Comments on NPRM, WT Docket No. 05-235
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Synopsis:

The complete elimination of testing for proficiency in Morse code is not in the best interest of the Amateur Radio Service, nor is it consistent with advancing the stated purposes of the Amateur Radio Service.

This comment concurs with the Commission's proposal to eliminate code testing as a qualification for any class of license, but proposes that it be retained as an *optional endorsement* to any class of license and a prerequisite to CW operation by any licensee. It further proposes that any Technician licensee who has documented credit for Element 1 be immediately eligible for such endorsement.

Rationale

I. Reasons Morse Code Remains Important Means of Amateur Communication

CW is a Technologically Simple Mode

There is no doubt that technological advances have produced digital modes that are, in many cases, faster and more accurate than telegraphy. These modes are well within the reach of most amateurs, requiring only a connection to a computer equipped with a sound card and appropriate software that is often available for free. In common with CW, these digital modes have a much narrower bandwidth than SSB.

But while modern digital modes have many advantages, the common weakness they share is that all require a properly equipped computer or digital firmware built into the radio itself. CW, on the other hand, requires only the radio, a keying device, and a person capable of sending and receiving Morse code.

The relatively modest technical requirements of a CW station make it ideal for portable operation from remote areas, as well as for certain emergency operations. One only need look at typical QRP stations to see how portable and "minimalist" this equipment can be, and how effectively

it can operate over long distances without the need for a computer. While speed will not be as great as, say PSK, when CW is utilized by proficient operators on each end, it can have a high degree of accuracy, even with the poorest of propagation and marginal operating conditions.

CW Provides a "Failsafe" for Emergency Communications

Where equipment is available and accessible to a particular site, there is no doubt that voice and digital modes are preferable to CW as a means of communication during an emergency. However, in remote areas where getting more complex equipment and power sources in is an issue, CW stations may be the only viable amateur alternative. Even where they are not the only alternative, they may be the most portable and thus best able to establish initial communications. A complete CW station capable of operation for several days can easily fit into a backpack, and may be carried into remote areas not accessible by vehicles.

Note that this comment does not contend that CW is a primary mode for emergency communication. However, because it is a simple mode that requires only modest and highly portable equipment, and it may work when nothing else is suitable.

CW Still Serves as a Modest Entry Level to HF

Because a CW station is relatively minimalist in nature, it is less expensive to assemble and may be the easiest way for those on a limited budget, particularly younger amateurs, to initially experience HF operation. It is important that we make amateur radio accessible to youth, particularly as the Commission looks at opening HF up to a broader base by eliminating the code requirement.

However, even a modest voice station consisting of a modern HF transceiver and simple dipole may cost several hundred dollars. While a young person may not be able to immediately afford a typical entry level multi-band HF transceiver, he or she may well be able to purchase a single band CW transceiver kit, or better still, build some or all of a beginning station for a fraction of the cost of HF phone.

In recent years, a number of young people have become licensed as Technicians, and have gone on to become skilled VHF operators. They were able to do get on the air with relatively inexpensive handhelds that would allow them to access local repeaters – including those tied into Echolink or IRLP. Once they earned the license, they were able to use it with a relatively inexpensive station.

The same could be true for young people advancing to General or Extra. Once they have access to HF, they need have a relatively inexpensive means to get on the air, and the availability of moderately priced CW equipment can provide an affordable gateway to HF.

CW Advances the Radio Art and Technical Proficiency

From a technical standpoint, the radio equipment required to send and receive CW is of the simplest design. The vast majority of amateur transmitter, receiver, and transceiver kits available worldwide are designed for CW operation. These kits often give the amateur the best opportunity to build his or her own station, and in the process, to advance a technical understanding of practical electronics.

Moreover, equipment designed to operate on CW is the easiest of any to design, placing the design of such equipment within the reach of skilled amateurs. It is far easier to design equipment to operate this mode than any other, given available parts and design complexity, and such original design advances technical understanding and furthers the radio art.

CW Provides a Simple Means of Communicating Internationally

Not all nations have made the decision to eliminate Morse code testing, and there are many operators worldwide who still predominately operate CW. One of the goals of amateur radio is to foster international good will through communications with amateurs from other countries.

Of course, CW is not the only means by which it can be done, but it is one of the easiest. Voice communications requires that both the U.S. and DX operator be able to speak the same language. Often the DX ham cannot speak English, and the U.S. ham cannot speak the language of the

DX operator. However, CW, utilizing universally understood Q codes and abbreviations, allows persons whose knowledge of each other's language is either minimal or even non-existent, to successfully communicate.

Granted, the text based digital modes share this capability, but it is CW alone that allows for crossing the language barrier with the human touch, and it is precisely this human touch, unique to CW, which makes it mode the mode of choice for most international DX'ers.

Preserving CW will secure a Mode Many Amateurs Currently Enjoy

The current NPRM, and the modification of the International Treaty that led to this proposal are both rooted in a fierce debate between those who believe code is essential to the survival of amateur radio, and those who believe that the elimination of the requirement is the only way it will survive. Passions have been high on both ends of the spectrum, and each position has its strong and weak points. However, regardless of opinion, there is one basic fact that must be borne in mind. There are a currently a substantial number of amateur operators who regularly use and enjoy CW.

Those of us who operate CW are concerned that if the testing requirement is eliminated completely, there will be an inordinate amount of pressure brought to bear on the Commission to reallocate or eliminate much, if not all, of the spectrum currently available to CW.

If the present NPRM is adopted as proposed, it is very likely that this will lead to a large influx of new amateurs onto the HF bands. Indeed, that is precisely what the Commission seeks to do. Having no desire to learn code, many of these amateurs will gravitate to the phone portion of the bands, and many others will want to try their hand at digital modes. This influx of new operators will be a good thing for amateur radio, but it will place a great deal of pressure on an already crowded spectrum.

This, in turn, will lead to a look at how the bands might be reallocated to provide for these modes, and active CW operators are concerned that the easiest target will be the space currently allocated by band plans to CW.

It is unrealistic to expect that CW spectrum should enjoy any special protection, but it is not unrealistic to assume that it will receive protection at least equal to other modes. This comment recognizes that this particular NPRM does not address reallocation. However, the decision made with respect to the nature of a CW requirement in some form will undoubtedly affect the outcome of any future consideration of spectrum reallocation.

The retention of CW as a testing requirement for those who wish to obtain the endorsement will help to preserve CW as a mode for those who wish to use it without requiring it for those who do not.

Preserving CW Preserves Amateur Radio Tradition

The roots of amateur radio, and indeed all radio communication, go all the way back to telegraphy. Today, CW remains a part of the cultural heritage of amateur radio. There can be no denying that the very debate that has led to the NPRM currently under consideration shows just how passionately some operators feel about CW. Preserving knowledge of Morse code through those who want to enjoy that tradition, without requiring it for those who do not wish to use it, will reasonably accommodate all interests.

II. Why there is a Need for Retention of an Examination Requirement

CW differs from digital modes in that it requires a specialized skill to successfully operate. Unless fully automated, it is simply not possible for a person to effectively communicate in CW over the air without first learning to recognize characters in Morse code. Code proficiency is a skill that must be mastered, and it requires some mental effort to do so. This effort takes time, and it is not realistic to expect that a person can learn code by just getting on the air.[1]

[1] Actually, it would be theoretically possible, assuming that code training were to be conducted on a same frequency where SSB communication is also permitted. Here, a code class could be conducted that would include voice interaction as well as code, but this probably would not be well-received on the bands, and it is questionable as to whether it would be good amateur practice.

Of course, if the current proposal is adopted, it would still be possible to learn code in a classroom setting, or by one of the other traditional methods. Theoretically, a person could try his or her hand on the air once they felt comfortable, no testing required. But is that realistic?

And while it is possible for a person to learn code without being tested, testing still serves several valuable purposes. First, it insures that a person has actually demonstrated at least a minimal level of competency sufficient to get on the air. It will not guarantee that a person will be a good operator from the beginning, but it will insure that the person has the ability to understand what is being sent and received.

Testing also offers a goal to be achieved for those who desire it. Standards have been developed by the NCVEC for code testing with respect to code speed, character speed and spacing. In addition, the message format and content type have been standardized so that a person seeking to pass the present Element 1 exam can know what to expect. These standards have taken into account the experience of many years regarding the best way to learn code and to increase code speed once the code has been learned.

Finally, successful completion of a code examination is a tangible indicator of accomplishment of that goal. As a VE, I have seen numerous code candidates exhibit a real sense of pride and accomplishment on learning that they had passed.

III. The Alternative Proposal

This comment proposes that the Commission's proposal be amended as follows:

1. That Morse code testing *not* be required to obtain any class of amateur radio license, as the Commission now proposes.

2. That every class of license be given full access to all the privileges of that class except CW operation, other than automated CW solely for the purpose of automatic station identification when otherwise permitted and consistent with good amateur practice.

3. That in order to obtain CW privileges only, a licensee be required to pass a 5 WPM sending and receiving test similar to the current Element 1 examination.

4. That upon successful completion of such examination, the license currently held by the licensee would reflect a CW endorsement. The endorsement would be carried over to any subsequent upgrade of the license.

5. That the CW endorsement would permit the licensee to operate using CW on any frequency permitted by his or her license class.

6. That Technician licensees who were licensed on or after April 15, 2000, and who can show successful completion of Element 1 at any time after that date be given credit for the Element 1 Endorsement to their Technician license upon application to any VE team without charge.

7. That Technician licensees with HF privileges issued between February 14, 1991 and April 14, 2000, and whose licenses have been subsequently renewed without the "with HF privileges" endorsement be given credit for the Element 1 Endorsement to their Technician license upon application to any VE team without charge.

8. That Technician licensees holding licenses originally issued prior to February 14, 1991 whose licenses have been subsequently renewed without the "with HF privileges" endorsement be given credit for the Element 1 Endorsement to their Technician license upon application to any VE team without charge.

9. That such credit may be established by presentation of a bona fide CSCE documenting Element 1 credit regardless of date of issue, by a letter documenting credit issued by the VEC that managed the Technician's Element 1 examination at no charge to the examinee, or by documentation acceptable to the NCVEC that the applicant previously held a Commission-issued Technician license that required at least Element 1 credit at any time.[2] Further, that if the endorsement is not applied for on the Technician license, this documentation may also be

[2] Such as call book documentation.

presented to any VE team at any time the licensee desires to upgrade to General or Extra for endorsement credit at no additional charge.[3]

IV. Rationale

This proposal would accomplish most of the stated objectives of the current NPRM. It would provide access to HF for all classes of license without requiring demonstrated code proficiency for all modes except CW. It would also insure that those who desire to do CW to have demonstrated proficiency before using it.

It would also allow Technicians with prior Element 1 credit to receive credit for the Element 1 endorsement. In so doing it would address a major inequity from the April 15, 2000 changes.

Finally, it would give those who currently use CW some degree of protection by recognizing that CW continues to be a viable mode for those who desire to use it.

V. Possible Commission Concerns

Adopting this proposal would require some reconfiguration of the FCC's computer system to allow for tracking the Element 1 endorsement, and for printing that endorsement on the face of the license, but such change should be minimal. It should not be necessary to reissue most licenses, since all Technician with HF, General, Advanced, and Extra Class licenses issued prior to the effective date of the rule change will be understood to show that the licensee is code qualified. Of course, it will be necessary to show the endorsement on the face of the license when such licenses are renewed.

Also, since some current Technician licenses do not reflect credit for Element 1 even though it has been earned, a few licensees who fall into this category may wish to have their current licenses reflect the endorsement without upgrading. This would require some new licenses to

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[3] The commenter realizes that this portion of the proposal can be somewhat complex. However, it is meant to address an inequity from the April 2000 changes that was, quite frankly, unfair to Technician licensees who qualified for Element 1 credit. The Commission has previously been petitioned to address this inequity and has unfortunately elected not to do so.

be issued upon application. However, this number should be extremely small since the vast majority of affected Technicians have already upgraded, or would present the appropriate credit as part of an upgrade.

V. Conclusion

The foregoing proposed modification serves the public convenience, interest and necessity more so than the Commission's current proposal in that it accommodates current and potential amateurs who wish to operate on HF, but who do not wish to learn or use code. However, it also preserves code for the many amateurs who wish to use it, and insures that amateurs who do use CW are at least minimally proficient prior to getting on the air.

This proposal will be somewhat more expensive and difficult to implement than the Commission's current proposal, but that alone should not be justification for it not to be considered. All amateurs, regardless of their position with respect to the Element 1 requirement, desire to see a service that is robust and that fulfills all the purposes of the service pursuant to 47 CFR §97.1.

The way in which each individual amateur goes about fulfilling these purposes is, of course, unique to that individual based on their individual interests and preferences. However, it is important that the Amateur Service be regulated in such a way as to accommodate as many of these different interests as possible.

While it no longer makes sense to exclude amateurs from HF solely because of the code requirement, neither does it make sense to slowly exclude those who are constantly demonstrating that code still serves a useful purpose within the Service.

Respectfully submitted,
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