

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

In the Matter of)	DA 19-1130
)	NPRM 16-239
Amendment of Part 97 of the Commission’s)	RM-11708
Amateur Radio Service Rules to Permit Greater)	RM-11831
Flexibility in Data Communications)	RM-11759
)	RM-11828
)	December 1, 2019

COMMENTS OF JANIS CARSON, AB2RA

DA 19-1130: <https://www.fcc.gov/ecfs/filing/1101131173138>

Regarding a Petition for Declaratory Ruling: 10242392005642

<https://ecfsapi.fcc.gov/file/10242392005642/NYU%20Wireless%20Petition%20for%20Declaratory%20Ruling%20-%2010.24.19.pdf>

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A. INTRODUCTION, OVERVIEW

I thank the FCC for seeking public comments¹ on the Petition for Declaratory Ruling² filed on behalf of New York University (NYU). It is an important step in resolving long standing disputes about data systems and emissions in the amateur spectrum spanning twenty years beginning with RM-11306

¹ FCC Public Notice, Docket 16-239, DA 19-1130, November 1, 2019 (<https://docs.fcc.gov/public/attachments/DA-19-1130A1.pdf>)

² Petition of New York University for Declaratory Ruling (filed Oct. 24, 2019) (*Petition*), (<https://ecfsapi.fcc.gov/file/10242392005642/NYU%20Wireless%20Petition%20for%20Declaratory%20Ruling%20-%2010.24.19.pdf>.)

and continuing with RM-11708, RM-11759, and RM-11828.

1. The FCC has rightly recognized a threat to the core principles of the amateur service which plans to fundamentally transform it into a private messaging service for non-emergency communications, transporting unscreened messages from the internet over the air, with no “control operator” “ensuring the immediate proper operation of the station.” (§97.105) **While the FCC's acceptance of the NYU petition is a significant break through, it does not go far enough in detailing other specific other rules that are in need of update and clarification.**

2. Most of the discussion revolved around §97.113, which has some wording prescribed by international agreements. There is nothing that prevents the FCC from making additional clarifying statements. The NYU petition should have also specifically highlighted §97.309(4) in its discussion to facilitate Over The Air decoding.

“(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.”

If an emission is not sufficiently “specified” or “publicly documented”, amateur operators and the public cannot view the contents of messages sent via amateur radio (monitored), a problem the NYU petition does include. The ORIGINAL “PacTor” inclusion does not “authorize by reference”³ subsequent radically different techniques such as Pactor 2, 3, 4, or 5, when it comes out. **The FCC needs to update and clarify this rule also, to clearly state the required standards of the “disclosure” and what constitutes a “specified” digital code called for in §97.307(f)(3):**

“Only a RTTY or data emission using a *specified digital code* listed in §97.309(a) of this part may be transmitted. The symbol rate must not exceed 300 bauds, or for frequency-shift keying, the frequency shift between mark and space must not exceed 1 kHz.”

Recent demonstrations of prototype Pactor 1 – 3 monitoring systems, documented in this proceeding took weeks to implement even on a “proof of concept” basis were, possible with help from SCS Pactor engineer Hans Peter Helfert. The release of this information in a form usable by the public should have

taken place as part of the initial §97.309(4) process. I commend the participants, especially Hans Peter Helfert for collaborating in bringing this project forward at this critical juncture. Any other techniques (e.g: VARA, ARDOP, ROS) should follow the same path, complying with an FCC standard which gives a level playing ground for all developers.

3. The ARRL has alleged that resistance to their RM-11708 petition and NPRM 16-239 is only the misinformed position of a minority. The FCC record of scores of comments requesting a separation of incompatible modes into appropriately sized band segments, rejecting wide band emissions anywhere, proves the ARRL characterization is inaccurate. Further, the recent ARRL position (“out of scope” or relegating band planning to a future rule making) filed in 16-239 is contrary⁴ to their own Board of Directors vote to segregate ACDS email operations from peer to peer narrow band activity. So opposition commenters can hardly be accused of being out of step with mainstream thinking (elected BOD members) on this matter.⁵ I was present at the negotiations that would have expanded ACDS segments to fairly distribute spectrum by EXPANDING ACDS SEGMENTS.⁶

4 https://ecfsapi.fcc.gov/file/1091828798020/ARRL%20FCC%20Docket%2016-239%2009_17_2019.pdf

Page 6: “While these issues are outside the scope of this proceeding, the League believes that some of the underlying rules should be clarified and that other issues have merit and should be considered in a Further Notice or new proceeding.”

The band planning issue of separation of ACDS from peer to peer IS AN ESSENTIAL COMPONENT to any resolution of 16-239, included in the FCC instruction for filing in 16-239, and extensively discussed in opposition reply comments.

5 www.arrl.org/files/file/2019%20Board%20of%20Directors/Final%20Minutes%20July%202019.pdf Page 17

Page 17: “IT IS ACCORDINGLY RESOLVED that the ARRL’s Washington Counsel is instructed to take appropriate steps, including, but not limited to, appropriate filings with the Federal Communications Commission, to obtain the Commission’s approval for the following enumerated changes to Part 97 of the Commission’s Rules:

(1) **All automatically controlled digital stations (ACDS) below 30 MHz, regardless of bandwidth, are authorized to operate only within the ACDS bands designated in the FCC’s Rules, 47 C.F.R. §97.221(b);**

(2) **All digital mode stations that operate with a bandwidth greater than 500 Hz also must operate within the ACDS bands designated in the FCC’s Rules, whether or not automatically controlled;**

(3) No digital mode station may employ a bandwidth greater than 2.8 kHz in any band below 29 MHz”

“A roll call vote being requested the motion to call the previous question **passed with 14 AYE votes and 1 NAY votes**”

6 <https://ecfsapi.fcc.gov/file/10719236004064/FINAL%20July%2018%20FCC%20HF%20Digital%20Proposal.pdf>

Page 9. **If ARRL is unable or unwilling to offer a suitable and equitable band plan in accord with their BOD resolution, the FCC SHOULD ADOPT OUR BAND PLAN as concluding 16-239, revising Part 97 rules.**

For the 20% of USA amateurs, where is their oversight and accountability exercised, through their elected Board of Directors? For the 80% of USA amateurs who do not belong to the ARRL, do they ever get a seat at the table? Or are we constrained to engage legal counsel to fight back against our erstwhile representative, the ARRL?

4. Many others share our concerns, and have woken up to this threat, as summed up in this comment by AD0DQ.⁷

“The concern of the amateur community seems to be that we are being converted to carrying mail for commercial services. In essence, we are allowing the bands to be used to send email to people who are not radio amateurs.”

Amateurs respect and support legitimate **emergency** communications as enumerated in §97.1:

“(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing **emergency communications**.”

5. However amateur radio operators and the public are justly appalled by the abuses of the amateur service detailed in Enforcement Bureau Ticket #3184322. A heavily redacted copy⁸ has been filed in 16-239 (see pages 29 - 60), redacting identities and credit card numbers used to make purchases:

<https://ecfsapi.fcc.gov/file/10718632326911/July%2018%2C%202019%20Ex%20Parte%20Filing.pdf>

This content captured from the Winlink traffic demonstrated clearly that *a lot of the communication in the past 20 years was NOT Part 97.1 emergency communications*, but content that most amateurs would view as inappropriate and potentially violating FCC rules. Lor Kutchins has taken steps to clarify the Terms of Service of Winlink⁹ (at best a temporary measure which only

⁷Comment of Anthony L. DeWitt, Docket 16-239, Nov 8, 2019 (<https://www.fcc.gov/ecfs/filing/1108050117077>)

⁸Comments of Carson, Kolarik, McVeay, White Docket 16-239: <https://ecfsapi.fcc.gov/file/10718632326911/July%2018%2C%202019%20Ex%20Parte%20Filing.pdf>

⁹ https://winlink.org/terms_conditions “If a Winlink user tries to send third-party traffic through stations that do not permit such traffic, the message is refused and a service message will be delivered instead” “Business content is any message including a transaction or partial transaction, sent or received, that is related either to a licensee’s personal or commercial business or activity involved in making money, attempting to make money, or to personally spend or save from spending money. Ordering or receiving via Winlink paid subscription-based weather guidance, custom forecasts, or any paid or free digital subscription product is another. Accordingly, YOU ARE STRONGLY ADVISED NOT TO CONDUCT PERSONAL OR COMMERCIAL BUSINESS VIA A WINLINK COMMUNICATION OF ANY KIND. ”

governs Winlink, not other systems). We applaud that step, and recommend the same rules should apply to ALL HF email systems and amateur operators. But that is no substitute for a clear FCC position on various rules which govern allowable emissions, band planning, system operation, compression techniques, facilitating monitoring, and appropriate content. The Winlink users who transmitted this objectionable content clearly had an “expectation of privacy” stemming from the lack of the ability to monitor, often promoted as a “feature”¹⁰. Were it not for the scrutiny brought by the Kolarik petition, RM-11831, we would not have made this kind of progress. Lor Kutchins and the Winlink team made available a “Winlink Viewer” feature which was very useful. I also commend Lor Kutchins for trying to improve transparency in this way. Will it continue to be available to other amateur radio operators and the “public”, or restricted to only certain people, or even disappear altogether once these rule makings conclude or Lor retires? The FCC should require this valuable resource for not just Winlink, but any other systems, rather than just relying on Over the Air (OTA) monitoring. OTA monitoring is important also, because Winlink is not the only “system” or emission that uses the amateur spectrum for email transport rather than peer to peer contacts. SCS modem owners can set up their own private system.¹¹

6. All of the evidence presented during 16-239 demonstrates that the LACK of the ABILITY TO ADEQUATELY MONITOR AND DISPLAY ALL CONTENT has enabled all this to occur over the course of 20 years. It also demonstrates the need to clarify various FCC rules and update them, BEFORE RM-11708 and NPRM 16-239 or RM-11759 is enacted in a Report and Order.

7. Despite “statistical studies”¹² claiming that the problem is fixed, what assurance do we have

10 “What Winlink 2000 Offers for EmComm: Various levels of security including message encryption” PAGE 4:
https://ecfsapi.fcc.gov/file/112327925360/McVey_PDR_Comments.pdf

11 http://www.p4dragon.com/download/InstallationGuide_DR-7X00.pdf Page 53 English version ““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.”

12 <https://ecfsapi.fcc.gov/file/10822196770221/ReAnalysisOfWinlinkObjectionableMessages.pdf>

These statistics are based on data AFTER the “Winlink Viewer” was made available and do not reflect the 20 prior years of traffic, likely to be worse than those presented to the FCC in EB ticket # 3184322, and likely to be the “business as

that it will not go back to “business as usual” without a clear FCC position statement in an R&O?¹³

From AmRRON¹⁴, The American Redoubt Radio Operator Network:

“**UPDATE 5/23:** After speaking directly with a Winlink representative, we have learned that this is expected to be a temporary move to meet requirements that were the result of a complaint filed with the FCC regarding compression being confused with encryption. They assured us they are working on a solution and **reiterated they believe this is ONLY TEMPORARY**. They did not provide an estimated resolution date but assured us they are working tirelessly on it.”

“**UPDATE JUNE 1, 2109:** Although we appreciate the steps taken to increase privacy with regard to emails sent over the Global Winlink system, **we hope to see this Message Viewer feature be done away with altogether**. We hope to see Winlink return to that sensible policy soon.”

8. However, the NYU Request for Declaratory Ruling focuses on the aspect of monitoring, but it does not go far enough. The other rules NYU lists needing revision must be clarified, in particular §97.113 (5) “Communications, on a regular basis, which could reasonably be furnished alternatively through other radio services” and what constitutes “pecuniary” content. There must be ONLY ONE set of RULES that apply to ALL amateur operators and systems EQUALLY.

9. Moreover, if a technical Part 97 solution cannot be devised to end this abuse of amateur spectrum, the FCC should consider eliminating Third Party Traffic that is not “emergency” in nature to prevent transformation of the amateur service into a public email provider. The EU and much of Region 3 do not allow (non-emergency) third party traffic in competition to commercial providers such as Sailmail and satellite service. Since the FCC has elected to NOT treat EB ticket # 3184322 as an “enforcement issue”, it is now imperative that it treat it as a “regulatory issue”.

10. PRELIMINARY CONCLUSION: **Attempts to unbundle these essential considerations, while enacting 16-239 (and not including a workable band plan segregating incompatible modes), will have undesirable results due to the world wide propagation of HF. requiring further FCC rule making later.** The FCC needs to update, modernize, and clarify: §97.113(a)(4), §97.309(4), §97.113(a)(3), §97.113(a)(5), §97.115(a)(2), §97.115(b), §97.105(a), §97.101, §97.219(d)(1), and the

usual” norm before the revised Winlink Terms of Service, which is an unregulated standard. That unacceptable norm will likely return after these rule makings are concluded, unless the FCC takes a clear position.

13 <https://amrron.com/2019/05/23/amrron-temporarily-suspends-the-use-of-winlink-system-white-paper/>

14 https://en.wikipedia.org/wiki/American_Redoubt

so-called “Pizza Rule” FCC 94-111, RM-7894, RM-7895, RM-7896, PR 92-136. Drawing RM-11708, NPRM 16-239, RM-11831, RM-11759, and RM-11828 into an Omnibus Report & Order will ensure an effective, coherent rule making approach to related issues, because they involve the spectrum management components necessary to implement everything necessary to successfully implement abolishing the 300 baud limit. That is the reason this comment is cross filed in those proceedings, because they are inseparable by virtue of overhauling band plans and operating privileges.

B. §97.113

1. The FCC needs to revise, modernize, and clarify ALL of §97.113, specifically the points in bold noted below. Michael Marcus requested clarification on this point as well.¹⁵

§97.113 Prohibited Transmissions.

(a) No amateur station shall transmit:

(1) Communications specifically prohibited elsewhere in this part;

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

(3) **Communications in which the station licensee or control operator has a pecuniary interest, including communications on behalf of an employer,** with the following exceptions:

(ii) An amateur operator may notify other amateur operators of the availability for sale or trade of apparatus normally used in an amateur station, provided that such activity is not conducted on a regular basis.

(4) Music using a phone emission except as specifically provided elsewhere in this section; communications intended to facilitate a criminal act; **messages encoded for the purpose of obscuring their meaning, except as otherwise provided herein; obscene or indecent words or language; or false or deceptive messages, signals or identification.**

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

(b) An amateur station shall not engage in any form of **broadcasting**, nor may an amateur station transmit **one-way communications** except as specifically provided in these rules; nor shall an amateur station engage in any activity related to **program production or news gathering for broadcasting purposes**, except that communications directly related to the immediate safety of human life or the protection of property may be provided by amateur stations to broadcasters for dissemination to the public **where no other means of communication is reasonably available before or at the time of the event.**

2. The FCC needs to clarify whether it is acceptable for amateur radio to transmit credit card numbers, paypal, bitcoin, etc, for payment on commercial activities which are appropriate in furnished in other radio services. *Anything* that includes direct payment should be prohibited.¹⁶

Compare the standard in §97.113(3) (ii) above for the rest of the amateur community to make available (and make payment by other means) for amateur related equipment.

3. The FCC needs to provide a working definition for “pecuniary” that addresses the so-called “Pizza Rule” discussed later in this document. This needs to include providing communications including Winlink email to participants in a yacht race with a 6 figure prize.¹⁷

4. The FCC needs to clarify it is unacceptable for systems like Winlink to communicate with unlicensed persons attempting to send emails by employing “false or deceptive messages, signals or identification”. The FCC needs to clarify §97.219(c)(1) to prevent instant authorization of Winlink accounts without properly performing the duty to “authenticate the identity” of users, as discussed later.

5. The FCC needs to clarify “messages encoded for the purpose of obscuring their meaning” so that all amateurs and the public can decode all messages transmitted in the amateur service. There must be no obfuscation about “QAM constellation alphabet”, “layers”, “compression”, “systems” and the like. If you can “hear” it with a radio, you must have reasonable means to “display the content in its clear meaning” using publicly available information and equipment and software that are generally available to the general public at reasonable cost, preferably from multiple sources.

The ability to prevent open monitoring¹⁸ has been widely advertised by Winlink¹⁹ and its users.²⁰

16 https://ecfsapi.fcc.gov/file/109261360912077/%24ADDENDUM9_24_19_ARRLreply.pdf Pizza Rule clarification

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

18 <http://www.wslsm.com/Winlink.html> “Encrypted attachments using the encryption program you choose.”
“Winlink is used by most off-shore sailors, operating within the international amateur radio frequency space.”

<https://listoffreeware.com/list-of-best-free-steganography-software-for-windows/>

<https://en.wikipedia.org/wiki/Steganography>

19 “What Winlink 2000 Offers for EmComm: Various levels of security including message encryption” PAGE 4:

https://ecfsapi.fcc.gov/file/112327925360/McVey_PDR_Comments.pdf

20 <http://www.arrl-mdc.net/Winlink/MDCWL2KOVwAM.htm>

WINLINK 2000 RADIO-EMAIL OVERVIEW

“WL2K system radio-email is also compressed to reduce spectrum use and to enhance privacy .”

Some of us proposed²¹ a simple solution²²:

“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"...

We simply propose to accept Helfert's above offer of such a monitoring tool, and require it as Part 97 rule of SCS and all other emission or proprietary system now existing or in the future. This monitoring tool should be a vital component of a “disclosed code”, as detailed in RM-11831.”

This is in accord with long standing FCC policy previously ruled on in the Dolph Order.²³

QUOTED FROM DA 13-1918:

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).

6. In regard to the Dolph Order, it is clear that the FCC believes “an amateur station *hearing* a message being able to determine whether message violate the amateur service rules” is a bedrock principle of amateur radio. **The word “hear” needs clarification**, that ANY *Over the Air* communication can be intercepted and displayed for its true content clearly. That is the essence of the NYU Petition for Declaratory Ruling. It is the only guarantee we have that “the amateur service remains a **non-commercial service and self-regulates**”. **Please restate that all transmissions on amateur spectrum must be open to monitoring by all amateurs and the general public, not just Volunteer Monitors or a narrow exclusive group of system operators.**

7. At present, the incredible pressure from Winlink appealing to yacht groups²⁴ and ARRL to

21 Page 5: <https://ecfsapi.fcc.gov/file/10719969503992/FINAL%20VERSION%20Siddall%20reply%20June%2018.pdf>

22 Kolarik Petition RM-11831 <https://ecfsapi.fcc.gov/file/100918881206/PETITION%20FOR%20RULEMAKING.pdf>

23 Order dismissing Don Rolph Amateur Encryption Rulemaking Petition (Dolph Order, September 18, 2013)

http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0918/DA-13-1918A1.pdf

24 <http://www.sailnet.com/forums/general-discussion-sailing-related/111746-us-citizens-urged-support-fcc-rm-11708-a.html>

transform amateur radio into a thrifty substitute for Sailmail and satellite services, to enable the unlicensed public to send email, even from countries where there is no Third Party agreements²⁵ to do so. This clearly serves yacht owners²⁶, but does it serve the public good?

8. The FCC needs to clarify whether it is acceptable for amateur radio to supplant common carriers providing email which are reasonably furnished²⁷ through other radio services.²⁸

(5)(b) The FCC needs to clarify whether it is acceptable for amateur radio to transmit content destined for the internet (e.g. Facebook, blogs, items for public consumption²⁹) which may be sources of income through Patreon, etc. This is “program production”, and often styled “news”. The past standard has been “where no other means of communication is reasonably available before or at the time of the event”, and **this must be unequivocally restated by the FCC to end this abuse of amateur spectrum.**

C. §97.309(4)

§97.309 RTTY and data emission codes.

(a) Where authorized by §97.305(c) and §97.307(f) of the part, an amateur station may transmit a RTTY or data emission using the following specified digital codes:

(1) The 5-unit, start-stop, International Telegraph Alphabet No. 2, code defined in ITU-T Recommendation F.1, Division C (commonly known as “Baudot”).

(2) The 7-unit code specified in ITU-R Recommendations M.476-5 and M.625-3 (commonly known as “AMTOR”).

(3) The 7-unit, International Alphabet No. 5, code defined in IT--T Recommendation T.50 (commonly known as “ASCII”).

(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

25 Third slice, list of countries with Third Party agreements: <https://www.fcc.gov/wireless/bureau-divisions/mobility-division/amateur-radio-service/international-arrangements>

26 https://ecfsapi.fcc.gov/file/1219623911650/SSCA%2012_18%20REPLY%20Final.pdf

27 <http://www.arrl.org/news/it-seems-to-us-pecuniary-interest> “On the other, this mission does not extend to providing a cheap alternative to other radio services that were created specifically for the use of business, non-profit and government entities.” David Sumner, K1ZZ, ARRL Chief Executive Officer

28 Page 2 <https://ecfsapi.fcc.gov/file/1022041145632/Marcus%20ex%20parte.pdf>

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

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:

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

1. **The FCC needs to clarify the terms “specified” and “documented publicly”** as laid out in RM-11831 and the NYU Petition for Declaratory Ruling, as it applies to HF. Micheal Marcus points out the problem of “incorporated by reference” in his comments as well.³⁰

§97.309(4)(b) Applies to VHF/UHF/microwave spectrum in that it allows unspecified digital codes at those frequencies, not HF. However, it states a general principle that stations “must maintain a record”. It does not state how long that record must be maintained, although in the 1960s, we were required to keep National Traffic System messages on file for a year. This standard seems more realistic than the 21 day window offered by the Winlink Viewer. **The FCC should require automatic data systems to maintain records of messages for one year from date of delivery.**

§97.307 Emission Standards. (Referenced in §97.305 and §97.301)

(3) Only a RTTY or data emission using a **specified digital code** listed in §97.309(a) of this part may be transmitted. The symbol rate must not exceed 300 bauds, or for frequency-shift keying, the frequency shift between mark and space must not exceed 1 kHz.

(4) Only a RTTY or data emission using a **specified digital code** listed in §97.309(a) of this part may be transmitted. The symbol rate must not exceed 1200 bauds, or for frequency-shift keying, the frequency shift between mark and space must not exceed 1 kHz.

As discussed above, the bold terms should be clarified.

D. §97.115, §97.105(a), §97.219(d)(1) CONTROL OPERATOR

§97.115 Third Party communications.

(a) An amateur station may transmit messages for a third party to:

(1) Any station within the jurisdiction of the United States.

(2) Any station within the jurisdiction of any foreign government when transmitting emergency or disaster relief communications and any station within the jurisdiction of any foreign government whose administration has made arrangements with the United States to allow amateur stations to be used for transmitting international communications on behalf of third parties. No station shall transmit messages for a third party to any station within the jurisdiction of any foreign government whose

³⁰ <https://ecfsapi.fcc.gov/file/1022041145632/Marcus%20ex%20parte.pdf> Page 3

administration has not made such an arrangement. This prohibition does not apply to a message for any third party who is eligible to be a control operator of the station.

(b) The third party may participate in stating the message where:

(1) The **control operator is present at the control point and is continuously monitoring** and supervising the third party's participation

1. For the purposes of this filing, I am explaining that revocation of third party agreements³¹ would have NO EFFECT ON any US emergency communications or “Winlink NGO clients”, since they meet the criteria of §97.115(a)(1). Neither would revoking third party agreements impact legitimate emergency communications, since it meets the criteria in §97.115(a)(2). It would only affect foreign amateur operators attempting to use USA based relay stations and US amateur operators with email destined for countries other than the USA or its possessions. IF the FCC cannot devise a working *technical* solution in Part 97 rules, this is a certain method of preventing the USA amateur spectrum from becoming the world's free HF email service. It does not “enhance international good will”³² by subverting their telecommunication systems. The EU, Japan (one of the largest populations of amateur operators) and much of Region 3 already do not have third party agreements. This extreme measure is then not out of step with the rest of the world. I find it repugnant that the inability of Winlink to adequately manage this aspect makes this kind of measure necessary, but if it is not possible to obtain compliance, there seems no other option.

It would save the FCC a lot of technical arguments and rule changes to fix it that way.

2. §97.115(b)(1) is intended to prevent an unlicensed third party user from transmitting unlawful content. An unlicensed internet user anywhere in the world can send a message via amateur radio on Winlink, if they are on a Winlink RF port user's white list. The white list can be an entire domain such as aol.com or yahoo.com. Also, a message can be sent without being on the white list by putting //WL2K in the subject line.

3. All of this is possible without prior screening by a “control operator” in the accepted Part 97

³¹ <https://www.fcc.gov/wireless/bureau-divisions/mobility-division/amateur-radio-service/international-arrangements>

³² §97.1(e)

sense for the rest of non Winlink amateur community. The FCC should insist on a “buffer file” that is screened by a live human control operator before transmission, and placed in a “ready to transmit” file. An RF based Winlink user could then retrieve email from the “ready to transmit” file without concern that the content is illegal, due to the sender not knowing Part 97 rules.

§97.105 Control operator duties.

(a) The control operator **must ensure the immediate proper operation of the station, regardless of the type of control.**

4. **The FCC needs to define per §97.105 exactly WHO the “control operator” is in the case of amateur radio §97.219 Message Forwarding Systems operating under §97.221 rules. There currently is NO EFFECTIVE CONTROL OPERATOR to “ensure the immediate proper operation.”** No exception is made for §97.219 rule users: “Regardless of type of control”.

5. Winlink advocates would have you believe that the RF link operated by an offshore amateur operator retrieving his email from the Winlink server (their purported “control operator”) is clairvoyant, knowing the content he is about to enable for transmission is legal, without pre-screening by a licensed control operator who knows the rules. Or are the Winlink officers the control operator?

§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.

§97.219 was written long ago, when these systems were popular on VHF spectrum. The FCC

seemed to know who the control operator was back then. It badly needs updating.

6. However, the Winlink system works by using a randomly selected relay station to send the message to the amateur who is attempting to retrieve his email from the system email server. The Winlink system has no way to determine in advance which relay station will be connected to by the offshore user to retrieve his email. Identifying the “first forwarding station” is then problematic. This would not be such a problem, if the FCC required messages be placed in a “buffer file” for screening BEFORE it was placed in a “ready to transmit file”. If the FCC continues to allow yachts and others to use Winlink style systems, this could easily be implemented in Part 97 clarifications.

7. Legitimate emergency communications operations from amateurs who were verified members of ARES, SHARES, RACES, Salvation Army, Red Cross and the like could be exempted from the “buffer file” rule, since they are likely to be familiar with part 97 rules.

FCC -94-76A1³³ is only one instance illustrating that the FCC most certainly DOES REGULATE “SYSTEMS” AND ALL THEIR COMMUNICATION PROTOCOLS AT ALL “LAYERS”. The FCC should clarify the definition of “control operator” in §97.105 and in all instances of “control operator” in Part 97 rules to update them for modern practices.

8. This rule overhaul and update should begin with §97.3(1) and (6) and (13) and (14) and (31) and (32) and (39) and (40) and include all instances in Part 97 of the word “control operator” to verify the definition and applicable rules are still appropriate. They should be worded simply enough that “a caveman can understand”, and nitpickers cannot find loopholes.

9. Returning to another aspect of §97.219(1), the “system” acting as “control operator” must “authenticate the identity” of users. Lor Kutchins³⁴ has stated that unlicensed people (call sign pirates)

33 https://apps.fcc.gov/edocs_public/attachmatch/FCC-94-76A1.pdf “There is no central supervisory authority in an ad hoc amateur service digital network. The vulnerability of an unsupervised system can make it an easy target for misuse by uncooperative operators and non-licensees. For these reasons, there must be on-going oversight of the system. The control operators of the first forwarding stations are in the best position to provide such oversight.”

34 <https://ecfsapi.fcc.gov/file/1020199526416/FINAL%20REPLY%202019%20%2016-239.pdf> Page 4: “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.”

immediately are granted access and persist in the system for weeks. The system must “authenticate” all potential Winlink account requests by better methods, such as sending a post card to the physical address of the license of record, with an “authentication code”. The real license holder is then aware that some one is misusing his call sign, and can report it and prevent the account from operating for a spoofed call sign unlicensed person.

10. Before guffaws of sending postcards all over the world take place, the FCC is the USA regulator, and Part 97 has no effect on international Winlink users. I only advocated this possible procedure for the USA. The FCC requires all US amateurs maintain a mailing address in §97.23:

“Each license grant must show the grantee's correct name and mailing address. The mailing address must be in an area where the amateur service is regulated by the FCC and where the grantee can **receive mail delivery by the United States Postal Service**. Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct mailing address.”

11. Also worth noting is that the ARRL uses this exact procedure to register its members of Logbook of the World³⁵ for radiosport awards, even international users.

Legitimate enrolled active emergency communicators verified as members of RACES, ARES, AUXCOMM, National Traffic System, Salvation Army, Red Cross, and the like could be exempt from the postcard system of authentication, by communication from their parent organization. SHARES and MARS do not use amateur spectrum and are not governed by part 97 rules.

12. Maybe someone has a better system, but something needs to be done about unlicensed Winlink users. The postcard system seemed good enough to work for world wide radiosport logging security concerns. If radiosport logging can implement this system world wide, the USA certainly can do so for its citizens and licensees using Winlink or other HF email systems, to ensure “authentication of identity” satisfies FCC rules and protects the network from unauthorized abusers.

E. Docket 92-136, RM-7894, RM-7895, RM-7896, PR 92-136

³⁵ <https://lotw.arrl.org/lotw-help/getting-started/> “If your primary callsign was issued in the United States, the ARRL will send a postcard to the postal address specified in your FCC license. The postcard will specify an 8-digit "postcard password"”

1. This section is going to have some history, to see how we got to 16-239, RM-11759, and RM-11828. This history will demonstrate why the current rules do not meet the needs without revision and update. This FCC action, referred to as the “Pizza Rule”, was done in July of 1993, long before large HF email store and forward systems existed. The intent at that time was to allow VHF communications flexibility in providing public service events and occasional personal communications. It even then did not permit “communications, on a regular basis”³⁶ on the scale it is practiced today in free HF email systems today. Therefore, the “Pizza Rule” badly needs an update and revision, since the current condition has reached a tipping point leading to unsustainable consequences.

“2. The rule amendments adopted by the Report and Order allow amateur stations greater flexibility to provide communications for public service projects and personal communications needs. Specifically, Section §97.113 was amended to allow licensees to use amateur service frequencies to facilitate events such as races and parades, to support educational activities, to provide personal communications such as making appointments and ordering food, to collect data for the National Weather Service, and to provide assistance voluntarily even where there are other authorized radio services available.”³⁷

PR 92-136³⁸

This is an expanded version of the FCC document discussed before, which elucidates the line of reasoning the FCC employed to reach its decision. It is reproduced intact here, because it is difficult to find, and I do not want to be accused of quoting out of context. The emphasis added is mine.

II. DISCUSSION

2. The international Radio Regulations define the amateur service as a radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest. ~ For this reason, Section §97.113(a) of the Commission's Rules, 47 CFR §97.113(a) prohibits amateur stations from transmitting any communications the purpose of which is to facilitate the business or commercial affairs of any party, or as an alternative to other authorized radio services. The amateur service community, however, generally desires a relaxation of this restriction to accommodate contemporary communications demands and the operational capabilities of amateur station licensees. Noting that it appears the amateur community appreciates both the benefits and the burdens of such relaxation, we proposed to relax the restriction. Over eighty comments and reply comments were filed in response to the *Notice*.

3. The comments convincingly support the proposal. *Although some comments urge caution to*

³⁶ §97.113(a)(3)(5)

³⁷ Memorandum, Opinion & Order, Docket 92-136, May 9, 1994

<https://docs.fcc.gov/public/attachments/FCC-94-111A1.pdf>

³⁸<https://ecfsapi.fcc.gov/file/1196660001.pdf>

prevent exploitation of the service, they show that the present rules hamper amateur operators from serving the public as well as diminish the value of the amateur service in satisfying personal communication needs. The vast majority of comments support our proposal to relax the prohibition against using the amateur service *as an alternative to other radio services such as the maritime services, land mobile radio services or the cellular telephone service*. They believe that the current prohibition is overly cautious and unnecessary. ~ We concur. *The capabilities of modern mobile communication services have all but eliminated the incentive to use the amateur service instead of those services*. We will relax, therefore, the current prohibition, as proposed, to provide amateur operators greater flexibility for public service and personal communications.

4. The American Radio Relay League (League) notes that it expects no noticeable change in amateur operations as a result of this rule making. This relaxation of the restrictions contained in the rules allows the amateur community to satisfy its contemporary needs for communications in return for greater responsibility for self-regulation and cooperation in the use of its allocated frequencies. This relaxation also will satisfy the desire of the licensees of many amateur stations to retransmit propagation and weather forecast information originating from United States Government stations. The revised rule provides, therefore, that propagation and weather forecast information intended for use by the general public and originated from United States Government stations can be retransmitted by any amateur station without permission of any government agency. In addition, as requested by the League, we shall clarify that the rule requiring prior approval for amateur station retransmission of United States Government communications applies only to communications, including incidental background music, between a space shuttle and its associated earth stations.

5. Some comments suggest even greater relaxation than we proposed. *The League, however, states that the proposed rule is a good, workable middle ground offering the requisite protection against exploitation.*

7. In summary, we have decided to amend the amateur service rules substantially as proposed by the League in order to allow amateur operators more flexibility to provide communications for public service projects as well as to enhance the value of the amateur service in satisfying personal communications needs. Amendment of the rules as the League requests will allow licensees to use amateur service frequencies, for example, to facilitate events such as races and parades, to support educational activities, *to provide personal communications such as making appointments and ordering food*, to collect data for the National Weather Service, and to provide assistance voluntarily *even where there are other authorized radio services available*. We believe that this action will expand the benefits derived from the amateur service by the general public as well as amateur service licensees.

2. It is now clear from current practice that there is both an enforcement and a regulatory problem with regard to content and “exploitation” unanticipated in 1993 by either the FCC or the ARRL. At that time, they speculated: “*The capabilities of modern mobile communication services have all but eliminated the incentive to use the amateur service instead of those services.*” Wrong. The evolving appetite for HF radio email service resulted in 16-239, RM-11759, and RM-11828.

3. Moving from 1993 to November 2001, we read in the New York Times³⁹:

39 <https://www.nytimes.com/2001/11/22/technology/radio-e-mail-connects-ships-to-shore.html>

Mr. Corenman and his wife, Sue, have been sailing the globe for 11 years on Heart of Gold. They are among thousands of active cruising sailors who use nonprofit radio e-mail networks to communicate with one another and those on shore.

The largest such network, **Winlink**, offers service at no charge and consists of 31 volunteer ham mailbox stations scattered over the globe. According to **Steve Waterman**, who operates two stations from his home in Nashville and is also the Winlink network administrator, the system currently handles more than 80,000 messages a month and has 3,300 users, about 80 percent of whom are sailors.

Of course amateur ham radio by law is strictly noncommercial. But sailors can also send HF radio e-mail through what are known as marine single-sideband (SSB) frequencies. SSB radio can be operated for profit and can carry business-oriented traffic.

Still, the most popular SSB e-mail network for recreational mariners is a nonprofit cooperative called SailMail, which charges a flat \$200 annual subscription fee to cover costs. SailMail was formed in 1997 by Mr. Corenman and Stan Honey, an ocean-racing sailor who navigates high-profile vessels like Roy Disney's Pyewacket and Steve Fossett's PlayStation, which recently set a trans-Atlantic speed record. SailMail currently has 11 automated mailbox stations and more than 1,100 users.

Mr. Poor, a former cruising sailor, developed the first Winlink system before becoming involved with Globe. Through him, Globe has helped the recreational market service itself by providing technical and logistical assistance to the nonprofit networks.

"It's all a question of support," Mr. Waterman said. "If you're trying to make money doing this, you want your support people talking to Exxon's tanker fleet, not some guy sailing around in a little yacht somewhere."

But another common carrier, PinOak Digital, has pursued the recreational market and has tried to hinder the growth of nonprofit SSB e-mail.

Through threats of legal action, PinOak succeeded in 1999 in thwarting the startup of an SSB e-mail cooperative planned by **Mr. Waterman** and the **Seven Seas Cruising Association**, a nonprofit organization with a membership of some 11,000 cruising sailors. PinOak failed, however, in its efforts to block SailMail's application to the Federal Communications Commission for additional station licenses to expand its network.

Since then, SailMail's membership has grown steadily. **PinOak, meanwhile, has stagnated.**

"Our assumption when we started SailMail was it would take the satellite companies two years to make bandwidth a cheap commodity," Mr. Corenman said. "I am no longer convinced satellite bandwidth will get cheap anytime soon. The capital cost is too high and the market too small. Satellites may be a viable option for business and government users, but HF radio will continue to be the best option for the low-end market."

And the nonprofit organizations seem to be the best bet for operating the e-mail systems. "Cruising sailors are by nature a very cooperative group of people," **Mr. Honey** said. "It's perfectly appropriate for us to fill this need on a cooperative basis."

IMPORTANT TAKEAWAYS: The news article named some of the players in commercial HF email services and ARRL and FCC lobbying for amateur spectrum. PinOak exited the HF email market due to Sailmail competition. Sailmail now has essentially a monopoly on HF email for recreational boaters. The founders of Sailmail did not anticipate operating it for more than 2 years. Stan Honey is still the

holder of the Sailmail marine band email FCC licenses. All of the people and organizations mentioned have strong ties to blue water sailing. Those people and organizations (Seven Seas Cruising Association⁴⁰) have filed comments in 16-239 in an attempt to influence the FCC and the outcome for HF email in the amateur spectrum. Some have been active in influencing the ARRL⁴¹ to take action through petitions⁴² and lobbying for this special interest group. If they can get amateur spectrum for free, why would they still pay for maritime commercial spectrum for Sailmail?

4. In 2018, Steve Waterman⁴³ advocated 100 simultaneous 40 meter 2.4 KHz channels, with similar ambitions for other amateur bands like 80 and 20 meters.

Steve Waterman Hurricane response page 4: But what about about two, three or a hundred such stations all operating simultaneously? After all, 2.4 KHz is the average bandwidth for a voice LSB signal. Why would the modern Amateur not want more than 5 KHz on 40 metes or 15 KHz on other HF Amateur bands for digital operations such as data transfer?"

240 KHz is over 100% of the RTTY/DATA segments in most amateur HF bands. This is excessive, especially given a lot of the traffic is for free HF email for yachts, not emergency communications. Winner take All also seems to be the current ARRL filing position, despite the ARRL Board of Directors 14-1 vote to the contrary.

On page 2 of the same Hurricane Response comment, Steve Waterman also advocates for repeal of §97.113 prohibitions of encryption, ostensibly for emergency communications, but also for yachts who use the Winlink system. This problem grows out of the tendency for Winlink supporters to conflate true emergency communications with non-emergency yacht traffic, which might find it convenient to encrypt credit card information and such. Note that MARS and SHARES operate outside Part 97 spectrum, and can use encryption for mission critical traffic, if that feature is needed. Amateur radio is often employed for Red Cross "Well and Safe" and other messages which do not require

40 https://ecfsapi.fcc.gov/file/1214762322850/SSCA%2012_18%20REPLY%20Final.pdf

41 <http://www.zerobeat.net/bandplan-dissent.html> "The committee majority recommendation therefore represents the views of a special interest group, and NOT the interests of all radio amateurs"

42 https://arrlse.org/?te_announcements=240-2 ARRL director K4AC statement on RM-11708
https://arrlse.org/?te_announcements=k4ac-makes-motion-making-clear-amateur-radio-performs-emergency-communications

43 <https://ecfsapi.fcc.gov/file/10123298305905/%2017-344.pdf> Page 4

encryption. In RM-11699⁴⁴, the FCC denied to allow encryption in the amateur service. Steve Waterman⁴⁵ filed supporting encryption. Phil Sherrod, a Winlink officer, advocated for encryption as well.⁴⁶ The ARRL⁴⁷ opposed RM-11699.

Steve Waterman⁴⁸ 17-344 Hurricane Response page 2 paragraph 2: “Also under FCC Part §97.113, HIPAA and other non-public data transfer is not allowed due to the inability of the control operator to obscure data. Most information sent during any casualty event is such data. Only health and welfare data is left for public observation. If the Commission wishes to increase the capabilities of the Amateur operator to provide emergency communications, this is an important issue.”

5. To wrap this section on the “Pizza Rule” up, we go back to PR 92-136. The FCC declined the ARRL's request for some examples to follow in interpreting §97.113 with regard to prohibited communications such as those with “pecuniary” interest.⁴⁹

6. The one detail that we are not able to accommodate is the *League's request that we provide a list of anecdotal examples of permitted and prohibited communications*. For us to do so would necessitate that we intrude upon the day-to-day functioning of the amateur service to a far greater degree than we desire. Further, in view of the wide diversity in the types of communications in which amateur operators want to engage, there would have to be thousands of examples. Therefore, we decline to devote staff resources to the development and maintenance of such a list. Rather, we will rely on the amateur service's traditions of self regulation and cooperation between licensees, the cornerstones of the amateur service, to determine whether specific communications should be transmitted on amateur service frequencies. *We also will include the League's criterion*, which we have incorporated in the rules we are adopting in this proceeding, that any amateur-to-amateur communication is permitted unless specifically prohibited, or unless transmitted for compensation, or unless done for the pecuniary benefit of the station control operator or his or her employer.

Due to current practice, it is apparent the FCC needs to restate its position, and revise that position. The Winlink Terms of Service apply only to its system, and are subject to change or cancellation without input from the amateur community in a rule making. In 2009, the ARRL offered some guidance on “pecuniary interest” which is helpful, but do not have the force of a Part 97 regulation. The confusion resulting needs to be resolved, not by the ARRL, not the Winlink Terms Of Service, but the FCC. The FCC should retake control in the former §97.113 wording.

44 <https://ecfsapi.fcc.gov/file/7520944376.pdf>

45 <https://ecfsapi.fcc.gov/file/7520927665.pdf>

46 <https://ecfsapi.fcc.gov/file/7520932338.pdf>

47 <https://ecfsapi.fcc.gov/file/7520928844.pdf>

48 <https://ecfsapi.fcc.gov/file/10123298305905/%2017-344.pdf>

49 Page 2 Paragraph 6: <https://ecfsapi.fcc.gov/file/1196660001.pdf>

The FCC itself muddied the water somewhat in 1999 when it declared, in denying a petition to amend §97.113 to permit licensed emergency personnel to operate while engaged in disaster relief on paid duty status, that the amendment was unnecessary because this was already permitted. The ad-hoc committee may find a need for additional clarification of the rules, but figuring out what is legal -- and what isn't -- is not the whole story. When the FCC amended Part §97 in 1993 to give radio amateurs the greater flexibility that we had asked for, they also gave us greater responsibility for avoiding exploitation of our precious resources: our access to the radio spectrum and the equipment and skills to use it responsibly.⁵⁰

Please therefore update the FCC position regarding §97.113, FCC 94-111, RM-7894, RM-7895, RM-7896, PR 92-136, the so called “Pizza Rule”, to eliminate the commercial exploitation.

F. §97.101 EXCLUSIVE USE OF FREQUENCY, REPEATERS

Furthermore, the arcane concept that a message forwarding system that uses fixed frequencies is NOT a subtype of repeater⁵¹, therefore subject to similar rules, needs to re-examined in the light of current problems. See §97.101(b) “No frequency will be assigned for the exclusive use of any station.” On world wide HF, there is no amateur “frequency coordinator” as described in that paragraph, as there is on local VHF/UHF repeaters. That coordinator must of necessity be the FCC, to separate HF ACDS and message forwarding systems in their own appropriately sized band segment, as is the “commonly accepted practice” on VHF/UHF band plans and IARU Region 2 band plans. Just because some countries with smaller amateur populations ignore specific band planning on this matter is no justification the USA should not be a leader instead of a follower, in its responsibility to maintain orderly operation to “mitigate congestion” and ensure all users have unimpaired access. **This is why a band plan allowing ACDS and wide band signals “only in certain sub bands” is a necessary component of any final 16-239 Report and Order.**

G. §97.301 AUTHORIZED FREQUENCIES, §97.305 AUTHORIZED EMISSION TYPES §97.307 EMISSION STANDARDS

1. The NYU PDR fails to address an essential core issue, in its focus on decoding. At the heart of 16-239 is the rule which ARRL requested the FCC to change:

⁵⁰ <http://www.arrl.org/news/fcc-clarifies-what-constitutes-an-amateur-radio-repeater>

⁵¹ Memorandum, Opinion & Order, Docket 92-136, May 9, 1994

<https://docs.fcc.gov/public/attachments/FCC-94-111A1.pdf>

(3) Only a RTTY or data emission using a specified digital code listed in §97.309(a) of this part may be transmitted. The symbol rate **must not exceed 300 bauds**, or for frequency-shift keying, the frequency shift between mark and space must not exceed 1 kHz.

The ARRL petition chose to exchange a baud rate specification for a 2.8 KHz specification, which applied EVERYWHERE in the RTTY/DATA sub bands. The FCC⁵² proposed NO BAND WIDTH LIMIT at all in NPRM 16-239, which suggested that commenters could advocate for various solutions:

12. We nonetheless request comment on whether we should ***establish emission bandwidth standards*** for amateur service MF/HF RTTY and data emissions. Commenters favoring such action should address what the maximum bandwidth should be, the basis for the particular limitation the commenter proposes, and ***whether the limit should apply across the bands or only in particular subbands***. Commenters should explain the grounds for departing from the generally applicable standards.

2. The ARRL has said⁵³, regarding band plans for HF email:

Page 10: “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.”

“Page 9. ***Having a narrow bandwidth segment and a wide bandwidth segment in a given allocation would tend to keep signals of roughly the same bandwidth in their own spectrum.***”

“A bandwidth of 200 Hz was chosen to accommodate Morse telegraphy and the narrowest RTTY/data emissions. A bandwidth of 500 Hz would permit the foregoing modes and a wide range of RTTY/data modes and some image modes yet to be designed.”

“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 12: “While it is not ARRL’s intention whatsoever to ***segregate HF data communications by rule, it is***

necessary to do so where the station or network configuration is such that stations under automatic control can initiate transmissions. To do otherwise would be to create an environment where such stations might initiate transmissions that ***would interfere*** with ongoing communications on the same frequency using ***incompatible emission types.***”

“Page 14. Section §97.1 19 (b)(1) is proposed to be modified by ***adding MCW for the purposes of identification in addition to CW, as the former is in common use for repeater identification.***”

3. The ARRL⁵⁴ in 16-239 affirmed ***voluntary band plans*** to segregate automatic control from peer to peer will not work.

52 Page 6 <https://ecfsapi.fcc.gov/file/0728122180423/FCC-16-96A1.pdf>

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

54 <https://ecfsapi.fcc.gov/file/1011120327463/Comments%20of%20ARRL%20on%20NPRM%2010112016%20FINAL.pdf>

PAGE 14 & 15, ITEM18: “In the specific context of the admixture of data and other modes in the HF and MF bands, *reliance solely on voluntary band planning is expecting quite a lot.* ARRL is in complete agreement that voluntary band plans - the tried-and-true manifestation of the exercise of responsible self-regulation in Amateur spectrum management (especially at HF) is critical to compatible shared use of the small, intensely used HF and MF bands and subbands. The Amateur Service in the United States does an admirable job of adherence to voluntary band plans overall. But just as increased automobile traffic in urbanized areas necessitates not only driver courtesy but also some traffic signals, increased use of data emissions in the HF and MF data and RTTY subbands necessitates *adherence by licensees not only to voluntary band plans but also adherence to some fixed limits that (1) prevent a few individuals from usurping the entire band and (2) ensure basic access by all.*”

PAGE 19. ARRL ITEM 24: “It can be fairly debated whether or not 2.8 kHz is the proper maximum bandwidth for data emissions. Greater bandwidth for data emissions would permit a wider array of data emissions now and in the future. *However, even 2.8 kHz could arguably permit usurpation of the subbands to the detriment of CW and other narrow bandwidth emissions.*”

4. In spite of this problem, the ARRL has continued to insist on 2.8 KHz EVERYWHERE in the RTTY/DATA band segment. The ARRL Board of Directors overwhelmingly supported⁵⁵ a segregated band plan approach; but the current filing does not reflect that decision. At the beginning of RM-11708, there was an HF Band Plan⁵⁶ from their ad hoc committee. It would be possible for the FCC to adopt the ARRL band plan, if the ARRL submitted that instead of a “winner take all” approach. The FCC therefore needs to establish separate sub bands to prevent impaired access by incumbent narrow band peer to peer operation, as allowed in instructions for filing on 16-239. **If the ARRL is unable or unwilling to provide a band plan, the FCC should adopt OURS⁵⁷ or reject NPRM 16-239 in its entirety, as unworkable.** The FCC should revise and update §97.301, §97.305, §97.307 to reflect those changes to the ACDS band segments, as permitted in 16-239, to conclude the proceeding, as many commenters advocated for segregation of ACDS and wide band emissions from incumbent narrow band peer to peer operations, to allow all to fairly access the HF spectrum.

55 www.arrl.org/files/file/2019%20Board%20of%20Directors/Final%20Minutes%20July%202019.pdf Page 17

56 <http://www.arrl.org/files/file/About%20ARRL/Committee%20Reports/2015/January/SUMNER%20QS4.pdf>

57 <https://ecfsapi.fcc.gov/file/1071958608259/July%2018%2C%202019%20Ex%20Parte%20Filing.pdf> PAGE 18

Current FCC 97.221(b) vs. July 2019 Proposed* ACDS/Wideband Sub Bands

Band	Current ACDS FCC 97.221(b)	Current FCC 97.221(b) Allowance, KHz	July Proposed* ACDS/Wideband	Proposed* Allowance, KHz	Delta, KHz
160	0	0	0	0	0
80	3.585-3.6	15	3.600-3.625	25	+10
40	7.1-7.105	5	7.100 - 7.120	20	+15
30	10.140-10.150	10	0	0	-10
20	14.095-14.0995 & 14.1005-14.112	16	14.101-14.125	24	+8
17	18.105-18.110	5	0	0	-5
15	21.090-21.100	10	21.100-21.125	25	+15
12	24.925-24.930	5	0	0	-5
10	28.120-28.189	69	28.120 – 28.189	69	0
Total		135		163	+28

* Assumes that only transparent data modes are used which are able to be intercepted, over-the-air, for meaning by the public. 2.8 KHz bandwidth allowance for ACDS/Wideband Data. Non ACDS RTTY/Data limited to 500 Hz "peer to peer" operations.

I. CONCLUSION

The NYU Petition for Declaratory Ruling focuses on one of the two issues in RM-11831, the need for amateurs and the public to monitor ANY transmissions in the amateur spectrum. The FCC must believe it is important, or they would not have issued an RM-11831 or included the NYU PDR. Many commenters share that concern. The exact implementation would require clarification to the Part 97 rules. The lack of monitoring has resulted in a host of related problems spelled out in the NYU PDR, and expanded upon in this comment, because the NYU PDR does not go far enough. The NYU PDR does list some of the following Part 97 items that need updating. I have gone beyond that, to point out the specific issues and changes needed in those related rules, so the intent of the PDR is clear.

1. Please clarify §97.113 as called for in the NYU PDR regarding obscured communications.
2. Please clarify §97.309(4) as to what the standards are for “specified” and “publicly disclosed”, as described in RM-11831 and other comments in this proceeding.
3. Please clarify discrepancies exposed within current proceedings regarding the definition, duties, and identity of the “Control Operator”. This would elucidate all instances of “control operator”

in Part 97, including, but not limited to: §97.3 Definitions (1), (6), (13), (14), (31), (32), (39), (47), (including(40) Repeater), §97.7, §97.9, §97.101 (b) and (c), §97.103, §97.105, §97.107, §97.109 (especially §97.101(c)), §97.113, §97.115 (especially (b)(1), §97.119, §97.201, §97.203, §97.205, §97.207, §97.209, §97.211, §97.213, §97.219 (especially §97.219(b), (c), (d including “authenticate”)), §97.301, §97.303, §97.305, §97.307, §97.313, and §97.407. In each instance of the phrase “control operator”, the FCC should ask the question: “Does this definition or statement still work for modern amateur practice?” This request arises from protracted debates in amateur forums and 16-239 regarding WHO is the “control operator” in a message forwarding system, since that is the entity ultimately responsible for “immediate proper operation of the station, regardless of the type of control.” (§97.105(a)). It simply cannot be determined from existing rules. Some have claimed “control operator” responsibilities were transferred to the “system” known as “Winlink”, since no one personally screens incoming messages for content from unlicensed persons using the internet to access Winlink. The “first forwarding station” that transmits incoming internet traffic on RF is randomly selected. The offshore station requesting email on the server selects the onshore relay station based on best propagation at that moment. The offshore station cannot have foreknowledge of any illegal content before it is transmitted from an unlicensed internet correspondent. If screening is performed by software, is the control operator the author of the computer code? The definitions and rules need an update in this fundamental matter, due to changes in practice since the rule was written.

4. Please clarify the group of rulings known as the “Pizza Rule”. These appear to be FCC 94-111, RM-7894, RM-7895, RM-7896, PR 92-136. The FCC apparently delegated the interpretation of §97.113 “pecuniary” to the ARRL, and possibly the Winlink Terms of Service in those proceedings. Recent revelations of abuses spanning 20 years, and an Enforcement Bureau ticket, make it clear that is not working as anticipated. We now have people operating a pizza business and setting prices using Winlink HF email, not just occasionally ordering a meal:

#2: I would like to put the meal deal up in price and see how the business stays the same for the last two months that we continue with them.

The thinking now is that we close for the summer and if you compare our deal with the pizza - we are more than half price - so why do we have to give our stuff away. If we sell fewer for more - then what is the difference.

Our pies are the best in the city in the province in the ***** world - so why can't we charge for them.

I'm liking this correspondence - because you can't tell me right away that I'm not thinking about it properly.

have fun - thanks for corresponding and tell me I can put the prices up.⁵⁸

The FCC simply should resume control, and return to the original interpretation because much has changed since people were ordering Pizza on a 2 meter autopatch to the telephone lines.

The Winlink Terms Of Service presently seems to be using traditional interpretations of rules for its message content. While Lor Kutchins seems to be leading this major cleanup, what happens if he retires? What happens in OTHER HF email systems? What happens in “privately owned” systems which can be set up using the SCS modem software? **Clarifying FCC policy on §97.113(3) and (5) would go a long way to reducing objectionable content in the system from yachts, with ZERO IMPACT on legitimate emergency communications.**

5. Please clarify that HF email store and forward systems ARE a subset of “repeaters”, and are not exempt from their requirements, so all of us play by the same set of rules. This arcane concept is based on the nitpicking idea some Winlink advocates try to apply to their system, that the retransmission is not “simultaneous”, to avoid certain rules⁵⁹. The FCC needs to revisit that decision which was made long ago applying to 2 meter operations and message boards, due to changes in current practices. No voice repeaters are allowed below 29 MHz for a good reason. Repeater operation is normally segregated from weak signal work and simplex FM, where propagation is local. HF is worldwide, and needs effective regulation, not voluntary band plans. §97.101(b) states: “No frequency will be assigned for the exclusive use of any station.” An HF email store and forward relay station on a

⁵⁸ <https://ecfsapi.fcc.gov/file/1071958608259/July%2018%2C%202019%20Ex%20Parte%20Filing.pdf> Page 29

(Salty language ***** redacted by me)

Also Enforcement Bureau ticket #3184322

⁵⁹ <http://www.arrl.org/news/fcc-clarifies-what-constitutes-an-amateur-radio-repeater>

fixed frequency needs its appropriate space to operate in, and an improved band plan should be in place to ensure they have what they need for emergency communications. Conversely, narrow band peer to peer operations need their unimpaired space as well.

6. Please update §97.301, §97.305, §97.307, and §97.221 to reflect the new band plan the FCC institutes, or congestion and interference will be inevitable. **SINCE THE ARRL HAS FAILED TO PRODUCE A BAND PLAN, AND SEEMS TO INTEND THAT OUTCOME, PLEASE ADOPT OURS (page 24). OTHERWISE, REJECT 16-239 IN ITS ENTIRETY AS FUNDAMENTALLY FLAWED FROM THE BEGINNING, AND NOT REPRESENTATIVE OF THE MAJORITY OF THE AMATEUR COMMUNITY AT LARGE, OR PRUDENT TO IMPLEMENT.**

7. The ARRL has not requested a Further Notice of Proposed Rule Making (FNPRM). If they do, it should be required to include such a band plan, or NPRM 16-239 should be closed without further action. The ARRL is free to submit a new petition, which exercises due diligence this time by including that essential feature. **Otherwise, I informally request the FCC to take up and decide “sua sponte” to institute a NEW Petition for Declaratory Ruling to impose a Part 97 band plan segregating wide band and ACDS from peer to peer and narrowband emissions in the HF RTTY/DATA band segments as set forth in the ARRL Board of Director minutes⁶⁰ page 17 , employing the band plan presented herein on page 24, to expand the ACDS band segments for emergency communications use.** The ARRL should have great difficulty justifying opposing the decision of its own Board of Directors in an FCC rule making proceeding.

IT IS ACCORDINGLY RESOLVED that the ARRL’s Washington Counsel is instructed to take appropriate steps, including, but not limited to, appropriate filings with the Federal Communications Commission, to obtain the Commission’s approval for the following enumerated changes to Part 97 of the Commission’s Rules:

(1) All automatically controlled digital stations (ACDS) below 30 MHz, regardless of bandwidth, are authorized to operate only within the ACDS bands designated in the FCC’s Rules, 47 C.F.R. §97.221(b);

(2) All digital mode stations that operate with a bandwidth greater than 500 Hz also must operate within the ACDS bands designated in the FCC’s Rules, whether or not

automatically controlled;

(3) No digital mode station may employ a bandwidth greater than 2.8 kHz in any band below 29 MHz;

(4) Reiterate to the Commission the need to remove, and the benefits of removing, the current baud limitations, subject to the conditions requested by the ARRL herein;

(5) Reiterate to the Commission the ARRL's unchanged position — most recently stated in its Comments submitted In the Matter of Don Rolph, RM-11699 - that the encryption of messages prohibited in Amateur communications by Section §97.113 of the Commission's Rules and by Article 25, §2 of the International Radio Regulations, should remain prohibited;

(6) Request that the Commission remind Amateurs, by whatever appropriate means available, of the current prohibition against transmitting “messages encoded for the purpose of obscuring their meaning.”

Discussion followed, including discussion on the difference between encryption and compression. Mr. Norris called the previous question, seconded by Mr. Stratton. A roll call vote being requested the motion to call the previous question passed with 14 AYE votes and 1 NAY votes⁶¹

Please note that I am not an attorney, and I making my best attempt (as a moderate position) to resolve 16-239 amicably, in spite of the “doubling down” of hard liners who have so far prevented any practical solution to date. Anything without segregation of ACDS doesn't “mitigate congestion”.

8. **THE EXIT RAMP:** RM-11306 FAILED due to inability of the ARRL to respect the rights of the majority who do not use HF email, and they had to withdraw it due to massive opposition. RM-11708 and NPRM 16-239 has likewise failed for the same reason: ARRL intransigence and “winner take all” predatory spectrum management. The FCC can cite the lack of consensus and simply end the proceeding. It may be difficult for the FCC to parse all the technical nuances contained in this filing, and they could determine the time and resources to make the decision are simply not available. 5G and other pressing matters are on the top of the FCC to do list. Ajit Pai has suggested that this sort of thing could be concluded within a year. That clearly has not happened. Lacking a workable technical solution for multiple interrelated intractable problems, the FCC could simply not rule. But please provide some closure with a final R & O ending it.

9. The FCC should beware of conflation of emergency communications with recreational boaters free HF email use. The FCC clarified⁶² emergency communications role in amateur radio:

61 <http://www.arrl.org/files/file/2019%20Board%20of%20Directors/Final%20Minutes%20July%202019.pdf> Page 17

62 Page 1 https://apps.fcc.gov/edocs_public/attachmatch/DA-09-2259A1.pdf

Transmissions by amateur stations participating in government disaster drills must comply with all applicable amateur service rules. While the value of the amateur service to the public as a voluntary noncommercial communications service, particularly with respect to providing emergency communications, is one of the underlying principles of the amateur service (*1), **the amateur service is not an emergency radio service**. Rather, it is a voluntary, **non-commercial communication service** authorized for the purpose of self-training, intercommunication and technical investigations carried out by licensed persons interested in radio technique solely with a personal aim and without pecuniary interest. (§ 97.3(a)(4)) also (*1) See 47 C.F.R. § 97.1(a). See also Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks, Order, EB Docket No. 06-119; WC Docket No. 06-63, 22 FCC Rcd 10541, 10576 ¶ 111 (2007) (noting that the amateur radio community played an important role in the aftermath of Hurricane Katrina and other disasters).

Procedures appropriate for SHARES and MARS are not appropriate for Part 97 spectrum.

9. The FCC has acted on long dormant rule making proceedings (RM-11834, RM-11835, RM-11833). I encourage the FCC to also reject RM-11829 as unworkable and not supported by the amateur community. I commend them for that timely action. I also support the ARRL's comments in RM-11785 and RM-11767 urging the FCC to act to approve those rule makings and petitions.

10. I disagree strongly with the ARRL in their attempt to push through RM-11759 and RM-11828, which is an essential band planning component for the resolution of NPRM 16-239 and RM-11708. It also complicates the band planning with a license restructure for Technician, which should be rejected outright, as noted in my comments⁶³ in that proceeding. That component is redundant to RM-11828. **The FCC should NOT act on RM-11759 OR RM-11828 separately, but bundle it into an Omnibus Report and Order with NPRM 16.239.**

11. I disagree with the ARRL's push to dismiss RM-11831. The Kolarik petition has been the driving force in forming opinion in NPRM 16-239 and the NYU Petition for Declaratory Ruling. **RM-11831 also should be bundled into an Omnibus Report and Order along with NPRM 16-239 and RM-11759 and RM-11828.** Furthermore, besides the essential monitoring issues, RM-11831 correctly

63 <https://ecfsapi.fcc.gov/file/10314271330556/petition%20to%20dismiss%20RM-11828.pdf>
<https://ecfsapi.fcc.gov/file/10319809215%20972/RM-11828%20errata.pdf>
<https://ecfsapi.fcc.gov/file/1050243614383/REPLY%20ARRL%2011828.pdf>
<https://ecfsapi.fcc.gov/file/10504233789157/REPLY%20W1YV%2011828.pdf>
<https://ecfsapi.fcc.gov/file/10429133671169/Comments%20to%20FCC%20RM%2011828.docx>
<https://ecfsapi.fcc.gov/file/10513284335700/RobertStephensARRLreply.pdf>

addresses problems solved by having an HF band plan that separates ACDS operations from peer to peer narrow band operations, in close agreement with the recent ARRL Board of Directors 14-1 vote.

11. RM-11843, the 8 meter band petition is likely to take some time, require work at the upcoming IARU, and is not relevant to current HF proceedings. The FCC should let this rule making run its course based on its own merits.

12. I thank the FCC for including RM-11831 and the NYU PDR in these 16-239 proceedings, to obtain a comprehensive practical solution to problems which have been festering for 20 years. I also thank the FCC for ensuring all ex parte presentations in this matter are properly publicly disclosed and documented, to prevent “back channel” contacts which derail due process.

Sincerely,

/S/

Janis Carson, AB2RA, Extra Class, ARRL member over 40 years