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**Before the
Federal Communications Commission
Washington, D.C. 20554**

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FEB 17 1999

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

**In the Matter of)
)
The Development of Operational,)
Technical and Spectrum Requirements)
For Meeting Federal, State and Local)
Public Safety Agency Communications)
Requirements Through the Year 2010)**

WT Docket No. 96-86

REPLY COMMENTS

Submitted by:

**Dr. Michael C. Trahos, D.O., NCE, CET
4600 King Street, Suite 6K
Alexandria, Virginia 22302-1249**

February 17, 1999

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Submitted by:

Dr. Michael C. Trahos, D.O., NCE, CET
4600 King Street, Suite 6K
Alexandria, Virginia 22302-1249

Date: February 17, 1999

I. INTRODUCTION

1. Before the Federal Communications Commission (Commission) is a Third Notice of Proposed Rule Making (**NOTICE**) concerning multiple proposals relating to public safety communications in the 764-776/794-806 MHz band (700 MHz band).

II.

COMMENTER QUALIFICATIONS

2. Commenter is an unlimited licensed, board certified and actively practicing General Medicine/Family Practice Physician and Surgeon. Commenter holds the academic faculty appointment of Assistant Clinical Professor, Department of Family Medicine, Georgetown University School of Medicine. Commenter holds the current positions of Chairman - Technology and Health Care [Telemedicine] Task Force of the [National] American Osteopathic [Medical] Association (AOA), Executive Member - AOA Council on Federal Health Programs, President-Elect - Virginia [State] Osteopathic Medical Association (VOMA), VOMA Delegate to the AOA House of Delegates, and Alexandria [Virginia] Medical Society (AMS) Delegate to the Medical Society of Virginia (MSV) House of Delegates. Commenter holds the previous positions of President (CY'94) - AMS and Vice-Councilor - MSV 8th U.S. Congressional District.

3. Commenter was selected/elected and currently serves as the Medical Profession Representative - Technical Committee, Chairman - Legislative/Regulatory Affairs Committee, and Special Emergency Radio Service Representative - RPRC of the National Public Safety Planning Advisory Committee's (NPSPAC) Region-20 [State of Maryland, Washington, DC, Northern Virginia] 821 MHz Public Safety Regional Plan Review Committee (RPRC), for the development and implementation of a Public Safety National/Regional Plan (GN Docket No. 90-7) for the use of the 821-824/866-869 MHz bands by the Public Safety Services pursuant to the Report and Order in GN Docket No. 87-112.

4. Commenter is also a First Class Telecommunications Engineer, certified by the National Association of Radio and Telecommunications Engineers (NARTE), possessor of a First Class Certificate of Competency, issued by the Association of Public Safety Communications

Officials, Inc. - International (APCO), and Fellow of The Radio Club of America. Commenter has over 25 years experience in the telecommunications field with many of these years spent actively participating in Commission proceedings.

5. Commenter is Commission licensed in the Amateur Radio (ARS), Business Radio (BRS), General Mobile Radio (GMRS) and Special Emergency Radio (SERS) services. Commenter has taken examination for and has been issued the Commission's commercial GMDSS Radio Maintainer, GMDSS Radio Operator, and General Radiotelephone Operator Licenses. It is with having the above extensive expertise in dealing with personal, business, medical and emergency/public assistance communications matters that this Commenter is qualified to make the following REPLY COMMENTS in response to this NOTICE.

III.

REPLY COMMENTS

6. It has come to the attention of this Commenter that prompt access to the original PR Docket No. 89-599 files has not been possible. To alleviate this apparent problem, attached to these REPLY COMMENTS are select excerpt copies of the original PR Docket No. 89-599 proceeding.

IV.

CONCLUSION

7. This NOTICE proposes the reallocation of a portion of the 138-144 MHz band to Public Safety. This Commenter proposes that the Commission create a PELTS, as envisioned in PR Docket No. 89-599, in this band.

8. The Commission creation of a PELTS within a portion of the 138-144 MHz band would be in the *public interest*.

Respectfully submitted,



Dr. Michael C. Trahos, D.O., NCE, CET

MCT/mct
Attachments (Multiple)



NEWS

FEDERAL COMMUNICATIONS COMMISSION
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934

This is an unofficial announcement of Commission action. Release of the full text of a Commission order constitutes official action. See MCI v. FCC, 515 F.2d 385 (D.C. Cir. 1975)

Report No. DC-1523

ACTION IN DOCKET CASE

December 12, 1989

FCC PROPOSES NEW PERSONAL EMERGENCY LOCATOR TRANSMITTER SERVICE
(PR DOCKET 89-599)

The Commission today proposed the establishment of a Personal Emergency Locator Transmitter Service (PELTS), that would provide individuals in remote areas with a means of alerting others of an emergency situation and to help search and rescue personnel locate those in distress.

The Commission pointed out that a growing number of persons are participating in outdoor activities resulting in an increased number of situations requiring immediate emergency assistance. For example, nine teenage climbers were caught in a severe unexpected storm on Oregon's Mt. Hood, and lost their lives; and, in Breckenridge, CO, four skiers lost their lives after being buried by an avalanche. These examples illustrate the need for a compact and reliable means of emergency communications in remote areas because these individuals might have been saved if rescuers had been able to quickly locate them.

The Commission has two objectives in establishing the PELTS. The first objective is to provide for an area wide, centrally-coordinated radio communications system for use by the general public in remote areas thereby reducing response time in emergency situations. The second objective is to reduce the illegal use of Emergency Locator Transmitters (ELTs) and Emergency Position Indicating Radio Beacons (EPIRBs) as personal locating beacons. ELTs and EPIRBs are emergency radiobeacons used to assist search and rescue units in locating downed aircraft and vessels in distress.

PELTS would consist of a base station and associated portable (mobile) units. Eligibility would be limited for a base station license but not limited for mobile operations. Base station operations would be restricted to governmental agencies and private organizations whose primary function is search and rescue, or those recognized by governmental entities to perform search and rescue. This will ensure that base station use will be limited to distress and assistance communications.

The Commission proposed to use the newly allocated 220-222 MHz band for the PELTS. Specifically, it proposed to allocate five frequency pairs (50 kHz) to PELTS. The Commission believes it that should provide sufficient spectrum to develop a personal emergency communications service that would permit two-way voice communications between individuals, base stations and search and rescue units, as well as emergency alerting and homing capabilities. Moreover, a new radio service in the newly allocated 220-222 MHz band will have a limited impact on existing users.

(over)

Finally, in order to increase the utility of the equipment and to improve the efficiency of the search and rescue operations, the Commission proposed technical standards and design specifications for PELTS equipment. These parameters will offer the public some assurance that the equipment is safe and likely to perform its intended function regardless of the user's location or the equipment's manufacturer.

Action by the Commission December 12, 1989, by Notice of Proposed Rulemaking (FCC 89-342). Commissioners Sikes (Chairman), Quello, Marshall and Barrett.

-FCC-

News Media contact: Patricia A. Chew at (202) 632-5050.

Private Radio Bureau contact: James A. Shaffer at (202) 632-7197.

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

PR Docket No. 89-599

In the Matter of

Amendment of
Parts 0, 1, 2,
and 95 of the
Commission's
Rules regarding
the establishment
of a Personal
Emergency Locator
Transmitter Service.

RM-6681

NOTICE OF PROPOSED RULE MAKING

Adopted: December 12, 1989; Released: December 20, 1989

By the Commission:

I. INTRODUCTION

1. This *Notice of Proposed Rule Making (Notice)* proposes to establish a Personal Emergency Locator Transmitter Service (PELTS) to provide individuals in remote areas a means to alert others of an emergency situation and to help search and rescue personnel locate those in distress.

II. BACKGROUND

2. There is no way to predict when and where emergencies will occur. If they occur in cities and towns where the vast majority of the American public live and work there is a modern communications network available to summon assistance. For example, in most cities and towns across the country the emergency telephone access system (911) is available to notify authorities in a matter of seconds of an emergency. Even rural America has access to a communications network to summon assistance. As a result of this extensive communications network, the ability to notify authorities in the event of an emergency is often taken for granted.

3. There are, however, large remote areas of the United States where there is no communications capability available, emergency or otherwise. These areas are used by a large segment of the American public for recreational activities. In fact, the number of individuals participating in outdoor activities such as backpacking, hiking, mountain climbing and snowmobiling in remote areas has increased dramatically over the last five years.¹ As the number of persons participating in such activities has increased so has the number of situations requiring immediate assistance (e.g., individuals getting lost or requiring emergency medical assistance).² For example, in May of

1986, nine teenage climbers got caught in a severe, unexpected storm while trying to climb Oregon's Mount Hood and lost their lives. The climbers, who were buried under four feet of snow, might have been saved had it not taken rescuers over three days to locate them.³ In February 1987, four skiers lost their lives after being buried for three days by an avalanche in the back country of Breckenridge, Colorado. They too might have been saved if rescuers had been able to locate them.⁴ Such fatal accidents have increased the awareness among individuals participating in outdoor activities in remote areas of their inability to summon assistance if and when it is needed.

4. Recently, the growing awareness of inadequate emergency communications capabilities and the limited appeal of the various alerting devices currently available have led the people to use emergency locator transmitters (ELTs) and emergency position indicating radiobeacons (EPIRBs) which are alerting devices that are not intended for use by the public in general. These emergency radiobeacons are currently used in an international system to alert others of distress situations in ships and aircraft and to aid search and rescue services to locate those in distress. In the United States, emergency radiobeacons carried on board aircraft are called ELTs. ELTs are small, portable, readily available and relatively inexpensive. In the event of a crash the ELT is activated automatically by means of a crash activation sensor. Radiobeacons carried on board ships are called EPIRBs and are generally larger and not as portable as ELTs. In the event of distress EPIRBs may be activated automatically or manually and some are designed to float free of a sinking vessel. ELTs and EPIRBs are currently designed to operate on identical frequencies, 121.500 MHz and 243.000 MHz⁵, which are allocated internationally for alerting and for search and rescue functions involving ships and aircraft in distress. Additionally, the Commission recently amended its rules to allow ships to voluntarily use emergency radiobeacons operating on 406.025 MHz.⁶ The frequency 406.025 MHz is also dedicated internationally for exclusive use by distress beacons.

5. The U.S. Air Force is responsible for monitoring and providing search and rescue services for land based distress situations while responsibility for search and rescue along the coast of the United States rests with the Coast Guard. Distress signals are detected by aircraft, vessels, or a number of COSPAS/SARSAT⁷ satellites, which retransmit the signal to special ground stations called Local User Terminals. From a Local User Terminal the signal is transferred to the U.S. Mission Control Center at Scott Air Force Base (Scott) in southwestern Illinois. The vicinity of the radio beacon emitting the distress signal is determined and the positions are relayed from the control room to the Air Force's Rescue Coordination Center at Scott where data are analyzed and local rescue units are notified. Additionally, Federal Aviation Administration (FAA) control towers, Coast Guard installations, military aircraft and military installations monitor the frequencies and handle local situations that do not need intervention from Scott. The ELT/EPIRB system has been designed specifically to handle aircraft and vessels in distress. It is not designed to accommodate the general public, which could add millions of users to the system. The addition of a large number of users, especially users unfamiliar with the use of radio, could render the entire ELT/EPIRB system useless. Along with an increase in unsophisticated users that could undermine the system, the system is

currently experiencing problems with false alarms. ELTs may transmit many false alarms due to hard landings, mishandling or problems related to beacon design, installation or maintenance. EPIRBs also generate false alarms but mostly due to mishandling. Thus, the proliferation of unauthorized users does not add to safety but decreases it as the system becomes overloaded.

6. Currently an increase in advertising in various magazines has led individuals to use aircraft emergency locator transmitters (ELTs) as personal emergency locators. ELTs at first appear to be suited for this purpose in that they are small, portable, readily available and relatively inexpensive with an international watch and response system already in place. The misuse of ELTs as personal emergency locators, however, strains the watch and response system, increases the cost of tracking and responding to distress alerts⁸ and, if allowed to continue, could overload the system, rendering it useless. The Commission recently warned the public against intentional misuse of ELTs. Unauthorized personal use of ELTs could result in a penalty of imprisonment and a forfeiture of up to \$10,000.⁹

7. In response to the proliferation of illegal use of ELTs, the limitations of current alerting devices, and the potential of personal emergency locator beacons, the Interagency Committee on Search and Rescue (ICSAR)¹⁰ formed an Ad Hoc Study Group (Group) on Personal Locating Beacons. ICSAR asked the Group to develop a position and make recommendations on the application of technology for user groups other than those legally employing ELTs and EPIRBs. The Group concluded that the potential widespread use of personal locating beacons would cause problems for the current watch and response systems and recommended that the U.S. learn from earlier experience with ELTs and remain ahead of the public's demand for personal locating beacons. In addition to the interest in the United States, several countries, including Norway, Denmark, Sweden, France, and the United Kingdom, foresee an immediate application for personal emergency locator transmitters and have presented draft subject papers at various international meetings.¹¹

8. Further, on January 13, 1989, Kenneth J. Seymour filed a petition (RM-6681) requesting that the Commission's Rules for the Radio Control (R/C) Service, 47 C.F.R. Part 95, Subpart C, be amended to allow for personal use of direction finding and tracking equipment. The purpose would be to provide frequencies to locate lost children, pets, or hikers and to recover personal property. Mr. Seymour states that there are over 8 million active campers, hikers, and the like who would be potential users and who would gain large benefits from such equipment. On March 31, 1989, The Academy of Model Aeronautics, Inc. (AMA) filed an opposition to Seymour's petition stating that the intended use of the tracking devices fails to qualify for operation under the R/C Rules and would be incompatible with existing R/C services.

III. DISCUSSION

9. The key factor in providing effective emergency assistance is response time -- the time it takes from the start of the emergency until the victim is provided with appropriate care. To minimize response time to emergencies in remote areas there must be a viable means available to let someone know that an emergency condition exists. The

quickest and easiest way to bridge the distance gap between a remote area and assistance is through the use of radio.

10. In the past the Commission has adopted rules to provide for emergency locator beacons for aircraft and ships to alert others of distress or emergency conditions.¹² These rules were intended to implement a safety system using the frequencies allocated internationally for this purpose and using the responsible agencies to monitor the frequencies and respond to distress alerts. Currently, however, no such communications capability exist solely for individuals in distress in remote areas. Indeed as ICSAR noted, other than citizens band (CB) radio and some low power communication devices authorized under Part 15 (47 C.F.R. Part 15),¹³ there are no other electronic alerting options regularly available to the general public.¹⁴ Instead, participants in recreational activities in remote areas have had to rely on a variety of alerting devices such as smoke flares, strobe lights, signal mirrors and balloons.

11. While all of these alerting devices have been of some assistance to those who have been lost or victims of accidents, they have disadvantages that have kept them from being extensively used for distress communications. CB radio, for example, has limited appeal in this regard because of the equipment design, the quality of the communications, and potential for skip interference. The low power devices authorized under Part 15 have a very limited range and no requirement for interoperability or system design. The non-electronic alerting devices are also very limited. One problem has been the inability of these devices to differentiate the seriousness of the situation. Further, the success of many of these devices depends on a number of factors such as the sophistication of the user and the area in which the device is used. Most of the non-electronic devices require the user to be in close proximity to the watch and response personnel. This usually occurs only after a search and rescue (SAR) organization has been alerted that a potential emergency condition exists and has started its search. This could be hours or even days after the emergency first occurs.

12. This lack of a viable means of alerting appropriate authorities has led to the proliferation of improper use of ELTs. Because ELTs are life saving devices used worldwide, it is important that they operate as efficiently and effectively as possible to ensure that search and rescue teams will be able to detect the distress signal and locate the source. Available SAR resources between now and the year 2000 are not expected to increase substantially. Thus, the potential inadvertent or improper use by a very large segment of the American public could render the existing aviation and maritime distress and safety systems ineffective. While there is no practical way to ascertain the size of the personal locator beacon market, a recent study has estimated the number of potential users to be in the millions and growing.¹⁵ Further in this regard, ICSAR concluded that the near future use of Personal Locating Beacons is probably imminent, with or without official and legal sanction.¹⁶

13. Finally, we note that over the past decade, satellites have become increasingly useful in emergency and disaster situations. For example, they have been used for disaster and emergency relief communications in Nicaragua, Mexico City, Italy, Mali, the Soviet Union and the United States (*i.e.*, after the Mount Saint Helens eruption). Further, the COSPAS/SARSAT system that piggybacks aboard U.S. and Soviet weather and navigation satellites has al-

ready saved many lives by locating ELT and EPIRB distress transmissions. A new satellite system dedicated to such services, however, would take years to implement and would require large national and international commitments. Such a system could not easily be implemented by local authorities quickly and inexpensively.

14. In order to accommodate the evolving demands of the public, we are proposing a new personal radio service for use by the general public for distress communications in remote areas. This new radio service would benefit professionals such as game managers, lumbermen and scientists as well as recreational enthusiasts. Under the approach proposed herein we would rely on local government entities and private safety related organizations to develop associated watch and response systems.

15. Although we put forward our specific proposal below, we seek comment on viable alternatives to that proposal. Our proposed version would offer the user several means of communication and be an important source of information. This system, however, could be expensive and, thus, arguably beyond the financial means of some who would want to use it. Thus, comments are sought on possible alternatives to reducing the system's costs. For example, one alternative would be to modify the technical standards in order that the equipment would be cheaper to manufacture. Further, as we are proposing a system that uses ten 5 kHz channels, commenters should address whether ten channels are necessary and whether using fewer channels would reduce the cost of the system. Finally, we request comment generally on the status of satellite services such as those being developed by Geostar Corporation and the American Mobile Satellite Corporation, that might be adaptable for distress communications in remote areas. In short, we solicit comments on these questions as well as any other options that would make this proposed service as efficient and effective as possible.

IV. PROPOSAL

16. Before enunciating our specific proposals for this new service, we want to state our objectives in this proceeding. In brief they are (1) to provide for an area wide, centrally-coordinated radio communications capability for use by the general public in remote areas for the purpose of reducing response time in emergency situations and (2) to reduce the illegal use of ELTs and EPIRBs as personal locating beacons. These goals are necessitated by the rapidly increasing segment of the American public either working or participating in recreational activities in remote areas, their growing desire to be able to summon emergency assistance, if and when it is needed, and the increasing sophistication in personal locating beacon technology.

A. Regulatory Structure

17. *Rule Part.* Currently, frequencies set aside for land mobile safety services are regulated under Part 90 of the Commission's Rules, 47 C.F.R. Part 90. In these services the general public is the recipient of the safety services provided by radio rather than an actual user of the frequencies. In fact the general public is not even eligible to use frequencies reserved for public safety under Part 90. This new service, however, is intended to satisfy the individual emergency communication needs of the general public and they would be the actual users of the frequencies. Therefore, we propose to establish a new radio

service, the Personal Emergency Locator Transmitter Service (PELTS) as one of the Personal Radio Services under Part 95 of the Commission's Rules, 47 C.F.R. Part 95.¹⁷

18. *Eligibility.* As stated above, this new radio service is intended to provide an emergency communications capability for the general public in remote areas. Under the radio system envisioned, the alert that an emergency condition exists would first come from a portable (mobile) unit. We propose not to restrict eligibility in regard to mobile operation under PELTS. Given the potential large class of users who could benefit from this service, the approach of not restricting eligibility will maximize the usefulness of this service to the public. Under this proposal anyone located in an area where radio services are regulated by the Commission could operate a PELTS portable station. We believe, however, base stations should be treated differently. Base stations use higher power and thus pose a greater risk of interference. Further, to ensure that base station use is limited to distress and assistance communications we propose to restrict eligibility to governmental entities and private organizations who provide a search and rescue service and are recognized as providing such by a governmental entity.¹⁸ By proposing unrestricted eligibility for mobile use and restricting base station eligibility we hope to allow maximum use of these frequencies to report emergencies while at the same time assure that the frequencies will be used for distress as well as search and rescue communications.

19. *License Requirements.* Because of the broad eligibility and operational provisions of this service there are millions of potential users. Individually licensing each one could be costly to the Commission. Further, under our proposal individual mobile licensing would not be needed to limit the number of users, assign specific channels,¹⁹ limit output power or control hours of operation. Rather we anticipate satisfying our spectrum management responsibilities through type acceptance and operating rules. For these reasons, we believe there is no need separately to license individual portable stations.

20. We could accomplish this two different ways. One option would be to authorize mobile operation by rule as we have done in several other Personal Radio Services.²⁰ While this option would provide the most flexibility (*i.e.*, individuals could independently own and operate PELT portable units), it would require an amendment to the Communications Act of 1934, as amended.²¹ The other option would be to include mobile units under the base station license. An example of this type of blanket or system licensing is found in the common carrier Domestic Public Land Mobile Service. See *Individual Radio Licensing Procedures*, 77 FCC 2d 84 (1980). A similar approach is used in the cellular radio service and for private carriers in the private land mobile radio services. For example, see 47 C.F.R. § 90.179(d). Under this option the base station licensee would also be the holder of the mobile license and individuals would rent service from base station licensees. In either case, eliminating individual mobile licensing would not free the users from complying with operational rules, but it would free them of any requirement to obtain an FCC license before beginning operation. For the purposes of this Notice we propose the blanket licensing option. Nevertheless, we specifically request comments on other licensing alternatives.

21. Base stations present a different situation. Here we intend to limit users to assure the frequencies will be used for distress and assistance communications.²² Further, we anticipate only a small number of base stations compared to the number of portable stations thus keeping the Commission's administrative costs down. Finally, licensing base stations assures that proper FAA notification and subsequent clearance by the Commission will be obtained for antenna structures. For these reasons, we believe base stations should be treated differently. We propose to require entities to obtain a Commission authorization prior to operating a PELTS base station.

22. *Filing Requirements.* As indicated above, we propose to license only PELTS base stations. Applicants would use FCC Form 574 for new authorizations, modifications, and assignments. No licensing fee would be required.²³ Our specific licensing proposals are outlined in the attached Appendix.

B. Channelization

23. *Spectrum Allotted.* With the increased demand for spectrum over the last ten years, finding spectrum for a new radio service is difficult. If we provide only for emergency alerting capability similar to ELTs or EPIRBs (*i.e.*, ballot one or two frequencies), our job would be less complex. While this capability would go a long way toward satisfying our objective, we believe additional capability is needed. The search and rescue community has indicated the need for two-way communications capability both to determine the seriousness of the situation and to provide reassurance to the victim.²⁴ Further, it would help if rescuers had the capability to communicate with one another while searching for the injured or lost party. For these reasons, we believe a number of frequencies should be allotted.

24. In addition to the number of channels to be allotted, several other factors need to be considered in our search for frequencies. For example, we need to consider what the impact would be on existing users. Further, we should consider propagation characteristics of the various bands in relation to where the frequencies would be used and what they would be used for. For instance, we would not want to allot for emergency communications in heavily wooded remote areas frequencies that are severely attenuated by forestation or frequencies that are routinely subject to atmospheric conditions such as skip. Mr. Seymour suggested frequencies in the 72-76 MHz band. While frequencies in this band provide good propagation in wooded areas and offer sufficient range capabilities without serve skip problems, there is the issue of impact on existing users.²⁵ Further, there are trade-offs in antenna design associated with portables operating in this band. We believe frequencies in the newly allocated 220-222 MHz band, however, may be better suited than the R/C frequencies proposed by Mr. Seymour. This band also has good propagation characteristics. Further, there would be no impact on existing users and the antenna trade-off problem is not as great. On balance we are proposing to reserve channels in the 220-222 MHz band for this service. We request comments on the choice of frequencies proposed for this service.

25. In a recent *Notice of Proposal Rule Making* we proposed service rules for the 220-222 MHz band.²⁶ In the channeling plans proposed, the lowest common denominator is a 5 channel block. Accordingly, we propose to allot one 5 channel block, five frequency pairs (channels

196-200), to PELTS.²⁷ This communications capability should be sufficient to provide entities with the opportunity to design an emergency communications system in remote areas.²⁸ We invite comment on the number of channels proposed for this service.

26. *Channel Bandwidth.* In the proceeding reallocating the 220-222 MHz band for land mobile use the Commission stated that the band was being reallocated to develop narrowband technologies.²⁹ Further, in the recent *Notice of Proposed Rule Making* concerning service rules for this band we proposed to divide the band into two hundred 5 kHz channel pairs.³⁰ We see no reason to deviate from this direction herein. We propose, therefore, a channelization plan based on 5 kHz channels.

27. *Channeling Plan.* As discussed above, the new service should provide for an alerting capability similar to that provided by ELTs and should provide for voice communication capability between the injured or lost party and the watch and response center. It should also provide common (working) channels for communications between different rescue squads or individuals participating in the search. Finally, we believe the ability to receive informational voice transmissions pertaining to weather conditions, hazards, closings, where to obtain first aid or other assistance, etc. also would be beneficial to individuals participating in recreational activities in remote areas. Providing frequencies for these different capabilities will allow the private sector to provide an emergency communications system.

28. Table one contains the proposed channel plan for the five frequency pairs. We propose to reserve two frequency pairs (channels 1/6 and 2/7) for full duplex emergency and assistance voice communications between persons needing assistance and a watch and response center. The lower side would be reserved for base station operation and the upper side for portable operation. We propose to prohibit mobile relay (mobile-to-mobile communications through a base station) on these frequencies to ensure they are used for emergency and assistance communications (*i.e.*, all communications would be to or from a dispatcher). The remaining three pairs will be divided into six single channels. We propose to reserve a frequency (channel 3) for one-way non-commercial informational-type messages. We propose to reserve a frequency (channel 10) for non-voice emergency alerting and homing operations similar to ELT operations. Finally, we propose to reserve the remaining four frequencies (channels 4, 5, 8 and 9) for short-distance simplex communications. For example, a backpacker would use his portable unit at the beginning and during his outing to monitor Channel 3 for information about weather conditions, hazards and trail closings. Should he/she be injured during his/her outing he/she would be able to alert search and rescue personnel either by using Channel 10 to send a distress signal or by communicating with the base station using Channels 6, or 7. Additionally, the backpacker could use Channels 4, 5, 8, and 9 for short range communications with other parties that might be in the area and available to offer assistance. Once search and rescue personnel respond they will be able to locate the injured backpacker by homing in on Channel 10 and then use Channels 4, 5, 8, and 9 to communicate with the injured party to determine the extent of the injury and to offer instruction and reassurance.

TABLE 1

Frequency (MHz)	Channel Designator	Use
220.9775	1	Assistance/Emergency (Base)
220.9825	2	Assistance/Emergency (Base)
220.9875	3	Information (Base)
220.9925	4	Short-distance (Mobile)
220.9975	5	Short-distance (Mobile)
221.9775	6	Assistance/Emergency (Mobile)
221.9825	7	Assistance/Emergency (Mobile)
221.9875	8	Short-distance (Mobile)
221.9925	9	Short-distance (Mobile)
221.9975	10	Emergency/Notification/Homing

29. We are currently working with the National Telecommunications and Information Administration (NTIA) to determine the procedure to be followed in sharing the spectrum with Government users. We anticipate that the Government and non-Government users will share the spectrum on a co-equal basis. Government users may desire to use this spectrum in the numerous parks which are operated by the Government and open to the general public for recreational activities. Also, our current treaty with Canada for licensing land mobile operations does not cover use of the 220-222 MHz band.³¹ We intend to work with Canada concerning this issue.

30. *Frequency Availability.* There are a number of different ways we could license these frequencies. The easiest way is for us to make the frequencies available on a shared basis among all users. All licensees and users would be expected to cooperate in the use of channels in order to reduce interference. The drawback of this approach is that several different entities in the same area could be operating on the same channel. The chance of this happening here is particularly high because of the limited number of frequencies available. There are other licensing alternatives that could resolve this problem. For example, we could require users in an area to submit a joint plan describing how the frequencies will be used, similar to our means of allocating new public safety frequencies.³² Alternatively, we could license a single communication provider in a local area as we do for airline enroute frequencies.³³ The two alternatives, however, could result in an additional workload on the Commission at a time when our resources are severely limited. For the purposes of this *Notice*, therefore, we propose to make the frequencies available on a shared basis. Nevertheless, we specifically request comments on whether another licensing approach should be used.

C. Technical Considerations

31. *Emission Mask.* Again to keep technical operation on these frequencies consistent with private land mobile use of the 220-222 MHz band, we propose to adopt the same emission mask as specified in PR Docket 89-552 regardless of the modulation technique used. Under the proposed mask, no emission attenuation is required for frequencies up to 1.8 kHz offset from the carrier frequency. Attenuation of emissions for frequencies offset beyond 1.8 kHz from the carrier would increase until frequencies 5 kHz and more away are attenuated by at

least 80 dB. Because there is some concern this mask may be overly restrictive and thus possibly result in higher priced equipment, we specifically request comments on this issue.³⁴ Comments should address the tradeoffs in cost versus adjacent channel interference and the possibility of employing a reduced standard for low power portable units.

32. *Frequency Tolerance.* We are proposing a frequency tolerance of 0.0001% for base stations and 0.00015% for portable units operating under PELTS. This is consistent with our approach to employ the same equipment technical standards as those proposed for private land mobile use of the 220-222 MHz band.

33. *Transmitter Power.* Unlike frequencies available for private land mobile use in the 220-222 MHz band, we are not proposing to assign PELTS frequencies on an exclusive basis. Consequently, there is no reason to specify a co-channel base station separation. Nevertheless, we believe the rules should provide some maximum power limit to reduce interference potential. We propose, therefore, a maximum output power for PELTS base stations of 100 watts and for portable units of 3 watts. We specifically request comments on whether these values are sufficient to provide the coverage area needed.

D. Equipment Standards

34. As we have continued to emphasize, our primary goal is to establish a new radio service that will enable local entities to provide a distress, search and rescue capability as well as information services for the general public in remote areas anywhere in the country. Individuals participating in recreational activities such as hiking and mountain climbing do not always do so at the same location. Further, search and rescue groups never know where the next emergency may be. In short, having some basic compatibility standards (*i.e.*, interoperability) would increase significantly the utility of the personal emergency locator transmitter for each individual, and improve the efficiency of search and rescue operations as well as increase the chance that the distress communication will be received. For these reasons, we propose to allow only amplitude companded single sideband (ACSB), J3E or J2D emission, on PELTS frequencies. Further, each portable unit must have the capability to transmit on channels 4, 5, 6, 7, 8, 9 and 10 and receive on channels 1, 2, 3, 4, 5, 8 and 9. These basic standards will permit the general public to communicate on all available channels as needed regardless of location or equipment manufacturer. We also solicit comments on whether other interoperability standards are needed. For example, should we specify the modulation sweep range and rate for operation on channel 10 and if so what should they be? Should there be standards for homing transmissions on channel 10 such as duty cycle and if so what should it be?

E. Design Requirements.

35. When the Commission established rules for ELTs and EPIRBs it specified certain equipment design standards. PELTS, like ELTs and EPIRBs, is designed to promote the safety of life and property. Further, just as with EPIRBs and ELTs, PELT transmitters are expected to function in other than ideal environmental conditions. While we cannot guarantee that a portable transmitter will function in all conditions, specifying certain equipment design characteristics could assure that the equip-

ment is intrinsically safe and is likely to perform its intended function. Listed below are some equipment design requirements that could be required. We request comments on these and any additional requirements that would be beneficial.³⁵ We also request comments on whether we should specify a testing procedure for these requirements.

(1) Portable units must have a positive means of turning the equipment off. When an on-off switch is employed a guard must be provided to prevent inadvertent operation.

(2) The exterior of the equipment must have no sharp edges or projections. Means must be provided to fasten the equipment to a person.

(3) Portable units must be powered by a battery contained within the transmitter case and be equipped with a visual indicator of a low battery condition. The visual indicator must indicate when 75 percent of its useful life has expired.

(4) Portable units must have operating instructions understandable by untrained personnel permanently displayed on the outside of the equipment.

(5) Portable units must have an attached warning label clearly stating that channel 10 is to be used only for emergency alerting and is effective only in areas where there is a watch and response system in place.

(6) Portable units must be waterproof and float in calm fresh water with at least the upper 10 cm (4 inches) out of the water.

(7) Portable units must have a visible or audible indicator that clearly shows that the device is operating. The indicator must be protected from damage due to dropping or contact with other objects.

(8) Portable units must meet the requirements of subparagraphs (1) through (7) of this section after free falls onto hard surfaces 3 times from a height of 18 meters (60 feet).

F. Summary

36. This proposed new service is intended to provide a distress as well as search and rescue communications capability for use by the general public in remote areas, with emphasis on a local system approach in providing radio communications. While radio communications are the integrating force in emergency response systems and are necessary to the success of such systems, such capability is only half of the picture. Without a corresponding watch and response system, the communications capability is wasted. This proposal provides state and local governments and certain private entities the communications capability needed to maximize the effectiveness of watch and response systems.

V. INITIAL REGULATORY FLEXIBILITY ANALYSIS

37. Pursuant to the Regulatory Flexibility Act of 1980 (Pub. L. 96-354), our initial analysis is as follows:

Reason for Action

38. We propose to adopt a new Personal Emergency Locator Transmitter Service (PELTS) to address an identified but unmet need for emergency radio communications.

Objectives

39. The objective of the proposed rules is to provide personal emergency communications and alerting capabilities in remote areas.

Legal Basis

40. The proposed action is authorized under Sections 4(i), 303(f) and (r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(f) and (r).

Reporting, recordkeeping and other compliance requirements

41. PELTS base stations would be licensed and the licensee required to maintain station records for the license term, including: (1) the license, (2) copies of letters from the licensee to the FCC concerning name or mailing address changes, (3) copies of answers to discrepancy notices, (3) an STA or waiver of these rules, (4) copy of any renewal application submitted to the FCC and not yet acted upon, (5) a copy of any FCC waiver to use an antenna higher than the rules normally allow, and (6) a copy of the FCC consent to a licensee corporation's change in its corporate control.

Federal rules which overlap, duplicate, or conflict with these rules

42. These proposed rules do not overlap, duplicate or conflict with other Federal rules.

Description, potential impact, and number of small entities involved

43. We have included an Initial Regulatory Flexibility Analysis in this document because we cannot, at this juncture, determine with any specificity the number of manufacturers who would avail themselves of the opportunity to make PELTS equipment, or the number of small entities that would be users of the PELTS. Moreover, we are soliciting comment on the very nature of the service and the equipment to be used in the service. We will examine this proceeding's impact on small entities further in the Final Regulatory Flexibility Analysis in this proceeding after evaluation of the relevant comments. We believe, however, that any impact will be beneficial.

Any significant alternatives minimizing the impact on small entities and existing licensees and consistent with the stated objectives

44. Since we are soliciting comment on the very nature of the service and the equipment to be used in the service we are unable to evaluate any significant alternatives minimizing the impact of small entities and existing licensees. We will examine significant alternatives that minimize the impact on small entities further in the Final Regulatory Flexibility Analysis in this proceeding after evaluation of the relevant comments.

VI. PROCEDURAL MATTERS

45. The proposal contained herein has been analyzed with respect to the Paperwork Reduction Act of 1980 and found to impose a new information collection requirement on the public. Implementation of any new requirement will be subject to approval by the Office of Management and Budget as prescribed by the Act.

46. For purposes of this non-restricted notice and comment rule making proceeding, members of the public are advised that *ex parte* presentations are permitted except during the Sunshine Agenda period. See generally 47 C.F.R. § 1.1206(a). The Sunshine Agenda period is the period of time which commences with the release of a public notice that a matter has been placed on the Sunshine Agenda and terminates when the Commission (1) releases the text of a decision or order in the matter; (2) issues a public notice stating that the matter has been deleted from the Sunshine Agenda; or (3) issues a public notice stating that the matter has been returned to the staff for further consideration, whichever occurs first. See 47 C.F.R. § 1.1202(f). During the Sunshine Agenda period, no presentations, *ex parte* or otherwise, are permitted unless specifically requested by Commission or staff for the clarification or adduction of evidence or the resolution of issues in the proceeding. See 47 C.F.R. § 1.1203.

47. In general, an *ex parte* presentation is any presentation directed to the merits or outcome of the proceeding made to decision-making personnel which (1) if written, is not served on the parties to the proceeding, or (2), if oral, is made without advance notice to the parties to the proceeding and without opportunity for them to be present. See 47 C.F.R. § 1.1202(b). Any person who makes or submits a written *ex parte* presentation shall provide on the same day it is submitted two copies of same under separate cover to the Commission's Secretary for inclusion in the public record. The presentation (as well as any transmittal letter) must clearly indicate on its face the docket number of the particular proceeding(s) to which it relates and the fact that two copies of it have been submitted to the Secretary, and must be labeled or captioned as an *ex parte* presentation.

48. Any person who is making an oral *ex parte* presentation presents data or arguments not already reflected in that person's written comments, memoranda, or other previous filings in that proceeding shall provide on the day of the oral presentation an original and one copy of a written memorandum to the Secretary (with a copy to the Commissioner or staff member involved) which summarizes the data and arguments. The memorandum (as well as any transmittal letter) must clearly indicate on its face the docket number of the particular proceeding and the fact that an original and one copy of it have been submitted to the Secretary, and must be labeled or captioned as an *ex parte* presentation. See 47 C.F.R. § 1.1206.

49. Pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415 and 1.419, interested parties may file comments on or before March 20, 1990 and reply comments on or before April 19, 1990. All relevant and timely comments will be considered by the Commission before taking final action in this proceeding. To file formally in this proceeding, participants must file an original and four copies of all comments, reply comments and supporting comments. If participants want each Commissioner to receive a personal copy of their comments, an original and nine copies must be filed. Comments and reply comments should be sent to Office of the Secretary, Federal Communications Commission, Washington, D.C. 20554. Comments and reply comments will be available for public inspection during regular business hours in the

Dockets Reference Room (Room 239) of the Federal Communications Commission, 1919 M Street N.W., Washington, D.C. 20554.

50. It is ORDERED that a copy of this Notice of Proposed Rule Making will be forwarded to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Donna R. Searcy
Secretary

APPENDIX

Parts 0, 1, 2, and 95 of Title 47 of the Code of Federal Regulations are proposed to be amended as follows:

1. The authority citation for Part 0 continues to read as follows:

Authority citation: 47 U.S.C. 154, 303 unless otherwise noted. Implement 5 U.S.C. 552, unless otherwise noted.

2. Section 0.401(b)(4)(i) is amended by adding the following after General Mobile Radio Service (FCC Form 574 only): Federal Communications Commission, General Mobile Service, P.O. Box 360373M, Pittsburgh, PA 15251-6373:

§ 0.401 Location of Commission Offices.

* * * * *

(b) * * *

(i) * * *

Personal Emergency Locator Transmitter Service (FCC Form 574 only):

Federal Communications Commission, ATTN: PELT Service, Gettysburg, PA 17326. * * *

3. The authority citation for Part 1 continues to read as follows:

Authority citation: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303; Implement, 5 U.S.C. 552, unless otherwise noted.

4. Section 1.926(a)(1) is amended by revising the first sentence of the paragraph to read as follows:

§ 1.926 Application for renewal of license.

(a) * * *

(1) Renewal of station authorizations in the Private Land Mobile Radio Services (Part 90 of this chapter), the General Mobile Radio Service (Part 95, Subpart A of this chapter), and the Personal Emergency Locator Transmitter Service (Part 95, Subpart F of this chapter) shall be submitted on FCC Form 574-R when the licensee has received that Form in the mail from the Commission. * * *

5. Section 1.951(a)(1) is amended by revising the heading to paragraph (a), adding a paragraph (a)(3), removing paragraph (c) and redesignating paragraph (d) to read as follows:

§ 1.951 How applications are distributed.

* * * * *

(a) Special Services Branch.

(1) * * *

(2) * * *

(3) General Radio Section applications: Amateur, General Mobile, Disaster and Personal Emergency Locator Transmitters.

* * * * *

(c) Microwave Branch. Operational fixed point-to-point and point-to-multipoint applications.

6. Section 1.952(b) is amended by changing CA to ZA and adding a category under the heading Personal Radio Services to read as follows:

§ 1.952 How file numbers are assigned.

(a) * * *

(b) * * *

Personal Radio Services

ZA - General Mobile Radio Service

ZB - Personal Emergency Locator Transmitter Service

* * * * *

7. Section 1.1112 is amended by revising paragraph (b) to read as follows:

§ 1.1112 General exemptions to charges.

* * * * *

(b) Applicants in the Special Emergency Radio, Public Safety Radio, and Personal Emergency Locator Transmitter services.

* * * * *

8. The authority citation for Part 2 continues to read as follows:

Authority citation: Secs. 4, 302, 303, 307, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 302, 303, 307, unless otherwise noted.

9. Section 2.106 is amended by modifying the 220-225 MHz band and adding a footnote US314 as follows:

§ 2.106 Table of Frequency Allocations.

UNITED STATES TABLE FCC USE DESIGNATORS

Government Allocation MHz (4) ***	Non-government Allocations MHz (5) ***	Rule part(s) (6) ***	Special-Use Frequencies (7) ***
220-222 Land Mobile.	220-222 Land Mobile.	PRIVATE LAND MOBILE (90)	
US314	US314	PERSONAL (95)	

* * * * *

US314 The frequency bands 220.9775 - 220.9975 and 221.9775 - 221.9975 MHz are limited to Personal Emergency Locator Transmitter Service operations.

* * * * *

10. The authority citation for Part 95 continues to read as follows:

Authority citation: Secs. 4, 303, 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303.

11. Section 95.601 is amended by revising the last two sentences of the paragraph to read as follows:

§ 95.601 Basis and purpose.

* * * The Personal Radio Services are the GMRS (General Mobile Radio Service), the R/C (Radio Control Radio Service), the CB (Citizens Band Radio Service), and the PELTS (Personal Emergency Locating Transmitter Radio Service). For operating rules, see Part 95, Subpart A - GMRS; Subpart C - R/C; Subpart D - CB; Subpart F - PELTS.

12. In Section 95.603, paragraph (d) is added to read as follows:

§ 95.603 Type acceptance required.

(d) Each PELTS transmitter (a transmitter that operates or is intended to operate at a station authorized in the PELTS) must be type accepted.

13. Section 95.626 is added to read as follows:

§ 95.626 PELTS transmitter channel frequencies.

(a) The PELTS transmitter channel frequencies are:

Frequency MHZ	Channel Designator	Use
220.9775 ¹	1	Assistance/Emergency (Base)
220.9825 ¹	2	Assistance/Emergency (Base)
220.9875 ²	3	Information (Base)
220.9925 ²	4	Short-distance (Mobile)
220.9975 ²	5	Short-distance (Mobile)
221.9775 ¹	6	Assistance/Emergency (Mobile)
221.9825 ¹	7	Assistance/Emergency (Mobile)
221.9875 ²	8	Short-distance (Mobile)
221.9925 ²	9	Short-distance (Mobile)
221.9975 ²	10	Emergency Notification/Homing (Mobile)

¹ Channels 1 and 2 are paired with Channels 6 and 7 respectively for full duplex operation. Mobile relay (mobile-to-mobile through a base station) operations are not permitted on these frequencies.

² Reserved for unpaired simplex communications.

(b) Each PELTS base transmitter must be maintained to within a frequency tolerance of ± 0.0001 per cent, and mobile units must be maintained to within a frequency tolerance of ± 0.00015 percent

14. In Section 95.627 paragraphs (d) and (e) are redesignated as (e) and (f) respectively and a new paragraph (d) is added to read as follows:

§ 95.627 Emission types.

(d) For PELTS operations on all channels only emission types J3E or J2D will be authorized.

(e) No GMRS or CB transmitter shall employ a digital modulation or emission.

(f) No GMRS, CB, or R/C transmitter shall transmit non-voice data.

15. In Section 95.629 paragraph (c) is added to read as follows:

§ 95.629 Emission bandwidth.

(c) The maximum authorized bandwidth for any emission type transmitted by a PELTS transmitter is 3.6 kHz.

16. In Section 95.631 the table in paragraph (b) is revised and a new footnote (10) is added to read as follows:

§ 95.631 Unwanted radiation.

(b) ***

Transmitter	Emission Type	Applicable paragraphs
PELTS	As specified in 95.627(d)	(10)

(10) For PELTS transmitters that operate in 5 kHz channel assignments in the 220-222 MHz frequency band, the power of any emission shall be attenuated below the power of the highest emission contained within that channel in accordance with the following schedule:

(i) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 1.8 kHz up to and including 2.5 kHz: At least 100 ($f_d - 1.8$) decibels;

(ii) On any frequency removed from the center of the authorized bandwidth by more than 2.5 kHz up to and including 5 kHz: At least 70 + 4 ($f_d - 2.5$) decibels; and,

(iii) On any frequency removed from the center of the authorized bandwidth by more than 5 kHz: At least 80 decibels.

(iv) Emission power shall be measured in peak values.

(v) The resolution bandwidth of the instrumentation used to measure the emission power is as follows: for measuring emissions up to (and including) 5 kHz from the center of the authorized bandwidth: 100 Hz; and, for measuring emissions more than 5 kHz from the center of the authorized bandwidth: 10 kHz. The power level of the highest emission within the channel, to which the attenuation is referenced, should be remeasured for each change in resolution bandwidth.

17. In Section 95.633 the first sentence of paragraph (b) is revised and a new paragraph (f) is added to read as follows:

§ 95.633 Modulation standards.

(b) Each GMRS and PELTS transmitter, except a GMRS mobile station or a PELTS mobile station transmitter with a power output of 2.5 W or less, must automatically prevent a greater than normal audio level from causing over-modulation. * * *

(f) A PELTS transmitter shall be exempt from the audio low-pass filter requirements of this section, provided that transmitters used for digital emissions must be type accepted with the digital modulating signal or signals specified by the manufacturer. The type acceptance application shall contain such information as may be necessary to demonstrate that the transmitter complies with the emission limitations specified in § 95.631.

18. In Section 95.635 paragraphs (d) and (e) are added to read as follows:

§ 95.635 Maximum transmitter power.

(d) No PELTS base transmitter, under any conditions of modulation, shall exceed 100 watts output power.

(e) No PELTS mobile transmitter, under any conditions of modulation, shall exceed 3 watts of output power.

19. In Section 95.649 paragraph (b) (4) is revised to read as follows:

§ 95.649 Instructions and warnings.

(b) * * *

(4) For a GMRS transmitter and a PELTS base station transmitter, warnings concerning licensing requirements and information concerning license application procedures.

20. A new Section 95.651 is added to read as follows:

§ 95.651 Mobiles in PELTS.

(a) Mobiles in PELTS must have the ability to transmit on all PELTS mobile channels.

(b) Mobiles in PELTS must meet the following requirements:

(1) Have a positive means of turning the equipment off. When an on-off switch is employed a guard must be provided to prevent inadvertent operation.

(2) The exterior of the equipment must have no sharp edges or projections. Means must be provided to fasten the equipment to a person.

(3) Be powered by a battery contained within the transmitter case and be equipped with a visual indication of a low battery condition. The visual indicator must indicate when 75 percent of the battery's useful life has expired.

(4) Have operating instructions understandable by untrained personnel permanently displayed on the outside of the equipment.

(5) Have an attached warning label clearly stating that channel 10 is to be used only for emergency alerting and is effective only in areas where there is a watch/response system in place.

(6) Be waterproof and float free in calm fresh water with at least its upper 10 cm (4 inches) out of the water.

(7) Have a visible or audible indicator that clearly shows that the device is operating. The indicator must be protected from damage due to dropping or contact with other objects.

(8) Meet the requirements of subparagraphs (1) through (7) of this section after free falls onto hard surfaces 3 times from a height of 18 meters (60 feet).

21. A new Subpart F is added to read as follows:

Subpart F - Personal Emergency Locator Transmitter Service (PELTS)

GENERAL PROVISIONS

§ 95.701 Scope

The PELTS is a land mobile radio service available to eligibles and is intended primarily for short-distance personal and emergency communications in isolated areas. The service provides a means of alerting or establishing communications with either other individuals or a point from which emergency assistance can be obtained. The technical parameters for PELTS operation are set forth in Subpart E.

§ 95.703 Definitions.

(a) Mobile station. A station which transmits while moving or during temporary stops at unspecified points.

(b) Base station. A station at a specified site authorized to communicate with mobile stations or mobile receivers.

§ 95.705 Eligibility

Licenses for Personal Emergency Locator transmitter base stations will only be granted to governmental entities or private organizations recognized by governmental entities to perform search and rescue functions. Licenses will not be granted to a foreign government or a representative of a foreign government. Eligibility for PELTS mobile stations will not be limited.

§ 95.707 License requirements.

An entity must obtain a license from the Commission prior to operating a base station in PELTS at any geographic location within or over the territorial limits of any area where radio services are regulated by the FCC. No individual license is required to operate a PELTS mobile station. Mobile use is authorized under the authority of the base station license.

§ 95.709 Channel Sharing

(a) Channels assigned in the PELTS are available only on a shared basis and will not be assigned for the exclusive use of any licensee. All applicants and licensees shall cooperate in the selection and use of channels in order to reduce interference and to make the most effective use of the authorized facilities. (See § 95.626 for specific uses of channels.)

(b) Licensees of PELTS stations suffering from or causing harmful interference are expected to cooperate and resolve such problems by mutually satisfactory arrangements. If the licensees are unable to do so, the FCC may impose restrictions including specifying the transmitter power, antenna height, or area or hours of operation of the station concerned. Further, the use of any frequency at a given geographical location may be denied when, in the judgment of the FCC, its use in that location is not in the public interest; the use of any channel may be restricted as to specified geographical areas, maximum power, or other operating conditions.

§ 95.711 Where to contact the FCC.

(a) Write to:

The nearest FCC Field Office:

- (1) For license application forms (see § 95.721);
- (2) To report interference; or
- (3) To find out if the FCC has type-accepted a certain transmitter for use in the PELTS (see 95.651).

(b) Write to:

Federal Communications Commission
Attention: PELTS
Gettysburg, Pennsylvania 17326

- (1) To ask questions about a license application or about these Rules;
- (2) To file a license application (see 95.721);
- (3) To request a duplicate license;
- (4) To notify the FCC of a change in name (see § 95.727) or mailing address;
- (5) To request consent to a change in the control of a licensee corporation (see 95.731);
- (6) To return a license to the FCC for cancellation;

(c) Write to:

Chief, Field Operations Bureau
Federal Communications Commission
Washington, D.C. 20554

To consult with the FCC about putting a land station at a point within 4.8 kilometers (3 miles) of an FCC monitoring station (see § 95.751).

LICENSING**§ 95.721 Application for station license.**

(a) An application (FCC Form 574) for a new station license shall be submitted to: Federal Communications Commission, Attention: PELTS, Gettysburg, PA 17326.

(b) The application will be returned to the applicant if it is defective. An application is defective if:

- (1) The form is not completely filled out;
- (2) All necessary additional information is not included; or
- (3) All necessary certifications have not been made.

(c) The Commission may, without a hearing, grant an application in part or subject to terms or conditions or with privileges other than those requested. The applicant will be presumed to have accepted the grant as conditioned unless the applicant files a written rejection of the grant as made within 30 days from the date of the grant or the effective date of the grant, whichever is later. If the Commission receives notice of rejection of such a grant, the Commission will vacate its original action and will set the application for hearing.

§ 95.723 Basic application information.

The following information is required in all applications for a license for a new or modified base station:

- (a) Applicant's name;
- (b) Applicant's mailing address (an address in the United States where mail from the FCC can be received);
- (c) Station class;
- (d) Number of base stations and mobile units;
- (e) Each base station location;
 - (1) Latitude and longitude within one second; and
 - (2) Street address (if none, local directions to station);
- (f) Antenna height for each base station, and antenna ground elevation for each base station;
- (g) Area of operation;
- (h) Applicant's signature (see § 95.755);
 - (i) Transmitting channels requested;
 - (j) Transmitter power;
 - (k) Effective radiated power (ERP);
 - (l) Emission designator;
 - (m) Primary control point and telephone number;
 - (n) Eligibility statement; and
 - (o) Copy of recognition issued by governmental entity.

P.O.Box 2
Green Bank, West Virginia 24944

Pacific Insular areas

of intent to file with the FCC an application for a license for a new or modified base station located within the National Quiet Zone. The National Quiet Zone is an area within the States of Maryland, Virginia, and West Virginia, which is bounded by:

- (1) 39° 15' N. on the North;
- (2) 78° 30' W. on the East;
- (3) 37° 30' N. on the South; and
- (4) 80° 30' W. on the West.

(b) Provide the following details about the proposed station in the notice:

- (1) Antenna point (latitude and longitude);
- (2) Antenna height;
- (3) Antenna directivity;
- (4) Transmitting channel(s);
- (5) Emission; and
- (6) Transmitter output.

(c) Include in the application to the FCC the date the notice was sent to the Observatory.

§ 95.745 Operation on environmentally or historically important land.

An application for new or modified license that may have a significant effect on the environment as defined in § 1.1307 must be accompanied by an Environmental Assessment. (See § 1.1311.) For environmental requirements with regard to construction prior to Commission authorization. (See § 1.1312.)

§ 95.747 Operation near the Canadian border.

The United States and the Government of Canada coordinate channel assignments to certain radio stations in areas along their common borders north of Line A and east of Line C. (See § 1.955 of the FCC Rules.)

§ 95.749 Authorized area of operation.

You are authorized to operate your PELTS station from:

(a) Within or over any area of the world where radio services are regulated by the FCC. Those areas are within the territorial limits of:

- (1) The fifty United States.
- (2) The District of Columbia.

Caribbean Insular areas

- (3) Commonwealth of Puerto Rico.
- (4) Navassa Island.
- (5) United States Virgin Islands (50 islets and cays).

- (6) American Samoa (seven islands).
- (7) Baker Island.
- (8) Commonwealth of Northern Mariana Islands.
- (9) Guam Island.
- (10) Howland Island.
- (11) Jarvis Island.
- (12) Johnston Island (Islets East, Johnston, North and Sand).
- (13) Kingman Reef.
- (14) Midway Island (Islets Eastern and Sand).
- (15) Palmyra Island (more than 50 islets).
- (16) Wake Island (Islets Peale, Wake and Wilkes).

(b) Any other area of the world, except within the territorial limits of areas where radio services are regulated by --

- (1) An agency of the United States other than the FCC.
- (2) Any foreign government.

(c) An aircraft or ship, with the permission of the captain, within or over any area of the world where radio services are regulated by the FCC or upon or over international waters. You must operate your station according to any applicable treaty to which the United States is a party.

§ 95.751 Antenna height considerations.

(a) A base station antenna (the station's radiating structure (for transmitting, receiving or both), including the tower, mast or pole supporting it and everything attached to the structure) must not be a hazard to aircraft. The licensee of a base station must obtain FCC permission (see § 95.753) before the uppermost tip of an antenna may be higher than permitted by paragraphs (b), (c) and (d) of this section.

(b) Regardless of any other requirement of this section, an antenna may always be at least:

- (1) 6.1 meters (20 feet) above the ground or above the building or tree upon which the antenna is mounted; or
- (2) Equal to the height of an existing antenna to which the base station antenna is attached.

(c) The antenna may be as high as 61 meters (200 feet) above the ground, unless it will be within 6.1 kilometers (20,000 feet) of an airport or heliport.

(d) If the antenna is near an airport or heliport listed in the FAA's (Federal Aviation Administration's) Airport Facilities Directory, or near an airport or heliport operated by the Department of Defense, it must not be higher than:

- (1) One meter higher than the airport elevation for every 100 meters from the nearest runway if the runway is longer than one kilometer (3,281 feet), and is within 6.1 kilometers (20,000 feet) of the antenna; or

(2) Two meters higher than the airport elevation for every 100 meters from the nearest runway if the runway is no longer than one kilometer (3,281 feet), and is within 3.1 kilometers (10,000 feet) of the antenna; or

(3) Four meters higher than the heliport elevation for every 100 meters from the nearest landing pad if the pad is within 1.5 kilometers (5,000 feet) of the antenna.

(e) If the FCC grants permission to put an antenna higher than normally allowed in paragraphs (b), (c), and (d) of this section, the licensee may be required to mark the antenna with bright paint and light it up at night (see Part 17 of the FCC Rules).

§ 95.753 Additional information for stations with antennas higher than normally allowed.

(a) An applicant for a license for a new or modified base station seeking permission to have an antenna higher than normally allowed (see § 95.751) must:

(1) Request on FCC Form 574 an antenna height greater than normally allowed; and

(2) Notify the Federal Aviation Administration on FAA Form 7460-1 that the antenna would be higher than normally allowed.

§ 95.755 Servicing station transmitters.

(a) The station licensee shall be responsible for the proper operation of the station at all times and is expected to provide for observations, servicing and maintenance as often as may be necessary to ensure proper operation. All adjustments or tests during or coincident with the installation, servicing, or maintenance of the station should be performed by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter installation, operation, maintenance, and repair duties in the private land mobile services and fixed services by an organization or committee representative of users in those services.

(b) Except as provided in paragraph (c) of this section, test signals during internal adjustments to a station transmitter must be made using a non-radiating simulated antenna.

(c) Brief test signals using a radiating antenna may be transmitted to adjust the antenna to the station transmitter or to detect or measure spurious radiation. These test transmissions must not be longer than one minute during any five-minute period. These test transmissions shall not interfere with communications already in progress on the operating frequency, and shall be properly identified as required, but may be otherwise unmodulated as appropriate.

OPERATOR REQUIREMENTS

§ 95.761 General licensee duties.

(a) The licensee is responsible for the proper operation of the station at all times.

(b) The licensee must have access to the station equipment and be able to disable it.

§ 95.763 Permissible communications.

(a) Channels 1, 2, 6, and 7 are limited to emergency assistance voice communications involving safety of life and property.

(b) Channel 3 is limited to one-way non-commercial informational voice messages pertaining, but not limited to, such information as weather conditions, hazards, closings, rest stops, and location of first-aid stations or other assistance.

(c) Channels 4, 5, 8, and 9 are limited to short distance personal voice communications.

(d) Channel 10 is limited to non-voice emergency alerting/homing transmissions.

(e) Priority must be given to emergency communications. Communications not pertinent to constructive handling of the emergency situation is prohibited.

(f) PELTS stations are not authorized to communicate:

- (1) Messages in connection with any activity that is against Federal, state or local law;
- (2) False or deceptive messages;
- (3) Intentional interference;
- (4) Music, whistling, sound effects, or other transmissions to amuse, entertain, or attract attention;
- (5) Obscene, profane, or indecent language;
- (6) Advertisements or offers for the sale of goods or services.

§ 95.765 Station identification.

(a) Every PELTS base station must transmit a station identification:

- (1) Following the transmission of communications or a series of communications; and
- (2) Every 15 minutes during a long transmission.

(b) The station identification is the call sign assigned to the base station;

(c) A unit number may be included after the call sign in the identification.

(d) The station identification must be clearly transmitted by voice in the English language, with each letter and digit separately and distinctly transmitted (letters may be said using a phonetic alphabet, *See*, International Telecommunications Union Radio Regulations, Appendix 24).

§ 95.767 Station records.

(a) The licensee must keep records for the base station during the license term (see § 95.729), except that the licensee need not keep authorizations which have expired.

(b) Records include the following documents (where applicable):

- (1) A copy of the current license document;
- (2) Copies of letters from the licensee to the FCC concerning name or mailing address changes (see § 95.727);
- (3) Copies of answers to discrepancy notices;
- (4) A grant of Special Temporary Authority (STA) or waiver of these rules;

(5) A copy of any renewal application submitted to the FCC and not yet acted upon (see § 95.733);

(6) A copy of the FCC consent to a licensee corporation's change in its corporate control (see § 95.731).

§ 95.769 Station inspection.

If an authorized FCC representative wishes to inspect any station or station records, the licensee or station operator must make the station available for inspection.

TRANSMITTER CONTROL

§ 95.771 Station control point.

(a) Each base station must have a control point where the station operator can communicate messages and control the station by:

(1) Causing it to transmit and to cease transmitting;

(2) Taking all necessary and reasonable precautions to assure that unauthorized or improper operations do not occur;

(3) Refraining from making any transmissions that may have the reasonably anticipated effect of causing improper operation of others' equipment; and

(4) In cases of recurrent interference, obeying any Commission-imposed additional requirements or restrictions designed to mitigate such interference.

(b) The control point for each station must be at that station, unless the license authorizes the station to be controlled from a remote point.

§ 95.773 Controlling a station from a remote point.

(a) A station operator may control a base station from a remote point through a control link (a connection between the remote control point and the remotely controlled station). The control link must be either:

(1) A wireline control link solely for purposes of transmitter control for messages which are both conveyed by a wireline control link and transmitted by a base station; or

(2) A radio control link.

(b) The remotely controlled station must not make unauthorized transmissions.

(c) The station operator must perform the required duties (see 95.761) when controlling the station from a remote point in the same manner as when controlling it locally at the station point. Should the control link fail to function so that the station operator cannot perform the required duties, the remotely controlled station must not transmit.

(d) The FCC does not consider a station as being remotely controlled if the connection is a wireline or mechanical control link, and the station and its control point are both:

(1) On the same vehicle; or

(2) At the same street address, or within 152 meters (500 feet) of each other.

(e) Any device used to establish a wireline control link which is attached to the public switched telephone network must be registered with the FCC and must comply with the standards incorporated in a registration program to protect the public switched telephone network from harm (see Part 68 of the FCC Rules).

§ 95.775 Interconnection.

No station in the PELTS may be interconnected to the public switched telephone network. Wireline or radio circuits or links furnished by common carriers, which are used by licensees or other authorized persons for transmitter control (including dial-up transmitter control circuits) or as an integral part of an authorized private internal system of communication are not considered to be interconnected for purposes of this section.

FOOTNOTES

¹ For example, the National Sporting Goods Association reports that participation by individuals over age 7 in skiing, backpacking, mountain climbing, and hunting increased from 48.3 million to 55.6 million for the period of 1984 to 1988. *Sports Participation 1988*.

² For the National Park Service, for example, the number of search and rescue incidents increased twofold, from 1500 to 2900, between 1978 and 1988. According to The Interagency Committee on Search and Rescue (ICSAR), "[t]his only gives a glimpse into the extent of the concern since no one has an accurate picture of the problem." *Final Report of ICSAR Ad Hoc Study Group on Personal Locating Beacons*, (ICSAR Final Report), January 17, 1989, p 3.

³ *New York Times*, May 16, 1986, 1.

⁴ *The Washington Post*, February 21, 1987, A7.

⁵ The exception is Class "C" EPIRBs which operate on the maritime VHF frequencies 156.750 and 156.800 MHz.

⁶ See *Report and Order*, PR Docket No. 86-424, 3 FCC Rcd 5406 (1988).

⁷ SARSAT stands for search and rescue satellite-aided tracking. COSPAS is an acronym for a Russian phrase meaning space system for search and distressed vessels.

⁸ The cost of tracking and silencing false alarms for ELTs alone was estimated to exceed \$2 million a year. *Smithsonian*, March 1987, 142. On September 27, 1988, *The Christian Science Monitor*, reporting the launch of the National Oceanic and Atmospheric Administration's (NOAA) new NOAA-11 satellite for use in an international satellite search and rescue program for ships and aircraft, noted that between \$900 and \$3,000 per hour is spent for fuel during a rescue operation. *The Christian Science Monitor*, September 27, 1988, 4.

⁹ Public Notice, "Commission Warns Against the Intentional Misuse of Emergency Locator Transmitters," December 29, 1988.

¹⁰ ICSAR is chaired by the U.S. Coast Guard and composed of other federal government agencies with an interest in search and rescue matters. ICSAR is the federal administrator of the National Search and Rescue Plan.

¹¹ See ICSAR Final Report, *supra*, 1.

¹² See, for example, *Report and Order*, Docket No. 19693, 39 Fed. Reg. 10143 (1974). (Special Requirements for Class A EPIRB)

¹³ For example, the Mount Hood Locator Unit is a homing system utilizing a small radio transmitter. The RECCO Detector, an avalanche victim locating device, is a detection system that passively and constantly monitors users. It consists of a transponder with a foil aerial and diode which receives a 917 MHz signal from the detector.

¹⁴ Satellite and rural cellular telephone communications offer some future possibilities in this area. For example, Geostar Corporation, which has been allocated spectrum and licensed in the radiodetermination satellite service, has received a patent on a vehicle location system using satellite technology that when implemented, will be able to pinpoint a customer's location within two to seven meters. This system is being geared for the consumer market. These two systems may not, however, be available for the purpose of emergency communications with hand-held portable units in remote areas for some time, especially in the case of rural cellular telephone systems. We invite comments on the potential of commercial satellite systems or rural cellular systems to meet the needs identified here quickly and at a reasonable cost.

¹⁵ See ICSAR Final Report, *supra*, 2.

¹⁶ See ICSAR Final Report, *supra*, 6.

¹⁷ There are currently three Personal Radio Services, the Citizens Band (CB) Radio Service, the General Mobile Radio Service (GMRS) and the Remote Control (R/C) Radio Service.

¹⁸ A letter of recognition from a governmental entity would accompany an application, and inform the Commission that the governmental entity recognizes the private organization as providing *bona fide* search and rescue services.

¹⁹ Mobile units would be authorized to operate on all mobile channels allotted to PELTS.

²⁰ See *Report and Order*, PR Docket No. 82-799, 48 Fed. Reg. 24884 (1983).

²¹ Recognizing that the high costs for licensing individual stations in the R/C and CB Radio Services may not justify the limited public interest benefits of such licensing, Congress amended the Communications Act of 1934 to permit us to grant authority to operate R/C and CB radio stations without individual licenses. See Public Law (P.L.) 97-259, Section 113(a), enacted September 13, 1982. See also 47 U.S.C. § 307(e).

²² See para 30, *infra*. We also ask for comments on whether we should limit users to reduce interference (i.e., license one provider per area). See paragraph 30.

²³ This is consistent with the current policy under the Communications Act of 1934, as amended, of exempting safety related radio services. See 47 C.F.R. § 1.1112(b).

²⁴ See ICSAR Final Report, *supra*, 3.

²⁵ Mr. Seymour's proposed use of the 72-76 MHz band was opposed by the AMA.

²⁶ See *Notice of Proposed Rule Making*, PR Docket 89-552.

²⁷ The lower half of these five frequency pairs (220-221 MHz), the base transmit side, is immediately adjacent to the upper half (221-222 MHz), which is reserved for mobile transmitting (base station receiving) in the private land mobile radio services. Consequently, there is the potential for interference from PELTS base station operations to private land mobile stations operating (receiving) on frequencies near 221 MHz and located in close proximity to a PELTS base station. Because PELTS base stations will be located primarily in remote areas, this should not be a problem. Nevertheless, we request comments on this matter.

²⁸ We emphasize again that PELTS is intended only to provide the communications capability needed. It is up to the governmental and private entities to provide the other half of the equation, watch and response systems, necessary to make this work. As the watch and response systems are provided a network of base stations will gradually build thereby increasing the efficiency and effectiveness of the PELTS.

²⁹ See *Report and Order*, Gen. Docket No. 87-14, 3 FCC Rcd 5287 (1988).

³⁰ See note 26, *supra*.

³¹ See 47 C.F.R. § 1.955.

³² *Report and Order*, Gen Docket No. 87-112, 3 FCC Rcd 905 (1987).

³³ See 47 C.F.R. § 87.261(c).

³⁴ See note 26, *supra*.

³⁵ For example, should a temperature range for mobile devices be specified, should an automatic identification be included in the transmission of the mobile device, should channel 10 have a separate switch to allow communication on other working channels while mobile device transmits a locating signal, and should we require a copy of the PELTS rules to be packaged with the equipment? We request commenters to provide specific values where appropriate.



MICHAEL C. TRAHOS, D.O.
GENERAL MEDICINE/FAMILY MEDICINE

RECEIVED

JAN 22 1990

Federal Communications Commission
Office of the Secretary

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Amendment of Parts 0, 1, 2 and 95) PR Docket No. 89-599
of the Commission's Rules regarding) RM-6681
the Establishment of a Personal)
Emergency Locator Transmitter Service)

COMMENTS FILED IN RESPONSE TO A NOTICE OF PROPOSED RULE MAKING

Submitted by:

Dr. Michael C. Trahos, D.O., NCE, CET
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Alexandria, Virginia 22302

January 22, 1990

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MICHAEL C. TRAHOS, D.O.
GENERAL MEDICINE/FAMILY MEDICINE

PRIVATE RADIO
BUREAU

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Comments Filed in Response to a Notice of Proposed Rule Making

Submitted by: Dr. Michael Christ Trahos
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Date: January 22, 1990

I. INTRODUCTION

1. Before the Federal Communications Commission (Commission) is a Notice of Proposed Rule Making (NPRM) concerning the Amendment of 47 CFR Parts 0, 1, 2, and 95 to establish a new Personal Emergency Locator Transmitter Service (PELTS). Designed for the short-distance personal and emergency communications needs of the general public 1/, this new PELTS is proposed to use a portion of the recently re-allocated 220-222 MHz band, spectrum previously underutilized by the Amateur Radio Service 2/ and which the Commission intends to put to more efficient and publicly-beneficial use in the Part 95 Personal Radio Services.3/

2. This commenter is a General/Family Medicine Physician and Surgeon and a certified First Class Telecommunications Engineer with 16 years experience in the telecommunications field. Commenter is currently licensed in the General Mobile Radio Service (GMRS), the Amateur Radio Service (ARS), the Business Radio Service (BRS), and the Special Emergency Radio Service (SERS). It is with having dealt extensively in the above radio services for personal, business, medical and emergency/public assistance that this commenter strongly supports this NPRM. However, it contains flaws which, if not addressed, will inhibit success of this proposal.

II.

COMMENTS

A. LICENSING REQUIREMENT

3. In creating this new radio service, the Commission, pursuant to the Communications Act of 1934 (as amended), is required to:

"(1) promote the safety of life and property;

(2) improve the efficiency of spectrum use and reduce the regulatory burden upon spectrum users, based upon sound engineering principles, user operational requirements, and marketplace demands;

(3) encourage competition and provide services to the largest feasible number of users;"^{4/} (Emphasis added)

4. The NPRM's proposed blanket licensing option 5/ is a beginning. However, it falls far short of providing service to the largest number of potential users.

5. Blanket licensing severely limits the efficient use of this spectrum by not providing for maximum flexible "user operational requirements."6/ Maximum flexibility would occur if "individuals could independently own and operate PELTS portable units."7/ But because the Commission is apparently unwilling to ask Congress to amend the Communications Act to allow for unlicensed operation in the PELTS,8/ the Commission has taken the incorrect position that "there is no need separately to license individual portable stations."9/

6. It would be difficult for Congress to amend the Communications Act of 1934 for a radio service that, as of yet, does not exist. But for the Commission not to state future intent to request such an amendment by Congress is not in the public interest.

7. The Commission must push for this amendment. The Report and Order in this proceeding must state that the Commission will request of Congress that it enact such an amendment. After Congressional amendment adoption, the Commission would automatically authorize the independent ownership and operation of

PELTS portables with no further action on the part of the Commission required (i.e. no further public proceedings necessary).

8. In the interim from the Report and Order adoption to Communications Act amendment enactment, the Commission could proceed with the blanket licensing proposal. But it must also simultaneously allow for the separate licensing of individual portable stations.

9. The precedent for this dual, individual/blanket licensing scheme already exists in the Part 90 Land Mobile Radio Services.^{10/} Pursuant to 47 CFR 90.179(c):

"Participants in the sharing arrangement may obtain a license for their own mobile units (including control points and/or control stations for control of the shared facility), or they may use mobile stations, and control stations or control points authorized to the license."
(Emphasis Added)

10. The rental service fees for PELTS portables will likely be high due to initial expensive system costs.^{11/} Under a blanket licensing option only, many individual end-users will not be willing to pay the expensive base station "rental fee" charges ^{12/} for the privilege of operating PELTS portables on the short-distance simplex frequencies authorized for personal non-emergency use.^{13/}

11. Base station licensees will also be reluctant to arbitrarily issue PELTS portables to the general public for short-distance simplex personal use, particularly when such use is outside the normal base station area of operation. This reluctance will be due to the licensee's responsibility to ensure "proper operation of the (PELTS portable) stations at all times" and the requirement the licensee to have unlimited "access to the (PELTS portable) equipment and be able to disable it."14/

12. A dual licensing scheme will create interim maximum spectrum utilization. It will promote the intended use of the PELTS, satisfying some of the personal and emergency communications needs of the general public without incurring enormous "rental fee" charges. Base station licensees, no longer required to be responsible for the equipment, would be more willing to rent PELTS portables to individual licensed users who repetitively lease from the licensee equipment intended for their personal use. Base station licensees would recoup their system costs by imposing "rental fees", for those without individual licenses, or by charging the individual licensed owners when actual base station emergency services are used.

B. ELIGIBILITY

13. "[T]o ensure that base station use is limited to distress and assistance communications"^{15/} (Emphasis added), the Commission proposes to "restrict eligibility to governmental entities and private organizations who provide a search and rescue service and are recognized as providing such eligibility by a governmental entity."^{16/} Restricting eligibility to only search and rescue service organizations is not in the public interest.

14. There exists many organizations nationwide that provide distress/assistance communications to the public but have limited or no search and rescue service capabilities. Two such national/international organizations, the American Radio Relay League, Inc. (ARRL) and Radio Emergency Associated Communications Teams, Inc. (REACT) provide distress/assistance communication services to the public and governmental/private search and rescue organizations through local affiliated/chartered member associations/teams.

15. In many regions, particularly isolated areas, the ARRL and/or REACT are the only "first line" distress/assistance communications entities that exist. The vast majority of these entities are well organized, with elaborate operational communications systems, and can rapidly mobilize to provide the

communications services necessary in the support of search and rescue operations.

16. Base station eligibility in PELTS must include all established entities that provide distress/assistance communications to the public, with or without search and rescue capabilities. To not give all such entities base station licensing eligibility would be a great waste of skilled man-power resources, particularly in isolated areas where no governmental/private search and rescue organizations exist or will never exist. In areas where search and rescue organizations elect not to participate in PELTS, these established private non-search and rescue distress/assistance communications entities would have established PELTS base stations to direct the search and rescue personnel.

17. Expanding PELTS base station eligibility to all established distress/assistance communications entities will maximize the coverage reception area for PELTS portables nationwide. Such expanded nationwide coverage will promote the intended use of PELTS and serve the public interest, convenience and necessity.

C. CHANNELING PLAN

18. The Commission expressed concern about the current channeling plan 17/ regarding "potential interference from PELTS base station operations to private land mobile stations operating (receiving) on frequencies near 221 MHz" 18/ However, potential interference would also exist to PELTS base stations (receiving) from Amateur Radio stations operating on frequencies near 222 MHz. 19/ Both of these interference potentials could be minimized if the proposed channeling plan were rearranged.

19. In the Part 95, Subpart D, Citizens Band (CB) Radio Service, the emergency communications frequency 27.065 MHz has been given the designation of "Channel 9". 20/ With much of the general public aware of CB radio and the use of CB "Channel 9" for emergencies, 21/ it would seem logical to maintain consistency in the Part 95 Personal Radio Services and designate the PELTS Emergency Notification/Homing frequency also as "Channel 9".

20. Interchanging the proposed channel 9 Short-distance (mobile) simplex frequency with the proposed channel 10 Emergency Notification/Homing frequency would achieve the objective of paragraph 14 supra. The latter interference concern of paragraph 13 supra would be significantly reduced by removing the important Emergency Notification/Homing frequency away from the upper edge of

band. The Short-distance (mobile) simplex frequency proposed as channel 9, reassigned to channel 10, would be more tolerant of interference and less likely to experience it.

21. As was the potential interference for the proposed channels 9/10, so is the potential interference problem for proposed channels 1/6 existing on the lower edge of their respective sub-bands. This too can be resolved by interchanging the channels 1/6 with channels 3/8. The Information (Base) channel 3 would be reassigned to channel 4. The Short-distance (Mobile) channel 4 would be reassigned to channel 1.

22. A new channel plan table depicting the above changes is as follows:

TABLE A

Frequency (MHz)	Channel Designator	Use
220.9775	1	Short-distance (Mobile)
220.9825	2	Assistance/Emergency (Base)
220.9875	3	Assistance/Emergency (Base)
220.9925	4	Information (Base)
220.9975	5	Short-distance (Mobile)

TABLE A (CONT.)

221.9775	6	Short-distance (Mobile)
221.9825	7	Assistance/Emergency (Mobile)
221.9875	8	Assistance/Emergency (Mobile)
221.9925	9	Emergency Notification/ Homing
221.9975	10	Short-distance (Mobile)

23. In this manner, the simplex Short-distance (mobile) frequencies would exist at the upper/lower edges of each sub-band, paired 1 MHz apart, protecting and reducing potential interference of the important PELTS Emergency Notification/Homing and Assistance/Emergency (Base/Mobile) stations with the Private Land Mobile and Amateur Radio Stations.

D. Technical Considerations

24. Besides Emission Mask, Frequency Tolerance, and Transmitter Power, the Commission needs to strongly consider the requirement for each PELTS portable to incorporate a user undefeatable "Automatic Transmitter Identifications System" (ATIS).

25. ATIS is a "unique, unchangeable identifying number assigned to each transmitter at time of manufacture plus some correlation of the number to a data base identifying the licensee (user), such as a call letter list."²²/ As a physician, ATIS in PELTS has a more important role besides Field Operations Bureau enforcement, that of recalling from a data base any significant medical history of a potential victim.

26. For example, an insulin-dependent diabetic, on an excursion through an isolated wilderness area activates his PELTS portable on the Emergency Notification/Homing frequency due to a developing syncopal episode from unanticipated acute hypoglycemia (insulin shock).

27. A PELTS base station, receiving the emergency homing signal, recalls the ATIS data base which indicates that this victim has a medical history of Insulin-Dependent Diabetes Mellitus. The rescue team, made knowledgeable of the victim's diabetic condition, take with them a special supply of intravenous 50% dextrose water. Upon reaching the now comatose individual the rescue team administers the life-saving 50% dextrose water intravenously and revive the victim.

28. If it were not for ATIS, the PELTS base station could not have accessed the data base containing the victim's medical history. The search and rescue team, in turn, may not have had the proper medical supplies to handle the emergency upon reaching the victim. Therefore without ATIS, it is very likely that this victim would have perished.

29. ATIS is a very important technical feature which must be required in PELTS portables. Its incorporation will be in the public interest with minimal cost incurred.

III.

CONCLUSION

30. Unlicensed portable operations is eventually what is most needed for PELTS. The Commission's blanket licensing option alone falls short of complying with its Congressional responsibility to provide services to the largest number of users. The dual, individual/blanket, licensing proposal outlined above allows for the maximum flexibility of spectrum use until a Congressional amendment to the Communications Act of 1934 can be enacted.

31. It is strongly recommended that the Commission adopt a PELTS dual licensing scheme. Additionally, the Commission needs to state that it will request of Congress that it amend the Communications Act of 1934 to allow for the unlicensed operation of

portable PELTS stations. The Report and Order to this proceeding must reflect this intent with further editorial stating that when the Communications Act of 1934 is eventually amended, automatic unlicensed portable PELTS authorization will be allowed without further Commission actions/proceedings necessary.

32. Adoption of the above recommendations, regarding dual individual/blanket licensing, expanded base station eligibility, revised channelization and ATIS, will increase the efficiency of PELTS spectrum utilization, reduce Commission administrative costs while fulfilling Congressional directives and be in the public interest.

Respectfully submitted


Dr. Michael C. Trahos, D.O., NCE, CET

MCT/mct

IV.

FOOTNOTES

- 1/ NOTICE OF PROPOSED RULE MAKING, PR Docket No. 89-599, FCC 89-342, Appendix, Paragraph 21.
- 2/ REPORT AND ORDER, General Docket No. 87-14, FCC 88-266, Paragraph 43. See also PETITION FOR RULE MAKING, RM-6990, Dr. Michael C. Trahos, May 9, 1989, in general.
- 3/ Ibid, Paragraph 56 and NOTICE OF PROPOSED RULE MAKING, PR Docket No. 89-599, FCC 89-342, Paragraph 17 and 19.
- 4/ COMMUNICATIONS ACT OF 1934 (as amended), Section 332 (a), [47 U.S.C. 332].
- 5/ NOTICE OF PROPOSED RULE MAKING, PR Docket No. 89-599, FCC 89-342, Paragraph 20.
- 6/ COMMUNICATIONS ACT OF 1934 (as amended), Section 332 (a)(2), [47 U.S.C. 332].
- 7/ NOTICE OF PROPOSED RULE MAKING, PR Docket No. 89-599, FCC 89-342, Paragraph 20.
- 8/ Ibid.
- 9/ Ibid, at Paragraph 19
- 10/ CODE OF FEDERAL REGULATIONS, Title 47, Part 90, Section 90.179.
- 11/ NOTICE OF PROPOSED RULE MAKING, PR Docket No. 89-599, FCC 89-342, Paragraph 15.
- 12/ Ibid, at Paragraph 20
- 13/ Ibid, at Paragraph 28 and Table 1.
- 14/ Ibid, Appendix, Paragraph 21, Section 95.761 (a) & (b).
- 15/ Ibid, Text, Paragraph 18.
- 16/ Ibid.
- 17/ Ibid, Paragraph 28, Table 1

- 18/ Ibid, Footnote 27
- 19/ REPORT AND ORDER, General Docket No. 87-14, FCC 88-266, Paragraph 1.
- 20/ CODE OF FEDERAL REGULATIONS, Title 47, Part 95, Subpart D, Section 95.407(b).
- 21/ NOTICE OF PROPOSED RULE MAKING, PR Docket No. 89-599, FCC 89-342, Paragraph 10.
- 22/ NOTICE OF PROPOSED RULE MAKING, GN Docket No. 86-337, FCC 86-356, Paragraph 2.