “Mission Statement” that has stood the test of time.** The FCC and amateur radio have been around for decades. There are certain things that may be stated in old fashioned ways, but that is not a bad thing. **We need to return to some of those values.**

Amateur radio was once on the cutting edge of technology. Many communications concepts came into existence in the workshop of a radio amateur. For instance, Bob Weitbrecht, a ham operator, brought a prototype into the small company I worked for. It was his RTTY setup for HF radio. He needed to invent that, because he was completely deaf; but this device made it possible to enjoy ham radio. By the way, he passed his Morse Code test by placing his fingers on the cone of the speaker sending the examination message. Bob speculated that the exact same device could be used by others who were hearing impaired, so that they could use the telephone. Our small company turned that into the first viable TTY unit. We produced about 25 of the modems every other week. Anderson Jacobson, a modem manufacturer just down the street, turned the job down. We were a small company hungry for job shop work or anything that would keep the lights on and pay the rent. J Omega Company is long gone. So is Anderson Jacobson and APCOM, but at least they made the history books. Our earlier version was not as pretty as the ones pictured here:

<http://www.computerhistory.org/revolution/networking/19/371/2023>

https://en.wikipedia.org/wiki/Telecommunications_device_for_the_deaf

Maybe amateur radio is not cutting edge any more to some. But they could be wrong – AGAIN!

Look at the development of a new narrow band weak signal digital technology hams created and are using, FT8:

<http://www.arrl.org/news/ft8-mode-is-latest-bright-shiny-object-in-amateur-radio-digital-world>

There's lots more where that came from. So maybe Bruce Perens cannot write us off as useless old farts just yet. I agree with Bruce that amateur radio should be viewed more as a “National Park” sort of operation. It is a small part of a national resource (the radio spectrum) for US citizens to enjoy for recreational purposes. We have to stop running around with our hair on fire about disasters, and just learn some useful tech stuff, and have some fun with it. However, I believe that amateur radio and systems like Winlink, properly used, will continue to give back to America good value for back up communications during emergencies.

Amateur radio is certainly not the **ONLY REASON** young people enter a STEM based career. **MOST IMPORTANTLY, HAM RADIO ISN'T TO BLAME FOR YOUNG PEOPLE NOT DOING STEM CAREERS EITHER. That is up to the schools, where some major changes are needed. Why are innovators like Steve Jobs and Bill Gates leaving college and starting businesses? The universities are messed up. Student loans for STEM training and K through 12 teachers should be promoted by government more effectively, with a payback provision if you work in that state at your career.** Maybe if a student wants to study “Art History” they can fund it on their own, instead of using taxpayer money. Obama got in a lot of trouble for saying that. I introduced my son to guitar, and he got pretty good; but I told him he better have a day job like the rest of us. Only a few get to be rock stars. Reality check. If anyone doesn't like the truth, go ahead, take your best shot.

Sometimes ham radio does get the attention of young people, they have some fun, and they get sucked in. It worked that way for me, and I made a living at it for a while. There are strong and volatile demographics at play, and no one can blame the ARRL or amateur radio for young people NOT joining

in. Their interests and values just do not include the ones we used to have. Some of us do not have the resources or situation to participate in amateur radio, just as most of us cannot afford a nice ocean going yacht. We accept that, and welcome the exceptional youth that do join in. We cannot reach the young people who drop rocks off a freeway overpass onto cars, killing a father who was unlucky enough to be driving by. We should not try to reach those perpetrators; we should lock them up, for a very, very long time. Scouting is a great program. Maybe that is not as big as it used to be either, but it still has value to society as a whole. I am glad I encouraged my son to join. The training, values, and leadership skills he absorbed while becoming an Eagle Scout were of lasting value and will NEVER become obsolete.

Of course there are changes that are coming. Hiram Percy Maxim (W1AW, the founder of ARRL), started it all by ordering some radio parts through a friend, another ham, from a source that was too far for him to communicate with on his radio apparatus. Thus, the American Radio "RELAY" League. But the current ARRL leadership has even realized that time is past, and taken the "RELAY" out of the ARRL. It is now called the National Association for Amateur Radio. I think that is long overdue, and very welcome. They need a new mission, while honoring their legacy. FCC veteran Riley Hollingsworth is running for Atlantic vice Director. I voted for him and I hope he is able to bring a fresh perspective and renewed purpose to the ARRL. I just hope they LISTEN TO HIM, whether he is elected or not. I wonder how Hiram Percy Maxim would feel if he walked into the ARRL headquarters today; would he like what he saw?

ARRL laments the declining membership in their organization. THAT is the real issue they are grappling with. Maybe they should look to their policies and ask what THEY are doing wrong, instead of trying to blame the FCC rules or the 80% or so of the rest of US for not joining their organization. http://www.arrl.org/files/file/About%20ARRL/Board%20Meetings/2015_July_ARRL_Board_Minutes.pdf

"40. Mr. Abernethy moved, seconded by Mr. Rehman that the HF Band Planning Committee is directed to poll the Amateur community concerning the possible **elimination of FCC subband regulations for mode and/or license class on the 80 through 10 meter bands**. The possible elimination would align regulation with what is presently done for the USA's 160-meter band and all Canadian bands. After discussion, a roll call vote being requested, the motion was **DEFEATED** with Directors Abernethy, Rehman, and Norton voting aye and **all other Directors voting nay.**"

You also have the record of the comments the 80% non members and more of us who are members of ARRL filed AGAINST RM-11708, WT 16-239, and RM-11759. Do the math.

So maybe the ARRL should stop tinkering with something that isn't broken, and quit bugging the FCC and the rest of us, until they figure it out.

Respectfully submitted,

/S/

Janis Carson, AB2RA, licensed since 1959, Extra Class, ARRL member for over 40 years
Comments timely filed, October 29, 2017