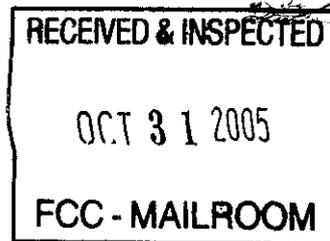


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October 27, 2005

To: Federal Communications Commission
Office of the Secretary
445 12th Street, SW, Room TW-A325
Washington, D.C. 20554
Re: Comment on Notice of Proposed Rulemaking

Proposed rulemaking: Amateur Radio Service Rules
WT Docket No. 05-235; FCC 05-143¹
Adopted July 15, 2005; Released July 19, 2005

Greetings,

This Comment on intends to address the Federal Communications Commission's Notice of Proposed Rulemaking and Order (NPRM), WT Docket No. 05-235, FCC 05-143, adopted July 15, 2005, and released July 19, 2005.² Said order "proposes to amend the amateur radio service rules to eliminate the requirement that individuals pass a telegraphy examination in order to qualify for any amateur radio operator license." I wish to express my support for the NPRM. The objectives set forth in the proposal will improve the state of the amateur radio operators community and, in doing so, benefit the greater the community as well.

Introduction

The goals set forth in the NPRM embrace the needs of the amateur radio operators community, while aspiring to shape the FCC guidelines in a way that serves the community in a greater capacity. Although quite general in nature, the FCC has correctly chosen to adhere to general principles of guidance that will be implemented by the diligent operators themselves.

¹ The Westlaw citation is: 70 Fed. Reg. 51705-01, or: 2005 WL 2084044 (F.R.).

² The author is David W. Headrick, a third-year law student at the University of Tennessee College of Law. The College of Law is located at: 1505 W. Cumberland Ave., Knoxville, TN 37996-1810. The author is studying administrative law under Professor Glenn Harlan Reynolds, the instructor for the course and the Beauchamp Brogan Distinguished Professor of Law.

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List A B C D E

The NPRM seeks to (1) encourage interest in communications technology, (2) eliminate unnecessary testing requirement, and (3) promote the efficient use of the radio spectrum. The elimination of the Morse code testing requirement serves all of these purposes well.

Objective 1

“encourage individuals who are interested in communications technology, or who are able to contribute to the advancement of the radio art, to become amateur radio operators”

As you indicated in the NPRM, removing the Morse code testing requirement would further enhance the value of the amateur service to the public as a voluntary non-commercial service, and result in expanding the existing reservoir of trained operators, technicians, and electronic experts within the amateur radio service. One of the fundamental purposes underlying Part 97 of the Commission’s rules is to accommodate the amateur radio operator’s proven ability to contribute to the advancement of the radio art. The amateur operators community generally acknowledges that Morse code proficiency is not necessarily indicative of his or her ability to contribute to the advancement of the radio art. In any event, the NPRM would not prevent those interested in pursuing telegraphy proficiency from doing so.

The usefulness of amateur radio is undisputed. Millions of amateur radio operators throughout the world communicate directly with each other by exchanging voice, teleprinting, telegraphy, digital packet, facsimile, and television messages. Operators use amateur radio to participate in discussion forums, keep in touch with friends, provide support to large events such as bike races, and even to talk with astronauts in orbit.³ Additionally, the community receives a great benefit from voluntary operators providing essential communication needs when normal communications systems are overloaded, damaged, or disrupted. Paul Harvey has recently

³ Ham Universe (located at <http://www.hamuniverse.com/study.html>).

labeled them “America's quiet warriors,” noting that “amateur, unpaid, uncelebrated, civilian radio operators” have responded with tremendous effect to the 9/11 attacks, the search for debris after the space shuttle Columbia disaster, and homeland security in general.⁴ Most recently, the hurricanes in the Gulf of Mexico serve to highlight the necessity of amateur operators. “With telephones down and wireless service disrupted, [amateur operators] have been instrumental in helping residents in the hardest hit areas, including saving stranded flood victims in Louisiana and Mississippi.”⁵ Some operators have been reported to have worked eighteen hour days after Hurricane Katrina struck.⁶ “In Covington, La., [t]he Communications for the American Red Cross was moved to a[n] Amateur’s heavily damaged home when the local office lost power. With generator and battery power, [operators] using makeshift antennas supplied the Red Cross and the Parish EOC with communications.”⁷

Unfortunately, the amateur radio operators community has experienced a decrease in ranks for various reasons. One reason must be that aging veterans from WWII and Korea are leaving the community faster than new members are repopulating it. To the detriment of all concerned, the Morse code testing requirement is serving as a barrier to entry for new members. The vast majority of new operators wish to talk or use some other mode than Morse code; so, they “forget it as soon as they test the first time, never to use [it] again.”⁸ Further, the majority of other countries no longer require the test, so the usefulness will continue to decline with worldwide acceptance of the mode.⁹ Besides, there is nothing that would work to stop new

⁴ Paul Harvey News and Comment, ABC Radio, March 19, 2003.

⁵ Gary Krakow, Ham radio operators to the rescue after Katrina, MSNBC on Sept. 6, 2005 (located at <http://msnbc.msn.com/id/9228945/>)

⁶ Amateur Radio Disaster Services website (<http://www.ares.org/>).

⁷ Id.

⁸ Comment by KC4UEB on July 25, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>).

⁹ Comment by KG4GFC on July 23, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>).

members from learning and using Morse code. The lack of purpose or benefit in learning the code is further manifested by the fact that few current members are choosing to upgrade their licenses by taking the test.¹⁰

Indeed, the removal of the Morse code testing requirement would provide additional incentive for new members to join the existing ranks. As the NPRM notes, the proposal is meant to reflect the Radio Regulation revisions adopted at WRC-03. As a result, the world community will increase its demand for communication via amateur radio. Additionally, “[h]istory has shown that most of the electronics community major technological developments have been first initiated and tested by skilled [amateur operators].”¹¹ Allowing more of the public to participate will foment the explosive growth in digital applications, especially that occurring on the HF bands.

The federal government is, in effect, validating the NPRM’s stated goal of increasing the number and abilities of the amateur community. The Corporation for National and Community Service (CNCS) is supplementing the amateur community for the first time by giving \$100,000 grant to ARRL. The grant, also known as “Ham Aid,” will serve to “support its emergency communication operators ... in the field in disaster-stricken areas.”¹²

¹⁰ Comment by WILLY on July 23, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>).

¹¹ Comment by Jim Geisinger on the W5YI Group website (located at http://www.w5yi.org/ama_news_article.php?id=66).

¹² Gary Krakow, Ham radio operators to the rescue after Katrina (MSNBC on Sept. 6, 2005, located at <http://msnbc.msn.com/id/9228945/>)

Objective 2

“eliminate a requirement that we believe is now unnecessary and that may discourage amateur service licensees from advancing their skills in the communications and technical phases of amateur radio”

The NPRM’s second objective is the key to revitalizing the amateur community. The Morse code testing requirement is obsolete, and therefore, an unnecessary and impractical barrier of entry for new amateur operators. In accordance with the changes in Article 25 of the international Radio Regulations adopted at World Radiocommunication Conference 2003, this testing requirement should be removed. It is worth noting that the FCC would have removed this requirement sooner if the international Radio Regulations would have complied because Morse code proficiency “does not comport with the basis and purpose of the amateur service.”¹³ Not only is the test an insufficient deterrent for undesirable operators, it has been described as not more than a “hazing ritual” which serves to make the amateur community as a whole more like a “clique, club or fraternal organization” than a group open to public.¹⁴ “The licensing regulations must be relevant to today’s world and not used as a method of preserving traditions.”¹⁵

It can also be said that Morse code is becoming outdated and obsolete. Granted, it will never disappear due to its compact efficiency. Plus, recreational operators enjoy and will continue to use the code, ensuring its continued existence.¹⁶ The emergence of satellite and digital communication technologies has nearly rendered the code obsolete “in practically all other contemporary communications systems.”¹⁷ Digital communications can actually be

¹³ No Code International (NCI) Petition.

¹⁴ Comment by Harold L. Snyder, Jr. on the W5YI Group website (located at http://www.w5yi.org/ama_news_article.php?id=66)

¹⁵ Id.

¹⁶ No Code International (NCI) Petition.

¹⁷ National Conference of Volunteer Examiner Coordinators (NCVEC) Petition

preferable to Morse code because the interpreter must be able to hear, whereas an operator need only “fire up the laptop, and using nothing but emergency power, use digital modes.”¹⁸ If outside influences (e.g., solar flares) interrupt services on conventional phones and digital communications, it would still not be necessary to know Morse code in order to use it when an operator can resort to computer programs.¹⁹

The Morse code testing requirement is an overly burdensome barrier to entry because of the difficulty it takes to learn the code.²⁰ Additionally, code testing burdens the test administrators because “these examinations require extensive preparation and special equipment to administer properly.”²¹ As the NPRM noted, the code limits the number of people, especially those who are handicapped, who can take advantage of amateur radio as a hobby. The fear of the inability to master or even learn the code prevents many otherwise qualified people from getting licensed.²² Those with hearing loss are particularly unfairly burdened in this regard, and would naturally enter the community if the requirement was negated.²³

¹⁸ Comment by KX8N on August 10, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>).

¹⁹ Comment by KG4GGC on July 22, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>) (“Welcome to 2005!”).

²⁰ “I have the theory down pat but learning code its taking a long time (been trying for almost 6 months and still having problems).” Comment by KD6BOH on October 12, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>); “If you practice every day for 30 minutes broken into two sessions (so your brain doesn't get too fatigued) and use a good training method, you should be ready to take the test in 60 days. ... You start with two letters. When you can copy 90% correctly, add a letter. Then when you can copy those 90% correctly, add another letter and so on.” Comment by N8UZE on October 13, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>).

²¹ National Conference of Volunteer Examiner Coordinators (NCVEC) Petition

²² Comment by KB3GTR on October 17, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>).

²³ Comment by Chris J. Smith on the W5YI Group website (located at http://www.w5yi.org/ama_news_article.php?id=66).

Objective 3

“promote more efficient use of the radio spectrum
currently allocated to the amateur radio service”

Eliminating the Morse code testing requirement would lead to a greater use of the bandwidth already allocated to amateur operators. As you know, the bandwidths garnered for amateur radio use have multiple intended utilizations, with the higher frequencies reserved for operators with more training (i.e., better licenses).²⁴ Naturally, if more people obtain the minimum “Novice Class” licenses, more operators would be encouraged to obtain the licenses required to work with higher frequencies. Additionally, the influx new operators and commensurate use of the appropriated bandwidths would defend the bandwidth already allocated to amateur radio.²⁵ Most certainly, users of the Citizens Band (CB users) and cell phone companies would like to encroach on radio territory.²⁶

Conclusion

Eliminating the Morse code testing requirement will improve the state of the amateur radio operators community and, in doing so, benefit the greater the community as well. The goals set forth in the NPRM embrace the needs of the amateur radio operators community, while aspiring to shape the FCC guidelines in a way that serves the community in a greater capacity. Although quite general in nature, the FCC has correctly chosen to adhere to general principles of guidance that will be implemented by the diligent operators themselves.

²⁴ Comment by WA9SVD on July 18, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>).

²⁵ Comment by KB3GTR on October 17, 2005 under “RE: Is element 1 gone officially? FCC document” (located at <http://www.eham.net/forums/Licensing/2066>).

²⁶ Id.

The FCC has previously determined that the test served no useful regulatory purpose. Because there is not longer an international regulation requiring the test and Morse code is no longer in general use, continuing to require the test could be construed as arbitrary and capricious and unsupported by the substantial evidence previously reviewed by the Commission. Eliminating the test would prove that the FCC is taking positive action to meet its statutory obligation to generally encourage the larger and more effective use of radio in the public interest.

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Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of) WT Docket No. 05-235
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)
)
Amendment of Part 97 of the Communication's Rules)
To Implement WRC-03 Regulations Applicable to)
Requirements for Operator Licenses in the)
Amateur Radio Service)

To: The Commission

I am writing today to express my views regarding the proposed rule changes in the above captioned matter. As I understand it, the FCC has proposed eliminating the requirement that certain amateur radio operators be able to correctly send and receive a message in Morse code in order to qualify for a radio license. The reasoning behind this change, at least in part, is that technological advances have made proficiency in Morse code unnecessary and that ending the requirement could lead more to a greater interest in amateur radio among the general public. As a third year law student who is not an amateur radio operator, I realize the limitations that must necessarily be placed on my opinions. I am also aware that many people in the amateur radio community support this proposition. Nonetheless, I must respectfully disagree with the reasoning put forth by the FCC in this matter.

Technological advances have made Morse code obsolete

While it is true that communications technology has advanced, it does not mean that the tried and true ways of communicating should be discarded. Nor should we be so quick to place our whole-hearted reliance on technology. It seems the human ability to find quicker, easier, and faster ways of getting things done knows no bounds. Even so,

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sometimes that can of Fix-a-Flat does not work and you need to know how to change a tire.

It is not unheard of for natural disasters to disrupt communications. Satellites are quick, powerful, and, usually, reliable means of transmitting information. But as anyone who has satellite service for his or her television knows, a thunderstorm can knock out the signal. How much more so if a tornado or a hurricane were to hit an area? Telephone lines and cellular telephone towers can be knocked down or destroyed. While I make no claims of being proficient in the technology behind amateur radio, I do understand that the simpler a piece of equipment or technology is, the less chance there is for a failure or a glitch. As Morse code requires only a radio frequency and a device to send the message, it is fairly simple. Also, Morse code does not require a computer to decipher the message. It can be translated by a person without any extra tools, cables, or software. As the old saying goes, "Simplify, simplify, simplify."

I have read many of the comments put forth by amateur radio operators and it is clear that they have a greater understanding of the industry than I do. Several of these commentators point out that most of the communications that went out over the HF frequencies during Hurricane Katrina and Rita were voice communications. However, there are other commentators who claim that Morse code was the only reliable means of communication during the disasters.¹ Even if it is accepted that voice communications were primarily used, it does not eliminate the fact that some people may have been able to communicate only by Morse code. If a person is going to be a part of a communication network, it only makes sense that he or she should be able to communicate with any and all persons who make contact. It is somewhat like the

¹ Comments of Lewes Amateur Radio Society, October 24, 2005.

requirement that people who sit in the exit rows of airplanes be able to hear and understand instructions. Yes, we depend on the airplane, and its technology, to get us safely to our destination, but if it does not then the people who sit in the exit rows need to be able to handle what comes their way. The Amateur Radio Service was set up, in large part, to help with emergencies. As the Morse code requirement has been in existence for a large number of years, it is logical to conclude that there are a large number of amateur radio operators who know Morse code. It is also a real possibility that at some point in time one of them may need to communicate in Morse code during an emergency. It would be ironic, and tragic, for these radio operators to attempt to communicate in Morse code only to have their message received by an operator who could not understand it.

In conclusion, while it is true that technology has advanced to the point that there are quicker and simpler means of communicating, it does not necessarily follow that requiring proficiency in Morse code should be dropped from the Amateur Radio Service. Since the ability to communicate is crucial in emergencies, it is not logical to eliminate a simple and reliable means of communication simply because it seems outdated. It is much better to have something and not need it than need it and not have it.

**Eliminating Morse code proficiency
would increase popularity of amateur radio**

There is probably a great deal of truth to this assertion, but I do not think it speaks well for those involved in the use of amateur radio. I have no doubt that if a particular activity was easier, more people would do it. This seems to be simple human behavior. However, I do not think this is something that should be important in an activity that plays such an important role in emergency situations. Furthermore, the ability for Morse

code to transcend barriers, language and otherwise, should increase the popularity of amateur radio.

First, any skill should be encouraged. Many amateur radio operators would likely not have learned Morse code if there was not a requirement. I do not think we are naïve enough to believe that people acquire skills simply out of a desire to learn a skill. Some do, but the majority of people learn because they want their degree or their certification. There is little doubt that the majority of college students in this country would, given the choice, take an easy class over a hard one. Therefore, knowledge of a skill such as Morse code should be required for anyone who wants to be an amateur radio operator for the simple reason that without the requirement many may not learn Morse code at all. It seems that given the importance of education, a federal agency would want to encourage learning, not discourage it.

Second, there is no Morse code requirement for a Technician class license. Thus, it is unlikely that the Morse code requirement would hamper interest. In the event someone wants to increase their operating capabilities, then Morse code is required. However, the person who seeks to move up from a Technician class license is presumably already interested in amateur radio. Furthermore, if a person seeks to use the wider band privileges associated with General and Extra licenses, it is only fair that he or she acknowledge the responsibility that comes with these privileges. It does not seem to be burdensome to require those on the bandwidth to be able to respond to the communication that comes to them.

Third, it would seem that Morse code allows greater contact with others. The international Morse code transcends language barriers. A person in the United States can

communicate with an operator in a foreign country in Morse code, but may be unable to communicate by voice due to differences in language. If one of the purposes of the amateur radio network was to utilize "the amateur's unique ability to enhance international goodwill", then it would seem appropriate for operators who can make radio contact with foreign to be able to communicate whether by voice or Morse code.

Finally, Morse code can also be used by people who have handicaps that limit their ability to move, such as paralysis victims. Because of the simplicity of putting messages into Morse code, a "puff-tube" can be used by paralysis victims to send messages in Morse code.² It would seem that requiring amateur radio operators to learn a skill that allows them to communicate with more people would make amateur radio more popular, not less.

In conclusion, while it is always tempting to make things easier, it is not always better to do so. While it may be important to attract new operators, it should not occur at the expense of losing a skill that allows people to communicate. Furthermore, there is not enough knowledge in the world that something as basic and fundamental as Morse code should be allowed, or encouraged, to fall by the wayside. It has often been said that America should give greater emphasis to education. It seems ironic that the Federal Communications Commission is now suggesting that radio operators should learn less.

Conclusion

With all due respect to the amateur radio operators who support the proposed rule change, the Morse code requirement should not be dropped from the Amateur Radio Service. It may be that technology has advanced, but technology is fallible.

Communication systems are vital to our country and Morse code is a simple means of

² Comments of Michael Dinelli, October 11, 2005.

communicating. While it may be tempting to discard Morse code because it is no longer used, or at least not widely, it is better by far to have a skill and not use it than not have it and need it. If there is one thing that is constant in emergencies, it is that things stop working. Glitches are not uncommon and Murphy's Law reigns supreme. It may be that technology has advanced, but that does not mean a skill that is simple and reliable should be discarded.

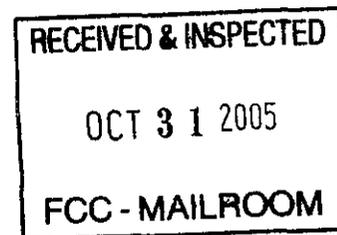
It may also be that doing away with the Morse code requirement would increase the popularity of amateur radio. This seems doubtful however since beginning amateur radio operators are not required to learn Morse code. Anyone with an interest in amateur radio can get experience without learning Morse code. But it also seems that increasing popularity should not come at the expense of losing a skill that allows for communication to occur between people who do not speak the same language or perhaps even able to communicate in any other manner. Nor should popularity be gained by providing an easier means for obtaining an advanced radio license. If interest in amateur radio is dissipating, perhaps the Commission should attempt to find other ways to attract new operators other than simply discarding skill requirements.

In conclusion, Morse code may be difficult to learn, may be obsolete, and may even be a waste of time and effort. But there have been times when Morse code was the *only means of communicating and no one disputes that Morse code requires little to no extra equipment to use.* In the event that a message comes to an operator in Morse code, whether as a result of an emergency or not, that operator should be able to understand and respond. Therefore, knowledge of Morse code should continue to be a requirement for those wanting to operate on wider bandwidths.

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*Stephen
Martin*

1. Proceeding: 05-235
2. Mail Correspondence To: Name
3. Name of Applicant/Petitioner
4. Law Firm
5. Attorney Name
6. Email-id
7. Mailing Address For Correspondence
8. City
9. State
10. Zip Code
11. Ex-Parte/Late Filed: No
12. Document Type: COMMENT
13. File Number



This comment supports Notice of Proposed Rulemaking 05-235, which proposes to eliminate the requirement that individuals pass a Morse code telegraphy examination in order to qualify for any amateur radio operator license. WT Docket No. 05-235; FCC 05-143. This comment's author is a law student.

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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. § 97.1(a)

The proposed change would recognize and enhance the value of the amateur service. It would recognize the value by the timing of the thing. By making the change so soon after amateur service's contributions during recent natural disasters, the change appears to be a response to good deeds well done.

Amateur service's contributions during recent disasters have been important. Amateur radio operators may still be able to communicate when most other systems, such as land-line telephones, are overwhelmed. Amateur radio is more reliable than land-line or cellular phones since there is little infrastructure by, say, flooding, even when a very large area, such as our Gulf Coast, is flooded.

http://en.wikipedia.org/wiki/Ham_radio#Emergency_and_public_service_communications

These operators can assist in far-off emergencies from their homes. A recent CBS news article, for example, mentions an amateur operator in Connecticut who was able to communicate to authorities on the Gulf Coast the location of a woman there who was stranded on her roof for four days. Because of this operator, the stranded woman was rescued on the fifth day.

<http://www.cbsnews.com/stories/2005/09/08/scitech/pcanswer/main828737.shtml>

Several more rescues made possible by the amateur service are described at:

<http://www.msnbc.msn.com/id/9228945/>

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James M. Watson

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To: Federal Communication Commission

Re: NPRM - WT Docket No. 05-235
Comments on Proposed Elimination of Morse Code Requirement for Amateur
Radio Operator Licensing.

To Whom It May Concern:

I respectfully submit these comments concerning the NPRM that would eliminate the testing of morse code from the requirements for an amateur radio operator license. I offer my comments as a disinterested citizen, having no background or experience with amateur radios and only cursory experience with morse code. Given these limitations, I would like to briefly address the subject and offer my evaluations. I oppose the elimination of the morse code requirement on the ground of a simple utilitarian calculus: Requiring a rudimentary knowledge of morse code by amateur radio operators is at worst a small burden on those seeking to use a limited public resource, while the potential benefits, both for the operators and for society as a whole, are significant.

WRC-03: Conformity for Conformity's Sake

This rulemaking was spawned by numerous petitions reacting to the 2003 World Radiocommunication Conference (WRC-03), at which the international Radio Regulations were changed, effectively eliminating the morse code requirement for

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amateur radio operators.¹ This proposal had its genesis in 1997, when the Final Acts of WRC-97 stated that though morse code was a requirement, administrations “may...waive this requirement” for stations operating on high frequencies.² In the grand span of six years, the collective wisdom of the world has apparently judged that morse code is unnecessary at any frequency. The WRC-03 regulations now “allow a country to determine” whether to continue requiring a morse code component.³ While one must wonder what technological innovation between 1997 and 2003 rendered morse code more archaic and obsolete than it previously was, this is irrelevant. What is relevant is that thanks to this grant of power, the FCC is now allowed to determine whether we should keep the morse code requirement. Now that we have the authority to promulgate our own rules, it seems we should use that authority, instead of merely adopting the international rules verbatim. While we are in an ever-shrinking world with ever-expanding technology, maintaining morse code as a requirement for amateur radio licensees is a policy with few drawbacks and potentially life-saving benefits.

Morse Code and Long Division: A Useful Analogy

Most Americans can remember sitting in math class as a child wondering why we must learn how to divide 13,589 by 731, taking up numerous time and a full sheet of paper, when the three dollar calculator in our desk would do it in a microsecond. A more recent experience had me wondering why I was calculating standard deviations by hand when Excel can do it, again, in a microsecond. As technology continually increases, the sanity of learning outdated tools and techniques for doing things is continually called into

¹ 20 FCC Rcd 13247, at 3-4, (2005).

² *Ibid.*, at n15.

³ *Ibid.*, at 4.

question. This line of reasoning is clearly behind the proposal to eliminate morse code as a requirement for amateur radio licensing. Other commenters have noted that there is “no clear rationale for using Morse Code proficiency as a ‘gatekeeper’ licensing requirement... (because)... the Commission’s rules cannot and do not attempt to require amateur radio operators to communicate using Morse Code.”⁴ While this is entirely consistent with the reasoning cited above, it is the equivalent of schoolchildren who say “as soon as we learn long division, we get to use a calculator and are no longer made to practice long division, so why make us learn it in the first place?” At the risk of admitting that all of those teachers were right, the answer they gave then is entirely applicable now: “What are you going to do if your calculator doesn’t work?” Analogously, “What are you going to do if your satellites, GPS, cell phones, pagers, and wireless worldwide broadband internet connected pocket watches (with calculator) don’t work?” Granted, the level of breakdown necessary to reduce us to morse code is multiple levels of magnitude greater than that which would require calculating long division on paper. However, the costs of maintaining this failsafe system of communication are minimal, while the potential benefits are, while unlikely, enormous. Learning morse code is not exactly rocket science, and unlike long division in elementary school, acquiring an amateur radio license is voluntary. People have been applying for licenses and begrudgingly learning morse code for years now, without incident. The costs of maintaining this requirement are minimal and should be weighed against the potential costs of a future society devoid of people who can competently communicate in morse code.

⁴ Ibid., at 5.

Space Aliens and Morse Code: Our Worst Case Scenario

If I were a nutty conspiracy theorist, I would have a great answer to my earlier query as to why the WRC did not eliminate the morse code requirement until 2003, when they began to do so in 1997. The WRC is actually controlled by space aliens who are planning an eventual invasion of the earth. Their plans to knock out our satellite communications technology seemed foolproof until they saw the 1996 movie "Independence Day," in which aliens invaded, destroyed or commandeered most of the world's communications devices, but were inevitably defeated when humanity organized a world-wide counter-offensive using low-frequency morse code transmissions. Realizing their failure to plan for our doomsday method of communication, they offered the partial elimination of morse code in 1997, followed by the complete elimination six years later, giving us time to forget the movie and the key instrument in humanity's fictional deliverance: Morse Code. Should the morse code requirements be eliminated, the aliens must simply bide their time until morse code goes the way of the dodo.

I am not a nutty conspiracy theorist, but the truth behind the preceding flight of fancy is that morse code is a valuable means of communication. While morse code is most certainly a last resort, it is important that it remains a viable option. Soldiers in war definitely don't like the extra weight of, or want to have to use, the knife on their belt. However, if their air cover is shot down, their tank is blown up, and their gun is out of ammunition, they will be very glad to have it. The elimination of the morse code requirements for amateur radio operators is by no means a death sentence for morse code. Military men and women and Boy Scouts nationwide will still learn this antiquated but useful means of communication. However, military men are off in the military, and Boy

Scouts are boys; neither would be likely to be available in an emergency situation, whereas amateur radio operators live everywhere.

I do not want to overplay morse code's hand by claiming that it saved lives during the recent hurricanes. While many amateur radio operators helped in the disaster relief, communications were nowhere near bad enough to require the use of morse code. However, these disasters showed how vulnerable we are, be it to the whims of nature or to our fellow man. While it would take a disaster of epic proportions to reduce our capabilities sufficiently to make morse code valuable, it would be irresponsible not to consider this possibility, no matter how remote. Space Aliens are not the only ones capable of disrupting or destroying our satellites.

Conclusion: Pascal's Wager Reinvented

It is easy to follow the crowd and to follow conventional wisdom, both of which say that morse code is an outdated and unnecessary communication tool. It is easy to eliminate the morse code requirements for amateur radio licensees, because what possible use could such a skill have with today's cornucopia of communications? It is apparently hard to continue placing a perceived hardship on a small group of people when the benefits of such a policy are solely potential and unlikely at best. However, the hardship is not only minimal; it is a voluntarily chosen one. And while the payoff seems unlikely of ever coming to fruition, we must consider to what degree this perceived improbability is real and to what degree it results from our own wishful thinking.

This rule-making is basically a version of Pascal's wager, dealing with policy instead of theology. If morse code requirements are removed, and nothing happens to

require the future use of morse code, we have a neutral outcome. If something does happen, however, the lack of morse code operators will be catastrophic. On the other hand, if the requirements are kept, and nothing happens, a few people may have suffered a minor hardship. If something does happen, we will have people able to communicate, to the benefit of all. By eliminating the morse code requirements, the two possible outcomes are neutral, and very bad. By keeping them, the outcomes are a little bad (though this is debatable), and very good. Thus, keeping the requirements is the best option. By a stricter utilitarian argument, requiring morse code does very little if any harm while maintaining the potential for immeasurable good. If these are insufficient reasons, then I guess the Space Aliens have already won.