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RE: RM-11831

A Study Of WINLINK SYSTEM OBJECTIONABLE EMAIL INCIDENCE

Dear Sirs:

I now believe that I am able to make estimated determinations of the incidence of objectionable emails transferred via WINLINK over radio by US- or US-related amateur radio operators, **estimate the initial incidence of such emails at the beginning of the WINLINK VIEWER** (approximately April 10, 2019) and **demonstrate an astonishing reduction in objectionable emails**, as a combined result of voluntary effort by amateur radio operators both opposed and in favor of the Winlink system, and of RM-11831.

This is a remarkable cooperative effort, that, if continued, will very soon result in the Winlink system being the cleanest portion of amateur radio, and the only facet of amateur radio where regulatory compliance is both monitored effectively and documented. All the persons involved should be congratulated for their efforts, which serve to dramatically reduce the burden on regulatory agencies in the long run.

Introduction

In the original Petition, the petitioner cited two regulatory concerns:

(iii) assurances that the amateur radio service will not be used to bypass commercial internet services or be used for commercial use as required by Part 97.1, 97.3(4), 97.113(a)(5), and

(iv) that in the case of third party digital traffic, there are questions regarding adequate vetting, by control operators of Message Forwarding Systems, of messages originating from the internet for transmission on the amateur bands, and likewise originating from an amateur radio operator for delivery to the internet, for content and sender identity, as required by Part 97.219(d)(1) (2).¹

¹ <https://ecfsapi.fcc.gov/file/100918881206/PETITION%20FOR%20RULEMAKING.pdf>

In a subsequent lengthy filing with a New Proposal and a long list of objectionable emails, the petitioner and additional persons again justified the need for their proposed only solution at least in part on the need to deal with regulatory issues;

1. All of these previous 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 that 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.

....²

4. The root cause of this host of problems, lack of over-the-air interception capability for all transmissions in the amateur radio spectrum, has caused documented potential violations of FCC part 97 rules on content, including obscenity, commercial content, and illegal third party contacts to countries with no such agreement. (FCC DA 13-1918 ¶ 6) Had the FCC been aware of these practices, it probably never would have consented to the changes in Part 97 that have allowed this. With this knowledge, the FCC now has “good cause” to act immediately to correct this situation. REFERENCE: Enforcement Bureau TICKET # 3184322 (redacted extract attached)³ [emphasis in the original]

A large number of participants in an online forum have stated their concern regarding violations of the FCC Regulations⁴, and their desire to see those appropriately handled. There was acrimonious discussion of how frequently such violations actually occurred in the WINLINK system, but no one presented actual factual data.

I therefore initiated an effort to attempt to leverage the data provided in the above New Proposal in order to make some estimate of the true incidence of “objectionable” emails transferred over the WINLINK System, and after succeeding at that, I attempted to make some measurement of whether or not the WINLINK VIEWER had substantially reduced those issues.

Please be mindful that the criteria employed in this document is not “violation” but “objectionable” because neither I nor the proponents of the Petition have the standing to determine what is actually a violation, and further, the Terms of Service of the WINLINK system are actually quite a bit stricter in some senses than the FCC Regulations.

Although US amateur radio operators may make incidental purchases with some use of amateur radio under the “pizza rule,” the Terms of Service of the WINLINK system related to business communications are **far more strict**;

2 The “interference claims” of 97.221(c) USA-regulated stations, largely WINLINK 500-Hz gateways, have already been statistically evaluated and found negligible, and hence are not part of this current investigation. See:

<https://forums.qrz.com>

3 <https://ecfsapi.fcc.gov/file/1071958608259/July%2018%2C%202019%20Ex%20Parte%20Filing.pdf>, a 60-page document with considerable factual documentation appended.

4 For one example: <https://forums.qrz.com/index.php?threads/arrl-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-33#post-5138400>

“Business Content

Directly or indirectly enhancing one’s pecuniary interest using amateur radio is universally prohibited. 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. Placing orders to trade stocks or receiving investing guidance are clear-cut examples of prohibited message content. Ordering or receiving via Winlink paid subscription-based weather guidance, custom forecasts, or any paid or free digital subscription product is another. On the other hand, in the US, the FCC has allowed that *infrequently* ordering physical items (ordering a pizza or repair parts that cannot be delivered digitally via radio) for personal use is not in violation of the rules so long as it is incidental to your activity as an amateur, and not done to enhance your pecuniary interest.

Even though the Winlink user may use a Telnet connection or Web Mail and never transfer prohibited content over the Amateur radio spectrum, it is the policy of Winlink administrators to abide by the Part 97.113 (US rules), and FCC interpretations of these rules, as it pertains to transaction content transported by all connection types.

Accordingly, YOU ARE STRONGLY ADVISED NOT TO CONDUCT PERSONAL OR COMMERCIAL BUSINESS VIA A WINLINK COMMUNICATION OF ANY KIND. If you do so, it will be considered a violation of these terms and conditions.

Administrators have adopted this definition of business content and this policy to avoid 'gray-area' situations that complex FCC rule interpretations often present. Warnings to this policy are intended to keep Winlink user licensees clear of violations and trouble. However, if a case is in dispute, Winlink administrators consult with the FCC or other regulatory entity representatives for their interpretation of applicable rules. Administrators will communicate these interpretations to any amateur who may question an administrative warning or action.

The system automation or administrators may block or remove messages from unsolicited mail sources, incoming messages from list servers or any regular or frequent “subscription-type” messages or message feeds. The best way to avoid unsolicited mail is to keep your Winlink email address private and to learn to properly use your account anti-spam white list. Do not instruct paid or even free information services to deliver purchased or especially recurring subscribed digital information products to your Winlink account when they can be delivered through other radio services off the amateur bands. Make arrangements to hold an alternate email service you can use for personal or commercial business.

Commercial services must always be employed first if business content will be communicated. Sailmail, Inmarsat, or Iridium are recommended for maritime users, and there are other services available regionally.”⁵

Since most of the proponents of the Petition, and the WINLINK administrative personnel, are very likely to adhere to this even-more-strict set of requirements, this “objectionable” standard is utilized in this document. It may well significantly overstate the “violation” incidence, but at this point it is the best that I can do.

5 https://winlink.org/terms_conditions

Method & Results

First, I asked on a national public amateur radio discussion forum frequented by the authors of the New Proposal for information regarding the capture of the objectionable emails contained within the New Proposal—four times.^{6 7 8 9} I was unable at that time to get any response.

Failing that avenue, I proceeded to utilize the available data:

The WINLINK VIEWER become available on or before April 10. The parties presented their band-plan proposal to the ARRL board on or after July 19 2019. This indicated they had 90+ days in which to capture the objectionable emails to which they referred. The WINLINK system, over HF, transfers approximately 840 emails per day¹⁰, giving them an effective pool of 75,600 emails from which to search.

Closely studying the objectionable emails within their submission, quite a few have been shortened and grouped together so although they demonstrate 29 sections, there are actually 42 emails represented.¹¹

In their filing, this took 32 pages to present, even though some were significantly shortened to just introductory material. The collectors indicated that they had “150+” total pages of captured emails (which they evidently judged as objectionable). Without any further explanation available from the filer, one can make a rough extrapolation then to an estimate of $150/32 * 42 = 197$ objectionable emails.¹²

I then indicated on the forum that I had performed the above estimations, and subsequently calculated the estimated incidence of objectionable emails (assuming a 90-day capture period) of $197/75,600 = 0.26\%$ objectionable email incidence. This figure was then published on the same forum.¹³

A member of the team which had published the objectionable emails at that point spoke up and indicated that all the objectionable emails had been captured in a 12-hour period very early in the existence of the WINLINK VIEWER.¹⁴ Thus, they likely captured the emails before any were already reported and moved to a different storage (to avoid the unnecessary work of duplicate reporting). Because of the 21-day moving sample of the WINLINK VIEWER this means that the reviewing team had access to 21 days of emails, or only 17,640 emails.

6 <https://forums.qrz.com/index.php?threads/arrl-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-22#post-5137230>

7 <https://forums.qrz.com/index.php?threads/arrl-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-22#post-5137278>

8 <https://forums.qrz.com/index.php?threads/arrl-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-23#post-5137291>

9 <https://forums.qrz.com/index.php?threads/arrl-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-23#post-5137308>

10 <https://winlink.org/RMSChannels> , click on “TRAFFIC” tab.

11 Counted within <https://ecfsapi.fcc.gov/file/1071958608259/July%2018%2C%202019%20Ex%20Parte%20Filing.pdf>

12 <https://forums.qrz.com/index.php?threads/arrl-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-27#post-5138058>

13 <https://forums.qrz.com/index.php?threads/arrl-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-28#post-5138081>

14 <https://forums.qrz.com/index.php?threads/arrl-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-30#post-5138180> Much appreciated!

That **raised** the original estimated incidence of objectionable emails to 1.1% It is important to recognize that this incidence was detected BEFORE most people became aware of the VIEWER, and detection was done literally by the people who wished to pass the Petition under discussion so they had a vested interest in detecting as many as possible.

Again, I could make even more accurate estimates if I were able to gain more information from those performing the evaluation. That avenue not fruitful despite efforts on my part, I contacted the Enforcement Bureau seeking precisely this type of information, but there are legal issues involved, and I was only given a “ticket” and informed that someone may contact me (which hasn’t yet happened).

How one views a 1.1% incidence of objectionable emails (chosen by the team proposing the Petition) is up to individual judgment – but if the same or similar criteria can be applied at a later date, than an estimate of the IMPACT of the WINLINK VIEWER and true self-policing of the amateur service by its own members can be made.

So I set about that task.

On the night of July 22, among requests for more information from those who had made the first evaluation, I began reviewing the most recent emails present within the WINLINK VIEWER to attempt to detect objectionable emails. The first hundred or more, I read individually, finding nothing that seemed objectionable (at that time). After a couple hundred emails the pattern was becoming more clear – the messages included

- a very large number of structured “check-ins” to various emergency-communications related nets – a large number of which apparently operate on Monday
- a very significant number of amateur radio operators who were simply testing or trying out various aspects of the system.
- family members communicating to each other from locations without cell service (one family in a remote campsite)
- mariners communicating with loved ones, items of a personal nature

And as I began to understand the pattern more clearly, I moved to being able to discount messages with titles that clearly indicated their purpose and centered more on the ones that were less obvious. It took the better portion of an hour to go carefully through 1,000 emails (the largest number that fits into one ‘window’) and I discovered:

- one email that was questionable in my mind
- an email from a member of the WINLINK Development Team warning a participant about a content deemed inappropriate.
- One email that was clearly an advertisement from a travel company that services armed forces personnel – and a 2nd from that group – I succeeded in reporting one of these.

I subsequently posted more findings and more requests¹⁵ and the Petitioner responded with a cryptic note that indicated I was using a far-too-tedious method, and suggested the WINLINK terms of service might be a key.¹⁶

Using that tip, I began to search the entire available 21-day segment (more than 17,000 emails) with various keywords, including:

- **\$** (no captures)
- **fee** (4 captures, one of which was questionable)
- **subscription** (120 captures, because the US Weather Bureau provides weather information under a “subscription”)
- **sex** (13 captures related to structured data on victims in a hospital emergency communications drill – none objectionable)
- **various non-suitable-for-mixed-company words** (found nothing, but my lexicon of these words may be limited by my age)
- **business** – JACKPOT!

Using the keyword “business” I stumbled upon a treasure lode of flagged messages, and a host of responses from WINLINK Development Team member(s) warning the individuals of their Terms of Service, reply discussions from individuals, and eventual resolutions. In one incidence a 2nd issue was found with one amateur, and in another incident, I had found the 3rd warning to one participant and notice that their account had been terminated on the WINLINK system I was astonished to discover that a post in German attempting to evade the Terms of Service by asking someone to forward a business request was caught. In all of these, I found that the WINLINK personnel were very polite – and it was patently obvious that they were enforcing a Term of Service that was *far more strict than the allowable pizza rule!* That helped me understand the level of criteria which I should utilize.

In all, using these techniques, I found in multiple hours of effort, 13 emails that would be considered “objectionable” under the Terms of Service (not all of which would even likely be viewed as violations!). These are likely detected however, with the same criteria as utilized by the initial reviewers – suggested by a note from the Petitioner that he has personally flagged 3 messages in the previous weekend. I detected recurring email addresses of a very hard-working reviewer of emails, in addition to the recurring WINLINK development team member(s).

This would be from a sample size of 21 days, or 17,600 emails.

13 objectionable emails / 17,600 emails = 0.07 % ; that is 7/100ths of 1 percent objectionable emails.

15 <https://forums.grz.com/index.php?threads/arrr-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-33#post-5138375>

16 <https://forums.grz.com/index.php?threads/arrr-report-no-consensus-reached-for-fcc-on-%E2%80%9Csymbol-rate%E2%80%9D-issues.666183/page-32#post-5138284> – a key tip.

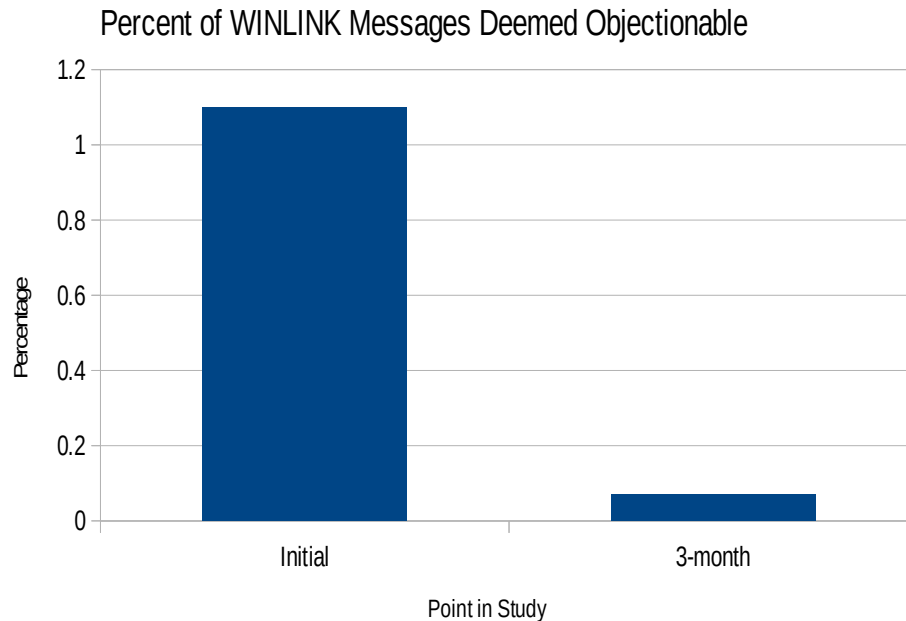


Figure: *Percentage of WINLINK message in a 21-day window deemed objectionable and marked by volunteer observers in the WINLINK VIEWER.*

While I cannot be certain that I have captured ALL the objectionable emails in the later capture, **it is very likely that the capture is very close to complete because in addition to my own searches through these 17,600 emails, I have detected the incidence of the other searchers who have been through it** – because I see the responses of the Winlink administrators. I have certainly asked repeatedly for any tips or help, and detected person(s) whom I believe are likely part of the proponents of the Petition, diligently searching through these emails and flagging them – to the benefit of all amateur radio, including the WINLINK system! Anyone is free to improve upon my detection methods.

CONCLUSION

- Increased data availability from all those concerned could lead to more accurate evaluation, or even to a trend plot presented by the Winlink Development Team themselves – something that no other sector in amateur radio does to my knowledge.
- The reduction in apparently objectionable emails from April 10 (approximately 1.1%) to July 22 (approximately 0.07% detected) is an astonishing improvement. It suggests that only one in 1,353 emails is now even “objectionable,” and that even fewer are a violation detected by diligent efforts of fellow amateur radio operators. Based on 840 emails transacted per day on HF alone, that indicates that the objectionable emails occur at a FAR lower rate than

objectionable material even on 75 meter phone band, where multiple violations probably occur nightly.

- This self-policing effort appears to have been **astonishingly successful (see Figure for graphical representation)**, and should be continued, and the techniques utilized in other arenas of amateur radio where possible.
- The goals espoused by so many amateur radio commenters for self-policing are clearing being met.

Respectfully submitted,

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