

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

<b>In the Matter of</b>	)	<b>RM-11831</b>
	)	<b>16-239</b>
<b>Amendment of Part 97 of the</b>	)	<b>RM-11708</b>
<b>Commission's Amateur Radio Service</b>	)	<b>RM-11759</b>
<b>Rules to to Reduce Interference and</b>	)	<b>RM-11828</b>
<b>Add Transparency to</b>	)	<b>RM-11306</b>
<b>Digital Data Communications</b>	)	<b>5/10/2019</b>

**To: The Chief, Wireless Telecommunications Bureau**  
**Via: Office of the Secretary**

**REPLY COMMENTS TO HELFERT, ARSFI, ET AL**

Janis Carson, amateur radio service licensee AB2RA since 1959, and ARRL member for over 40 years, pursuant to Section 1.405 of the Commission's Rules (47 C.F.R. §1.405), hereby respectfully requests that the Commission urgently expedite RM-11831 to solve long standing problems with the now suspended 16-239, RM-11708, and associated RM-11759 and the previously withdrawn RM-11306. This intractable issue has been petitioned, opposed, withdrawn, petitioned again in various form, opposed again, suspended, and dragged on since before 2007. All of these actions failed to address the protection of incumbent users of the spectrum and promote violation of FCC Part 97 rules on a large scale. I am responding to various comments referenced in each of the numbered sections to follow.

There are important contradictions in various filings and comments which the FCC should take into account in the final closing days of 16-239, RM-11708, RM-11759, RM-11831, and RM-11828. It is my hope that the FCC will follow past practice of employing an “omnibus report and order” to resolve all these related proceedings.

<b><u>TABLE OF CONTENTS</u></b>	<b>PAGE</b>
1. IS THE USA POLICY OUT OF STEP WITH THE REST OF THE WORLD?	1
2. WHAT IF AMATEUR RADIO FREE HF EMAIL IS THE ONLY METHOD EMPLOYED?	3
3. SHOULD YACHTS RELY SOLELY ON FREE HF EMAIL FOR EMERGENCIES?	3
4. HOW THESE PROBLEMS GREW OUT OF LACK OF OVER THE AIR MONITORING	4
5. 97.221(C) MUST BE REMOVED, AVOID GROUPING INCOMPATIBLE EMISSIONS	6
6. WHEN IS A REPEATER NOT A REPEATER?	7
7. CONCLUSIONS	8

**1. IS THE USA POLICY OUT OF STEP WITH THE REST OF THE WORLD?**

Quite a few commenters erroneously state that the USA will become a backward “island” in a world of Pactor 4 and third party messaging. A significant number of comments from European yacht owners, mostly without a stated call sign, demanded their entitlement of free HF email, provided by US store and forward stations in 16-239.

There are approximately 50 islands and nations that the USA has agreements allowing third party traffic. There are 162 total members of IARU. Third party participation of 31% of total is hardly a stampede to implement a world wide private HF email messaging system. Below are examples of

world wide practices in regard to third party traffic.

In IARU Region 1, there are 28 countries in the EU. Those countries are widely considered modern progressive democracies. Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden do NOT permit third party messages. ONLY ONE EU country, the United Kingdom permits it.

In IARU Region 3, BANGLADESH, BRUNEI DARUSSALAM, CHINA, CHINESE TAIPEI, FIJI, FRENCH POLYNESIA, HONG KONG, INDIA, INDONESIA, JAPAN, REPUBLIC OF KOREA, MACAU, MALAYSIA, MYANMAR (Membership temporarily suspended), NEW CALEDONIA, NEW ZEALAND, PAKISTAN, SAMOA, SINGAPORE, SOLOMON ISLANDS, SRI LANKA, THAILAND, TONGA, VANUATU, and VIETNAM do NOT permit third party traffic. Only Australia, Pitcairn Island, and the Philippines permit third party traffic. It should be noted that Japan has one of the highest amateur radio populations in the world.

This information was gathered from:

<http://www.arrl.org/third-party-operating-agreements>

<http://www.iaru.org/region-3.html>

I submit that limiting the USA role in becoming the world's free HF email provider for yachts is a prudent step for the FCC to take now, before it gets out of hand any more.

Regulatory problems resulting from widespread unlicensed operation in the yachting community should not add to the FCC's enforcement problems, with its shrinking resources.

<https://www.sailingscuttlebutt.com/2019/01/21/maintaining-information-barrier/>

The following filing lists some of the 16-239 comments referenced, along with a discussion of internal problems in Winlink's authentication of users. Unlicensed people get away with using the system for weeks. If only joining Winlink were as thoroughly vetted as ARRL's Logbook of the World, those unlicensed users would be locked out before they are able to log in. This is a clear failure to 97.219: "Authenticate the identity" and 97.105: "ensure the immediate proper operation of the station, regardless of the type of control." Winlink can only monitor these transmissions after the fact, and reprimand the offender, if they happen to have time to read all the outgoing messages, an unlikely occurrence in such an automated system. This was a failure to authenticate in the RF port of the Winlink email system. The failure in the case of the internet port, from automated internet email coming into the system is worse, since these users are not licensed amateurs and cannot be expected to know or follow FCC part 97 rules on content or valid third party country destinations of traffic. This is not a new problem; some of us have been saying this for some time. Now it is out in the public view finally. Why measures to eliminate this problem have been neglected for so long is important to consider before expanding these operations as requested in RM-11708, RM-11759, and 16-239.

<https://ecfsapi.fcc.gov/file/1020199526416/FINAL%20REPLY%202019%20%2016-239.pdf>

In ARSFI's Lor Kutchins words:

"The sad fact is that our filter has large holes and a pirate can sometimes get away with abusing the system for weeks before their caught."

"Sadly, abuse like this is rare with non-maritime users, and that's a fact. Over the years, we've come to the conclusion that promoting Winlink to the non-ham cruising community is a bad thing."

The Winlink Viewer tool only recently provided has revealed a host of problems with improper content. If incoming messages from the internet from unlicensed users were stored in a buffer file for review by the shore based Automatic Data station before transmission, that might be a partial solution. The operators of these systems have known for some time that the yacht users of this system were doing this, as quoted from Lor Kutchins in a discussion with a Seven Seas Cruising Association leader, in the filing above. There is a dive shop that has an HF store and forward Automatic Data station, and arranges tank delivery, etc.

**RECOMMENDATION:** The FCC and the US amateur community should immediately take a

comprehensive look at whether these operations of HF email store and forward stations should be stopped (as a significant number of other modern nations prohibit them). Consider revising the US third party agreement to stop this. Consider eliminating all US third party traffic, if Winlink cannot correct these problems within 6 months.

Otherwise, consider limiting its use to ONLY legitimate emergency communications by RACES, ARES, and NGOs such as Red Cross and Salvation Army. Emergency communications are considered separately from routine third party traffic in international agreements. This will preserve “the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.” It will also end the “commercial” abuse of amateur radio prohibited in 97.113(5) “Communications, on a regular basis, which could reasonably be furnished alternatively through other radio services.”

**The so-called “Pizza Rule” badly needs revision to prevent further erosion of the distinction between amateur radio and a common carrier.**

Even the AREDN is looking at the problem of “tunnels” to the internet being used for commercial purposes:

<https://www.arednmesh.org/content/rm-11831>

## **2. WHAT IF AMATEUR RADIO FREE HF EMAIL IS THE ONLY METHOD EMPLOYED?**

The following quote is important, because many people have only one system of free HF email via amateur radio aboard, or at their remote location, rather than using a commercial provider:

“FWIW: Keeping Winlink as a sole method of communications off-grid is a poor idea because of the clause quoted above, since services from Iridium, Inmarsat, Globalstar, SPOT, Hughes and others are available off-grid. Sooner or later a prohibited transmission has to be made if there is only Winlink, and circumstances of being off-grid really don't matter. With Winlink as the only method kept, it's hard to argue against the rule quoted above. That's how a Volunteer Monitor will be trained to call it. (I've been in touch with Hollingsworth a lot recently!) You might pass this wisdom along to your users in this situation.

Once this is past testing, a notice will go out to sysops about it.

73,

Lor W3QA

Winlink Development Team”

However, this comment shows that frequently users rely completely on Winlink or similar systems:

<https://www.fcc.gov/ecfs/filing/10430755909170>

ID: 10430755909170

RM-11831

Steen Brochner-Nielsen

“These shortwave frequencies are very important for the safety of small boats in the offshore and high seas. The frequencies enable access to crucial GRIB file weather information, direct communication with other other ship-stations. Further, this is often the only link between these small crews and other crews and shore based families via WinLink email.”

## **3. SHOULD YACHTS RELY SOLELY ON FREE HF EMAIL FOR EMERGENCIES?**

**Winlink is widely promoted as "safety" equipment by Amateur Radio "Safety" Foundation.**

**The coast guard says NOT to use email to contact it,** but to use a phone number (loaded in your

sat phone memory) or HF SSB voice or Global Maritime Distress and Safety System (GMDSS) .

<https://www.dco.uscg.mil/Our-Organization/Assistant-Commandant-for-Response-Policy-CG-5R/Office-of-Incident-Management-Preparedness-CG-5RI/US-Coast-Guard-Office-of-Search-and-Rescue-CG-SAR/Contact-USCG-SAR/>

"Currently the U.S. Coast Guard email system is not set up to accept or respond to emergency SAR messages. If you are in distress or need to report an emergency, **do NOT send it via email**, contact the Coast Guard via telephone or radio."

Critical safety equipment should be based on reliable commercial methods like an EPIRB and a proper marine radio with water resistant features such as Icom M802 to call the Coast Guard.

<https://www.icomamerica.com/en/products/marine/ssb/m802/default.aspx>

In spite of the above USCG policy, you find on the web recommendations to rely on Winlink as a substitute for proper means for critical emergency communications. Some FCC comments refer to that. The Coast Guard should look into this email advertising.

<https://www.winlink.org/tags/sinking>

<https://web.archive.org/web/20150428091315/http://www.scs-ptc.com/news/pactor-rescue-bounty-crew/pactor-rescue-bounty-crew>

(I had to use an archived copy of the SCS web article because they removed it.)

[https://www.winlink.org/content/hms\\_bountys\\_captain\\_sends\\_winlink\\_message\\_saves\\_14\\_crew](https://www.winlink.org/content/hms_bountys_captain_sends_winlink_message_saves_14_crew)

[www.va3rom.com/docs/The%20Winlink%202000%20Hybrid%20Radio-Only%20Network.pdf](http://www.va3rom.com/docs/The%20Winlink%202000%20Hybrid%20Radio-Only%20Network.pdf)

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

It seems that you should email a friend, who may not be home at the time, that you are in distress, and ask them to contact the coast guard at his earliest convenience. When a vessel may sink in a few moments, allowing this lengthy delay baffles me.

One ham operator comments (archived copy):

<https://web.archive.org/web/20151203044210/https://kypn.wordpress.com/2014/06/01/the-hms-bounty-and-winlink-rescue-story/>

US Coast Guard reports on Bounty sinking:

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

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

#### **4. HOW THESE PROBLEMS GREW OUT OF LACK OF OVER THE AIR MONITORING**

All of this has been going on behind the scenes for decades. If the transmissions could not be monitored by any amateur operator, users thought that they could do nearly anything with impunity. RM-11831 now has applied pressure that resulted in the Winlink Viewer, which supposedly gives access to the email data base to Volunteer Monitors. That feature only applies to Winlink, not other systems. SCS provides a software feature that any owner of a SCS Pactor Dragon modem to set up his own private HF email system, separate from Winlink. Quoted from page 53, English version, SCS Pactor 4 modem manual:

[http://www.p4dragon.com/download/InstallationGuide\\_DR-7X00.pdf](http://www.p4dragon.com/download/InstallationGuide_DR-7X00.pdf)

“2.1 SCSmail: SCSmail has been developed to enable users of SCS PACTOR modems to easily establish an own email system without additional costs. SCSmail is freeware and will be distributed via the SCS CD and the SCS website. It is not the intention of SCSmail to replace or to interfere with existing professional HF email providers with their highly sophisticated solutions and services. Its purpose is just to give private users and small organizations the chance to quickly install an own, private email service without additional costs and without the need to subscribe to an existing provider and with this being dependent from an external service.”

The Winlink Viewer is useless for such an independent system. Over the Air interception has been a standard of amateur communications, as consistently stated in FCC policy.

If you compare Hans-Peter Helfert's comments in relevant FCC proceedings, you find this:

<https://ecfsapi.fcc.gov/file/110731917879/16-239.pdf>

[https://ecfsapi.fcc.gov/file/10417301289214/SCS\\_FCC\\_Comment\\_RM11831.pdf](https://ecfsapi.fcc.gov/file/10417301289214/SCS_FCC_Comment_RM11831.pdf)

In the first comment, Helfert states: "All PACTOR modems provide a comprehensive "monitor mode" in order to allow monitoring the PACTOR traffic by "third parties"."

Only FEC transmissions may be decoded. Compressed ARQ is nearly impossible to display content received from Over the Air. In the SCS manual it says "Listen" works with Unproto (FEC). Pactor supporters state that anyone can easily devise software to display content of ALL the transmission.

In the second link comment, Helfert says it “requires considerable effort” for someone possessing the source code (undisclosed code) and “expensive”, not so easy anyone could devise an inexpensive method.

“Nevertheless, SCS is willing to develop and provide a free PACTOR monitoring tool as a contribution to “mutual understanding” in the spirit of AR. This would be a software solution under the operating systems Linux and / or Windows. The tool would not require any special hardware. However, such a development would require considerable effort for SCS, as our modems are powered by specialized signal processors. Porting the software to common Intel and ARM processors will be correspondingly expensive. Nonetheless, we are willing to provide such a comprehensive, free monitoring tool. It would integrate with the Volunteer Monitor Program now being organized by the ARRL.”

“We propose the following be adopted as requirements for a (new) digital method:

1. Description of its fundamental characteristics (ITU emission designator)
2. Description of the channel and source coding
3. Availability of an easily accessible monitoring mode

We see this as more than adequate for the required "transparency””

Finally, after 5 years of contentious comments, we have an admission that Over the Air display of ALL the content requires an “expensive” solution that “requires considerable effort for SCS”. Also, a “Winlink Viewer” may be offered to display the contents of emails routed through that system, to promote transparency. Why did it need this much conflict to get to this point? We can attribute Helfert's later offer directly to pressure from RM-11831. It is an admission that Ron Kolarik was right all along.

The years of delay in transparency directly resulted in this revealed and documented commercial misuse of the amateur spectrum.

It will be difficult for the FCC to unravel the misuse from the legitimate emergency communications that we were assured were contained in the signals on the HF bands. I urge strong

FCC enforcement action to end these practices, while preserving the good work for the public benefit. Please ensure the continuation of FCC policy (RM-11699, DA 13-1918) as stated in paragraph 6:

[http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2013/db0918/DA-13-1918A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0918/DA-13-1918A1.pdf)

“The primary protection against exploitation of the amateur service and the enforcement mechanism in the amateur service is its self-regulating character”... “To ensure that the amateur service remains a **non-commercial service** and self-regulates, **amateur stations must be capable of understanding the communications of other amateur stations.**”

Footnote 19: “We note that a hallmark of enforcement in the amateur service is "self-policing," which depends on an amateur station hearing a message being able to determine whether message violate the amateur service rules. See, e.g., Waiver of Sections 97.80(b) and 97.114(b)(4) of the Amateur Rules to Permit the Retransmission of Third-Party Traffic in Certain Situations, Order, PR Docket No. 85-105, 59 Rad. Reg. (P & F) 1326, 1326 ¶ 2 (PRB 1986).”

## **5. 97.221(C) MUST BE REMOVED, TO AVOID GROUPING INCOMPATIBLE EMISSIONS**

Helfert further states:

[https://ecfsapi.fcc.gov/file/10417301289214/SCS\\_FCC\\_Comment\\_RM11831.pdf](https://ecfsapi.fcc.gov/file/10417301289214/SCS_FCC_Comment_RM11831.pdf)

“As a final remark I want to add that RM-11831 has another severe weakness: Eliminating paragraph 97.221(c) will force all automatic digital stations, regardless of signal bandwidth, into the narrow sub-bands in the USA. Though opponents claim this will reduce amateur-amateur interference, it will aggravate the problems of unintended collisions and mutual interference within the inadequate sub-bands while other portions go underutilized. The ITU rules and the rules of other countries do not limit emissions like this by content to narrow sub-bands. Furthermore, the potential for interference is not alleviated by any action of the USA alone. When the US rules do not well-conform to the rules of its neighbors, confusion and interference is increased. Adjusting US amateur allocation rules to better align with ITU recommendations could improve the situation, not the biased patch to allegedly dysfunctional US rules proposed in RM-11831.”

We can all agree that existing and proposed rules in 16-239 are dysfunctional.

It is telling that Helfert complains that it might “force all automatic digital stations, regardless of signal bandwidth, into the narrow sub-bands in the USA. Though opponents claim this will reduce amateur-amateur interference, it will aggravate the problems of unintended collisions and mutual interference”. We recognize that the allowance of automated data stations in spectrum occupied by peer to peer communications, but Helfert expects narrow band users to accept such interference.

Kolarik, in RM-11831 agrees that the ACDS Automatic Data segments SHOULD be aligned with the IARU band plans to the extent possible. RM-11831 allows adjustment of the size of those ACDS segments. The FCC instructions allow two choices: “by band width anywhere” or “by band segment”. The ARRL and ARSFI have stubbornly insisted on propagating wide band email signals throughout the CW/DATA segment, rather than containing them in reasonably sized separate ACDS segments. Hundreds have advocated for this solution. I have too.

[https://ecfsapi.fcc.gov/file/1219623911650/DRAFT%20REPLY%20ARSFI%2012\\_18%20%2016-239.pdf](https://ecfsapi.fcc.gov/file/1219623911650/DRAFT%20REPLY%20ARSFI%2012_18%20%2016-239.pdf)

Refer to page 5 for the ARRL inspired ACDS segment sizes.

Helfert mistakenly claims:

“The ITU rules and the rules of other countries do not limit emissions like this by content to narrow sub-bands.”

One only needs to refer to the IARU band plans to see this is simply not so.

IARU REGION 2 BAND PLAN:



Available at both links below:

[http://www.hflink.com/bandplans/Region\\_2\\_MF\\_HF\\_Bandplan\\_Annex\\_1\\_2008.pdf](http://www.hflink.com/bandplans/Region_2_MF_HF_Bandplan_Annex_1_2008.pdf)

<https://www.iaru-r2.org/documents/explorer/index.php?dir=Plan%20de%20bandas%20%7C%20Band-plan/&file=R2%20Band%20Plan%202016.pdf>

IARU REGION 1 HF BAND PLAN:

<http://www.iaru-r1.org/index.php/spectrum-and-band-plans/hf>

IARU REGION 3 BAND PLAN:

<http://www.radioamadores.org/biblio/iaru/R3-2015.pdf>

## **6. WHEN IS A REPEATER NOT A REPEATER? (When is a duck not a duck?)**

Over the last few decades, FCC rules have been infected with arcane interpretations of certain operations to avoid common sense spectrum management. The old saying about “It walks like a duck, it quacks like a duck, it must be a duck” is evident in this case. Any other interpretation is deliberate legal tampering behind the closed doors of the FCC by special interest groups, to avoid public rule making and comments.

The ARRL said this (in RM-11306, which sought the same goal as RM-11708, except in the VOICE/IMAGE segment):

“Automatic control of data communications at HF presents technical problems that make sharing with other modes and uses challenging. Fully automatic control, in a network or station configuration where both stations in communication can be under automatic control, unless limited to certain band segments where automatically initiated transmissions can be expected, complicates efficient sharing of crowded HF spectrum.”

Page 8: “The HF allocations offer the least opportunity for frequency re-use, and the higher UHF and microwave bands offer the most flexibility in this respect. The higher frequency bands, therefore, properly offer the widest available bandwidths.”

From <https://ecfsapi.fcc.gov/file/6518181567.pdf>

ARRL admits that a Pactor Winlink RMS store and forward station permanently occupies an HF channel of roughly 3 Khz. It waits there for a call from a user who wants to send email. When that user activates the RMS to send his email, the sequence of transmissions for sending the email and the error correction re-transmissions continue until the process ends for that exchange. Then the next user takes his turn. This is exactly how Pactor and the Winlink email system is designed to work.

97.101 General standards.

(a) In all respects not specifically covered by FCC Rules each amateur station must be operated in accordance with good engineering and good amateur practice.

(b) Each station licensee and each control operator must cooperate in selecting transmitting channels and in making the most effective use of the amateur service frequencies. **No frequency will be assigned for the exclusive use of any station.**

(d) No amateur operator shall willfully or maliciously interfere with or cause interference to any radio communication or signal.

Any incumbent user who attempts a contact in a narrow band mode on that channel is likely to be interfered with when a Winlink user sends an email connect request. This is why 97.221(c) must be deleted, and all Automatic Data must be confined to ACDS segments specified in 97.221(b). A discussion SHOULD follow regarding the exact frequencies to align those segments with IARU band plans where possible, and size the ACDS segment appropriately to facilitate legitimate emergency communications. The commercial misuse of amateur radio should not be used to demand excess spectrum.

No VOICE repeaters are allowed below 29.5 MHz for exactly the same reasons. The time delay element is irrelevant, and the twisted definition woven into the fabric of the rules was for the sole

purpose of expanding digital store and forward operations. In any event, allowing them in the general CW/DATA or VOICE/IMAGE spectrum is widely opposed by objective incumbent users, and ACDS is recognized for what it is. It violates a rule: **No frequency will be assigned for the exclusive use of any station.** Further, on VHF/UHF there are coordinating organizations to mitigate congestion. An ACDS is like a 500 pound gorilla that sits wherever it wants with impunity. There is no coordinating organization. When is a duck not a duck? When a lawyer meets behind closed doors with the FCC to fudge the definition.

Containing ACDS within its own segment will force those occupants to settle their interference problems and develop collision detection and channel busy detectors with innovative solutions.

## **7. CONCLUSIONS:**

Since the time of the withdrawn RM-11306 from 2006, this has gone on for far too long.

All of these noted actions failed to address the protection of incumbent users of the spectrum and violation of FCC Part 97 rules on a large scale. Sufficient time and debate has occurred to verify these all constitute a badly engineered patchwork of proposals that are defective regulatory policy, do not serve the public good, and have wasted unjustified amounts of time and FCC resources.

PLEASE EXPEDITE ADOPTION OF RM-11831

PLEASE REJECT RM-11708, RM-11759 and 16-239, as in the previous case of RM-11306.

PLEASE REJECT and DISMISS WITH PREJUDICE RM-11828, as the FCC has previously ruled on this matter before as well.

It is my hope that the FCC will follow past practice of employing an “omnibus report and order” to resolve all these related proceedings simultaneously.

RM-11785 and RM-11767 should be implemented as they are good.

There are more “Vanity Call Sign” petitions and rule makings to also include; this program has generated far more petitions than would be expected. They should be included also.

**The so-called “Pizza Rule” badly needs revision to prevent further erosion of the distinction between amateur radio and a common carrier.**

**I recommend the FCC return to a strict interpretation of what constitutes commercial content, to avoid more free HF email problems.**

**Consider eliminating all US third party traffic, if Winlink cannot correct these problems within 6 months.**

Respectfully submitted,

/s/

Janis Carson, AB2RA