

**Before the  
Federal Communications Commission  
Washington, DC**

In the Matter of

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

**COMMENTS BY THE PERSONAL RADIO STEERING GROUP, INC.**

**Summary**

The Rules should be easy to find for a particular radio service, clear to understand, and consistent with some central guideline or objective. The rules should not regulate by definition. The FCC's intent to consolidate rules by topic instead of by radio service is misdirected.

Channel/frequency designations should follow popular usage.

The FCC should continue to prohibit any voice obscuring or scrambling.

GMRS licensees support FCC licensing and enforcement. The FCC should retain the current five-year license term, but reduce the onerous “application” (processing) fee to a level that reflects its actual cost. The Commission should retain the current age for licensing eligibility.

The FCC should prohibit manufacturers from including sound effects intended merely to amuse or to entertain.

The FCC should retain the policy of allowing only individual persons to obtain a GMRS license, and should continue to prohibit non-personal licensees from modifying or expanding their existing “grandfathered” licenses.

The Commission should create no further restrictions on the transmitter output power of GMRS hand-held radios, nor any further restrictions on the transmitter output power of GMRS stations operated North of Line A or East of line C. The FCC should not prohibit GMRS hand-held radios from having detachable antennas.

The FCC should prohibit the combination of FRS radios with radios capable of operating in *any* other radio service, but should create no restriction on the licensed use of GMRS radios for communications in other radio services.

The FCC should continue to allow the use of repeaters in GMRS.

Narrowbanding of GMRS is inevitable, but the FCC should allow for at least a 20-year transition.

The FCC should permit an expansion of GPS-based and brief-text communications only on the 462 MHz interstitial frequencies. The FCC should inquire separately about the most suitable spectrum and radio service for any longer-range GPS communications.

Certain GMRS rules which the FCC has proposed for deletion should instead be retained.

The NPRM proposes major new restrictions on GMRS operations, but fails to justify their need or even, in some cases, to discuss them. These proposed restrictions come in a political climate when the public rejects restrictions by further federal regulation.

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## **COMMENTS.**

### **I. BACKGROUND OF THE COMMENTER.**

1. The Personal Radio Steering Group, Inc. (PRSG) is an all-volunteer, not-for-profit Michigan corporation established in 1980 by licensees in the General Mobile Radio Service (GMRS, FCC Part 95-A) to provide services to and to serve as an advocate for users of the FCC's various personal radio services.
2. The PRSG has published more than 300 different guides to GMRS licensing, technology and operating practices in the various personal radio services, including ten editions of our GMRS National Repeater Guide, long our flagship publication.
3. PRSG has worked closely with major land mobile equipment manufacturers and marketers to disseminate instructional materials on licensing and proper use of radio equipment.

### **II. SCOPE OF THE NPRM.**

4. In the opening paragraph, the Commission exhibits some confusion about the nature of the personal radio services when the Notice says:

"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."

5. In the Notice at paragraph 23, the Commission claims that “(t)he most popular type of GMRS radio today is lightweight portable units.” That may be true of combination FRS/GMRS radios, but these do not represent the primary kind of licensed GMRS radios. Hand-held radios are popular among licensees, but their primary units are still mobile/vehicular models with their typically higher transmit power, external antenna, etc. Hand-held radios are viable in GMRS primarily when used with a local repeater system.

6. The differences between these four personal radio services go well beyond merely the types of radios most commonly used. Each of the services has a distinctly different set of users, behavioral patterns, and expectations of performance. There is relatively little overlap of user constituencies, even between the GMRS and the FRS (as claimed by the Commission in the Notice at paragraphs 23, 42, and elsewhere) that share the same general spectrum.

### **III. CRITERIA FOR DESIGNING AND ORGANIZING RULES.**

7. Rules should be easy to find for each radio service, easy to read, clear to understand, and consistent with some central guideline or objective. The rules should not regulate by definition. When the rules contain some condition, restriction, limitation or prohibition, there must be a clearly stated policy which justifies this condition, or from which this condition logically and directly derives.

8. When a current user or a prospective user inquires about the regulations governing a particular radio service, he or she will want to find *all* rules governing that particular radio service in a single general location. The traditional organizational scheme of placing all rules governing a particular radio service in a single, central location has served well in the past, and should be continued.

9. However, in paragraph 3 of the Notice, the Commission states its intent

“to streamline and consolidate Part 95 rules where practicable.”

10. That intent is highly misdirected, and fails to recognize the operational realities and differences between these four services. Placing rule sections governing similar topics, as described in the Notice as proposing

"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"

would inevitably confuse users of these disparate services.

11. Although retaining the traditional organizational scheme may appear contrary to an "administrative efficiency" of consolidating all similar rules across disparate services together, findability, readability, useability and justifiability of the rules are more important.

### **IV. ORGANIZATION OF THE TECHNICAL RULES.**

12. At paragraph 12, the Notice observes that rules governing technical aspects are found both in the sections dedicated to specific radio services, and in rules containing the general technical requirements for all personal radio services.

13. The guiding principle should be this: Technical requirements which can be affected by user behaviors (such as antenna non-detachability requirements and prohibitions) should be contained in and justified by policy stated in those rule sections which are oriented to specific services. General technical requirements, such as those used by designers and manufacturers of this equipment, can be placed in a "technical requirements" section that pertains to all personal radio services, but should be cross-referenced in the service-specific sections as well. This is the general policy currently followed by the rules, and PRSG believes it has served well.

#### **IV.B. DESIGNATION OF INDIVIDUAL FREQUENCIES/CHANNELS.**

14. With regard to designating channel numbers, the Commission should look at the experience from its proposal in the CBRs three decades ago. The user community was already using abstract channel-number designations, and the FCC's proposal to change the designations failed to receive popular acceptance, and was eventually abandoned.

15. In the Notice at Appendix B, Part 95, Subpart C, paragraph 95.103 (Channels Available), the Commission proposes an abstract channel-numbering scheme that both defines and restricts how GMRS frequencies may be used, assigning numbers even for frequencies not currently authorized for GMRS use.

16. For GMRS, the vast majority of users currently use a channel-numbering scheme for the primary (25 KHz spaced) channels based on the last three digits (to the right of the decimal point, when the frequency is expressed in MHz). The 462.550/467.550 MHz channel pair is called "the 550 channel" or just "550." The 462.575/467.575 MHz channel pair is called "the 575 channel" or just "575." Etc., up through the 462.725/467.725 MHz channel pair, which is called "the 725 channel" or just "725."

17. We note here that the Commission abandoned the pairing of the primary channels, at exactly a 5.00 MHz split, in the Report and Order in WT Docket 98-20. When someone transmits to a repeater that employs a split other than precisely 5.000 MHz, the transmission can cause unintended and unrecognized interference to a repeater on a channel other than the one he/she or others are listening to and communicating on. The FCC should return mandatory frequency pairing for GMRS repeaters.

18. For the 12.5 KHz offset frequencies (which are not paired), most GMRS users refer to them either by the four-digit scheme ("the 5625 frequency" or just "5625" for 462.5625 MHz, "the 5875 channel" or just "5875" for 462.5875 MHz, etc. up through "the 7125 channel" or just "7125" for 462.7125 MHz), or (probably more commonly) by the FRS channel designation ("FRS Channel 1" for 462.5672 MHz, "FRS Channel 2" for 462.5875 MHz, etc. up through "FRS Channel 7" for 462.7125 MHz). All three methods are used, and appear to be clearly understood by the vast majority of GMRS users. (FRS users use only the single-digit FRS designation, even though not all FRS radios have the same frequencies in the identical channel positions.)

19. MURS operators typically use one of three common numbering schemes. In the first, users refer to the complete frequency (in MHz). In the second, users refer to the last three digits (to the right of the decimal point when the frequency is expressed in MHz) even though the first three channels are in the 151 MHz band and the second two are in the 154 MHz band, and even though the last digit is always a zero. In the third protocol, users refer to the single-digit designation (MURS Channels 1 through 5).

20. The Notice does not justify changing these common channel-designation protocols, nor why the FCC should mandate just a single numbering scheme. A mere change in an FCC rule appendix is unlikely to become commonly accepted or used. The Rules could acknowledge the multiple protocols in use, for instance by the following description:

"In GMRS, the non-paired frequency 462.5625 MHz may be referred to as "the 5625 Channel," just as "5625," or as "FRS Channel 1."

#### **IV.B. PROHIBITING VOICE SCRAMBLING.**

21. PRSG agrees with the Commission's intent (Notice at paragraph 19) that all communications should be in plain language in the Personal Radio Services. However, we note that the Notice does not propose to extend this prohibition to the Multi-Use Radio Service (MURS). PRSG believes that the FCC should apply this prohibition to MURS as well.

22. We note with concern that many manufacturers have chosen language to refer to selective-addressing/selective-muting protocols (in which a user may chose to hear only those transmissions from another party transmitting the same code) as "privacy codes," inappropriately implying that some degree of privacy or security is available, or that it is permissible to ignore other co-channel users. In reality, these are actually "*selective-ignoring*" codes.

23. For shared-time services, meaningful sharing of the spectrum resource can occur only if users are aware of others operating or attempting to operate on the same frequency in the same area. The FCC's rules should reflect this reality and necessity.

24. To enhance sharing, PRSG has previously recommended (PRSG Comments, Notice of Proposed Rulemaking, FCC Docket 98-182) that a transmitter in any of the personal radio services should be enabled only after the associated receiver has been in "open squelch" mode (employing no code filtering) for some minimal period of time (perhaps several seconds). The receiver switch-over to "open squelch" monitoring would also be triggered and retained for some minimum period of time (perhaps 10 or 20 seconds) after each transmission

25. In the Notice at paragraph 74 (as part of the Memorandum Opinion and Order on Reconsideration), the FCC claims that

“(n)o such need for automatic monitoring has been demonstrated with respect to MURS.”

But this failure to perform pre- and post-transmission monitoring, and to refrain from (further) transmitting until the channel is available, is precisely why users of the Personal Radio Services cause and suffer interference to and from each other.

26. Given the all-encompassing nature of the current Notice, PRSG believes this to be the appropriate time and docket for the FCC to propose such a system for equipment certificated and manufactured for use in all of the Personal Radio Services after some date in the future. PRSG also supports the suggestion in the Notice (at paragraph 20) that a date should be set for ending the marketing and sale of transceivers that include voice scrambling.

## **V. LICENSING OF GMRS STATIONS.**

27. The FCC's licensing process in all radio services is inherently exclusionary. The FCC issues licenses to permit certain uses and/or users in all radio services, and to exclude other uses and/or users from the same spectrum and location. "Licensing-by-rule" is, in its entire essence, merely the same as delicensing just by a different name.

28. Retention of GMRS licensing has enabled the FCC to limit the type of uses and users in the GMRS. This has proven to be necessary to keep out those uses and users for which other comparable radio services are available and more appropriate.

29. Experience has taught (as acknowledged in the Notice at paragraph 46) that when the FCC delicensures a radio service, or licenses a radio service by rule, it loses the ability to control how that spectrum is used, and by whom (by classes of eligibility). Further, the public perception is that when the FCC delicensures a radio service, it essentially gives away any ability or desire to retain control or influence as to how that service is used or how it evolves.

30. The most recent example of this is what happened when the FCC created the Multi-Use Radio Service (MURS) in 2002, but intended it to continue to be used for personal, family and business communications. Instead, persons desiring to expand their personal recreational and hobby-oriented communications have begun to take over, and the nature of usage of the service (even with just 5 channels, and with increasingly ignored severe transmitter-power-output limitations) has begun to change.

31. Motorola and other manufacturers of transceivers marketed for the business-use community had warned precisely of this inevitability, but the Commission made no effective attempt to control how and who could use MURS radios. As a consequence, MURS has become less available for the intended business communications of the family and of non-personal entities.

32. Most users in the GMRS, but especially repeater users, are fearful that the delicensing of GMRS would result in a similar change in usage behaviors. Many of today's GMRS users are "refugees from 11-meter CB," and migrated to GMRS (beginning in the 1970s but continuing to the present) to escape the infamous abuses of and increasingly limited usefulness of CB radio at 27 MHz. They are rightfully fearful that a similar degradation of future GMRS user behaviors (under delicensing) would lead to a similar loss of the usefulness of the GMRS spectrum. Many of these users have spent many hundreds of dollars, and sometimes many thousands of dollars, to acquire the commercial-level equipment needed by most repeater-based GMRS systems. These investments would be at risk under delicensing.

### **V.A. LICENSING FEES.**

33. In the public comments already filed in this Docket, GMRS licensees express this concern about GMRS delicensing. GMRS users are willing to pay a *reasonable* fee for licensing, but want to know that the fee is based on the FCC's actual cost of processing applications.

34. In the Notice at paragraph 25, the Commission claims:

"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."

GMRS licensees vehemently reject the suggestion that this would apply to GMRS. Continuing licensing is required to control who may operate in this service, and what type of communications may be conducted.

35. At paragraph 26, the Commission states:

"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; there is no requirement for frequency coordination; and none of the GMRS frequencies are assigned on an exclusive-use basis."

This statement is confusing and reflects a lack of understanding of most GMRS operations. Part 90 licensees do have some degree of choice on which frequencies they may license for and on which to operate, as evaluated by the service coordinator. Few of the Part 90 licensees have exclusive use of their frequencies, since some degree of sharing is often still involved.

36. Moreover, there are considerable similarities between GMRS and the other Part 90 PLMRS services. Users communicate with multiple others in a "fleet-type" environment, to coordinate the planning of mutual activities with families and friends. Unlike the other personal services, GMRS users rarely communicate as merely a recreational pursuit. GMRS can be thought of as "the business radio" to coordinate the business of the family and the community. This clearly distinguishes GMRS from the "recreational style" communications predominant in CBRS, FRS, and MURS.

36.A. The Notice goes on to state:

"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."

That is actually the same for Part 90 licensees, although most Part 90 licensees have the assistance of centralized coordinators to choose in selecting the frequencies for operation.

37. The Notice also states:

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



GMRS licensees overwhelmingly support retention of the licensing process. The Commission has proposed, and historically has demonstrated, no ability to retain control over users and uses of unlicensed services. Indeed, the Commission has had to use the licensing process historically as a tool for exclusion of those uses and those users who have similar communications options in other radio services, but who have exhibited a lack of cooperation with co-channel personal and family users in GMRS.

38. The Notice (at paragraph 27) seeks comment on

"whether all classes of GMRS stations should be licensed by rule or only hand-held portable units."

Conscientious owners of GMRS repeater stations maintain control over the operation of their respective stations by identifying those stations' users by FCC callsign. This is the only practical and feasible way to be able to identify those users. These repeater owners need an in-place licensing system (whose data is accessible over the Internet) to perform their duties of station control.

## **V.B. THE CONUNDRUM OF THE LICENSING FEES AND THE LICENSE TERM LENGTH.**

39. In the Notice at paragraph 28, the FCC asks about increasing the length of a new or renewed GMRS license term from five to ten years as a potential alternative to licensing by rule ("delicensing").

40. The FCC is limited by laws which allow it to change only those matters about which it has first given notice to the public, and then provided an opportunity for public comment. The NPRM does not discuss the way in which the FCC actually calculates the fees themselves. Since the Notice does not propose to change the amount of the fees nor their method of calculation, the FCC cannot legally change them in this Docket.

41. From a review of the public comments already filed by GMRS users, it is apparent that many people are not familiar with how the FCC calculates GMRS licensing fees. Commission staff members sometimes refer to the sum of these fees (currently \$85) as "the application fee."

42. However, the FCC actually collects *two* fees from most GMRS licenses;

1) An application (processing) fee, currently \$60 per application; and,

2) A regulatory (usage) fee, currently \$5/year for a 5-year license.

43. Comments filed with the FCC so far seem to indicate that people believe that the FCC can just extend GMRS license terms to ten years but keep the sum of the two fees the same, \$85. That is *not* the case. The Notice does not propose any change to how the FCC calculates the fees. The total fees would increase for a ten-year license to \$110 (\$60 for the application [processing] fee, and \$50 for the regulatory [usage] fee [\$5/year for each of the ten years of the license]). This is undoubtedly *not* what most of those who have commented understand or desire.

44. So what should the fees and the licensing term be? PRSG believes that the GMRS licensing term should remain at five years. People move, and a renewal process on a five-year basis is a reasonable

requirement to keep track of where GMRS licensees can be contacted. GMRS repeater operators deserve the ability to identify and contact users of their stations. People suffering interference or needing to contact other GMRS licensees for cooperating and coordinating in the selection and use of the frequencies, as the FCC Rules have long required, need access to reasonably up-to-date information. Keeping the current five-year licensing term will keep the fees lower also. PRSG continues to support the rationale expressed in the Notice at footnote 60 for retention of a five-year GMRS license.

45. In today's world, we believe that GMRS licensing will continue *only* if licensees pay for it. The chance of "free licenses" from the government is extremely remote. The same is true for FCC enforcement of GMRS rules. The regulatory (usage) fee would help to fund this enforcement.

46. The problem is the currently onerous application (processing) fee. It was originally set to be the same as that for the Part 90 services (business band, industrial, police, fire, local government, etc.) and other services that all used the same FCC Form 574 in earlier times. When the FCC changed the GMRS application process to use the vastly simpler FCC Form 605 instead, the FCC's cost to process GMRS applications substantially decreased. However, the FCC failed to reduce the application (processing) fee to reflect this change in cost. The FCC has promised [MD Docket 08-65] to re-evaluate this GMRS application fee, but never did so.

47. What is the FCC's actual cost of processing the Form 605? The Commission has never said, but it would probably be in the \$5 to \$10 range apiece, maximum.

48. Even if the FCC's cost is at the upper figure (\$10), the fee total for a five-year license should be about \$35 (\$10 for processing the application, \$25 for the regulatory fee). For a ten-year license, a total of \$60 (\$10 application-processing fee, \$50 for the regulatory fee).

49. The current common complaint among GMRS licensees is that the application (processing) fee is excessive. Reducing that fee to \$5 to \$10 would make the cost of TWO five-year licenses only a little more (by that second application-processing fee) than the same for a single ten-year license. However, with a 10-year license term, the licensing database would suffer from a less frequently updated data set.

## **V.C. THE AGE FOR LICENSING ELIGIBILITY.**

50. In the Notice at paragraph 29, the Commission proposes to drop the minimum age requirement for acquiring a GMRS license, citing the absence of any age requirement in the other personal radio services. However, anyone who listens to the FRS has observed the antics of children playing with their FRS "toys," in the absence or with the lack of concern of any parental or supervisory authority.

51. That kind of behavior is undesirable and unacceptable for GMRS operations, especially given the greater range and often the greater network complexity (with repeaters) of many GMRS systems. Supervision by a (hopefully) responsible adult should always be provided, but removing any minimum age requirement for licensing sends a message that GMRS is also nothing more than "a toy." Manufacturers of FRS equipment have exacerbated the problem themselves by including various sound effects into the FRS and FRS/GMRS combo transceivers. These sound effects are for the sole purpose of providing amusement and entertainment, and serve no useful function for selective addressing or selective receiver muting.

52. If there is to be any change in the minimum age requirement, the question must be addressed: What age should be the minimum to presume an awareness of responsible conduct?

53. The Amateur Radio Service has no minimum age requirement to obtain a license. However, there IS a component on the licensing exams for each class that requires knowledge of the FCC Rules and an awareness of common operating practices. No such exam is required for the GMRS, nor for any other Personal Radio Service. Any argument that the absence of a minimum age requirement in Part 97 should apply to GMRS in Part 95 is invalid.

54. PRSG recommends retention of the current 18-year-old minimum age requirement to obtain a GMRS license. Family members under that age would still be permitted to operate, but the licensee himself/herself must assume the full responsibility for supervision over all such operations.

55. PRSG also recommends that the FCC prohibit in GMRS and FRS the manufacturing, marketing, and use of radios capable of sound effects intended to amuse or to entertain. The FCC created such rules for the CBRS in the 1960s. Practical experience in GMRS and FRS demonstrates that these features do not represent innovation, and are significantly irritating and disruptive to other users.

#### **V.D. RETAINING THE REQUIREMENT FOR PERSONAL-ONLY LICENSING.**

56. In the Notice at paragraph 30, the Commission asks:

"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, 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."

57. The current GMRS rules do not prohibit business use of GMRS devices. The rules do not prohibit communications to support the activities of, nor to provide communications assistance to, non-personal entities. Instead, the rules limit only the eligibility to obtain a new GMRS license or to modify an existing GMRS license. The comparison with the FRS is invalid, because GMRS systems can include much wider coverage and higher power stations and repeaters.

58. As the Commission has noted, once licensing requirements are removed, the FCC has no effective way to control who operates the stations or how those stations are used. Given the well-documented and long-standing problems which non-personal users have created (and continue to create) in the GMRS by failing to cooperate in sharing the service with personal and family users, the current prohibitions on non-personal licensing should be retained.

59. PRSG petitioned the FCC to reconsider the current non-personal licensing restrictions in WT-87-265 for limited situations. At paragraph 61 in this Notice, the Commission stated:

"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. ... 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 eligible for licensing in business and other radio services."

60. We concur that the Commission should retain the current personal-only eligibility for GMRS licensing. The reasons cited by the Commission (FCC Docket 87-265) are still valid.

## **VI. TRANSMITTER POWER LIMITS FOR HAND-HELD AND OTHER GMRS RADIOS.**

61. In the Notice at paragraph 31, the Commission proposes to place limits on the effective radiated power (ERP) of hand-held GMRS radios. Both mobile-type and hand-held radios have long been popular among GMRS users, but hand-held radios are viable in GMRS primarily when used in conjunction with a local GMRS repeater. The popularity of hand-held radios is not (as suggested in the Notice) something that has recently substantially increased. It is a long-term experience. Although many current GMRS hand-held radios transmit with an ERP that already falls within the proposed 2 watt ERP limit, the Commission has not established that slightly higher levels are harmful.

62. GMRS hand-held transceivers, aside from the "combo" FRS/GMRS units, are essentially identical to those also authorized and widely used in the various Part 90 PLMRS services. The 2-watt ERP limit in the low-power industrial/business services was imposed not because of concerns over human exposure limits, but rather to create a deliberate limitation on communications range. PRSG knows of no information or experience to suggest that ERP signal levels up to 5 watts ERP (a reasonable upper limit for what is available in the GMRS and Part 90 hand-held radios) have demonstrated any exposure dangers to users. These radios are used exclusively in a push-to-talk environment, and thus they have a relatively low duty cycle.

63. If the Commission wishes to establish an ERP limit for GMRS hand-held radios, it should first investigate and establish that there is actually some need for such a limit, and propose such a limit in the Part 90 PLMRS services as well. Absent such investigation and finding that 5 watts ERP presents a human-exposure threat, it is premature to propose such a restriction in GMRS.

64. The current 50 watt limit (which is based on transmitter output power, not on ERP, as the Notice mistakenly states at paragraph 31 with reference to mobile stations) has served well for many decades, and is the level around which many repeater-based systems are designed and operated. The Notice provides no justification for changing this current limit, and PRSG recommends no such change. It matters not at all whether this level is any less appropriate for a service without mandated, central coordinating.

65. Similarly, PRSG sees no benefit in considering antenna height limits. However, PRSG does believe that the FCC Rules should establish that licensees/users of wider-area-coverage repeater stations have an increased responsibility to assure that the transmissions of those stations do not cause undue interference to operations on the same frequency by stations with less site advantage, or transmission in the "direct" mode (one transceiver directly to another without going through a repeater). The Commission has (but rarely exercises) the authority in some PLMRS service to require that base and repeater stations employ "a lock-out receiver" that prevents the operation of the associated transmitter

if the transmitter's frequency is already in use. PRSG encourages the Commission to mention such an option as being available to impose on advantageously-sited repeaters if there is recurrent interference to other co-channel communications in the same general area.

66. The licensees and users of GMRS repeater systems make decisions on the location of repeater stations generally based on their desired or projected coverage range. In many cases, repeaters are installed at locations to provide a type and extent of coverage that is simply not economically justifiable or often just not available whatsoever from the providers of commercial services. This is especially true for "fleet-type" operations where multiple parties are involved in a series of communications exchanges, such as at public-service events. (In GMRS, this would include participation in a communications exchange by multiple members of the same family or by the same public-service group.)

67. The justification for repeaters in GMRS is the same as that for any of the Part 90 PLMRS services. Unless the Commission is proposing to inquire as to the continuing need for repeaters in the Part 90 PLMRS services, there is no justification to propose changes in the availability and use of repeaters in the GMRS. Repeater usage is an integral and necessary component of many GMRS systems.

68 The Government Accountability Office (GAO) also notes the problem that exists when cellular coverage is lacking:

"Constructing and maintaining [wireless phone] infrastructure can be cost prohibitive due to low population density, difficult topography, or lack of existing infrastructure such as power sources and wireline infrastructure. ... When it is not possible or desirable for a carrier to build out in these areas, coverage can be inconsistent or nonexistent."<sup>1</sup>

69. GMRS users need the continuing ability to create, install and operate repeater-based systems intended to satisfy their own communications needs, and not be locked into what may be the limited availability or higher cost of communications services from commercial providers. Some of these systems are in areas where commercial-provider service is simply not available.

70. A change in the power limit for small control stations, as the Notice proposes at paragraph 35, is reasonable, but should include the requirement that control stations should still employ the minimum power needed for satisfactory communications. In our experience, there is rarely a situation in which even a conventional control station needs to employ more than 5 watts transmitter output power.

## **VII. NARROWBANDING GMRS CHANNELS.**

71. There is a massive "installed base" of GMRS stations operating with a maximum of 5 KHz deviation, for which a 25 KHz channel spacing is desirable and necessary. PRSG notes that the evolution toward narrowbanding in the Part 90 services has been going on for nearly three decades. In GMRS, operation of narrowbanded FRS communications at both 462 MHz and 467 MHz has been under way for a decade and a half, but there has never before been an FCC proposal for narrowbanding GMRS.

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<sup>1</sup> GAO, "Enhanced Collection Could Help FCC Better Monitor Competition in the Wireless Industry," Report GAO 10-779, July 27, 2010, page 33.

72. Will GMRS stations eventually be narrowbanded? Yes, but with the current installed base, not for at least another couple of decades. As consumer devices, GMRS radios cannot not be replaced as a matter of normal cycling and obsolescence. For example, there are still in use thousands of CB radios first type-certificated under the pre-1976 rules. There are likely to be 5 KHz deviation radios used in GMRS for a similar extended period of time.

73. The appropriate approach would be for the Commission to establish that it will eventually require narrowbanding of all GMRS channels, but with an ample period of time allowed for conversion. Placing a short-term limit on the manufacturing or (especially) the marketing of narrowbanded GMRS equipment would deprive the GMRS user community of the benefit of acquiring conventional 5 KHz-deviation radio equipment shortly to be prohibited in the Part 90 services. The availability of such used equipment plays an important role in getting new GMRS systems on the air, and in expanding older GMRS systems to meet a broader user constituency and increase the service profile.

#### **VIII. FIXED STATION OPERATIONS IN GMRS.**

74. "Fixed" stations in GMRS are those land stations at specified or temporary locations that communicate with fixed stations at other specified or temporary locations. Regulation of "fixed" stations in GMRS is a relic from the past, when the FCC required that the GMRS be used primarily for mobile-to-mobile and base-to-mobile operations. PRSG supported (and continues to favor) GMRS use for such "mobile-involved" communications, but the FCC has decided to remove limitations on "point-to-point" communications.<sup>2</sup>

75. When the FCC licensing database for GMRS still included information about fixed-station authorization, PRSG determined from that data that there remained at that time only three GMRS licenses nationally that still authorized fixed-station operation. Two of those three systems were for essentially the same stations just authorized to two different families (thus needing separate licenses).

76. The FCC can and should remove all reference to fixed-station operation from the GMRS rules. These provisions and limitations are simply no longer needed.

#### **IX. GARMIN INTERNATIONAL, INC. PETITION FOR RULEMAKING.**

77. As noted in the Notice at paragraph 41, PRSG and others have long opposed the expansion of GPS and text transmissions in the GMRS. Since these transmissions are already permitted on the seven non-paired GMRS "interstitial" channels at 462 MHz shared with the FRS (namely, 462.5625 MHz, 462.5875 MHz, etc. up to 462.7125 MHz), PRSG would accept a change to allow GMRS hand-held stations to transmit location data and brief text messages on any of these seven 462 MHz channels, but with the higher power permitted for GMRS (five watts maximum).

78. The Notice (at paragraph 40) suggests that GPS transmissions at the slightly higher power permitted of GMRS hand-held stations would result in coverage over a larger area. This would unlikely be the case. The incremental increase in coverage would be small at best, and more likely would be nearly negligible.

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<sup>2</sup> Report and Order, WT Docket 87-265.

79. The Commission should instead open an inquiry as to how any communications system transmitting GPS and data (text) communications should be authorized and designed to maximize the public benefit. The Commission should address at least the following questions:

➔ **A. What spectrum would be most suitable and appropriate for such communications?** The low-power and integral-antenna requirements of the FRS are not appropriate for the kind of extended communications range sought by Garmin or suggested by the Commission in the Notice. A more appropriate place in the radio spectrum would be on the channels allocated to the MURS at 150 MHz. The higher power, lower frequency band, and detachable antennas permitted in MURS would create a much more favorable operating environment for such a communications capability, especially one used in a rural operating environment where 150 MHz transmissions can have a much greater range than those at 462 MHz for equivalent power levels and antenna heights.

➔ **B. Why should proprietary data-encoding formats be permitted at all?** If this kind of communications capability is to become truly useful, a data-encoding format available to all manufacturers should be required. PRSG notes that such a format has already received popular support in the Amateur Radio Service (ARS) for APRS (Automatic Packet Reporting System) communications. At least three manufacturers of ARS radios, ICOM, Kenwood and Yaesu (each of which also has a commercial product line for Parts 90 and 95), currently offers or expects soon to offer a hand-held radio model which has such an APRS option. APRS requires an infrastructure support that is unlikely to exist anytime soon for FRS/GMRS, but at least these manufacturers are aware of this potential consumer market.

➔ **C. What additional rulemaking should the FCC consider** to create and encourage a more utilitarian, consumer-benefiting radio service? MURS currently permits the technical operating parameters to enable such GPS- and-data communications without the need for additional rulemaking or rules changes.

80. Before the Commission considers any expansion or enhancement of a GPS-based, consumer-available communications system, especially one which could set the precedent for a burgeoning future consumer market, it should first address these and other related questions. Merely to extend a current program of limited utility, intrinsically extremely short range, and based solely on a proprietary data-encoding protocol would be a serious long-term mistake.

## **X. RADIOS CAPABLE OF OPERATING IN MULTIPLE SERVICES.**

81. PRSG shares the concern (expressed in the Notice at paragraph 46) about the effect of permitting unlicensed (license-by-rule) FRS radios to include a capability of operating in any other radio service that requires an FCC license. PRSG believes that this concern should carry over to the combination of FRS and GMRS radios as well. The explosion of unlicensed operation in the GMRS began when the Commission authorized the manufacture and marketing of combination ("combo") FRS/GMRS radios.

82. This change occurred without any opportunity for public comment, and violated a decades-old FCC policy of prohibiting the manufacturing and the marketing of any transceiver authorized to transmit in a licensed service as well as in an unlicensed service. (This policy originated when some licensed CBRS

radios were combined with Part 15 radios permitted then to operate on the same 27 MHz frequencies.) 83. PRSG supports a change to conform with that existing non-combination policy, and to establish an early cut-off date (recommended: end of 2010) for any continuing manufacturing of such combination FRS/GMRS radios.

84. With regard to prohibiting licensed multiple-service capabilities in the GMRS, PRSG recommends that no prohibition be imposed. There are useful circumstances in which the operator may be authorized in GMRS and in one of the other UHF PLMRS services. Having available a single radio that can perform under multiple licenses is a user benefit that we believe has not been significantly abused and should not be restricted.

## **XI. THE USE OF CB DIRECTIONAL ANTENNAS.**

85. The Notice at paragraph 57 requests recommendations about prohibiting the use of directional antennas in the CBRS. PRSG objects to any such prohibition, and notes that the use of directional CB antennas has facilitated the location of travelers reporting some emergency but uncertain of or unable to report their exact location.

## **XII. TRANSMITTER OUTPUT POWER OF GMRS STATIONS OPERATED NORTH OF LINE A OR EAST OF LINE C.**

86. In the Notice at Appendix B (Proposed Rules), Subpart B (Technical Information), paragraph 95.35(b)(2) (which is mislabeled by sequence), the Commission proposes to limit the transmitter output power of all GMRS stations operated North of Line A or East of Line C to a maximum of 5 watts ERP. No such limitation currently exists for GMRS stations, except for small control stations operated North of Line A or East of Line C. (All small base stations are currently limited to a maximum of 5 watts ERP, whether or not operated North of Line A or East of Line C.)

87. GMRS stations (other than small control stations and small base stations) have always been authorized to transmit at 50 watts transmitter output power in these areas. The Commission offers no justification for such a change. The PRSG strenuously opposes this proposed new restriction, and strongly objects to the Commission's proposing this restriction without having announced or discussed it in the Notice's Section III.

88. In recent years, the FCC has prohibited GMRS operations on 462.650 MHz, 462.700 MHz, 467.650 MHz, and 467.700 MHz for any station located North of Line A or East of Line C, to protect certain PLMRS-type stations in Canada. The Canadian counterpart to the FCC (IC, Industry Canada) relocated those Canadian stations to other frequencies when it created its own FRS-equivalent service. Therefore, this restriction on operations of GMRS stations North of Line A or East of Line C is no longer needed and should be dropped.



### **XIII. ANTENNA HEIGHT LIMITS FOR GMRS STATIONS LOCATED NORTH OF LINE A OR EAST OF LINE C.**

89. In the Notice at Appendix B (Proposed Rules), Subpart B (Technical Information), paragraph 95.45(a)(3), the Commission proposes to limit the maximum height of all new GMRS stations located North of Line A or East of Line C to a height of no more than 20 feet above ground or above the building or tree on which it is mounted.

90. All GMRS stations (except for small control stations and small base stations) located North of Line A or East of Line C are currently and have always been permitted to transmit with antenna heights up to that permitted to GMRS stations located South of Line A or West of Line C. The Commission has provided no justification for this new restriction. The PRSG strenuously opposes this proposed new restriction, and strongly objects to the Commission's proposing this restriction without having announced or discussed it in the Notice's Section III.

### **IXV. TRANSMITTER OUTPUT POWER OF MURS STATIONS.**

91. In the Notice at Appendix B (Proposed Rules), Subpart B (Technical Information), paragraph 95.35(h), the Commission proposes to limit the output power of all MURS stations to 2 watts ERP. The original rules governing the MURS did indeed establish this limit. However, in response to several petitions for reconsideration, the FCC changed this to 2 watts of transmitter output power.

92. In this Notice, the Commission has provided no justification for this change back to the original authorization, transmitter power measured in ERP. PRSG recommends retention of the current specification in transmitter output power, at we discuss in our earlier Petition for Reconsideration.

### **XV. ANTENNA DETACHABILITY FOR GMRS HAND-HELD RADIOS.**

93. In the Notice at Appendix B (Proposed Rules), Subpart B (Technical Information), paragraph 95.45(a)(4), the Commission proposes to require that the antennas of hand-held GMRS units must be an integral part of the transmitter. The antenna must have no gain (as compared to a half-wave dipole) and must be vertically polarized.

94. GMRS licensees currently have and often use the ability to connect hand-held GMRS transceivers to external antennas, for example mounted on the roof of the vehicle or the building from within which the transceiver is operated. This can significantly extend the coverage area of the mobile station. This also allows a flexibility to use a single hand-held transceiver in multiple locations

95. No such restrictions currently exist for GMRS hand-held units (except for those combined with an FRS hand-held radio). The Notice provides no justification for such a new requirement. The PRSG strenuously opposes this proposed new restriction, and strongly objects to the Commission's proposing this restriction without having announced or discussed it in the Notice's Section III.

## **XVI. RULE SECTIONS DESIRED FOR RETENTION.**

96. The Notice at Appendix C proposes the removal or deletion of several sections of the current rules without replacement or inclusion in new rule parts. Some of these deletions are inconsequential, but other contain language that PRSG feels should be retained, even if relocated.

### **XVI.A. THE CURRENT 95.21 AND 95.23 DEFINE THE ESSENCE OF THE GMRS.**

97. The GMRS rules have gone through many changes over the years, but the basic intent has always been to serve the mobile communications needs of its users. Current rule section 95.21 establishes this basic concept, and should be retained. Section 95.23 defines a mobile station unit.

### **XVI.B. THE CURRENT 95.33 ESTABLISHES AND LIMITS THE CONDITIONS FOR NON-PROFIT SHARING.**

98. Over the decades since World War II, the Commission's various Part 90 (etc.) and Part 95 PLMRS radio services have struggled to establish a reasonable distinction between private and public carriage. This distinction is especially important in the GMRS because of the wide usage of cooperatively shared stations (especially repeaters).

99. The language of the current rule section 95.33 should be retained to carry forward this important information.

### **XVI.C. THE CURRENT 95.105 ESTABLISHES AN IMPORTANT REQUIREMENT FOR STATION IDENTIFICATION.**

100. GMRS can be distinguished from all other PLMRS-type stations by the degree to which there is a need for and capability of communications between stations operating under different licenses. The GMRS rules formerly included the requirement that each UNIT of a mobile station must identify separately. Compliance with this requirement benefited GMRS users in distinguishing intra- and inter-licensee communications, and should be returned to the GMRS rules.

### **XVI.D. THE CURRENT 95.139 PROHIBITS THE EXPANSION OR MAJOR MODIFICATION OF GMRS LICENSES ISSUED TO NON-PERSONAL LICENSEES.**

101. The rules must continue to prohibit new or expanded operation of GMRS stations authorized under prior versions of the Rules to “grandfathered”: non-personal licenses. The current 95.139 continues this prohibition, and should be retained.

### **XVI.E. THE CURRENT 95.143 ESTABLISHES IMPORTANT CRITERIA REGARDING EMERGENCY COMMUNICATIONS.**

102. The proposed 95.9 should be expanded to include the additional provisions of the current 95.143 concerning permissible station operators and points of communication during an emergency.

#### **XVI.F. THE CURRENT 95.171 ESTABLISHES IMPORTANT DUTIES FOR STATION OPERATORS.**

103. The language of the current 95.171 is needed to explain the legal obligations of the station control operator. This is especially necessary for the operation of repeaters.

#### **XVI.G. THE CURRENT 95.179 ESTABLISHES ELIGIBILITY STANDARDS FOR STATION OPERATORS.**

104. The language of the current 95.179 is needed to establish and limit operating authority under a GMRS license. This language should be retained.

#### **XVII. TIMING OF THIS NPRM.**

105. Most experienced GMRS licensees rightfully view this NPRM as proposing to take away many long-enjoyed benefits and capabilities, often with little real justification or even a clear FCC explanation or discussion. The already-filed public comments express disappointment, disapproval and outrage at many of these proposals.

106. At a time when polls show that the general public expresses so much hostility toward the federal government, does the Commission really think that the GMRS user public will calmly or passively accept these new restrictions and prohibitions without vigorous protest?

107. How should the Commission expect GMRS licensees who still support licensing, self-regulation and disciplined use of GMRS respond to these major losses of privileges? The rules proposed in this NPRM, if the FCC adopts them, will inevitably alienate one of the few groups of personal-use licensees who still support federal licensing and control of this public resource.

#### **XVIII. CONCLUSIONS.**

108. Many of the proposals affecting GMRS in this Notice create limits and prohibitions that appear to be entirely arbitrary and capricious. PRSG recommends that the *entire* Notice be withdrawn, and that work on proposing changes to GMRS and FRS be started entirely anew. The present Notice is so flawed that we believe it cannot and should not be salvaged.

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