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PETITION
To the Federal Communications Commission
August 6, 2003

Petitioner:
Frank W. Napurano, K2OKA
212 Hopewell-Wertsville Road
Hopewell, New Jersey 08525

IN THE MATTER OF:
Retaining and preserving the Morse Code proficiency as a requirement in Amateur Radio. The petitioner hereby petitions the Federal Communication Commission to retain and preserve, permanently, the present Morse Code proficiency requirements for licensing of Amateur Radio license classes with privileges below 30 Mhz.

BACKGROUND:
From the very inception of radio communications in the early 20th century, the Continuous Wave (CW-A1A emission) mode of modulation has been utilizing the International Morse Code as an efficient form of radio communications. In the very beginning it was the one and only form of modulation which had indispensably aided the maritime and military services. Early experimenters and later, licensed Amateur Radio operators learned the art and skill of CW. And they used it to build a virtual "Army" of skilled, citizen communicators; ready at a moment's notice, to aid their communities in times of disaster. It proved to be an invaluable service.

Later developments in technology brought about newer forms of modulation which made it possible to modulate and detect the human voice and other form of audio and video; e.g. AM, FM and Single Side Band. These later developments, while more practical for domestic use by the general public, did not at all diminish the vital and necessary role of the more accurate and reliable CW Mode for two-way emergency communications.

In the decade of the 1990s the American Radio Relay League engaged an independent firm to conduct a survey of its members. The survey polled the members on the importance of retaining the Morse Code as a Amateur Radio licensing requirement. The results showed that over 80% of the respondents voted to keep the status quo. Over 80% wanted to keep the code as it was in the licensing structure. And this was at a time when the code proficiency rates for licensing were still 5, 13 and 20 words per minute. Since then, however, in defiance and regardless of the wishes of the Amateur Community at large, the Morse requirement has been steadily eroded.

In June of this year, at the 2003 World Radio Conference, it was voted to eliminate the International Requirement of a Morse Code proficiency skill for Amateur Radio licensing below 30 Mhz. In the petitioner's opinion, it was a colossal mistake with far reaching negative ramifications. Unfortunately as it now stands, it is up to the individual administrations to retain or remove the requirement in their respective countries. Many member nations at the conference objected to the elimination of the Morse requirement, citing its importance. The following comments outline the petitioner's argument to the Commission in favor of **permanently preserving** the Morse Code proficiency requirement for Amateur Radio Licensing below 30Mhz. The numerous intrinsic technological assets alone, speak in favor of the absolute need to retain the CW mode in the licensing structure.

CW IS THE MOST RELIABLE FORM OF RADIO

- The CW mode is the purest, most accurate, efficient, reliable and economical form of radio communications ever devised. Unlike other forms of modulation, the CW mode is fully 100% efficient in that 100% of the radio frequency energy generated, is converted into intelligence. Thus lower power is required to communicate. This is not true of any other form of modulation. With CW there are no unused carriers, side-bands or wasted energy.
- CW is the most economical form of radio from both the stand points of monetary cost to construct and use and **bandwidth occupied.** Every Amateur transmitter, as part of the electronics needed for any intended mode of operation, must already contain a continuous wave carrier. Thus every Amateur transmitter can serve to communicate using CW. That is, if, and only if, the Amateur has the Morse skill to carry out the communication. Moreover, whereas AM, FM and Side-band signals occupy a minimum of 2000 to 4000 Hz of bandwidth, a CW signal uses less than 100 Hertz. This extremely narrow bandwidth precludes congestion, confusion and interference during an emergency. It also reduces noise in the received signal and allows many more stations to operate in a given space.
- When propagation conditions are poorest the CW signal is the only form of modulation that will consistently "get through". And the very nature of the CW signal--the crisp, piercing tone and distinctive positive start and stop definitions of each character-- presents recognizable intelligence even at a distance. Any Amateur who uses Morse Code will confirm that it is normally possible to copy the audio of CW signals from a relatively great distance. Unlike the audio of AM and Single Side band voice signals, by its very nature, the Morse audio reaching the ear is easily discernable.
- CW is not only economical as to bandwidth and cost but also in the power required to establish communications. Many Amateurs enjoy QRP operation. QRP stands for communicating using low power. A five watt CW transmitter operating on the 20-meter band can easily allow communications across the continental United States. Some Hams use as little as 100milliwatts (0.1watt). This is normally only possible when using the CW mode.
- **Morse Code is universal.** Over the years Morse Code users have compiled an agreed upon list of universal "Q Signals". These Q-Signals are accepted and understood by Hams throughout the world, no matter what language they speak. For example QTH stands for location, QRS means "Please send slower", QSL means "I confirm what you sent, Etc. It's a very common occurrence for American Amateurs, using the Morse Code, to communicate with foreign Amateurs all over the world, regardless of the language differences. In these days of terrorism, a skill in Morse may prove to be an indispensable tool.

Morse code is an art form and a language

Thousands upon thousands of American Amateurs Radio Operators have spent their entire Amateur "careers" using, practicing and honing their copying abilities. It is a language and form of communications as real and as prized as the English language. To them Morse is the very essence of Amateur Radio and without it, Amateur Radio doesn't exist. If none of the foregoing technical reasons for keeping the code as a requirement for licensing is convincing, the Commission should consider the human aspect of maintaining the Morse Code as a requirement for HF licensing. In addition to the foregoing facts, the Commission must remember that Amateur Radio is also a much-loved avocation. It may seem on the surface, that in the scheme of things, eliminating the code is unimportant and a victimless act. But that is not true. Amateur Radio Operators take their hobby very seriously and it's a large part of their lives.

Removing the code requirement would result in a drastic reduction of future operators skilled in the use of Morse. In a few short years, the remaining, skilled CW operators will be hard-pressed to find Morse-literate operators with whom to communicate. An analogy might be offered here by comparing the elimination of the Morse Code to eliminating arithmetic in our grade schools. One might conclude, that we no longer need to teach addition, subtraction, multiplication or division to our children, because it's old fashioned and we now have portable calculators.

THROWING THE BABY OUT WITH THE BATH WATER

It is imperative that the Commission recognize the adverse effects of any future attempt to eliminate the More Code as a requirement for Amateur Radio licensing in the U.S. Time and time again we hear reports on the national news of how Ham Operators were providing the only communications following a man-made or natural disaster. When disaster strikes, typically, the first things to go are the power lines and the telephones. Even cell phones are not immune because the phone infrastructure is partly landline. It is at these times that Amateur Radio operators usually function to save lives with their low-power, battery-operated equipment. It is at these times, during weather-related emergencies, that radio conditions prove to be the poorest because of electrical storms. And it is at these times that even two-way radio voice communications are marginal at best. But the CW mode with its very narrow bandwidth, which eliminates noise, and its high efficiency and low power requirements will always poke through.

In this post 9-11 era, we can't even imagine what man-made emergencies await us in this country. Possibilities may include the complete elimination of large portions of the power grid and phone systems which are vital for normal communications. This is no time to divest ourselves of even one worthwhile defense tool. For more than a century the Morse Code and the CW mode of radio communications has served us well. At the present time America has a "Ready Army" of possibly 150,000 skilled volunteer, radio operators with Morse skills. If the Morse requirement is removed from Amateur licensing that number will diminish very quickly through attrition. It will spell the death of a valuable emergency tool, a language, an art form and a beloved method of communications which fosters fellowship and international goodwill.

Since the 2003 World Radio Conference has eliminated the International Morse Code requirement, the FCC will no doubt receive many petitions from special interest groups to remove the code from this country's Amateur licensing structure. The petitioner fervently hopes the Commission will very carefully study and consider the possible motives for, and beneficiaries of, such an elimination, whether monetary or otherwise; against the selfless concerns of those us who choose to keep the code requirement. In the interest of public safety, the preservation of a radio art and as a tribute of support for a prized and respected avocation, the Federal Communication Commission must retain and preserve the present Morse Code licensing requirement.

Sincerely,

Frank W. Napurano