Before The Federal Communications Commission
Washington, D.C. 20554

In the matter of:	)	
	)	
Petition to define a nationwide emergency	)	Received & Inspected
frequency in the table of VHF frequency	)	FEB 0 2 2012
assignments in the Amateur Radio Service	)	FCC Mail Room
("Part 97" operations)	)	

Petition for Rulemaking

Submitted by:
Bryan D. Boyle, WB0YLE, 102 Juliet Rd., Morrisville PA 19067
H R Jim Dixon, WB6NIL, 34907 Highway 41, Coarsegold, CA 93614

Table of Contents

I. INTRODUCTION

II. GENERAL BACKGROUND

III. NEED FOR A DEFINED FREQUENCY ALLOCATION

IV. DESCRIPTION OF PROPOSED ALLOCATION

a. Overview of Part 97 operation and usage patterns
b. Low-cost barrier to introduction
c. Low effect on current allocation
d. Flexibility in implementation
e. Widest possible influence for least cost

V. ACTIONS BEING REQUESTED IN THIS PROPOSAL

VI. CONCLUSIONS

No. of Copies rec'd 0+4
List ABCDE
12-4 WTB

I. Introduction

1. The purpose of this petition is to respectfully request that our Federal Communications Commission, through the normal rulemaking process, define and specify, in the assigned allocation table for the 144 MHz (2 Meter) band of the Amateur Radio Service (Part 97 CFR), a specific nationwide emergency radio frequency for use by all Amateur Radio Operators to enable rendering assistance, comfort, and aid when called upon to exercise their privileges in distress situations as defined in the Commission's rules in the preamble to the Amateur Service regulations.

2. The Amateur Radio Service, as one of the oldest radio services supporting the people of the United States, has provided, and will continue to provide, voluntary assistance to first responders, civilians, municipal, state, and federal government operations in times of distress. It functions as a means of increasing the size of the cadre of trained and enthusiastic communications specialists, as well as assist, when called upon, in relief efforts in the event of man-made or natural disasters.

3. While there is no doubt that this service can be viewed, from time to time, as one of the less 'organized' of the services, the service itself has a long history of voluntary efforts that succeed in spite of the voluntary nature of engaging its participants through diligence and dedication to furthering the practice of the communications arts. In discussions with like-minded, publicly-focused individuals, we are calling this service, internally among said individuals, the Radio Amateur Network (for) General Emergency Response (RANGER).

4. The lack of a defined and specific frequency allocation in the frequency tables assigned to the service means that, for local disasters or emergency events, there is no one, well-known, or specific channel which can be understood as the location to use to provide assistance, call for help, or act as a guard frequency and able to be accessed by the greatest number of operators. This lack of specificity can hinder rendering aid and assistance, as well as contribute to the opinion that the Amateur Service is not actively participating in Homeland Security efforts due to the lack of a predictable location for operators to automatically use without additional coordination.

5. In developing this petition, consideration was given to the various bands allocated to the Amateur service. We are requesting the Commission to assign a simplex frequency in the 144 MHz band, since all current classes of Amateur

Operators have privileges in this band, equipment is inexpensive, and we feel a large majority of operators would, without additional expenditure, be able to access this frequency in an efficient and timely manner in the event it is needed.

II. GENERAL BACKGROUND

1. Out of all the generally-apportioned radio services used by non-professionals as well as those in commercial service, there are specific frequencies assigned as "emergency" frequencies. For instance, some well-known services such as Citizen's Band (27 MHz, Channel 9), Aviation (121.5 MHz), and Marine (Channel 16) are allocated specific simplex frequencies which were codified as frequencies set aside for use in case of emergency or life-assistance traffic. That these simplex channels are in use today, and are used to good effect by those in distress, is a testament to the need for individual services to have a readily-accessible and publicized location at which assistance can be given by trained volunteers who monitor those channels.

2. Amateur radio is unique among the publicly accessible allocations in that, while emergency service in times of distress is given as one of the charter reasons for which the service was created, there is no one frequency or channel allocated within the entire service as being set aside for this purpose.

3. In deciding which of the bands we request this allocation be made, it is thought that the simplest and most inexpensive equipment as well as the largest community of operators by license class be the deciding factor, as well as the most favorable propagation characteristics considered. For this reason, the 144MHz band, commonly known as the 2 Meter band, would be the most propitious location in which to locate this assignment. The petitioners realize that this may raise issues with those in the community who view *any* regulation or set-aside of what are viewed as 'amateur frequencies' as an unwanted imposition; in our view, the allocation of a single 16KF3 voice channel within the 144 MHz band, which encompasses a 4 MHz frequency spread, is not an unreasonable request, and, when viewed in its entirety, in light of one of the defined purposes of the service, is a reasonable request and will minimally, if at all, dislocate or impede existing services.

4. Additionally, if this petition is granted, it may encourage commercial equipment manufacturers, who must base marketing decisions on the predictability of allocated band space, to include this single frequency as a "hot button" on their equipment. We must point out that existing manufacturers for other services

have included this in equipment designed for the above mentioned services to good effect. We believe this predictability will allow both the service and the manufacturing base that supports it to offer additional features to allow for more widespread acceptance and use in times of local, state, or national need.

III. NEED FOR A DEFINED FREQUENCY ALLOCATION

1. The Amateur Service encompasses a wide scope of defined allocations from just above the top of the AM Broadcast Band into the Extremely High Frequency and above. This valuable real estate of radio frequency spectrum is used on a daily basis by the over 700,000 licensed operators to fulfill the missions of the service, namely: a) provide a trained cadre of communications professional who act in the service of their fellow citizens, b) provide, when called upon, service during distress and emergency service, and c) promote good will among nations by communicating with and forging warm relations with like-minded individuals in foreign lands. This three-fold mission has a long and fruitful history of fulfilling this mission in both peace and, through coordination with our military forces, war time in ensuring that all means of communications are used to unite individuals around the world.

2. As part of the requirement to fulfill the second leg of our mission, Amateur Operators voluntarily provide emergency communications services, entirely at our expense, to support the needs of the first responders and other volunteer services in the best traditions of responsible citizenship.

3. However, due to the licensing structure and privileges granted to licensees, many of the allocated frequency bands are off-limits, by regulation, to lesser-skilled or lower-level licenses due to the need to segregate skill levels and provide an incentive to increase the acquisition of privileges by achieving higher classes of licenses. This mitigates against the allocation of an emergency service frequency from what are commonly defined as High Frequency (HF) bands. An additional mitigating factor against the allocation of an emergency channel in the HF spectrum is the ability of that spectrum to communicate across long distances at nominal power levels; this could potentially hinder the use of HF frequencies for what may be, in the majority of cases, local or regional efforts at emergency response and interfere with international communications efforts on the part of other Amateur Operators.

4. Additionally, the acquisition of equipment that is able to operate in the HF spectrum is not an insignificant activity; most useable equipment is in the

thousand dollar (US) range which limits the number of volunteers which can participate, and in these days of heightened awareness of fiscal issues, means that an economical and efficient method be developed.

5. It is noted that, by regulation, all US-licensed Amateur Operators have privileges in the Very High Frequency (VHF) and above spectra. The most common VHF band in use within the Continental United States, both in terms of numbers of transmitters and activity, is the 144 MHz band, commonly called the "2 Meter" band. Therefore, it is proposed that this allocation be made at a fixed frequency within this band.

6. Amateur Operators, within the broad scope and discretion provided for by the Commission, have developed voluntary band plans which allocate services within the spectra assigned by the Commission to attempt to self-regulate services and segregate types of communications technology into defined locations. We are not proposing that the Commission define the band plan *per se*, but to acknowledge and codify that, within the 2 Meter band, there is set aside a specific frequency which is a defined nationwide emergency frequency that is predictable, specific, and publicized as such by the Commission and provisions made to induce the inclusion of this frequency in commonly-agreed-to local plans.

IV. DESCRIPTION OF PROPOSED ALLOCATION

1. Overview of Part 97 operation and usage patterns: Of all of the popular modes of the Amateur Radio service, the most widely used by the most operators is FM operation on the 2 Meter band, both through the use of so-called repeater stations, or via direct (simplex) communications. As a result, the most readily available to purchase at the least cost, and the most likely to be available on hand at an Amateur Radio station, is a transceiver that is capable of operation on FM in the 2 Meter band. There are very few Amateurs that do not at least have once such radio.

   Furthermore, since emergency operation is most likely to be oriented around a mobile or portable station needing some sort of assistance, the operational mode that is most likely to be associated with mobile or portable operation (which is FM on the 2 Meter band) would certainly be the best candidate for use consistent with the purpose of this proposal.

2. Low-cost barrier to introduction: Whether an Amateur Operator already has a 2 Meter transceiver that they might re-purpose, or they purchase one; equipment compatible with this proposal has minimal cost, compared with equipment meant for other modes or frequencies.

   The mode of operation being proposed here would enable trivial use of inexpensive equipment and readily provides an easily attainable and simple-to-implement technology to provide this highly valuable service being proposed.

   In addition, it allows use of already existing equipment for those who would need to use the service in a simple and easy to understand way.

   Surplus commercial equipment is becoming readily and inexpensively available, especially since the recent narrow-banding mandate for commercial radio services will free up equipment at reasonable cost. Since a number of commercial-type radios work well, and without modification at and above 146 Mhz (and often times not below), it would be advisable to use a simplex channel at or above 146 MHz.

   Also, simplex channels vary a bit from area to area, depending on the 2 Meter band plan adopted by each area's local frequency coordination organization. The simplex channels in the 146-148 MHz section of the band are pretty consistent in all areas, and therefore is a good reason to define a channel at or above 146 MHz.

3. Little effect on current allocation(s): The 2 Meter Amateur band has a number of simplex channels. Defining one channel for the purpose of this proposal would have minimal effect on simplex operation in the 2 Meter band as a whole, and would not have any effect on any other allocations within the band, since the channel defined would still be available for simplex operation, but would be a consistently defined nationwide frequency that would be able to support priority emergency traffic.

4. Flexibility in implementation: Many methods could potentially be used to implement this type of service:

   a. The simplest form could be an Amateur Operator listening on a base-station or mobile radio, and interacting with a station in distress when needed.

There are very many citizens who possess scanner receivers. Certainly, a number of them could include the channel allocated for this proposal in their scanning activities, and at least be able to contact appropriate authorities if they hear someone calling in distress.

b. It is also possible (actually quite easy and inexpensive) to implement "networks" of remotely-controlled stations (via various methods of remote control, such as wireline, auxiliary link, VOIP, etc), that can be monitored at a "central location". This can vastly improve the availability and quality of coverage for this type of service.

c. Automated remote activation techniques such as the Long-Tone Zero (LiTZ) capability, resident through controllers on the defined frequency, could be used to link remote simplex radios into repeater or other amateur service networks to expand the coverage area of responders, providing a higher possibility of timely assistance being rendered to a station in a distress situation.

   It should be noted that, with the allocation of this frequency, federal, state, and local emergency operations centers would have a defined and consistent additional channel that could be used and monitored in the event the situation warrants, and would be an additional channel to provide communications in the event it was needed.

5. Simple, effective implementation: It is imperative to implement this service in a way that is both simple and effective in both use and implementation.

   From the standpoint of a user, it must be implemented in a way that requires minimal complex interaction with a radio transceiver that is not normally used for this purpose (such as one that does not have the proposed channel/mode pre-programmed in to it). In an emergency situation, a user may not have time or physical ability to perform complicated adjustment to a radio transceiver to account for frequency offsets, tone encoding requirements, etc.; the requirements for usage of this service must be limited to require minimal interaction, such as merely tuning to a simplex frequency, without the need to select the additional functional requirements commonly used in this band.

   From the standpoint of an amateur radio system operator, it must be specified in a way that allows minimal cost and complexity while maintaining sufficient technical standards to maintain a reliable and usable system.

It is not only possible, but highly desirable (from an efficiency and cost standpoint) to have the ability to enable auto-alert monitoring. This could consist of transceivers listening for signaling to indicate an emergency situation, and upon detecting such signaling, alerting an operator or operators that the emergency assistance is needed, so they can respond accordingly. This also allows "centralized" monitoring and response of many such stations at a single point, thus significantly raising the overall quality of the service by ensuring that there will be a higher likelihood of a response when someone is in need, and doing so in a highly efficient, low cost, low maintenance method.

To achieve all of these goals, a minimal and acceptable trade-off must be made. It seems to the petitioners that it is worth requiring a minimal amount of "extra" effort by a user (over and above merely transmitting on the designated frequency) in order to achieve the incredible impact of the efficiency of an auto-alerting system.

If all that is required for communications is for a user to start transmitting on the designated channel, it would completely eliminate the possibility of having auto-alerting monitoring stations, thus requiring manned or manual monitoring at all times. To have effective, reliable and viable auto-alerting monitoring and response, there must be an effective and reliable way of (technically) identifying a station with an emergency as opposed to noise on a channel, or a station that accidentally transmits on the designated channel. Also, since all stations are on the same simplex channel, without some sort of qualifying signaling method, a station handling an emergency could potentially be received by another station monitoring this channel and be erroneously considered "un-handled" emergency traffic, and if a third party attempts to contact that station, it would interfere with and possibly impede the station that is already handling emergency traffic.

A simple and easy-to-implement solution would be to require a user to send a single DTMF tone (since almost all amateur transceivers capable of operating in the 2 Meter band have the ability to send DTMF tones from a front panel keypad in a trivial manner) for a minimal (longer than normal) duration. This type of "signaling" is already commonly in use on many Amateur repeater systems for emergency purposes, and is the LiTZ method mentioned above.

6. Widest possible influence for least cost: Certainly, there are many potential methods whereby an emergency-oriented service could be implemented for the Amateur Service.

What is proposed here is a best-effort attempt to implement such a service in the most efficient manner, and at the least cost, based upon the following:

Amateur Radio is, by definition and tradition, a service consisting of individuals dedicated to the good of the public, who can be relied upon to take action consistent with this goal when required, and will do so diligently without monetary compensation.

Use of commonly-available existing (essentially zero-cost) or minimal-cost equipment allows simple, low-impact, and easily implemented wide-spread deployment.

Simple, efficient, and robust technical requirements in line with existing amateur practice allow widest possible applicability for various methods of use, yet do so with minimal complication and intrusiveness.

The combined result is that for comparatively little (or no) cost (and some cooperation), this capability can be implemented in a manner that provides wide-spread, consistent, and reliable response for Amateur Radio stations in need of emergency assistance.

V. ACTIONS BEING REQUESTED IN THIS PROPOSAL

1. It is proposed, as stated in Section IV of this petition, that the Commission publish as a Notice of Proposed Rulemaking (NPRM) that the simplex frequency of 146.550 MHz, currently defined as a voice channel at the center of the 2 Meter Amateur Radio frequency allocation, be specified and defined as a non-exclusive nationwide Amateur Radio Service emergency communications channel using FM wideband modulation, and restricting the use of PL/DPL or other channel quieting technologies to ensure that communications can be established quickly and with a minimum of operator overhead.

2. Upon the proper reception of comments, under Commission regulations, if the Commission deems it proper and necessary, that this frequency, after proper public comment, be codified as the specific frequency set aside for emergency communications.

3. That no restrictions other than the codification of this frequency in terms of cross-linking to existing services such as repeater, linked systems, or specification of

particular equipment be defined in the proposed rule. Restrictions as to the use of this frequency for actual emergency, distress, and practice response activities, as well as normal equipment development and maintenance, should be allowed for by the proposed NPRM to encourage the widest voluntary deployment of this capability.

4. Encouragement should be expressed to developers and experimenters in both the manufacturing and private sector to develop coordination capabilities with local, state, and federal homeland protection agencies to ensure the widest dissemination and awareness of this capability, and encourage Memoranda of Understanding to be developed in line with current regulations to enable the use of this frequency by properly licensed operators in times of need.

VI. CONCLUSIONS

1. The Amateur Radio service has a long history of providing a voluntary and valuable public service in establishing communications capabilities in times of natural and manmade disasters.

2. Part 97 defines one of the foundations for the existence of the Amateur Radio service as providing communications capabilities in times of disaster; without a clear and specific frequency known to be codified as that location for communications in this situation, the development of accurate, timely, and consistent response is, at this time, hampered by the random nature of selecting a frequency. This petition is an attempt to address that perceived gap in the service's capabilities, and bring the service in line with other services licensed by the Commission.

3. Tens of thousands of Amateur Operators voluntarily contribute time, equipment, money, and their skills to ensure a workable system of radio communications exists for the public interest, convenience, and necessity of their own volition to improve the life of their fellow citizens.

4. As a licensed radio service with privileges granted by the Commission in the name of the people of the United States, we feel that the Amateur Service, to enable us to more widely deploy a predictable nationwide capability, requests that the Commission codify, as they have for other services, a defined emergency frequency specifically set aside for assistance, aid, and comfort for areas or people in distress.

5. Furthermore, we ask that the Commission define the frequency of 146.550 MHz in the 144 MHz band allocation as being the most logical location for this capability. All Amateur Operators have privileges in this band, the equipment is available at a reasonable cost, and the number of operators using this band is not an insignificant proportion of the Amateur Operator population.

6. It is felt that, with this specified allocation, the capabilities of the Amateur Service will be brought into line with other publicly-accessible radio communications services, and so increase the ability of radio communications capabilities to be deployed more readily to protect life, render assistance, and ensure the ongoing confidence of the public in the efficacy of the service.

7. The actions requested in this petition can be quickly and easily implemented by the Commission with a minimum of resources and dislocation of existing services. Any negative effects are outweighed significantly by the advantages stated herein, increase the capabilities of the service, and address a perceived need within the planning and execution functions of our activities as called for by regulation. The proposals put forth in this petition will clearly serve the public interest, convenience, and necessity, and are submitted for consideration, discussion, rulemaking, and positive action.

Respectfully submitted:

Bryan D. Boyle, WB0YLE
102 Juliet Rd.
Morrisville PA 19067
908-410-8510

H R Jim Dixon, WB6NIL
34907 Highway 41
Coarsegold, CA 93614
619-226-6969