

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Implementing Public Safety Broadband Provisions of the Middle Class Tax Relief and Job Creation Act of 2012)	PS Docket No. 12-94
)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band)	PS Docket No. 06-229
)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands)	WT Docket No. 06-150
)	

COMMENTS OF MOTOROLA SOLUTIONS, INC.

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Motorola Solutions, Inc. (“MSI”) hereby submits these Comments in response to the Federal Communications Commission’s (“Commission”) Notice of Proposed Rulemaking¹ that is intended to implement provisions of the Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”).² As further discussed below, MSI supports the Commission’s efforts to adopt rules and policies that will expedite the availability of public safety broadband services in the 700 MHz band.

I. INTRODUCTION AND EXECUTIVE SUMMARY.

The Spectrum Act was a momentous event for improving public safety communications in the United States. By providing spectrum, a governance structure and significant levels of

¹ See Implementing Public Safety Broadband Provisions of the Middle Class Tax Relief and Job Creation Act of 2012, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, *Notice of Proposed Rulemaking*, PS Docket Nos. 12-94, 06-229, WT Docket No. 06-150, 28 FCC Rcd 2715 (2013) (“Notice”).

² Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156 (2012) (“Spectrum Act”).

funding, Congress created a tremendous opportunity to turn the promise of a nationwide broadband network designed for public safety needs into reality. MSI is committed to working with the Commission, the National Telecommunications and Information Administration (“NTIA”), the First Responder Network Authority (“FirstNet”), our customers and all public safety stakeholders in achieving the shared goal of developing a nationwide interoperable broadband network.

Among its many actions, the Spectrum Act mandated the reallocation of the Upper 700 MHz D Block spectrum from commercial to public safety broadband use³ and established FirstNet to oversee the development and construction of a public safety broadband network in the 700 MHz band.⁴ The Spectrum Act directed the Commission to issue a single license to FirstNet for the combined public safety broadband spectrum comprised of the 700 MHz D-Block (758-763/788-793 MHz) and the previously allocated public safety broadband spectrum (763-769/793-799 MHz). The Spectrum Act also authorized the Commission to evaluate requests for renewal of FirstNet’s license and to take all actions necessary to facilitate the transition of the spectrum to FirstNet.⁵

The instant Notice seeks to facilitate the implementation of these policies. First, the Notice seeks to harmonize under Part 90 the technical and operational rules applicable to the public safety broadband spectrum and the 700 MHz D Block (which was formerly covered by Part 27 of the Commission’s rules).⁶ In addition to merging the relevant Part 27 and Part 90 rules, the Notice seeks comment on whether to modify certain technical provisions for the

³ Spectrum Act § 6101.

⁴ *Id.* § 6202.

⁵ *Id.* § 6201.

⁶ *See* Notice at Section III.A.

combined public safety broadband spectrum. The Notice also seeks comment on how the Commission should exercise its statutory obligation to review FirstNet's performance to determine whether it should qualify for renewal at the expiration of its initial license term.⁷ Finally, the Notice seeks comment on how to transition existing incumbent users to provide unencumbered spectrum for FirstNet's deployment of the nationwide public safety broadband system.⁸

MSI supports many of the Notice's proposals and urges the Commission to move swiftly in adopting final rules that will pave the way for public safety broadband deployment. MSI recommends herein modest changes to the Commission's proposals that are designed to aid the Commission in establishing rules that support FirstNet's crucially important mission while giving it the necessary flexibility to carry out its obligations under the Spectrum Act.

Specifically, MSI supports the Commission's proposals to bring the D Block spectrum under Part 90 of the rules and provides several recommendations on appropriate changes to enable more efficient and effective use of the available spectrum. Regarding FirstNet's licensing renewal requirements, MSI urges the Commission to exercise its statutory obligations to oversee FirstNet's performance in managing the development of the nationwide broadband network. To that end, MSI recommends that the Commission establish tentative construction and performance benchmarks for FirstNet and require FirstNet's reports to be made public for notice and comment. This process will provide the Commission with valuable input for assessing whether FirstNet has satisfied all requirements, including compliance with recommended minimum

⁷ *Id.* at Section III.B.

⁸ *Id.* at Section III.C.

technical requirements,⁹ and warrants license renewal. Finally, MSI urges that 700 MHz narrowband relocation costs be considered an eligible expense of broadband deployment.

II. COMMENTS ON TECHNICAL SERVICE RULES FOR THE PUBLIC SAFETY BROADBAND NETWORK

MSI agrees that the Commission should unify the technical service requirements applicable to the public safety broadband spectrum and D block spectrum.¹⁰ In doing so, it is critical that the Commission set technical standards for the public safety broadband network that minimize harmful interference to other operators while maximizing the spectrum's utility. MSI sets forth below recommended technical parameters for power limits, emission limits, field strength limits, interference coordination, guard bands and equipment certification.

A. Power and Antenna Limits.

Noting that the previously adopted rules for the Upper 700 MHz D Block and the public safety broadband spectrum specified substantially identical requirements for power and antenna height limits, the Notice proposes to consolidate the requirements into a single Part 90 rule section.¹¹ In so doing, the Notice seeks comment on whether the previously adopted power strength, antenna height limits and prescribed power measurement techniques are appropriate for the expanded public safety broadband allocation or are modifications necessary.¹² The Notice also notes that the legacy rules establish a 3 watt power limit for hand-held devices and seeks

⁹ The Spectrum Act requires FirstNet to build, maintain and operate its network without materially changing the minimum technical requirements for interoperability as developed by the Public Safety Interoperability Board. Spectrum Act at § 6206(b)(1).

¹⁰ Notice at ¶ 17.

¹¹ *Id.* at ¶ 19.

¹² *Id.*

comment on whether this is excessive given that LTE standards define much lower levels for hand-helds.¹³

MSI supports the Commission's tentative proposal to use the power strength and antenna height limits set forth in Section 90.542(a) across the expanded public safety broadband allocation, with the notable exception of the guard band spectrum at 768-769/798-799 MHz.¹⁴ In addition, MSI supports maintaining the ERP limits for mobile stations and portable stations at 30 Watts ERP and 3 Watts ERP respectively.

The "Public Safety Broadband High Power UE for Band 14 for Region 2" feature was added to 3GPP Release 11 in December, 2012.¹⁵ This change defines a 31dBm (*i.e.* 1.2 Watts) limit for 3GPP Power Class 1 user devices. However, the 3GPP standards apply to transmitter power while the Commission's Rules specify ERP limits. While it is usually true that portable devices with integrated antennas, such as typical smart phone devices, have negative antenna gains and thus will have a lower ERP than the transmitter output power, mobile radios (*i.e.*, as distinguished from portable, handheld units) may have antennas with 3 to 5 dBi of gain. Such high gain/high powered operations are often necessary. For example, command vehicles often require highly directive antenna producing up to 30 watts ERP to maintain very high throughput back to a cell site. The 31dBm 3GPP Power Class 1 has the same spectral emission mask requirements as the 23dBm Power Class 3, which mitigates interference to neighboring LTE and Public Safety bands. At the same time, the higher power LTE devices improve spectral efficiency and coverage range, especially in rural deployments with large inter-site distances and

¹³ *Id.* at ¶ 20.

¹⁴ *Id.* MSI discusses guard band operations at Section II.E *infra*.

¹⁵ 3GPP RP-121581 Status report for WI Core Part: Public Safety Broadband High Power UE for Band 14 for Region 2.

low user density.¹⁶ For these reasons, the relatively high ERP limits for mobile and portable devices should be maintained.

The Commission also seeks comment on appropriate ground level power flux density limits in the vicinity of base or fixed stations.¹⁷ MSI supports the consolidation of 90.542(b) and 27.55(c) and maintaining the power flux density limit at 3000 microWatts per square meter even though the bandwidth is expanded to 10 MHz. In the 800 MHz band, the 3000 $\mu\text{W}/\text{m}^2$ limit has proven to be an effective compromise between service and interference prevention. While the level does not prevent interference in all cases, it is an effective standard to trigger the initiation of mitigation work.

B. Emission Limits.

Noting that out-of-band emission (OOBE) limits can limit interference to other licensees in adjacent frequency bands, the Notice requests input on the appropriate OOBE limits for transmitters operating in the expanded public safety broadband spectrum allocation.¹⁸ The Notice includes discussion and considers separately the emissions that fall into: 1) the adjacent public safety narrowband spectrum at 769-775/799-805 MHz, 2) the Global Positioning Satellite spectrum at 1559-1610 MHz, and 3) the spectrum bands adjacent to the public safety allocation (i.e., below 758 MHz, between 775 and 788 MHz and above 806 MHz). In adopting OOBE

¹⁶ As further discussed in Section II. E *infra*, the technical rules for the public safety broadband spectrum should not be extended to the internal public safety guard band at 768-769/798-799 MHz in order to minimize interference with 700 MHz narrowband operations. Motorola does support using the guard band spectrum for low power devices that complement public safety operations while posing little risk of interfering with either broadband or narrowband devices.

¹⁷ Notice at ¶ 21.

¹⁸ *Id.* at ¶ 22.

rules for the expanded public safety broadband spectrum, the Commission should not reduce the interference protection provided to other vital public safety communications services.

In general, MSI supports retaining the existing OOB levels and consolidating the previously adopted standards into a revised Section 90.543 that pertains to the entire expanded public safety broadband allocation. MSI strongly opposes any reduction in the protection afforded to public safety narrowband systems. Such systems will provide mission critical public safety services for the foreseeable future and should be neither considered “secondary” to public safety broadband networks nor subjected to increased risk of interference.¹⁹

Public safety broadband spurious emissions, including harmonics, also can be a source of interference to nearby Global Positioning Satellite (GPS) L1 receivers. As the Commission knows, GPS is a critically important service to public safety as well as a wide range of consumer, enterprise, and government applications. To adequately protect these GPS receivers, MSI supports retaining the legacy OOB levels with the phrase “including harmonics” in the consolidated requirements.

C. Field Strength Limits.

Acknowledging that the Spectrum Act contemplates the possible deployment of more than one radio access network in the public safety broadband spectrum, the Notice asks whether the Commission should establish field strength limits at the geographic boundary of an operator’s service area.²⁰ Such limits are designed to mitigate the potential for harmful interference with geographically adjacent operations using the same frequencies. Field strength

¹⁹ FirstNet and State broadband network operators could always negotiate reduced interference protection, including relaxed OOB limits, with narrowband licensees based on unique deployment circumstances.

²⁰ Notice at ¶ 26.

limits will be important to the coexistence of various state deployments within the integrated FirstNet system.

Given the likelihood that there will be more than one network operating in the public safety broadband spectrum, it makes sense to adopt field strength limits at service area borders. This will preserve opportunities of States that may choose to opt out of the FirstNet network and deploy their own radio access network. Currently, Part 27 rules establish a relatively high field strength level of 40 dB μ V/m for geographically adjacent commercial networks. Such a level is sufficient to cause interference, thus, deployments near service area boundaries require licensee coordination. MSI believes that this process would work for public safety broadband operators as well and therefore urges the Commission to adopt the 40 dB μ V/m field strength limit. Of course, the rules should allow for negotiated agreements between operators based on different levels.

D. Interference Coordination.

The Notice seeks comment on whether the Commission should impose additional interference coordination requirements between FirstNet (and other users of the expanded public safety broadband spectrum) and adjacent band commercial wireless networks.²¹ The Notice also seeks comment on the need for coordination requirements with incumbent narrowband users of the public safety broadband spectrum.²² MSI believes that mandating coordination requirements for public safety broadband users would be unnecessary and could limit deployment flexibility

Clearly, coordination and cooperation between network operators provides benefits in terms of minimizing interference risks before they are created. MSI does not believe, however, that such coordination should be imposed by rule, but should instead be implemented as a design

²¹ Notice at ¶ 27.

²² *Id.*

guideline. Mandated coordination and even co-location requirements may restrict public safety broadband site placement flexibility, increasing site acquisition and maintenance costs. Further, 3GPP industry standards for OOB and blocking performance already limit the scenarios in which interference between spectrally adjacent broadband systems impacts performance.

E. 700 MHz Public Safety Guard Band.

The Notice states that the Spectrum Act directs the Commission to issue a license to FirstNet that includes the spectrum previously identified as guard band between the public safety narrowband and broadband allocations. Currently, this spectrum is not designated for an operational use under the Rules. The Notice proposes to maintain the current restrictions but seeks comment on this matter.²³ The Commission should take no actions with respect to the guard band that would jeopardize the continued interference-free availability of the public safety narrowband spectrum.

The Commission should not extend the technical rules that will be adopted in this proceeding for public safety broadband transmitters into the 768-769/798-799 MHz guard band. The interference concerns that led to the establishment of the guard band have not been mitigated by the establishment of FirstNet or the reallocation of the D Block. While the Spectrum Act did permit the Commission to adopt flexible usage requirements for the narrowband spectrum in anticipation of its possible integration into the broadband network, such considerations are very premature given the status of performing mission critical voice operations over broadband networks. Because the need for narrowband networks will continue to exist for the foreseeable future, the need for appropriate restrictions on the guard band spectrum will also continue to exist.

²³ *Id.* at ¶ 31.

MSI does believe, however, that the Commission should consider allowing some limited uses of the guard band for localized public safety applications. MSI envisions a variety of low power mobile/portable applications that would enhance public safety communications while posing little risk of interference to adjacent band systems. Because the paramount purpose of the guard band must continue to be the protection of public safety broadband and narrowband systems, the operating power of guard band devices must be appropriately limited. MSI believes limiting guard band operations to 3 Watts transmitter output power would sufficiently limit the opportunity for interference while enabling a useful range for local operations. The Commission should therefore consider expanding the efficient use of the public safety spectrum by making the guard available for limited, low power uses.

F. Equipment Certification.

The Notice addresses the status of the equipment certification process for 700 MHz devices. Noting that the Commission has not yet formalized complete technical and operational rules, the Notice suspends the processing of equipment certification applications for devices designed to operate in the 700 MHz public safety broadband spectrum.²⁴ In addition to instituting this application freeze, the Notice seeks comment on several certification rules necessitated primarily by the reallocation of the former Upper 700 MHz D Block to public safety broadband spectrum.²⁵

MSI urges the Commission to move quickly to resume issuing new equipment authorizations for devices designed to operate in this band. There is already a demand for equipment authorized to operate on the Public Safety broadband spectrum for use with early deployment networks where first responders are leveraging broadband communications to aid in

²⁴ Notice at ¶ 33.

²⁵ *Id.*

their mission of protecting the public. That demand will increase as FirstNet progresses towards deployment of the nationwide public safety broadband network.

The halt in equipment authorizations is impacting product development schedules for devices being designed to meet this demand, and this impact will continue to worsen until equipment authorizations for the public safety broadband spectrum are again available, which could result in even greater delays in the deployment of these new devices by public safety broadband users. The Commission must expeditiously reinstate the equipment authorization process for 700 MHz public safety broadband devices. The Commission should also allow manufacturers to utilize the permissive change process to update authorizations for devices already approved for use with the initial 10 MHz of public safety broadband spectrum, to quickly facilitate the finalization of any necessary modifications for equipment already being deployed by first responders, once the final rules for the full 20 MHz of public safety broadband spectrum have been adopted.

MSI agrees with the proposal to delete the associated certification requirement contained in Section 90.203(p). As the Commission notes, the *Report and Order* has deleted the underlying rule provisions that required operators to implement these LTE interfaces.²⁶ MSI further agrees with the Commission's proposal to combine the D Block into Section 90.549 and to subject equipment designed to operate in this band to a certification process based on unified technical rules.²⁷

Finally, the Notice asks whether equipment operated in this band should be made subject to certification requirements that augment the general requirements of Section 90.203 and, if so, how any such additional requirements should be applied to equipment that had been certified

²⁶ Notice at ¶ 34.

²⁷ Notice at ¶ 35.

prior to such requirements becoming effective.²⁸ MSI urges the Commission to avoid establishing additional certification requirements. Similar to any commercial system operator, FirstNet has the right to impose additional requirements on equipment vendors to support specified features, protocols and applications. Indeed, Section 6206 of the Spectrum Act authorizes the Director of NIST to develop “a list of certified devices and components meeting appropriate protocols and standards for public safety entities and commercial vendors to adhere to, if such entities or vendors seek to have access to, use of, or compatibility with the nationwide public safety broadband network.”²⁹ This process requires flexibility as protocols and standards are under constant refinement. Subjecting future enhancement and refinements to the Commission’s rulemaking process would add unnecessary delay to providing public safety with devices that have the latest features and functionality.

G. Recommendations on Further Proposed Rule Revisions to Implement the Spectrum Act.

The Notice proposes various conforming revisions to Part 27 of its Rules necessitated by the reallocation of the D Block in Part 90. The proposed rule revisions all appear to be appropriate. MSI recommends that the Commission consider these additional non-substantive revisions to the Part 27 rules:

- Section 27.4 Terms and Definitions: Delete “Public Safety Broadband Licensee” and “Upper 700 MHz D Block license”. These terms are no longer relevant.
- Section 27.6: Delete 27.6(b)(3)
- Section 27.20: Delete D Block reference in 27.20(a)
- Section 27.53: Revise frequency ranges in 27.53(c)(3) and 27.53(c)(4), and 27.53(e)(1) and 27.53(e)(2).

²⁸ *Id.*

²⁹ Spectrum Act § 6206.

III. THE COMMISSION SHOULD ESTABLISH CLEAR STANDARDS FOR RENEWAL OF FIRSTNET’S LICENSE.

Under the Spectrum Act, FirstNet has been licensed for an initial ten-year term and must submit a renewal application to the Commission that demonstrates that it has met its duties and obligations as set forth in the Spectrum Act.³⁰ In the Notice, the Commission seeks comment on how to assess FirstNet’s compliance with its duties and obligations and the terms of its license.³¹ MSI believes that it is important that the Commission establish clear, objective benchmarks, by which it can fulfill its statutory obligations to monitor FirstNet’s activities as a spectrum licensee.

As an initial matter, the Commission has the responsibility to monitor FirstNet’s activities as a licensee and establish performance benchmarks. The Commission’s fundamental authority is confirmed under Section 6201 of the Spectrum Act, which makes clear that FirstNet will be a Commission licensee and that the renewal of its license will be subject to the Commission’s review of FirstNet’s performance in properly executing its statutory duties and obligations.³²

To fulfill its statutory obligations, the Commission must have a clear standard by which to evaluate FirstNet’s application for renewal. Public safety renewal standards previously have been tied to construction deadlines. For example, when the Commission selected the Public Safety Spectrum Trust (“PSST”) to serve as the Public Safety Broadband Licensee, it imposed performance benchmark requirements—the nationwide D Block licensee was required to provide signal coverage and offer service to (1) at least 75 percent of the population of the license area by

³⁰ Spectrum Act § 6201(b)(2).

³¹ Notice at ¶ 43.

³² Spectrum Act § 6201(a)-(b).

the end of the fourth year, (2) at least 95 percent of the population by the end of the seventh year, and (3) at least 99.3 percent of the population by the end of the tenth year, and meet construction benchmarks specified in the Network Sharing Agreement.³³ MSI believes that benchmarks tied to construction and performance would be appropriate for FirstNet as well.

However, at this point, questions remain regarding FirstNet funding and when these funds will become available. The Incentive Auction proceeding will have a large impact on FirstNet's funding. Under the Spectrum Act, \$1.75 billion of the proceeds from the incentive auction shall be deposited in a TV Broadcaster Reallocation fund, and all other proceeds shall be deposited in the Public Safety Trust Fund until the end of 2022.³⁴ Both the timing of the incentive auctions and the amount of proceeds remain undetermined. It is also likely that additional funds will need to be provided for the deployment of the nationwide public safety broadband network.

In light of the uncertainty that FirstNet faces regarding funding, the Commission should establish tentative renewal standards for FirstNet tied to construction milestones, and commit to periodically reevaluating the benchmarks for feasibility. This approach will ensure that FirstNet has the flexibility to respond to changing circumstances and enable the Commission to evaluate FirstNet's performance using a clear set of criteria.

Other metrics are readily available to the Commission for assessing FirstNet's performance during its initial license term. For example, Section 6206(b)(1) of the Spectrum Act requires FirstNet to build, operate, and maintain the broadband network using, without materially changing, the minimum technical requirements developed by the FCC's Technical Advisory

³³ FCC, Auction 73, 700 MHz Band Fact Sheet, *available at* http://wireless.fcc.gov/auctions/default.htm?job=auction_factsheet&id=73#License%20Period%20and%20Construction%20Requirements.

³⁴ Spectrum Act § 6402.

Board for First Responder Interoperability established under Section 6203 of the Spectrum Act. Compliance with this provision should be a condition of renewal.

MSI concurs with the Commission’s observation that it “should be able to obtain considerable information about FirstNet’s performance during the license term, given the Commission’s opportunities to consult with and provide technical assistance to FirstNet and assuming access to reports that are required” under the Spectrum Act.³⁵ Indeed, FirstNet is already statutorily required to regularly submit detailed information about its activities.³⁶

FirstNet’s first annual report to Congress has been made public, and subsequent reports should also be made available both to the Commission and the public.³⁷

Additionally, MSI recommends that the Commission require FirstNet, as a condition of its license, to submit its annual reports directly to the Commission. The Commission should place these reports on public notice and solicit comment from all interested parties, particularly public safety entities. By doing so, the Commission will be able to take these comments into account when determining whether to renew FirstNet’s license. This requirement will provide a routinized process for periodic collection of comments on FirstNet’s activities and provide an open forum for interested parties to raise any concerns. Drawing from these sources of information, the Commission will have sufficient information to evaluate FirstNet’s performance of its duties and obligations and determine whether the needs of public safety are being adequately addressed.

³⁵ Notice at ¶ 44.

³⁶ FirstNet must produce independent auditor annual reports and annual reports to Congress. Spectrum Act at §§ 6209; 6210.

³⁷ See First Responder Network Authority Annual Report to Congress for Fiscal Year 2012 (Feb. 2013), *available at* http://www.ntia.doc.gov/files/ntia/publications/firstnet_report_to_congress_fy2012_02122013.pdf.

As the Commission recognizes, the success of FirstNet requires flexibility.³⁸ The approach outlined above balances the Commission's need to oversee FirstNet's performance with the challenges associated with funding and constructing the nationwide project.

IV. 700 MHZ NARROWBAND RELOCATION COSTS SHOULD BE AN ELIGIBLE EXPENSE OF BROADBAND DEPLOYMENT.

In 2007, the Commission revised the 700 MHz band plan to consolidate the public safety narrowband spectrum, eliminate public safety wideband spectrum and create a new spectrum block for public safety broadband.³⁹ As a result of this revision, a portion of the spectrum formerly designated as narrowband in which some public safety entities had already deployed overlapped a portion of the original public safety broadband spectrum. The Commission granted waivers to allow those licensees to continue operations as deployed, pending further actions regarding the public safety broadband network.⁴⁰

It was originally decided by the Commission that the auction winner of the D Block spectrum would fund the relocation of these public safety narrowband systems to the new consolidated public safety narrowband spectrum block.⁴¹ In so doing, the Commission established a policy that these public safety entities, when deployed in accordance with rules in effect at the time, should not be required to fund their own relocations.

Subsequently, the D Block was not awarded at auction and in 2012, Congress adopted the Spectrum Act which reallocated the D Block spectrum to public safety for use in deploying a

³⁸ Notice at ¶ 46.

³⁹ Service Rules for the 698-746, 747-762 and 777-792 Bands; Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, *Second Report and Order*, 22 FCC Rcd 15289 (2007).

⁴⁰ *Id.* at ¶¶ 491-496.

⁴¹ *Id.* at ¶ 336.

new broadband public safety network.⁴² As part of the Spectrum Act, Congress established FirstNet which would hold the license to all 20 MHz of public safety broadband spectrum and be responsible for deploying, operating and maintaining the network. The Spectrum Act also designated \$7B in funding to deploy the network, \$2B of which could be made available immediately and up to \$5B additional to come from future spectrum “incentive” auctions.⁴³

MSI recommends that the cost of relocating these narrowband systems to comply with the revised band plan be deemed an eligible expense from the broadband funds provided to FirstNet. While narrowband relocation is not specifically addressed in the Spectrum Act, MSI sees no provision in that Act that would prohibit such a practical solution. Unless relocated, these narrowband systems would risk facing interference from deployments of the broadband network in their respective areas. Similarly, the public safety broadband network could face interference from the narrowband systems. As the network is built out to provide the coverage and capabilities FirstNet is promising, these narrowband systems will need to be relocated. These narrowband licensees led the way in implementing 700 MHz narrowband systems necessary to meet critical communications requirements through deployments that were consistent with the rules in place when the systems were implemented. Accordingly and consistent with the Commission’s previous determinations, the relocation costs should not be borne by public safety narrowband 700 MHz band licensees. MSI recommends the cost be an eligible expense from the FirstNet broadband funds. A process and schedule also needs to be established to implement the relocation of these systems so they conform to the revised 700 MHz band plan. MSI believes that the process needs to include the following key steps:

⁴² Spectrum Act § 6204.

⁴³ Spectrum Act § 6402.

- Sufficient funding must be made available. Relocation costs should be considered eligible expenses from FirstNet funds.
- The Commission should develop an updated inventory of the narrowband licensees that require relocation as the list previously developed by PSST is several years old and some licensees may have relocated since that information was collected.
- Affected narrowband licensees should be provided a reasonable amount of time to inventory equipment that needs relocation and estimated costs for doing so. Estimated costs should be based on the types and quantity of equipment that must be relocated, any related equipment replacement or modification cost, the labor costs of developing and managing the relocation plan, consultant and attorney fees and other costs as appropriate.
- The process and schedule for how relocation funds will be made available must be established. Uncertainty or lack of clarity hinders realistic planning by public safety agencies.
- A realistic schedule for completing the relocation must be established.

Given the proper policies and rules to ensure that adequate relocation funding is available and that a rational and realistic process and timeline are established, MSI believes these mission critical narrowband 700 MHz systems will be relocated to conform to the revised band plan. Doing so is an essential element in deployment of a nationwide broadband network.

V. CONCLUSION.

Motorola Solutions supports the Commission's continued progress towards the deployment of a nationwide public safety broadband network in the 700 MHz band. The Commission must continue to give careful consideration, informed by consulting with stakeholders, to the initial rules for the spectrum, requirements related to FirstNet's license, and the transition of incumbents. Doing so will enable the Commission to fulfill its statutory obligations and ensure successful use of the new, vitally important network.

Respectfully submitted,

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