

July 25, 2018

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Written Ex Parte Presentation in WT Docket No. 10-119

Dear Ms. Dortch:

Pending before the Federal Communications Commission (“FCC” or “Commission”) is a Petition for Partial Reconsideration¹ filed by Motorola Solutions, Inc. (“Motorola Solutions” or “MSI”) in WT Docket No. 10-119. Motorola Solutions urges the Commission to act favorably on the *Recon Petition* in order to enable automatically initiated transmissions of GPS location data in the 462/467 MHz frequencies that are shared by the General Mobile Radio Service (“GMRS”) and the Family Radio Service (“FRS”). In support of that outcome, Motorola Solutions provides the following clarifications and recommendations on the rule changes needed for allowing automatic transmission of geo-location data in these two services.²

As MSI has previously explained, enabling automatic transmissions of GPS coordinate data on GMRS and FRS channels will allow individuals to better track the location of friends and family members in outdoor locations, primarily where commercial wireless network coverage is lacking such as woods and forests, state and national parks, and ski slopes.³ Because these location-based applications are intended to be used when “off the grid,” they are not expected to replace more popular “Find-a-Friend” applications found on commercial wireless devices, which provide much greater range than is possible in the GMRS and FRS services. Thus, the true value of GMRS and FRS tracking will be in remote areas where these expanded capabilities will aid search and rescue missions for skiers, backpackers, and hunters that may become lost in the great outdoors. These applications will enhance public safety.

¹ Petition for Partial Reconsideration, Motorola Solutions Inc., WT Docket No. 10-119, submitted September 28, 2017 (*Recon Petition*). See also, *Review of the Commission’s Part 95 Personal Radio Service Rules*, WT Docket No. 10-119, *Report and Order*, 32 FCC Rcd 4292 (2017) (*2017 Report and Order*).

² Throughout the proceeding, MSI had requested that the GMRS rules be amended to allow automatic transmissions of GPS coordinate data. That terminology was accurate under the legacy rules for the two services. However, 2017 Report and Order modified the scope of this proceeding by providing FRS full access to all 462 MHz frequencies, including those that were previously assigned exclusively to the GMRS, and provided GMRS access to the 467 MHz interstitial channels that were previously available only to FRS. As the two services coexist on the same frequencies (except for the GMRS 467 MHz main channels), it is now appropriate to consider harmonized operational service rules.

³ See Further Comments of Motorola Solutions, Inc., WT Docket No. 10-119, submitted January 8, 2018 at 1, 2.

Permitting automatically generated data transmissions in the FRS and GMRS services requires very few rule changes because, as Motorola Solutions noted in its *Recon Petition*, “[a]lmost all of the issues surrounding the provision of allowing manually generated data transmissions in the GMRS apply equally to transmissions initiated automatically.”⁴ Therefore, enabling automatically generated data transmissions could be accomplished by simply removing the distinction in the rules between manually generated transmissions and automatically generated transmissions and allowing both modes to operate under the same parameters. Motorola Solutions notes that the Multi-Use Radio Service (“MURS”), which is also a Personal Radio Service regulated under Part 95 of the Commission’s Rules and very similar in scope and utility to the GMRS and FRS services, allows data transmissions without distinction in how those messages are originated.⁵ Motorola Solutions urges the Commission to adopt a similar approach for the FRS and GMRS services.

However, Motorola Solutions also recognizes that the record in this proceeding has raised issues regarding whether duty cycle limits would enhance the ability of automatically generated data transmissions to better coexist with voice operations and whether certain GMRS channels should be prohibited from data transmissions. To that end, the existing rules governing manually generated data transmissions limit such transmissions in the FRS and GMRS services to 1 second in duration and require a minimum transmission interval of 30 seconds.⁶ In addition, the existing GMRS rules prohibit data transmissions on the 467 MHz main channels, which serve as the input frequencies for GMRS repeater stations.⁷

During the course of this long proceeding, comments have been filed that recommend different duty cycle limits for automated transmissions. For example, one comment suggested limiting the duration of digital data transmissions to 5 seconds with a minimum interval between transmissions of 2 minutes.⁸ In previous comments and *ex parte* submissions, MSI has stated that it would not oppose reasonable conditions to control the duty cycle of automated data transmissions while noting that data transmission of GPS coordinates would typically occupy a GMRS channel for “approximately 1-2 seconds” and that “allowing periodic transmissions every 30-60 seconds should not result in channel congestion.”⁹

Most recently, two entities representing the interests of GMRS repeater users filed comments to provide their perspectives on MSI’s *Recon Petition*.¹⁰ RepeaterFinder and NCGUG both state that they support MSI’s *Recon Petition* as permitting automatic data transmissions on GMRS frequencies is “in the best interests of the GMRS community.”¹¹ However, both parties also recommend the adoption of certain

⁴ *Recon Petition* at 4.

⁵ See 47 C.F.R. § 95.2731 of the Commission’s Rules.

⁶ See 47 C.F.R. §§ 95.2731 of the Commission’s Rules.

⁷ See 47 C.F.R. § 95.1787(a)(5) of the Commission’s Rules.

⁸ Ex Parte Letter from Gregg P. Skall, representing Uniden America Corp., to Marlene H. Dortch, Sec’y, Federal Communications Commission, WT Docket No. 10-119, filed June 11, 2015.

⁹ Further Comments of Motorola Solutions, Inc., WT Docket No. 10-119, filed January 8, 2018.

¹⁰ Reply Comments to the Petition for Partial Consideration, Northern California GMRS Users Group (NCGUG), WT Docket No. 10-119, filed July 15, 2018 (“NCGUG Reply Comments”). Reply Comments of RepeaterFinder Inc., WT Docket No. 10-119, filed June 19, 2018 (“RepeaterFinder Reply Comments”).

¹¹ *Id* at 1.

restrictions designed to protect GMRS operations. For example, RepeaterFinder asks the Commission to approve automatic data transmissions in the GMRS with these three main conditions:¹²

- Limit automatic data activity to the 462 MHz GMRS frequencies to prevent interference to GMRS repeater input frequencies in the 467 MHz band.
- Require a Busy Channel Lockout feature to prevent an automatic data transmission until the radio detects that the channel is free.
- Restrict message duration and repetition in a manner consistent with the recommendations cited above (5 second transmission duration and 2 minute intervals between transmission).

RepeaterFinder states that these limits can be eased if a Busy Channel Lockout feature is utilized.

NCGUG recommends these same three conditions but also recommends that the FCC require a time-out feature that stops automatic transmissions if the radio is no longer in motion.¹³ NCGUG also asks that the Commission prevent continuous use or use by non-persons as NCGUG is concerned that GMRS automatic devices could be used in commercial applications to track shipping containers or other assets.¹⁴

Motorola Solutions appreciates the positions and interests of NCGUG and RepeaterFinder and, from an operational perspective, does not fundamentally oppose any of the recommended restrictions. The broader question, however, is whether each of these recommendations could be effectively implemented into the rules in an enforceable manner that does not restrict innovation. Below, Motorola Solutions addresses each of the issues raised by these two commenters.

First, Motorola Solutions would support adoption of rules that prohibit the automatic transmission of data on the 467 MHz channels assigned to both GMRS and FRS. MSI recognizes the investments made by the GMRS community in developing and maintaining GMRS repeater networks and believes that ample capacity for data transmission should exist in the 462 MHz band. Therefore, Motorola Solutions agrees that data transmissions should continue to be prohibited on the 467 MHz main channels that are assigned to the GMRS. Motorola Solutions notes, however, that FRS devices are not restricted from sending manually initiated transmissions on the 467 MHz interstitial channels. Motorola Solutions does not support eliminating that existing flexibility from the rules for FRS devices but instead recommends that the provision should also apply to GMRS devices operating on the 467 MHz interstitial channels.

Second, Motorola Solutions fully intends to implement technology that would sense channel occupancy before sending an automatically generated data transmission and would hope that all other manufacturers follow suit. That said, Motorola Solutions questions the enforceability and practicality of adopting such a requirement into the FCC rules. Imposing a simple requirement that “devices shall employ technology to monitor channel usage before initiating an automatically generated data transmission” becomes little more than a “check the box” exercise during the equipment certification process as neither the Technical Certification Bodies or the equipment test laboratories will be able to attest to its efficacy without defined standards. Specifying performance specifications for such technology would be a non-trivial matter and would be unlikely to be replicated in remote, off-the-grid locations that are difficult radio environments. Therefore, despite the fact that it fully intends to deploy channel sensing technology, Motorola Solutions recommends that the Commission leave implementation and adoption of this type of technology to the marketplace.

¹² Reply Comments of RepeaterFinder Inc. at 2, 3.

¹³ NCGUG Reply Comments at 4.

¹⁴ *Id.*

Third, as previously indicated, Motorola Solutions would not oppose “duty cycle” limits that address both transmission duration and the required interval between multiple transmissions. The current rules for manually initiated data transmissions specify 1 second duration at 30 second intervals. Both NCGUG and RepeaterFinder instead appear to support a 5 second maximum transmission duration and a 2 minute minimum interval. Motorola Solutions notes that the latter recommendation would allow greater channel occupancy for automatically generated data transmissions (4.16%) than the current rules do for manually generated transmissions (3.3%). When extended over a one hour period, the 5 second/2 minute proposal would allow automatically generated data transmissions to occupy a channel for 150 seconds over 1 hour whereas the Commission’s existing rule would allow for a total channel usage of 120 seconds over 1 hour. Either way, both of these standards would assure very low occupancy.

For automatically generated data transmissions, Motorola Solutions believes that the existing rule that sets a maximum transmission duration of 1 second and a minimum interval of 30 seconds between transmissions would be acceptable. One desirable compromise to the existing rule would be to extend the maximum duration from 1 to 2 seconds to accommodate slightly more complex data messages. If so, the minimum interval between repeated transmissions could be extended from 30 seconds to 60 seconds to maintain an equivalent channel occupancy as the existing rule.

Fourth, Motorola Solutions does not support the requirement of a time out feature for the very reason raised by NCGUG. It would be a tragic outcome if, for example, an injured skier incapable of moving and separated from his or her device were unable to be rescued because the radio stopped pinging its location due to a time-out feature. Motorola Solutions is also unconvinced that a burgeoning market exists for repurposing GMRS and FRS radios into asset tracking devices to warrant the adoption of rules prohibiting such behavior. The limited range of these devices make them unlikely to supplant other commercial solutions on a wide-scale basis.

Motorola Solutions appreciates the Commission’s continued attention to this proceeding. If there are any questions regarding this matter, please contact me.

Respectfully Submitted,

/s/ Frank Korinek

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