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

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In the Matter of)	
)	
Review of the Commission's Part 95 Personal Radio Services Rules)	WT Docket No. 10-119
)	
1998 Biennial Regulatory Review – 47 C.F.R. Part 90 – Private Land Mobile Radio Services)	WT Docket No. <u>98-182</u> RM-9222
)	
Petition for Rulemaking of Garmin International, Inc.)	RM-10762
)	
Petition for Rulemaking of Omnitronics, L.L.C.)	RM-10844

**NOTICE OF PROPOSED RULE MAKING
AND MEMORANDUM OPINION AND ORDER ON RECONSIDERATION**

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I. INTRODUCTION

1. By the *Notice of Proposed Rule Making (NPRM)* below, we commence a proceeding to review the Commission’s Part 95 Personal Radio Services rules.¹ Part 95 Services include a variety of short-range, low-power, mostly non-commercial² applications that are generally not provided for in other wireless services. Part 95 uses include walkie-talkie radios for use by families and friends, remote-control hobby applications, devices to aid persons with hearing difficulties, medical telemetry devices, and devices to track persons and property for law enforcement purposes.

2. Our goal in this proceeding is to simplify, streamline, and update the Part 95 rules to reflect technological advances and changes in the way the American public uses the various Personal Radio Services. Implementation of the rule changes proposed below should result in clearer, more consistent rules, benefiting Personal Radio Service users, equipment manufacturers, and the Commission.

3. In the *NPRM*, we propose to streamline and consolidate Part 95 rules where practicable. The Commission generally intended that Part 95 Services would be used by the public for a wide range of applications, and therefore adopted technical rules designed to minimize harmful interference, while providing flexibility in where and how Part 95 devices could be used. Many of the Commission’s Part 95 rules are now decades old, however, and the Personal Radio Services have evolved since adoption of those rules. Based on our examination of Part 95 and review of two related rulemaking petitions, we tentatively conclude that both organizational and substantive changes to Part 95 are warranted. For example, we propose to simplify Part 95 by conforming and consolidating administrative requirements that are common to various Personal Radio Services in a new Subpart A–General Information. We also propose to update and consolidate the general technical rules in a new Subpart B–Technical Requirements.³

4. Further, we propose to revise individual service rules to reflect more accurately current technologies and the ways in which services are used today, and to provide users additional flexibility. Specifically, we propose to (1) license General Mobile Radio Service (GMRS) operations by rule; (2) relax GMRS eligibility requirements; (3) implement 12.5 kilohertz channelization for GMRS; and

¹ 47 C.F.R. Part 95.

² Most Part 95 services are intended for personal uses and, with the exception of the 218-219 MHz Service, not for commercial uses. The 218-219 MHz Service however may be operated as a common carrier or private service. See 47 C.F.R. § 95.807.

³ The proposed rules are contained in Appendix B below.

(4) allow the transmission of Global Positioning System (GPS) location information and user-generated text messages on certain GMRS channels.⁴ We also propose to prohibit the authorization of radios that combine Family Radio Service (FRS) with safety-related services.

5. In addition, we evaluate various requirements regarding the Citizens Band (CB) Radio Service in order to determine whether they all are still needed, and whether to permit the use of “hands-free” microphones in that service.⁵ We propose to transfer the 218-219 MHz Service rules from Part 95 to Part 27, and to refine certain rules to provide licensees additional flexibility to better serve the public. We also propose to clarify that the term “personal locator beacons” (PLBs) in the 406 MHz band refers only to a beacon that meets the requirements of Part 95, Subpart K. Finally, we solicit comment on the rules governing other Part 95 services.

6. In the *Memorandum Opinion and Order on Reconsideration* below, we deny the petition filed by the Personal Radio Steering Group (PRSG) for reconsideration of the *Memorandum Opinion and Order*, WT Docket No. 98-182,⁶ regarding certain Part 95 Multi-Use Radio Service (MURS) rules.⁷

II. BACKGROUND

7. The Personal Radio Services include a variety of short-range, low-power radio services for personal use that are generally not provided for in other wireless services. Over time, the range of applications supported by the Personal Radio Services has expanded beyond its original purposes: short-distance, simplex,⁸ mobile voice communications and radio control used by hobbyists for model aircraft. Today, Part 95 applications include devices to enable the location of persons who are lost or in danger, the retrieval of data from implanted medical devices, the provision of auditory assistance in public venues for persons who are hearing impaired, tracking of persons or property for law enforcement purposes, and increased highway safety through vehicle electronics that are integrated with Intelligent Transportation Systems. Part 95 Personal Radio Services include the following eleven services:

- General Mobile Radio Service (GMRS) - GMRS is a land mobile service available on a shared basis for short-distance, two-way communications to facilitate the activities of licensees and their immediate family members.⁹
- Family Radio Service (FRS) - FRS is a two-way, short-distance, voice and data communications service for facilitating family and group activities as well as emergency messages, traveler assistance and location information.¹⁰

⁴ See Garmin International, Inc. Petition for Rulemaking, RM-10762 (filed July 22, 2003) (Garmin Petition); *Public Notice*, Report No. 2619 (rel. Aug. 6, 2003).

⁵ See Omnitronics, L.L.C. Petition for Rulemaking, RM-10844 (filed Dec. 17, 2003) (Omnitronics Petition); *Public Notice*, Report No. 2644 (rel. Jan. 23, 2004).

⁶ 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 – Private Land Mobile Services, WT Docket No. 98-182, *Memorandum Opinion and Second Report and Order*, 17 FCC Rcd 9830, 9837-38 ¶¶ 15-17 (2002) (*MURS MO&O*).

⁷ MURS is a two-way, short-distance, voice, data or image communication service for the personal or business activities of the general public. See Personal Radio Steering Group (PRSG) Petition for Reconsideration (filed November 14, 2002) (PRSG Petition).

⁸ “Simplex” refers to a communications system where each person may either speak or listen, but not at the same time. With a simplex system, each party to the communication must wait until the person speaking has finished before replying. By contrast, most commercial wireless systems are “duplex,” which refers to a communications system where all parties to a communication may both speak to and hear the other parties simultaneously.

⁹ 47 C.F.R. § 95.1(a).

¹⁰ 47 C.F.R. §§ 95.193(a), 95.401(b).

- Radio Control (R/C) Radio Service - The R/C Radio Service is a one-way, short-distance non-voice communications service for the operation of devices at remote locations.¹¹
- Citizens Band (CB) Radio Service - The CB Radio Service is a two-way, short-distance voice communications service for personal or business activities of the general public, which may also be used for voice paging.¹²
- 218-219 MHz Service - The 218-219 MHz Service authorizes system licensees to provide communication service to subscribers in a specific service area.¹³
- Low Power Radio Service (LPRS) - LPRS is a short-distance communication service providing auditory assistance to persons with disabilities, persons who require language translation, and persons in educational settings; health care assistance for the ill; law enforcement tracking services in cooperation with law enforcement; and point-to-point network control for automated maritime telecommunications system (AMTS) coast stations.¹⁴
- Wireless Medical Telemetry Service (WMTS) - WMTS is a short-distance data communication service for the transmission of patient medical information to a central monitoring location in a hospital or other medical facility.¹⁵
- Medical Device Radiocommunications Service (MedRadio) - MedRadio is an ultra-low power radio service for the transmission of non-voice data for the purpose of facilitating diagnostic and/or therapeutic functions involving implanted and body-worn medical devices.¹⁶
- Multi-Use Radio Service (MURS) - MURS is a two-way, short-distance voice or data communications service for personal or business activities of the general public.¹⁷
- Personal Locator Beacons (PLBs) - PLBs are beacons that meet the requirements set forth in Subpart K of this Part for 406 MHz PLBs, and are intended to provide individuals in remote areas a means to alert others of an emergency situation and to aid search and rescue personnel to locate those in distress.¹⁸
- Dedicated Short Range Communications Service On-Board Units (DSRCS-OBUs) - DSRCS refers to the use of non-voice radio techniques to transfer data over short distances between roadside and mobile radio units, between mobile units, and between portable and mobile units, to perform operations related to the improvement of traffic flow, traffic safety, and other Intelligent Transportation Service applications in a variety of public and commercial environments. DSRCS

¹¹ 47 C.F.R. § 95.201.

¹² 47 C.F.R. § 95.401(a).

¹³ 47 C.F.R. § 95.803(a).

¹⁴ 47 C.F.R. §§ 95.401(c), 95.1009.

¹⁵ 47 C.F.R. §§ 95.401(e), 95.1105.

¹⁶ 47 C.F.R. §§ 95.401(d), 95.1201. The Commission recently released a Report and Order where, among other things, the former Medical Implant Communications Service (MICS) was renamed the Medical Device Radiocommunications Service (MedRadio). See Investigation of the Spectrum Requirements for Advanced Medical Technologies, ET Docket No. 06-135, Amendment of Parts 2 and 95 of the Commission's Rules to Establish the Medical Radio Service at 401-402 and 405-406 MHz, RM-11271, Report and Order, 24 FCC Rcd 3474 (2009) (MedRadio R&O).

¹⁷ 47 C.F.R. § 95.401(f).

¹⁸ 47 C.F.R. § 95.1400.

systems may also transmit status and instructional messages related to the units involved.¹⁹

8. Each Personal Radio Service has its own subpart under Part 95. These subparts have unique requirements, as well as general operating and administrative rules that are similar and often identical both in language and effect to other subparts. For example, of the eleven Personal Radio Services, most have the same or similar rule language governing authorized locations, station identification, station inspection, license requirements, and licensee responsibility and eligibility. Similarly, the transmitters for most of these services are mass marketed and used by millions of Americans and have traditionally been licensed by rule.²⁰

9. In recognition of the evolving nature of the Personal Radio Services, we initiate this proceeding to examine the Part 95 rules comprehensively. Such an examination will enable us to increase the regulatory symmetry among these services and streamline our Part 95 rules. Additionally, we propose to simplify the wording and format of the rules to increase clarity and reduce potential confusion. We also seek comment on whether additional changes to the Part 95 rules are needed to account for technological developments and changes in how these services are being used by the public.

III. NOTICE OF PROPOSED RULEMAKING

A. General Reorganization/Streamlining of the Part 95 Personal Radio Services

10. In view of the commonality among most of the service-specific Part 95 subparts, we propose to eliminate obsolete or redundant rules where appropriate and to consolidate, conform, and update general operating rules under a new subpart (Subpart A—General Information) to apply to all Personal Radio Services that we propose to keep under Part 95.²¹ Specifically, we propose to relocate and consolidate rules for the following subjects in a new Subpart A:

- Definitions
- License requirement and eligibility
- Authorized locations
- Licensee responsibility
- Station inspection
- Correspondence from the FCC
- Penalties for violating the rules

¹⁹ See 47 C.F.R. §§ 90.7, 95.401(g). Equipment in the DSRC Service includes on-board units (OBUs) and roadside units (RSUs). An OBU is a “transceiver that is normally mounted in or on a vehicle, or which may be a portable unit.” 47 C.F.R. § 90.7. OBUs are licensed by rule under Part 95 and communicate with other OBUs and RSUs. RSUs are licensed under Part 90 and are “transceivers mounted along a road or pedestrian passageway,” that collect and distribute information to OBUs. 47 C.F.R. Part 90 Subpart M.

²⁰ The 218-219 MHz Service, however, is not licensed by rule, but instead is subject to the requirements and conditions for the grant of authorizations set for in Part 1, Subpart F of our rules. See 47 C.F.R. § 95.811. Recognizing that the cost of licensing individual stations in certain shared Personal Radio Service bands may not justify the limited public interest benefits of such licensing, the Congress, in 1982, amended the Communications Act of 1934 to permit the Commission to grant authority to operate certain radio stations “by rule” without individual licenses. See Public Law (Pub. L.) 97-259, Section 113(a), enacted September 13, 1982. See also 47 U.S.C. § 307(e).

²¹ This proposal and the proposals to consolidate and conform other Part 95 rules do not apply to the 218-219 MHz Service, which we propose to integrate into our Part 27 rules for Miscellaneous Wireless Communications Services.

- Contacting the FCC

This consolidation should improve the utility of the rules and result in more consistent treatment of Part 95 services: Nevertheless, we realize that in some cases, it might be beneficial to maintain certain general requirements in individual service subparts so the public can find relevant operational requirements in one subpart. Therefore, we seek comment on how the Part 95 rules should be structured. Should general requirements like those listed above be consolidated and streamlined to promote consistency across all Part 95 Services? Should such requirements be repeated in each individual subpart to allow unique requirements for different Part 95 Services and “one-stop” rule reading; or is some other approach more desirable? For example, should we consolidate and streamline our Part 95 rules to the extent possible and provide “user friendly” service rule fact sheets on our website? Finally, which general regulatory requirements should be consolidated into Subpart A and which should be maintained in the individual service rule subparts?

11. We also note that the current rules governing the FRS, R/C, and the CB Radio Services are written in a “plain-language” question-and-answer format to facilitate the public’s understanding of the rules. We believe this format has been successful in eliminating confusion regarding the applicable regulatory requirements for these services, but this format is not used for any other services. We seek comment on whether the question-and-answer format should be maintained. If we change the format, should we provide a consumer education campaign that highlights which rules are still in force, but have only been relocated or re-formatted? Additionally, if we consolidate and streamline all Part 95 Services, should we create “plain-language” question-and-answer format rules for all Part 95 Services and make them available on our website?

1. Technical Requirements

12. We propose to consolidate the technical requirements for all Part 95 services in a new Subpart B–Technical Requirements. Presently, for some Personal Radio Services, the technical requirements are listed in both the individual service rules and in Subpart E–Technical Regulations.²² In other cases, technical requirements are listed in the individual service rules, but not in Subpart E.²³ We propose to consolidate and harmonize, to the maximum extent possible, all basic technical requirements in a new Subpart B. We do this with an understanding that most technical requirements for Part 95 Services are only reviewed by equipment manufacturers when designing devices and not by the users of the devices, because the user is not permitted to change certain technical parameters of the device. However, there are some technical requirements, such as antenna requirements, that permit users some flexibility in how they operate their systems.²⁴ We seek to streamline and simplify these technical rules where appropriate, including eliminating obsolete rules and revising technical rules to reflect current technologies and the way people use the services. For example, we propose to place the frequencies for each service in a table and designate each frequency by channel number. This approach reflects our understanding that Personal Radio Service users generally prefer to reference communication channels by channel number rather than by frequency. Nevertheless, we seek comment on whether all technical rules should be consolidated and/or streamlined into a new Subpart B. We note in particular, that the technical requirements for MedRadio devices and PLBs follow unique industry guidelines and protocols that are not easily integrated with other Part 95 Services, so the technical rules for these services might be more easily understood if they stayed in their individual subparts.

²² For example, the rules concerning power in the GMRS, CB and R/C Radio Services are listed in both the respective individual service subpart and Subpart E. See 47 C.F.R. §§ 95.135, 95.210, 95.410, 95.639.

²³ See, e.g., 47 C.F.R. §§ 95.135, 95.194, 95.1115.

²⁴ See, e.g., 47 C.F.R. §§ 95.51, 95.208, 95.639(a).

2. Frequency Tolerance

13. Part 95, like other parts of the Commission's rules, contains frequency tolerance rules²⁵ that are intended to prevent interference by ensuring that transmitters initially operate when new, and continue to operate during their service lives, on or very close to their assigned frequencies. Historically, there has been a trade-off between manufacturing cost and the amount of frequency accuracy that can reasonably be obtained. As a result of improvements in technology and manufacturing processes over the years, however, transmitters today are manufactured economically with much greater frequency accuracy than in the past. As a result, frequency tolerance and stability in industry specifications are now normally expressed in terms of "parts per million" ("ppm") instead of percent (which means "parts per hundred"), as was common when rules for the CB and several of the other older Part 95 services were first adopted. Consequently, Part 95 currently contains several rules addressing frequency tolerance, some in percent, and others in ppm.

14. We propose to amend our Part 95 rules to express frequency tolerance requirements in terms of parts per million, instead of percent, of the carrier or reference frequency. This approach will modernize our rules and ensure consistency in the units used to specify frequency tolerance. We seek comment on this proposal. We also welcome comment as to whether the current frequency tolerance requirements for the older services, such as CB, R/C and GMRS are still appropriate, given the capabilities of modern manufacturing processes. Finally, noting that the Commission's goal is to prevent interference caused by off-frequency operation, we invite comment on whether these requirements are the best method of meeting that objective. For example, instead of specifying frequency tolerance limits, should we adopt requirements similar to current section 95.1115(e), which requires manufacturers of wireless medical telemetry devices to ensure frequency stability such that an emission is maintained within the band of operation under all of the manufacturers' specified conditions?

3. Power Limits

15. The Part 95 technical rules also specify power limits and equipment certification requirements²⁶ for transmitters²⁷ used in the Personal Radio Services. We note, however, that the power limits for different Part 95 devices were adopted at different times and are expressed variously as limits on a device's transmitter output power, effective radiated power (ERP), equivalent isotropically radiated power (EIRP), field strength at a certain distance, maximum carrier power, and peak envelope power.²⁸ Compliance is measured using different techniques as well.²⁹ The Commission adopted these power limits to account for how various devices are used. For example, devices with integrated antennas are required to meet an ERP limit, while devices that use external antennas would have to meet a maximum transmitter output power limit.

²⁵ Frequency tolerance standards specify the maximum allowable amount that the transmit frequency of any individual transmitter may differ from the assigned reference frequency as a result of variations in the manufacturing process. Frequency stability standards specify the maximum allowable amount that the transmit frequency of any transmitter may change during operation as a result of changes in the ambient temperature and/or power supply voltage.

²⁶ See 47 C.F.R. Part 2 Subpart J, §§ 95.603, 95.605, 95.1109.

²⁷ A transmitter is an apparatus that converts electrical energy received from a source into radio frequency energy capable of being radiated. 47 C.F.R. § 95.601.

²⁸ See 47 C.F.R. § 2.1 for definitions of the various power designations.

²⁹ 47 C.F.R. Part 95 Subpart E; see Revision of Operating Rules for Class D Stations in the Citizens Radio Service, Docket No. 20120, *Third Report and Order*, 63 F.C.C. 2d 32 (1976); Personal Radio Services; Update and Simplification of Technical Rules, *Order*, 50 Fed. Reg. 5074 (1985); Amendment of the Part 95, Subpart E, Technical Regulations in the Personal Radio Service Rules, *Order*, 3 FCC Rcd 5032 (1988). We note, however, that Subpart E currently does not apply to PLBs or the 218-219 MHz Service.

16. We are mindful that one approach would not be appropriate for all Part 95 services due to the use of integrated and non-integrated antennas, and we recognize the need to measure field strength for medical implant devices to simulate their implantation into a body. Nevertheless, we think that a review and possible consolidation and simplification of our power limits are appropriate. Below we make a specific proposal for GMRS devices, but here we generally invite comment regarding power limits and measurement techniques for each Part 95 service. We seek comment on whether the current power limits for each Part 95 service continue to be appropriate, and if not, on how they should be changed. If commenting parties support higher powers for certain applications, they should explain the technical basis for the higher power and provide an analysis for the associated impact on interference potential.

4. Unwanted Emissions

17. The Commission's limits on unwanted emissions are intended to reduce the probability of adjacent channel interference and interference to services in non-adjacent spectrum. There are two types of unwanted emissions: out-of-band emissions (OOBE) and spurious emissions. OOBE are unwanted emissions generated by the modulation process that are located outside of and immediately adjacent to the authorized bandwidth.³⁰ Spurious emissions are unwanted emissions that are unrelated to the modulation process and can be located anywhere in the spectrum outside of the authorized bandwidth.³¹ These unwanted by-products are reduced through proper transmitter design and the use of filters in order to prevent interference outside of the intended transmission band. However, the suppression of unwanted emissions has to be balanced with the desire for affordable equipment.

18. Part 95 contains both attenuation requirements and field strength limit rules to reduce unwanted emissions. These unwanted emissions rules were adopted over time, and vary considerably. Based on our review of these rules, we believe that the organization of this section could be improved. Accordingly, we propose to revise the emission limit rule section to reduce duplication, conform the way the requirements are presented and to increase clarity. The proposed rule (section 95.41 in appendix B) would not substantively change any current requirement, but rather would specify the existing requirements more clearly. In particular, the proposed rule separates the attenuation requirements (paragraphs (a) and (b)) from the field strength limits (paragraphs (c) and (d)). In addition, we would remove certain outdated spurious emission requirements that applied only to CB equipment manufactured before 1976 and R/C equipment marketed or imported before 1993. We assume that the transmitting equipment that was manufactured and operated under these old standards has long been retired from service. Also, we propose to remove the table entry for DSRCS-OBUs from this section because these Intelligent Transportation Service devices follow unique industry standards that are incorporated by reference in Section 95.1003. Although we have not proposed any substantive change in the emission limit rule section, we nevertheless welcome comment on whether any particular emission limit or limits should be changed given the evolution of filtering technology.

5. Voice Scrambling

19. The FRS, GMRS, and CB Radio Service are shared channel services (*i.e.*, all channels are available to users and users must cooperate in sharing the channels to prevent conflicting communications). To allow users of these services to readily hear, understand, and communicate with each other, our rules generally prohibit "scrambling" of communications in these services. Specifically, the Part 95 emission rules prohibit non-voice emissions in the FRS, GMRS, and CB Radio Service, except to establish or continue voice communications or, for FRS, to transmit certain types of location data (*e.g.*, GPS).³² In addition, the rules prohibit digital modulation or emissions in the CB Radio Service

³⁰ In this regard, we note that international guidelines consider the out-of-band emission domain (*i.e.*, where OOBE are located) to extend outside the authorized bandwidth by 250% of the authorized bandwidth.

³¹ See 47 C.F.R. § 2.1.

³² See 47 C.F.R. §§ 95.181, 95.193, 95.412.

and the GMRS.³³ Further, GMRS and FRS rules require that messages be in plain language, without codes or hidden meanings.³⁴ Not only do these requirements facilitate channel sharing, but they also enable emergency communications if needed.

20. Recently, several GMRS and FRS radios have been certified with an optional voice “scrambling” feature that purports to add a level of privacy to communications within a particular group of users.³⁵ We believe that voice-obscuring techniques, which go beyond the ubiquitous, standardized tone squelch, are inappropriate for these services. Specifically, we believe that these voice-obscuring techniques could thwart the channel sharing protocols in these services and the ability to communicate during an emergency. To ensure there is no future confusion on this matter, we propose to clarify our rules to specifically prohibit voice obscuring or scrambling in the GMRS, FRS, and CB Radio Service, and to provide that any such equipment with those features will be prohibited from receiving a grant of equipment certification for operation under Part 95 of our rules. We seek comment on this proposal and whether other Part 95 Services should prohibit voice “scrambling.” We invite commenters to address whether there are alternatives that may allow voice altering features while still addressing the concerns identified above. We also seek comment on how to phase-out the marketing and sales of existing equipment. Should we impose a specific cut-off date or dates? Should the same date apply to the manufacture, import, and sales of devices? Should we allow existing inventory on shelves to be sold or should it be removed? What are the trade-offs of the various approaches?

6. Crystal Control

21. Section 95.651 provides that transmitters in the Personal Radio Services, with certain exceptions, must be crystal controlled.³⁶ The Commission adopted this requirement to ensure that personal radio transmitters utilize a stable and accurate transmit frequency-determining method. In the early years of CB Radio Service, some operators used radios with coil and capacitor based variable frequency oscillators (VFOs)—electronic circuits that generate an alternating current or voltage—as the frequency-determining method. VFOs of this type are susceptible to greater frequency inaccuracy and variation with time and temperature, relative to crystal oscillators.

22. Today’s personal radio transmitters utilize a digital frequency synthesizer to generate the transmitted signals.³⁷ These synthesizers have at their heart a crystal time base which ensures that frequencies of the transmitted signals are stable and accurate, and such synthesizer-based radios satisfy the crystal control requirement. Synthesizer technology is also less expensive to manufacture than the older VFO technology and has largely, if not entirely, supplanted it. In view of the evolution in technology, we seek comment on whether section 95.651 is necessary, or whether frequency tolerance and stability requirements discussed *supra* alone are sufficient. If section 95.651 is retained, we seek comment on whether the rule should be revised to clarify that crystal-based frequency synthesizers satisfy the rule.

B. General Mobile Radio Service

23. The GMRS (formerly Class A of the Citizens Radio Service) is a personal radio service available for the conduct of an individual’s personal and family communications. GMRS was created

³³ See 47 C.F.R. §§ 95.631(a), 95.631(c).

³⁴ See 47 C.F.R. §§ 95.181(e), 95.183(a)(4), 95.412(a).

³⁵ See “Two-Way Radios,” at http://www.consumersearch.com/www/electronics/two_way_radios/types-of-two-way-radios (site last visited May 24, 2010).

³⁶ See 47 C.F.R. § 95.651.

³⁷ See Amendment of Parts 2 and 95 of the Commission’s Rules to Require Type Acceptance of Transmitters Used by Class B and Class D Stations in the Citizens Radio Service, Docket 17196, *Report and Order*, 43 F.C.C. 2d 375 at ¶ 11 (1973).

more than 50 years ago for use by individuals and entities that were not eligible at the time for licenses in the Public Safety or the Industrial and Land Transportation Radio Services.³⁸ The GMRS rules define mobile, fixed, base and repeater station classes and include technical rules for each station class.³⁹ The GMRS rules also provide for “small base” and “small control” stations, which are restricted to five watts ERP and to an antenna height of no more than six meters (approximately 20 feet) above ground level.⁴⁰ Unlike most other Personal Radio Services, a license is required to transmit on GMRS channels.⁴¹ The most popular type of GMRS radios today is lightweight portable units, which offer good mobility and flexibility of use; however, these devices are not specifically addressed in the GMRS rules.

24. GMRS portable and mobile stations can communicate over several miles, depending upon the terrain. GMRS base stations can communicate with mobile and portable units over a somewhat longer distance, depending upon the height of the base station antenna. GMRS repeater stations greatly extend the range of GMRS mobile and portable units, making communications between mobile units across a large area (*e.g.*, 25 miles) possible. Repeater stations, however, occupy two channels (a base channel and a mobile channel, which are referred to as a channel pair) throughout their coverage area, and only one station may transmit through the repeater at a time (*i.e.*, the communications are simplex). Thus, extended range is achieved at the expense of spectrum re-use.⁴² Only individuals may obtain a license for a GMRS repeater station. However, because establishing and maintaining a repeater station is often considered complicated and costly, this activity is often undertaken by an organized group or club. There are GMRS clubs that operate GMRS repeaters (licensed to an individual member) for the use of all members.⁴³

1. Station Licensing

25. The regulatory structure of GMRS was patterned after the traditional view of a land mobile radio system during the 1940s: a base-to-mobile dispatch operation transmitting on an assigned shared channel in a specific geographic location. Later, as repeater stations were incorporated into Part 90 private land mobile systems, they were incorporated into the GMRS rules.⁴⁴ While both GMRS and Part 90 land mobile services require a license to operate, the Commission’s rules no longer require GMRS applicants to file technical information relating to system configuration and equipment.⁴⁵ Therefore, while Part 90 licensees generally avoid interference through coordination on a license-by-license basis, GMRS licensees rely on operating rules and a listen before transmitting etiquette. We also note that there are reports that most purchasers of portable FRS/GMRS combination radios (as well as purchasers of portable GMRS-only radios) use the licensed GMRS channels, while only a small percentage obtain the

³⁸ See Amendment of Subparts A and E of Part 95 to Improve the General Mobile Radio Service (GMRS), PR Docket 87-265, *Report and Order*, 3 FCC Rcd 6554, 6554 ¶ 3 (1988) (*GMRS R&O*).

³⁹ See 47 C.F.R. § 95.21.

⁴⁰ See 47 C.F.R. § 95.51(b).

⁴¹ See 47 C.F.R. § 95.3.

⁴² That is, shorter range communications enable a higher degree of frequency reuse. This is particularly important in shared bands where a number of entities may want to communicate in the same area at the same time. If higher powers are allowed and communication distances are increased in a shared environment, frequency reuse would decline.

⁴³ This is similar to the situation with repeater stations in the Amateur Radio Service.

⁴⁴ A repeater station is a base station that receives signals on one frequency and automatically retransmits that signal on another frequency. In GMRS, signals received on frequencies in the 467 MHz band are automatically retransmitted in the 462 MHz band.

⁴⁵ See *ULS Report and Order*, 13 FCC Rcd at 21113 ¶ 197.

required license.⁴⁶ Although the Commission has made several regulatory changes over the years to enhance the GMRS, the basic regulatory structure remains.⁴⁷ Consequently, given the evolution of how people communicate, the creation of other services and the passage of time, we believe it is appropriate to reevaluate the GMRS licensing rules. Section 307(e)(1) of the Communications Act of 1934, as amended (the Act), provides that upon a determination that it would serve the public interest, convenience, and necessity, “the Commission may, by rule, authorize the operation of radio stations without individual licenses” in the citizens band and certain other services.⁴⁸ Section 307(e)(3) provides these services “shall have the meaning given to them by the Commission.”⁴⁹ The Commission eliminated individual licensing in the CB and R/C Radio Services in 1983, finding that individual licensing is unnecessary when services allow licensees to use any channel at any location and spectrum management is implemented by the operating rules rather than the licensing function.⁵⁰ In 1988, however, the Commission sought to discourage a surge in business radio use of the GMRS by adopting rules limiting eligibility for new GMRS systems, combined with an individual licensing requirement to control proliferation of GMRS systems.⁵¹ Currently, GMRS and the 218-219 MHz service are the only Personal Radio Services with individual licensing requirements.⁵² The rest of the Part 95 services are licensed by rule pursuant to Section 307(e), based on determinations that the administrative burdens associated with individual licensing outweighed any potential benefits from such licensing and that no regulatory purpose would be served by requiring station licenses.⁵³

26. We believe that current GMRS operations more closely resemble other Part 95 Personal Radio Services that are licensed by rule rather than Part 90 private land mobile systems that require an individual station license. For example, once authorized, a GMRS licensee may operate on any GMRS frequency;⁵⁴ there is no requirement for frequency coordination; and none of the GMRS frequencies are assigned on an exclusive-use basis. In addition, all licensees must cooperate in the selection and sharing of the available channels to make the most effective use of the channels and to reduce the possibility of interference.⁵⁵ Furthermore, we believe that licensing GMRS by rule would reduce administrative and other burdens on GMRS users, as well as on the Commission. For example, users would no longer be

⁴⁶ See, e.g., Bob Parks, *Radio Hyperactive*, Outside Magazine (Apr. 2004) (noting that hundreds of FRS/GMRS combination radios have been sold for every GMRS license that has been issued).

⁴⁷ See *ULS Report and Order*, 13 FCC Rcd at 21108 ¶ 186.

⁴⁸ 47 U.S.C. § 307(e)(1).

⁴⁹ 47 U.S.C. § 307(e)(3).

⁵⁰ See Amendment of Parts 1 and 95 of the Commission’s Rules to Eliminate Individual Station Licenses in the Remote Control (R/C) Radio Service and the Citizens Band (CB) Radio Service, PR Docket No. 82-799, *Report and Order*, FCC 83-169, 48 Fed. Reg. 24884 (rel. June 3, 1983).

⁵¹ See *GMRS R&O*, 3 FCC Rcd at 6556 ¶ 16.

⁵² We also note that the 218-219 MHz Service, which we are proposing to relocate to Part 27, is the only Personal Radio Service where licenses are issued by competitive bidding for exclusive use over a defined geographic area. Further, while Part 80 AMTS licensees are permitted to operate LPRS systems, they are not individually licensed through Part 95. See 47 C.F.R. §§ 95.816, 95.1001.

⁵³ See, e.g., Amendment of Part 95 of the Commission’s Rules to Establish a Very Short Distance Two-Way Voice Radio Service, WT Docket No. 95-102, *Report and Order*, 11 FCC Rcd 12977, 12983-84 ¶ 17 (1996) (*FRS Report and Order*).

⁵⁴ There are twenty-three GMRS frequencies. Specifically, there are eight GMRS “primary” channel pairs (462/467.550, 462/467.575, 462/467.600, 462/467.625, 462/467.650, 462/467.675, 462/467.700, and 462/467.725 MHz), and seven interstitial or split GMRS frequencies (462.5625, 462.5875, 462.6125, 462.6375, 462.6625, 462.6875 and 462.7125 MHz) which are shared with the FRS channels.

⁵⁵ See 47 C.F.R. § 95.7.

within a licensed system.⁶² Given that there is no age restriction on using radios in the other Personal Radio Services, we see no reason why, if we maintain the GMRS licensing requirement, younger individuals should be prohibited from operating a GMRS device or obtaining their own GMRS license. Therefore, we see little benefit to maintaining a minimum age requirement for GMRS. We seek comment on this proposal.

30. Furthermore, while individual licensees are permitted to use GMRS to communicate business activities, the rules have not permitted businesses to obtain GMRS licenses since July 31, 1987.⁶³ If we license GMRS by rule, should we maintain the eligibility requirement that only individuals are permitted to operate GMRS or should we remove the prohibition on business use of GMRS devices? We note that businesses successfully use FRS radios,⁶⁴ but that FRS operates at significantly lower power than GMRS, so frequency reuse is still achieved and significant spectrum congestion does not appear to be a problem. If we remove the individual licensing requirement for GMRS, are any eligibility requirement changes needed to ensure that a shared spectrum approach remains viable?

3. GMRS Portable Devices

31. Currently, there are no power limits specifically addressing portable GMRS radios. Instead, such devices fall under the GMRS mobile station category and are subject only to the 50 watts ERP limit established for that category. This has allowed manufacture of handheld GMRS radios that operate between one and five watts ERP. Given the increasing popularity of portable GMRS radios and the ubiquitous marketing of such devices, we believe the public interest would be served by establishing specific power rules for portable GMRS devices. In addition, because GMRS portable devices are, for the most part, used by the general public, we believe the public interest would be served by no longer categorically excluding portable GMRS devices from routine evaluation of human RF exposure.

32. We propose to prohibit GMRS portable devices from operating at more than two watts ERP. This is the same power limit that applies to portable units used in licensed low power industrial / business pool Part 90 land mobile operations in the 450-470 MHz range (the same frequency range as GMRS).⁶⁵ A review of equipment authorization applications for portable GMRS units reveals that many units already operate at less than two watts ERP.⁶⁶ This power limit should be adequate to ensure the devices meet the RF exposure limit for the general public. We also note that it will promote economies of scale, because Canada's license-exempt radios operating in this band are limited to two watts ERP.⁶⁷ We seek comment on all aspects of this proposal.

33. All GMRS stations, including portable devices, are currently categorically excluded from routine evaluation of human RF exposure.⁶⁸ The Commission's decision to categorically exclude GMRS

(...continued from previous page)

eligible for licensing in business and other radio services. See Amendment of Part 95 of the Commission's Rules Regarding General Mobile Radio Service License Eligibility, Memorandum Opinion and Order, 18 FCC Rcd 20030 (WTB PSPWD 2003).

⁶² See 47 C.F.R. § 95.179(a).

⁶³ See 47 C.F.R. §§ 95.181(a), 95.5(a)-(c).

⁶⁴ See Amendment of Part 95 of the Commission's Rules to Establish a Very Short Distance Two-way Voice Radio Service, *Order*, RM-10564, DA 04-1035, released April 21, 2004.

⁶⁵ 47 C.F.R. § 90.267(b)(2)(i).

⁶⁶ Staff review performed on January 5, 2010 by searching the equipment authorization database at <http://www.fcc.gov/oet/ea> for GMRS handheld portable radios.

⁶⁷ See Industry Canada Radio Standards Specification RSS-210 at A6.2.4.

⁶⁸ 47 C.F.R. § 2.1093.

subject to application and regulatory fees,⁵⁶ and would not be at risk of losing their authorization to operate for failing to file a timely renewal application.

27. In view of the foregoing, we propose to eliminate the requirement for individual station licenses in the GMRS. Instead, we would, by rule, authorize operation of these stations without individual licenses. In addition, if GMRS is licensed by rule, GMRS operators would no longer receive call signs for their radios and we would, therefore, eliminate the station identification requirements in current section 95.119. As of the day the revised rules became effective, all existing GMRS licenses would be void. In addition, all pending applications for such licenses, and all applications for such licenses subsequently received, would result in no official Commission action. We seek comment on the proposal to license GMRS by rule, including whether all classes of GMRS stations should be licensed by rule or only hand-held portable units. Additionally, we seek comment on the pros and cons of licensing GMRS by rule versus maintaining the individual licensing requirement. Additionally, if we only license certain classes of GMRS by rule, should we maintain the station identification requirements for GMRS?⁵⁷

28. Alternatively, if we were to maintain the individual licensing requirement for all or some types of GMRS operations, we propose to extend the GMRS license term from five⁵⁸ to ten years, to conform with most other wireless services, where the license terms have been extended from five to ten years.⁵⁹ Extending GMRS license terms to ten years would decrease the administrative burden on both the general public and the Commission without, we believe, any adverse impact.⁶⁰ It also would promote standardization of general licensing rules and streamlining of administrative requirements. We seek comment on the proposal to extend the license term from five to ten years if the individual licensing requirement is maintained for GMRS.

2. Eligibility

29. Under the current GMRS rules, only individuals who are 18 or older are eligible to obtain a GMRS license.⁶¹ An individual's family members of all ages may operate GMRS stations and units

⁵⁶ If the Commission licenses GMRS by rule, we would delete GMRS from the Commission's Application and Regulatory Fee Schedules, sections 1.1102 and 1.1152, respectively. *See* 47 C.F.R. §§ 1.1102, 1.1152.

⁵⁷ 47 C.F.R. § 95.119.

⁵⁸ *See* 47 C.F.R. § 95.105.

⁵⁹ *See, e.g.*, 1998 Biennial Regulatory Review -- 47 C.F.R. Part 90 - Private Land Mobile Radio Services, WT Docket No. 98-182, RM-9222, Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket No. 92-235, and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Services, *Report and Order*, 15 FCC Rcd at 16673, 16677-78 ¶¶ 9-10 (2000).

⁶⁰ In 1983, the Commission declined to extend the GMRS license term because the GMRS community argued that, lacking frequency coordination procedures, users must be able to rely on reasonably current license records in order to determine which frequencies have been assigned to which licensees. *See* Amendment of Part 95 of the Commission's Rules to authorize ten year license terms in the General Mobile Radio Service (GMRS), PR Docket No. 83-330, *Report and Order*, FCC 83-455, 48 Fed. Reg. 49314 (rel. Oct. 6, 1983). In 1998, however, the Commission amended the rules to authorize GMRS licensees to use any channel, ending the practice of licensing specific channels to each licensee. *See ULS Report and Order*, 13 FCC Rcd at 21110-12 ¶¶ 191-95.

⁶¹ *See* 47 C.F.R. § 95.5. The Commission has specifically declined to make an exception for public service organizations or other non-profit organizations. The Commission was concerned that it could not adequately prevent licensing of organizations formed for the purpose of providing communications to commercial entities. *See* Amendment of Subparts A and E of Part 95 to Improve the General Mobile Radio Service (GMRS), *Report and Order*, 3 FCC Rcd. 6556 (1988). In 2003, the Public Safety and Private Wireless Division denied a Petition for Rulemaking requesting that the Commission reconsider its 1988 decision and amend its rules (*i.e.*, 47 C.F.R. §§ 95.1-95.183) for the GMRS to allow certain tax-exempt organizations to be eligible to apply for a GMRS license, in part because the requested revisions would result in the use of GMRS again for communications by entities

(continued...)

transmitters was based on certain assumptions concerning their operating configurations in mobile exposure conditions (e.g., vehicular mobile installation where the antenna is away from the body, see § 2.1091) combined with a low transmit duty cycle (ratio of transmit time to receive time), particularly for “push-to-talk” type operations.⁶⁹ As noted above, our current rules have allowed the manufacture of hand-held GMRS transceivers that typically operate at power levels between one and five watts ERP. Because these portable GMRS devices are intended for use by the general public, the Commission has been requiring specific absorption rate (SAR) evaluation, on a case-by-case basis, for the higher powered portable GMRS devices, particularly those with very thin body worn accessories.⁷⁰ In order to apply RF exposure standards that are appropriate for GMRS hand-held portable transmitters that are used by the public, we propose to require routine SAR evaluation for portable GMRS devices⁷¹ to meet the General Population/Uncontrolled exposure limits of section 2.1093(d)(2)⁷² of the Commission’s rules within 60 days of the effective date of the Order that adopts such changes.⁷³ We seek comment on this proposal. We also seek comment on whether GMRS devices operating in mobile exposure conditions should continue to be categorically excluded from routine evaluation of human RF exposure for all power levels. In the same context, we seek comment from manufacturers regarding considerations to reduce SAR test requirements for portable GMRS devices that are designed to operate at lower power or using thicker body-worn accessories to reduce exposure potentials.

34. We also seek comment on power limits for other classes of GMRS operations. Most GMRS station classes currently may transmit with up to 50 watts output power.⁷⁴ This is a relatively high power for stations that are not coordinated, and with the use of gain antennas, the actual radiated power could be much higher. Given that GMRS licenses are not issued on a coordinated or exclusive use basis, should we continue to permit 50-watt operations? Should the existing station classes and power limits be maintained? In this regard, we request comment on whether we should reduce power limits or establish antenna height limits to increase frequency reuse for, and minimize interference to, GMRS communications. We recognize that the authorized level of station power and antenna height may impact spectrum efficiency. Furthermore, we note that the personal communications environment has evolved substantially since the Commission adopted the rules allowing repeater operation for GMRS. For example, most wide-area personal communication needs are now met by commercial communication providers.⁷⁵ We seek comment on whether repeater and base station operations are still needed in the GMRS given the availability of commercial alternatives that allow for more efficient use of the spectrum.

35. Furthermore, in order to account for the way a base station’s power is measured, we propose

⁶⁹ See Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, ET Docket 93-62, *Report and Order*, 11 FCC Rcd 15123, 15149 at ¶67 (1996).

⁷⁰ We note that the SAR test data for certain portable GMRS devices filed for equipment certification indicate that at conducted power levels of 1.5 – 2 watts, face and body-worn SAR can be close to the general public SAR limit for some models. In some cases, when feasible, the equipment authorization must be restricted for use in the occupational/controlled exposure environment.

⁷¹ For purposes of a portable GMRS device, we use the definition found in section 2.1093(b) of the Commission’s rules. See 47 C.F.R. § 2.1093(b).

⁷² 47 C.F.R. §§ 1.1307(b)(2), 2.1093(d)(2).

⁷³ See proposed § 95.49.

⁷⁴ A small control station north of Line A or east of Line C (i.e., near the U.S./Canada border area) must transmit with no more than five watts ERP on the 467 MHz channels. See 47 C.F.R. §§ 95.25(d), 95.29(b), 95.135(c).

⁷⁵ At the end of December 2007, there were 263 million mobile phone subscribers, representing nearly 86 percent of the U.S. population. See Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Thirteenth Report and Order*, FCC 09-54 at 6 (rel. January 16, 2009).

to change the power limit for GMRS small base stations to five watts transmitter output power, instead of five watts ERP. This approach would ease the accuracy of power measurement and would allow for the use of directional antennas to focus the signal's energy in the desired direction. We seek comment on the proposal to change the power limit for GMRS small base stations to five watts transmitter power and on whether we should also adopt antenna limitations for such stations.

4. Narrowbanding GMRS Channels

36. GMRS "primary" channels are currently spaced 25 kHz apart and are subject to the technical parameters generally associated with 25 kHz operation (e.g., an authorized bandwidth of 20 kHz). To facilitate more efficient use of the private land mobile radio (PLMR) spectrum below 800 MHz, the Commission adopted a schedule to migrate Part 90 PLMR systems from 25 kHz technology to narrowband (12.5 kHz) technology.⁷⁶ A similar narrowbanding of GMRS channels could foster more efficient spectrum use and reduce the interference potential between GMRS and FRS. Moreover, we note that GMRS radio equipment (base/mobile) is essentially the same as PLMR equipment operating in the 450-470 MHz band and FRS equipment, both of which already employ 12.5 kHz technology. Thus, it does not appear that narrowbanding GMRS would impose an undue burden on GMRS manufacturers, and could even reduce manufacturing costs.

37. Accordingly, we propose to implement 12.5 kHz narrowbanding in the GMRS. In implementing this proposal, we note that the manufacture and importation of Part 90 PLMR 25 kHz bandwidth equipment would be prohibited beginning January 1, 2011.⁷⁷ However, we question whether sufficient time remains to accomplish all of the necessary regulatory and technical prerequisites to implementing GMRS narrowbanding before the January 2011 date. Therefore, we seek comment on the time that would be needed for GMRS manufacturers to transition to narrowband equipment if we adopt narrowbanding rules for GMRS. We would prohibit the marketing of 25 kHz GMRS equipment after that date. We request comment on whether this proposal would be overly burdensome on GMRS licensees, in particular repeater operators. At this time, we do not propose to implement a date after which 25 kHz operation is no longer permitted in the GMRS. However, we do seek comment on possible requirements that would assist in the transition to narrowband technology.

5. Section 95.29(g)

38. Section 95.29(g) provides that GMRS fixed stations "authorized before March 18, 1968, located 160 kilometers (100 miles) or more from the geographic center of urbanized areas of 200,000 or more," as defined by the 1960 U.S. Census, may transmit on channels other than those specified in Section 95.29, provided the Commission assigned such channels and the licensee causes no interference with Part 90 private land mobile radio services.⁷⁸ The Commission's licensing records do not reflect whether there are any such legacy operations. We believe that given the passage of over 40 years, any such operations have been discontinued and we therefore propose to delete this rule. Nevertheless, we seek comment on whether the rule should be retained and, if so, why.

⁷⁶ See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, WT Docket No. 99-87, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 18 FCC Rcd 3034 (2003); Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, WT Docket No. 99-87, *Third Memorandum Opinion and Order and Third Notice of Proposed Rulemaking and Order*, 19 FCC Rcd 25045 (2004).

⁷⁷ See 47 C.F.R. § 90.203(j)(11). We note that a petition to stay the January 2011 date to 2013 is currently pending. See Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau Seek Comment on National Public Safety Telecommunications Council Petition for Stay of Interim Narrowband Implementation Dates, *Public Notice*, DA 09-2364 (WTB/PSPWD rel. Nov. 2, 2009).

⁷⁸ 47 C.F.R. § 95.29(g).

6. Garmin International, Inc. Petition for Rulemaking

39. In 2003, the Commission, at the request of Garmin International, Inc. (Garmin), a designer and manufacturer of electronic devices, amended Part 95 to permit the transmission of Global Positioning System (GPS)⁷⁹ location information and user-generated text messages on certain FRS channels.⁸⁰ On July 22, 2003, Garmin filed a petition for rulemaking requesting that the Commission amend Part 95 to permit such transmissions on the 462 MHz GMRS channels.⁸¹ Garmin requests that we amend sections 95.29(f)(1),⁸² 95.119(a)(1),⁸³ 95.181,⁸⁴ 95.183(a)(4),⁸⁵ 95.631(a), (e), and (f),⁸⁶ and 95.633(a)⁸⁷ to authorize the transmission of GPS location information and text messaging using emission type F2D⁸⁸ in a digital data burst of not more than one second. The digital transmissions (data or text) would have basically the same limitations as those applicable to the transmission of GPS data and text messaging in the FRS.⁸⁹

40. Garmin notes that the Commission has already acknowledged the benefits (*e.g.*, the ability to locate lost or injured persons) of allowing such transmissions on FRS spectrum, and argues that these benefits will be even greater in the GMRS because the higher power permitted in this service allows coverage over a larger area.⁹⁰ Garmin contends that the safety of life and property benefits associated with

⁷⁹ GPS is a satellite-based navigation and positioning system consisting of twenty-eight satellites. *See, e.g.*, Amendment of Part 95 of the Commission's Rules to authorize the use of 406.025 MHz for Personal Locator Beacons (PLB), WT Docket No. 9-366, *Report and Order*, 17 FCC Rcd 19871, 19880 n. 69 (2002); *see also* Garmin Petition at 3 n.4.

⁸⁰ *See* Garmin International, Inc., Amendment of Sections 95.193(a), 95.193(b) and 95.631(d) of the Commission's Rules in the Family Radio Service, WT Docket No. 01-339, *Report and Order*, 18 FCC Rcd 2349 (2003) (*FRS GPS R&O*).

⁸¹ Garmin Petition at 2; Garmin RM-10762 Reply Comments at 1.

⁸² 47 C.F.R. § 95.29(f)(1) (limiting use of 462 MHz channels to voice transmissions).

⁸³ 47 C.F.R. § 95.119(a)(1) (station identification shall follow the transmission of communication or a series of communications).

⁸⁴ 47 C.F.R. § 95.181 (permissible communications).

⁸⁵ 47 C.F.R. § 95.183(a)(4) (prohibiting coded messages).

⁸⁶ 47 C.F.R. § 95.631(a), (e), (f) (limiting GMRS emission types to voice communications, prohibiting digital modulation or emission and non-voice data communications on GMRS frequencies).

⁸⁷ 47 C.F.R. § 95.633(a) (authorized bandwidth for voice communications).

⁸⁸ Emissions are designated according to their classification and their necessary bandwidth. F2D is an emission in which the main carrier is frequency modulated, the signal modulating the main carrier is a single channel containing quantized or digital information with the use of a modulating subcarrier, and the type of information to be transmitted is data, telemetry, or telecommand. *See* 47 C.F.R. § 2.201 for a description of emission types.

⁸⁹ Garmin Petition at 1 (citing *FRS GPS R&O*). Specifically, Garmin recommends amending the GMRS rules to provide that transmission of GPS location data be limited to GMRS mobile units that have integrated (*i.e.*, non-detachable) antennas and be limited to an authorized bandwidth of no more than 12.5 kHz. Garmin also proposes that GMRS mobile unit may transmit digital data (1) containing location information, (2) requesting location information from one or more GMRS units, or (3) containing a brief text message to another specific GMRS unit. Garmin also recommends that digital data transmissions (1) must be initiated by a manual action or command by the user, except that a GMRS unit receiving an interrogation request may automatically respond with its location; (2) not exceed one second; and (3) generally be limited to no more than one digital transmission within a thirty-second period, except that a GMRS unit may automatically respond to more than one interrogation request received within a thirty-second period. *Id.* at 4; Garmin Reply Comments at 2-10.

⁹⁰ Garmin Petition at 2, 5 (citing *FRS GPS R&O*, 18 FCC Rcd at 2360 ¶¶ 26, 28).

allowing the transmission of GPS and text information can be obtained while still maintaining the integrity of GMRS and without causing interference.⁹¹

41. Several commenters oppose the Garmin petition in whole or in part.⁹² For example, the Personal Radio Steering Group (PRSG) acknowledges a role for the transmission of GPS information, but only on the GMRS spectrum that is shared with FRS.⁹³ It contends that the transmission of GPS data and text messages on the frequencies proposed by Garmin will interfere with GMRS operations, especially if operation is not subject to pre-transmission monitoring.⁹⁴ The Northern California GMRS Users Group (NCGUG) states that while allowing location transmissions on GMRS channels would benefit the public, Garmin's approach "could open up potential loopholes" that could result in abuse and interference.⁹⁵ Popular Wireless Magazines argues that allowing such operations will lead to more interference in the GMRS and generally agrees with NCGUG's comments.⁹⁶ Garmin responds that the interference concerns raised by commenters largely relate to interference potential that is already present under the existing GMRS rules.⁹⁷

42. As explained above, GMRS is similar to FRS. Both are voice services used by families and other small groups for personal communications, and they share certain spectrum. Further, FRS/GMRS combination radios are currently being used by the general public, including models that incorporate GPS capability.⁹⁸ The public interest is served by the ability to automatically locate individuals in distress, especially when they are injured or in an unfamiliar environment.⁹⁹ The Commission recognized these benefits when it adopted rules allowing the transmission of location information and text messages on FRS channels.¹⁰⁰ We see similar benefits in allowing such transmissions on GMRS spectrum and propose to amend the GMRS rules to permit the transmission of GPS location information and user-generated text messages under the same limitations that apply to FRS.¹⁰¹ We seek comment on this proposal and on the public interest and personal safety benefits of allowing such transmissions in the GMRS. Interested

⁹¹ *Id.* at 5-6.

⁹² Comments in the RM-10762 proceeding were filed by Tony Drake, Personal Radio Steering Group (PRSG), Popular Wireless Magazines (PWM), Northern California GMRS Users Group (NCGUG), F.E. Brody, Ralph J. Pellegrini, David Wehrwein, and Thomas H. Adler. Garmin filed reply comments.

⁹³ PRSG RM-10762 Comments at 3.

⁹⁴ *Id.*

⁹⁵ NCGUG RM-10762 Comments at 2-5. For example, NCGUG is concerned that large transit fleets or other industries that require location capability could take advantage of the GMRS GPS capability if safeguards are not put in place. Furthermore, NCGUG states that assurances need to be made that the limited number of GMRS channels are not abused by unlicensed individuals or large organizations (commercial or otherwise).

⁹⁶ See PWM RM-10762 Comments at 9-13.

⁹⁷ See Garmin RM-10762 Reply Comments at 2. Garmin states that commenters have not demonstrated that a data communication will cause any more or different interference than a voice or tone transmission.

⁹⁸ See, e.g., <http://www.garmin.com/products/rino/> (last visited on February 19, 2009).

⁹⁹ See, e.g., Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 18676, 18679 ¶ 5 (1996).

¹⁰⁰ See *FRS GPS R&O*, 18 FCC Rcd at 2353 ¶ 7.

¹⁰¹ We note that the Wireless Telecommunication Bureau has previously granted Garmin a temporary waiver to permit FCC certification for a GMRS transceiver that is capable of transmitting location information and text messages, pending the resolution of the subject petition for rulemaking. See Garmin International, *Order*, 20 FCC Rcd 982 (WTB PSCID 2004) (granting two-year waiver); Garmin International, *Order*, 21 FCC Rcd 15072 (MD 2006); Garmin International, *Order*, DA 08-2806 (rel. December 24, 2008).

parties should address any concerns regarding increased interference potential to voice communications as well as ways to minimize such interference, including channel restrictions and duty cycle requirements. Finally, commenters should address whether all or only some GMRS channels should be permitted to transmit location information.

C. Family Radio Service

43. The FRS is designed to provide individuals with short-range mobile communications and is licensed by rule.¹⁰² It was established in 1996 when the Commission allocated to FRS fourteen channels then allocated to GMRS.¹⁰³ In doing so, the Commission found that (1) the GMRS channels were not heavily used; (2) the two services were similar in that both were intended to operate in a shared environment and provide for the personal voice communications needs of the general public; and (3) given the low power of FRS, the potential for interference between the two services was small.¹⁰⁴ The Commission envisioned that the FRS would provide an affordable and convenient means of direct, short-range, two-way voice communications among small groups of persons, including families, with minimal regulation.¹⁰⁵

44. FRS radios are now widely available in a variety of styles from competing manufacturers. No license is needed to operate FRS radios, which are generally inexpensive, small, reasonably rugged, and easy to use. Most FRS radios also have good voice quality and use common, inexpensive, disposable batteries. Recently, more elaborate FRS radios have been developed that incorporate GPS capabilities to enable users to determine their location and automatically pass that information to nearby similarly equipped FRS radios. The transmission range between FRS radios is typically less than one half mile, but could be further depending on terrain. The popularity of FRS radios has resulted in intensive use of FRS channels in public venues such as beaches, parks, ski areas, sporting events, and festivals.

1. Combination Radios

45. With the increasing popularity of FRS radios, some manufacturers have begun to market radios that can be used by consumers to access FRS frequencies as well as frequencies in other services (*i.e.*, the frequencies are accessible using front panel controls). For example, several manufacturers market radios that operate on both FRS and GMRS frequencies.¹⁰⁶ While we recognize the convenience of these combination radios, we are concerned that manufacturers are starting to include FRS frequencies in radios that include VHF marine frequencies.¹⁰⁷ FRS combination radios that include VHF marine

¹⁰² See generally *FRS Report and Order*.

¹⁰³ See *FRS Report and Order*, 11 FCC Rcd at 12980 ¶ 8. Seven of the fourteen channels designated for to FRS are shared between FRS and GMRS (462.5625, 462.5875, 462.6125, 462.6375, 462.6625, 462.6875, and 462.7125 MHz). The other seven channels are interstitial channels (channels between GMRS channels commonly referred to as “split” channels) and available only to FRS (467.5625, 467.5875, 467.6125, 467.6375, 467.6625, 467.6875, and 467.7125 MHz). Compare 47 C.F.R. § 95.621 (GMRS frequencies) with 47 C.F.R. § 95.627 (FRS frequencies).

¹⁰⁴ See *FRS Report and Order*, 11 FCC Rcd at 12980 ¶ 8.

¹⁰⁵ *Id.* at 12978 ¶ 2. Businesses also may use FRS spectrum. See, e.g., Industrial Telecommunications Association, Inc., *Order*, 19 FCC Rcd 6988 (WTB PSCID 2004) (denying petition for rulemaking to prohibit business use of FRS).

¹⁰⁶ When operating as an FRS radio, the radio meets the FRS technical requirements; when operating as a GMRS radio, the radio meets the GMRS technical requirements.

¹⁰⁷ Standard Horizon’s HX471S radio, for example, includes both FRS channels and marine frequencies. See <http://www.standardhorizon.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=85&encProdID=71726205E5C6EC181DE69A09BC8877EA&DivisionID=3&isArchived=0> (last visited February 19, 2009).

channels could raise an eligibility issue.¹⁰⁸ Moreover, depending on the VHF marine frequencies available in the radio, a possible interference problem to marine distress, safety or navigation communications on Channels 16 and 70 could arise.¹⁰⁹ Allowing VHF marine frequencies to be front panel accessible on radios manufactured and mass marketed to the American public for personal communications could result in disruptions to the United States Coast Guard during distress calls or confusion between communications by the general public and actual maritime distress calls. Additionally, widespread capability to transmit on these distress frequencies could result in increased hoax mayday calls.

46. Against this backdrop, we question whether certain or all Personal Radio Service combination radios should be prohibited or otherwise restricted. In this regard, we note that the Commission's Part 95 rules already prohibit certain types of combination radios.¹¹⁰ We are concerned that the type of risks outlined above may outweigh the benefits of flexible use afforded by combination radios. In licensed services, the Commission can limit inappropriate or improper use by permissible communication rules and the associated range of sanctions for violation of such rules. For services licensed by rule, experience has shown that permissible communication restrictions are difficult to enforce, and such limitations tend to be more effective if they are imposed at the equipment certification stage rather than if they require user compliance.¹¹¹

47. We are particularly concerned with services that may be used for communications related to safety of life and property or communications during distress, and therefore propose to prohibit the certification of radios that combine Personal Radio Service channels with the capability to transmit on frequencies in the licensed services of Parts 80, 87, 90, and 97 of the Commission's rules. Prohibiting such combination radios with these licensed services would prevent unauthorized use of maritime, aviation, public safety, and amateur frequencies to the benefit of those licensees and the public more generally. We seek comment on this conclusion and whether we should prohibit any other services from being combined with Personal Radio Services. Additionally, we seek comment on whether our proposal should be more narrowly focused on certain Personal Radio Services. Commenters should address what sort of grandfathering, if any, would be appropriate for currently certified FRS combination radios and any other radios that combine Personal Radio Services with licensed services.

D. Citizens Band Radio Service

48. The Citizens Band (CB) Radio Service is a two-way, short distance voice communication service for use in personal and business activities of the general public.¹¹² Adopted in 1983 to prevent certain abuses, Section 95.419 prohibits the operation of a CB station transmitter by remote control (*i.e.*,

¹⁰⁸ Specifically, Part 80 marine operations are restricted to licensees that meet the eligibility requirements in section 80.15, but FRS radios are easily obtained at retail stores, have no licensing requirement for domestic operations and the only eligibility restriction applies to representatives of foreign governments. *See* 47 C.F.R. §§ 80.15(d), 95.191(a).

¹⁰⁹ For example, VHF marine channel 16 (156.8 MHz) is the international distress, safety and calling channel and channel 70 (156.525 MHz) is the frequency used for distress, safety and calling when using digital selective calling techniques. 47 C.F.R. § 80.373(f).

¹¹⁰ *See, e.g.*, 47 C.F.R. §§ 95.655(a), (d) (prohibiting equipment that combines CB with other frequencies and MURS with other frequencies).

¹¹¹ The Commission recognized this and the potential for abuse when it adopted service rules that prohibit combination radios involving spectrum allocated to MURS. *See MURS MO&O*, 17 FCC Rcd at 9848 ¶ 38.

¹¹² 47 C.F.R. § 95.401. “[T]he purpose of the CB Radio Service is to provide for short-distance personal and business radiocommunications and ... this purpose has not changed since the service's initial authorization.” *See* Amendment of Section 95.413 of Commission's Rules Prohibiting Communications or Attempts to Communicate with Citizens Band Radio Services Stations than More than 250 Kilometers Away, *Order*, 16 FCC Rcd 14825, 18830-31 ¶ 6 (WTB 2001) (*CB Order*).

operation from any place other than the location of the CB transmitter).¹¹³ Similarly, section 95.607 prohibits the addition of any “accessory” or device not specified in the application for certification and authorized by the FCC in granting the certification.¹¹⁴ There is no exception to section 95.419 for wireless hands-free microphones.¹¹⁵

1. CB Hands-Free Microphones

49. On December 17, 2003, Omnitronics, L.L.C. (Omnitronics), a manufacturer of communications equipment, filed a petition for rulemaking requesting that we amend Part 95 to authorize the manufacture, sale, and use of wireless microphones to permit hands-free operation of CB transmitters.¹¹⁶ Specifically, Omnitronics proposes that we amend the rules “to (i) provide that authorized wireless microphones in the Citizens Band Radio Service (‘CB Hands-Free Microphones’) may be used with authorized CB transmitters, (ii) allow manufacturers to obtain stand-alone equipment authorizations for CB Hands-Free Microphones designed and marketed as after market add-ons, and (iii) set forth technical standards for CB Hands-Free Microphones.”¹¹⁷ Omnitronics also requests that we amend section 95.419 to provide that use of CB hands-free microphones does not constitute remote control.¹¹⁸

50. Omnitronics contends that its proposed changes are necessary because the Commission’s current rules frustrate the development and use of hands-free technology by CB users,¹¹⁹ and that the proposed changes would not undermine the purpose of section 95.419. It notes that section 95.419(c) already provides that direct mechanical control or electrical control by wire from some point on the same premises, craft, or vehicle as the CB transmitter is not considered remote control.¹²⁰ Omnitronics states that its proposed parameters would limit use of CB hands-free microphones to the immediate vicinity of the CB transmitter, just as if a direct wire were used.¹²¹

51. Omnitronics also proposes that we amend section 95.607 to exempt CB hands-free microphones from the prohibition on adding an accessory not specified in the equipment certification.¹²² Omnitronics contends that the Commission would have greater control over the design and operation of

¹¹³ See 47 C.F.R. § 95.419(a), (c).

¹¹⁴ 47 C.F.R. § 95.607(a).

¹¹⁵ See Omnitronics, LLC, *Order on Reconsideration*, 18 FCC Rcd 23064 (WTB PSPWD 2003) (affirming denial of request for a waiver of Section 95.419 to permit manufacture and marketing of an earphone/microphone device that would permit hands-free operation of a CB station transmitter).

¹¹⁶ Omnitronics Petition at 1. No comments were filed against the Omnitronics Petition.

¹¹⁷ *Id.* at 5. It proposes to define CB Hands-Free Microphone as

[A] simplex system consisting of a head-worn microphone and associated transmitter unit and a receiver unit with a connector that is intended to attach to the existing microphone connector on a CB transmitter. The hands free transmitter shall include a voice activation circuit (VOX) that will activate a relay in the receiver unit when voice is present at the head worn microphone. The receive unit shall be designed to activate the relay only when the hands free transmitter is in range and voice is present at the head-worn microphone. Each system shall use a unique user code meeting the specifications outlined in section 15.214(d) to ensure that the specific CB operator only controls the CB transmitter. The associated transmitter shall be limited 1 mW (0.001 watt) final collector current. The transmitter shall be designed to meet or exceed the specifications of Part 15, specifically including 15.249.

¹¹⁸ *Id.* at 4-5.

¹¹⁹ *Id.* at 1-2.

¹²⁰ *Id.* (citing 47 C.F.R. § 95.419(c)).

¹²¹ *Id.*

¹²² *Id.* at 5-6.

these devices, and that competition among manufacturers would provide the public with greater choices and lower prices for this technology, if manufacturers other than the CB transmitter manufacturer may obtain equipment authorization.¹²³ Omnitronics also states that CB transmitter manufacturers have “standardized the use of open external connectors to allow CB microphones to connect with the CB transmitter” so that no changes to the CB transmitter are necessary to add a microphone, and such microphones cannot affect the transmission characteristics of a CB transmitter.¹²⁴

52. Finally, Omnitronics contends that the proposed rule changes serve the public interest, particularly in facilitating safer operation of CB transmitters by the long-haul trucking community.¹²⁵ It argues that use of hands-free microphones will enhance road safety.¹²⁶ Additionally, to the extent that States prohibit the use of hand-held wireless devices in motor vehicles, hands-free microphones may be the only means to ensure that some CB users can continue to operate.¹²⁷

53. We agree with Omnitronics that the rule sections at issue were not specifically intended to prohibit the use of wireless hands-free microphones.¹²⁸ Accordingly, we propose to amend Part 95 to make it clear that use of wireless hands-free microphones with CB transceivers is not considered to be remote control. Operation of such hands-free microphones, however, will be limited to the immediate vicinity of the CB transmitter. To effect such a limit, we propose to allow only hands-free microphones that operate under Part 15 of our rules. We seek comment on whether the operating range should be constrained by means of a field strength limit specifically for CB wireless hands-free microphones, for example, a fundamental emission level of one thousand $\mu\text{V}/\text{m}$ (microvolts/meter), as measured at three meters based on measuring equipment using a quasi-peak detector function.¹²⁹ Wireless microphones used with CB transmitters would have to comply fully with Part 15 of our rules,¹³⁰ and must not change any of the operating parameters of the CB transmitter or affect the CB transmission. We seek comment on whether the one thousand $\mu\text{V}/\text{m}$ emission limit proposed for Part 15 is appropriate. Additionally, we seek comment as to whether we should allow only the CB transmitter manufacturer to obtain certification for a CB hands-free microphone or alternatively, as Omnitronic suggests, to permit separate equipment authorizations for CB hands-free microphones. Additionally, we seek comment on whether we should allow hands-free devices that are widely available for cellular telephones used in vehicles to be used with CB transceivers.¹³¹

2. Review of Operating Rules

54. While CB radio was extensively used in prior decades, the widespread introduction of wireless telephony and other forms of communication in the 1990s have resulted in a sharp decline in the number of CB users. In view of this marked decline, we question whether the rules adopted to ensure a reasonable spectrum sharing environment in the CB Service are still timely and appropriate. Below we will review various rules for the CB Service and seek comment on whether the rules are needed, effective, enforceable, and make sense for this Personal Radio Service.

¹²³ *Id.* at 8-10.

¹²⁴ *Id.* at 5-6.

¹²⁵ *Id.* at 2, 8-10.

¹²⁶ *Id.* at 8.

¹²⁷ *Id.*

¹²⁸ *Id.* at 9-10.

¹²⁹ *See* 47 C.F.R. § 15.35.

¹³⁰ *See* 47 C.F.R. §§ 15.227, 15.229, 15.235, 15.249.

¹³¹ *See* www.bluetooth.com for further information.

55. We note that section 95.416 (CB Rule 16) provides that CB communications must be limited to the minimum practical time, that each CB station must limit its conversations to no more than five continuous minutes, and that after each conversation, CB stations must not transmit again for at least one minute.¹³² These restrictions were adopted long before the introduction, and now pervasive use, of wireless telephony, which has effectively relieved the CB service of congestion. Similarly, the GMRS prohibits continuous or uninterrupted transmissions¹³³ and are generally required to share channels to reduce interference.¹³⁴ The FRS rules state that the user must share each channel with other users and no channel is available for private or exclusive use.¹³⁵ Given that these three services are basically used for the same purpose, should we apply the same general channel sharing requirements across all the services or does CB continue to need specific limits on the length of communications and a required pause before initiating a new conversation? Does there continue to be congestion in the CB band or is the rule needed due to interference concerns with uses outside the CB band? We seek comment on whether to limit the duration of any single continuous transmission to prevent the use of CB radios as broadcast stations, transmitting continuously for long periods and thereby preventing others from using a channel. If they do favor such a limit, commenters should address how long a continuous transmission the rule should allow. We also seek comment on whether the Commission should amend or eliminate section 95.413(a)(6), which prohibits the transmission of music, whistling, sound effects or any material to amuse or entertain, and section 95.413(a)(7), which prohibits the transmission of any sound effect solely to attract attention.¹³⁶ Obviously, some of these types of transmissions could be detrimental if not kept in check, but would some allowances be reasonable and consistent with how we treat other Part 95 Services? If the Commission amends or eliminates such restrictions, should it retain a time limit on continuous transmissions?

56. Section 95.607 specifies certain types of design modifications to certificated CB transmitters that would not be permissive, and would in fact require the manufacturer holding the certification to seek written FCC permission prior to incorporating such changes in current production.¹³⁷ This section essentially elaborates on the general requirement of section 2.932, regarding changes to certificated equipment.¹³⁸ To avoid possible confusion from such duplication, we propose to remove section 95.607 and consolidate this requirement with similar requirements for other Personal Radio Services into section 95.33, which will contain a general reference to the Part 2 equipment certification rules, an outline of the equipment certification process, and any special certification requirements for Personal Radio Services. While section 95.607 and the new section 95.33 are primarily intended for manufacturers of CB equipment that hold the FCC equipment authorization, we observe that interference to other services is frequently caused by the use of CB equipment that has been modified by the CB operator or persons other than the manufacturer to operate on unauthorized frequencies or increase power beyond what is allowed. To emphasize that CB operators are not permitted to change the technical operating parameters of their equipment, or to operate equipment that has been so modified, we will repeat the prohibition in section 95.311 (What equipment may I use at my CB station?) and also point to the administrative and technical subparts (Subpart A and B of Part 95, respectively) in section 95.301 (Scope). We also seek comment on whether CB or other Part 95 Services need special equipment certification provisions or other changes to the rules to ensure that only proper equipment is used.

¹³² 47 C.F.R. § 95.416.

¹³³ 47 C.F.R. § 95.183(a)(14).

¹³⁴ 47 C.F.R. § 95.7(a).

¹³⁵ 47 C.F.R. § 95.191(b).

¹³⁶ 47 C.F.R. §§ 95.413(a)(6), (7).

¹³⁷ See 47 C.F.R. § 95.607.

¹³⁸ See 47 C.F.R. § 2.932.

57. Section 95.413(a)(9) prohibits communications or attempted communications with any CB station located more than 250 kilometers (155.3 miles) away.¹³⁹ The purpose of this rule is to ban CB radio communications using sky wave propagation, because the Commission intended CB radio to be used for short-distance communications.¹⁴⁰ CB radios operate in the upper portion of the high frequency (HF) band, where radio wave propagation includes two modes, direct and sky wave. Direct waves move along the earth's surface, while sky waves reach the ionosphere and then reflect (bend) downward reaching long distances. CB stations can communicate by direct waves with other CB stations within approximately 15 miles at all times, and also with stations up to several hundred miles away via sky wave propagation, provided solar conditions permit.¹⁴¹ When conditions for sky wave propagation are favorable, it may actually be easier to communicate with distant stations than closer ones. This presents a unique problem with allowing a "commons" band regulatory structure¹⁴² in the HF band that allows the capability to transmit over long distances. Section 95.413(a)(9) can be a difficult rule to enforce because regular CB radios are capable of communicating over hundreds of miles without any attempts to modify their operations. Nevertheless, this ability to communicate over long distances has tempted some to use illegal linear amplifiers and directional antennas to see how far they can communicate. Such operations can result in harmful interference to television operations, as well as other services in the HF band. Therefore, we seek comment on how best to deal with this natural phenomenon. Amplifiers for CB stations are already illegal, but should we consider prohibiting directional antennas for CB operations in order to facilitate its intended use for short range communications? Should we consider power reductions for the CB Service? Is there harm in allowing CB operators to communicate in sky wave mode, or would such an allowance tempt the use of illegal amplifiers which cause interference? We seek comment on how best to deal with section 95.413(a)(9) and other challenges in permitting a "commons" band regulatory structure in the HF band.¹⁴³

E. Radio Control (R/C) Service

58. Section 95.215(b) of the R/C Service rules provides that "[t]he only time your R/C communications may be a continuous signal for more than three minutes is when operation of the device requires at least one or more changes during each minute of the communications."¹⁴⁴ Given the evolution of applications in the R/C Service since adoption of this rule, we seek comment regarding whether we should eliminate this restriction, while maintaining the requirement in section 95.215(a) that transmissions be limited to the minimum practical time.¹⁴⁵ We also seek comment on whether some limit

¹³⁹ 47 C.F.R. § 95.413(a)(9).

¹⁴⁰ See In the Matter of Amendment of Part 19 Citizens Radio Service, to Revise Subpart D, Station Operating Requirements and to Make Other Changes, Docket No. 14843, *Report and Order*, 42 F.C.C. 1195, 1206 (1964).

¹⁴¹ We are now in a period between the predictable, recurrent peaks of solar sunspot activity that enable high-frequency sky wave propagation, and sky wave (or "skip") communications in the 27 MHz band are currently infrequent. Conditions for sky wave propagation will become increasingly favorable until the years 2011-2013, when the current sunspot cycle (number 24) is predicted to peak. See National Oceanic and Atmospheric Administration website at: <http://www.swpc.noaa.gov/SolarCycle/SC24/index.html>.

¹⁴² Typically, "commons" bands are made available for short range communications where everyone can operate on the same spectrum with appropriate etiquettes to avoid interference and maximize spectrum reuse.

¹⁴³ We note that in 2000, the Wireless Telecommunications Bureau denied a petition for rulemaking to amend this limit. See Amendment of Section 95.413 of Commission's Rules Prohibiting Communications or Attempts to Communicate with Citizens Band Radio Services Stations than More than 250 Kilometers Away, *Order*, 15 FCC Rcd 18828 (WTB 2001), *recon denied*, 16 FCC Rcd 14825 (2001). We remind CB operators that the use of RF power amplifiers to facilitate sky wave propagation is a principal source of interference to TV reception and remains illegal.

¹⁴⁴ 47 C.F.R. § 95.215(b).

¹⁴⁵ 47 C.F.R. § 95.215(a).

greater than three minutes should be established to prevent unforeseen applications that would continually use the channels to the detriment of R/C hobbyists.

F. 218-219 MHz Service

59. The Commission established the current 218-219 MHz Service as the “Interactive Video and Data Service” (IVDS) in 1992.¹⁴⁶ IVDS was established with a 500 kilohertz frequency segment for two licenses in each of the 734 cellular-defined service areas, and was envisioned as a short-distance communications service by which licensees could provide information, products, or services to, and allow interactive responses from, subscribers within the licensee’s service area.¹⁴⁷ The original service rules included: a five-year license term; restrictions on holding both licenses in a market; and specific construction benchmarks.¹⁴⁸ The Commission also adopted technical requirements to reduce the potential for harmful interference to nearby operations, including reception of TV Channel 13 broadcasts in the 210-216 MHz band.¹⁴⁹

60. The Commission renamed IVDS the “218-219 MHz Service” in 1996, and amended the technical and service rules to provide licensees more flexibility in using this spectrum.¹⁵⁰ Specifically, the Commission removed the restriction on holding both licenses in a market; permitted partitioning and disaggregation; extended the license term to ten years; eliminated the three- and five-year construction benchmarks; and adopted a “substantial service” analysis to be assessed at the expiration of the 218-219 MHz Service license term as a condition of renewal.¹⁵¹ We seek to further streamline the 218-219 MHz Service rules to provide a more flexible regulatory environment that would enable licensees to more effectively and efficiently use this spectrum. We seek comment on specific measures detailed below, and more generally regarding whether there are measures we can take to provide additional flexibility to 218-219 MHz Service licensees.

1. Part 27 Designation

61. As an initial matter, we believe that the 218-219 MHz Service rules, now in Subpart F of Part 95, are better suited to Part 27 (Miscellaneous Wireless Communications Services).¹⁵² The Commission originally decided to regulate IVDS under Part 95, rather than as a common carrier service, because it expected the services to be of a personal nature (*i.e.*, a consumer interactive service) and offered by subscription.¹⁵³ As noted above, the Commission subsequently modified the rules to allow a variety of

¹⁴⁶ Amendment of Parts 0, 1, 2 and 95 of the Commission’s Rules to Provide Interactive Video and Data Services, GEN Docket No. 91-2, *Report and Order*, 7 FCC Rcd 1630, 1630-33 (1992) (*1992 Allocation Report and Order*), *on recon.*, *Memorandum Opinion and Order*, 7 FCC Rcd 4923 (1992) (*IVDS MO&O*), *further recon.*, *Second Memorandum Opinion and Order*, 8 FCC Rcd 2787 (1993).

¹⁴⁷ *1992 Allocation Report and Order*, 7 FCC Rcd at 1630-33. The 218.0-218.5 MHz block is frequency segment A, and the 218.5-219.0 MHz block is frequency segment B. 47 C.F.R. § 95.853(a). These service areas consist of 306 Metropolitan Statistical Areas (MSAs) and 428 Rural Service Areas (RSAs). Thus, a total of 1468 licenses — consisting of 612 MSA licenses and 856 RSA licenses — were allocated for this service.

¹⁴⁸ *1992 Allocation Report and Order*, 7 FCC Rcd at 1637-41.

¹⁴⁹ *Id.* at 1633-37.

¹⁵⁰ See Amendment of Part 95 of the Commission’s Rules to Modify Construction Requirements for Interactive Video and Data Service (IVDS), *Report and Order*, 11 FCC Rcd 2472 (1996) (eliminating the one-year construction requirement); and Amendment of Part 95 of the Commission’s Rules to Provide Regulatory Flexibility in the 218-219 MHz Service, *Report and Order and Memorandum Opinion and Order*, 15 FCC Rcd 1497 (1999) (*218-219 MHz Order*).

¹⁵¹ *218-219 MHz Order*, 15 FCC Rcd at 1517, 1537-1538 ¶¶ 31, 68, 70.

¹⁵² See 47 C.F.R. Part 27.

¹⁵³ See *1992 Allocation Report and Order*, 7 FCC Rcd at 1637 ¶ 54.

fixed and mobile services on either a common-carrier or private basis.¹⁵⁴ For example, mobile service providers may elect their regulatory status as either commercial (under the Commercial Mobile Radio Service rules) or private (under the Private Mobile Radio Service rules).¹⁵⁵ This flexibility makes the 218-219 MHz Service unique among the Personal Radio Services in that it may be used for commercial applications, is licensed on a geographic, exclusive-use basis, and is subject to the Commission's competitive bidding procedures and secondary markets policies.¹⁵⁶ By contrast, all other Part 95 services are personal in nature and operate on a shared basis.

62. In view of the foregoing, we propose to integrate the 218-219 MHz Service rules into Part 27, using the current format of the Part 27 rules and, as necessary, making conforming changes so that the 218-219 MHz Service rules are aligned with similar Part 27 rules. For example, to promote consistency and clarity in how we regulate various commercial licensees, we propose to integrate most of the 218-219 MHz Service rules into Part 27 Subpart A—General Information, Subpart B—Applications and Licenses, and Subpart C—Technical Standards. We also propose to create a new Subpart N—“218-219 MHz Service” for any rule sections relocated from Part 95 that are not integrated into Part 27 Subparts A, B, or C. We seek comment on our proposal to move the 218-219 MHz Service rules from Part 95 to Part 27.

2. Rule Streamlining

63. We seek comment on eliminating certain 218-219 MHz Service rules. First, we find that it is unnecessary to retain section 95.813(b), which restricts a licensee that loses its authorization for failure to meet its construction requirements from obtaining any new 218-219 MHz Service authorization for a period of three years.¹⁵⁷ This requirement stems from concerns that an entity that obtained a license through the lottery process may not actually build a 218-219 MHz Service system.¹⁵⁸ The construction requirements for 218-219 MHz Service licenses obtained by lottery were required to be satisfied more than three years ago, and there are no lottery-based licensees subject to the three-year period at this time. The Commission moreover no longer issues 218-219 MHz Service licenses by lottery, and section 95.813(b) thus no longer serves the Commission's intended purpose. Therefore, we propose to eliminate section 95.813(b) and to apply section 27.14(a) to 218-219 MHz Service licensees, which states that failure by any licensee to meet its construction requirement will result in forfeiture of the license and the licensee will be ineligible to regain it.¹⁵⁹ Part 27 services are not subject to the restriction found in section 95.813(b), and we believe that continued application of section 95.813(b) unnecessarily penalizes a licensee that may not meet its construction requirements for a particular license (*e.g.*, in a specific market and for a specific channel block) from being able to obtain a different license for a period of three years. We seek comment on this proposal.

64. We also seek comment on whether to remove the requirements in section 95.815 that 218-219 MHz Service licensees file with the Commission a plan analyzing co- and adjacent channel interference potential when they file their license application forms and when they propose to modify an individually licensed transmitter.¹⁶⁰ While the prevention of interference is important, we question whether this

¹⁵⁴ *218-219 MHz Order*, 15 FCC Rcd 1497, 1499 (1999), *recon. denied* 15 FCC Rcd 25020 (2000).

¹⁵⁵ 47 C.F.R. § 95.807.

¹⁵⁶ See 47 C.F.R. §§ 95.805, 95.807, 95.816, 95.823; 2004 Biennial Regulatory Review, WT Docket No. 04-180, *Staff Report*, 20 FCC Rcd 142, 243 (2005); Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503, 17534-35 ¶ 64 (2004).

¹⁵⁷ See 47 C.F.R. §§ 95.813(b).

¹⁵⁸ *1992 Allocation Report and Order*, 7 FCC Rcd at 1641 ¶ 77.

¹⁵⁹ See 47 C.F.R. § 27.14(a).

¹⁶⁰ See 47 C.F.R. § 95.815.

requirement is necessary, effective, and efficient in preventing interference. We note that the 218-219 MHz Service is licensed by geographic area at auction, and we question whether it is reasonable to ask license applicants to specify where all transmitting antennas will be and their interference potential when they file applications for a geographic license. Additionally, the Commission does not require predictive interference avoidance plans for other geographically licensed services and we question the need for disparate treatment of the 218-219 MHz Service. We also seek comment on whether requiring a new licensee to analyze its deployment and interference potential up-front is likely to be a true representation of the potential for interference. For example, many tasks such as obtaining transmitter site leases and local zoning approval would most likely be completed after a geographic licensee obtains its authorization, so any predictive interference analysis of a licensee's tower deployment and interference potential is not likely to be accurate at such an early stage. In view of the foregoing, we seek comment on whether an overall prohibition on causing harmful interference should be sufficient to address any interference that may occur.

65. We also seek comment on how we should amend section 95.861,¹⁶¹ which requires 218-219 MHz licensees to provide a copy of their deployment and interference avoidance plans to any TV Channel 13 station whose Grade B contour overlaps their licensed service area. This section also requires 218-219 MHz licenses to provide (upon request) and install, free of charge, interference reduction devices to households within the Grade B contour that experience interference to over the air reception of TV Channel 13 due to operation of the 218-219 MHz station.¹⁶² We note that full power TV stations (including approximately 20 that will be operating on Channel 13) have recently completed the transition to digital transmissions (DTV). The analog (NTSC) contours Grade A and B are not used for DTV stations; instead DTV service is defined by use of a principal community contour and a noise-limited service contour.¹⁶³ We propose to replace, in the 218-219 MHz service rules, references to the Grade B contour with a metric that is appropriate to DTV technology, such as the noise-limited contour. In this regard, we note that the field strengths associated with the DTV contours are different than the Grade B field strength, and the prescribed propagation prediction methodology is different. Although the Commission calculated DTV station parameters in such a way as to replicate, to the extent possible, the existing NTSC coverage of each station, in some cases the DTV contours may differ somewhat (in the area covered) from the former Grade B coverage. We seek comment on the impact of the transition to digital television, as it relates to rules that address the interference potential of 218-219 MHz Service operations to TV Channel 13 reception. We also seek comment on continuing the existing interference approach (requiring filters to be provided) and welcome suggestions of any approaches that might be more appropriate.

66. Finally, we seek comment on any other steps that can be taken to provide a more efficient and flexible regulatory environment to promote more expansive use of the 218-219 MHz Service. In addressing this issue, commenters are urged to provide specific recommendations, including any technical requirements that the Commission should consider in adopting additional rules and policies.

G. Personal Locator Beacons

67. In 2002, the Commission adopted rules to authorize the use of 406 MHz personal locator beacons (PLBs) to provide a distress and alerting capacity for use by the general public in a life-threatening condition in a remote environment after all other means of notifying search and rescue (SAR) responders have been used.¹⁶⁴ The 406 MHz PLB provides worldwide alerting capability with distress

¹⁶¹ See 47 C.F.R. § 95.861.

¹⁶² *Id.*

¹⁶³ For digital television stations, the signal intensity standards are the values set forth in Section 73.622(e) of the Commission's Rules describing the DTV noise-limited service contour. See 47 C.F.R. § 73.622(e).

¹⁶⁴ See Amendment of Part 95 of the Commission's Rules to authorize the use of 406.025 MHz for Personal Locator Beacons (PLB), PR Docket No. 99-366, *Report and Order*, 17 FCC Rcd 19871 (2002).