



MOTOROLA SOLUTIONS

March 22, 2013

Julius Knapp
Chief, Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

**RE: Experimental License Service Application,
File No. 0199-EX-PL-2013**

Dear Mr. Knapp,

Motorola Solutions, Inc. (MSI) submits the attached application for grant of an experimental license to operate on a secondary non-interference basis in the 758-768/788-798 MHz spectrum that is licensed to the First Responder Network Authority ("FirstNet"). This experimental license is needed to continue ongoing testing at our worldwide headquarters and laboratories in Schaumburg, Illinois and to implement testing at our laboratory in Plantation, Florida.

MSI is a leading manufacturer and integrator of mobile radio equipment for the public safety and homeland security community and is continually engaged in the design and development of new and innovative communications solutions. The experimental authority requested herein will allow the company to test and periodically demonstrate the performance and functionality of prototype broadband LTE equipment and solutions designed to support the needs of the public safety community.

As a developer of solutions for the broadband public safety market, MSI is dedicated to developing, integrating and testing products and technology in a way that supports the needs of public safety responders in the critical moments that matter. To test the functionality and performance of broadband technology thoroughly, we need to test LTE systems and subscriber units in simulated real-world situations which include performance testing with varying signal levels at different distances from the LTE eNodeB sites. It also includes testing over varied conditions, at different vehicular speeds and with hand-offs between cell sites. In addition, we test different applications in this simulated real-world environment. As an example, VoIP applications have a much different traffic profile than a video application. The reliability testing we perform also includes various error and failure conditions to ensure the solution works as designed when deployed in stressful situations that public safety agencies routinely face.

MSI conducts such testing at two major facilities in the U.S., our worldwide corporate headquarters and laboratories in Schaumburg, Illinois, and our subscriber engineering and development facilities in Plantation, Florida. While the focus of the testing is primarily on infrastructure in Schaumburg, IL and on subscriber units in Plantation, Florida, complete testing requires operation of both as a system in the vicinity of both facilities.

The development and testing of new products, system solutions and subscriber devices is *not* a short term process, and the types and numbers of devices are evolving as the technology and standards evolve. Access to on-air RF test capabilities is necessary in

the iterative process of designing these new broadband solutions for the public safety environment. These requirements are distinct from those for which FirstNet has recently provided consent for FCC issuance of experimental authorizations for short-term the iterative process of designing these new broadband solutions for the public safety environment. These requirements are distinct from those for which FirstNet has recently provided consent for FCC issuance of experimental authorizations for short-term demonstrations by public safety entities, as evidenced by the testing requirements noted above.

In view of the above requirements, MSI requests authority for an experimental license for a two year period from the date of grant for operation as follows and as detailed in the attached application:

- 2 sites on/near Schaumburg, IL MSI campus. One site is on our campus and the second site is nearby in Palatine, IL.
- 1 site at Plantation, FL MSI campus to provide the new authority needed for testing there.
- Up to 9.5 km mobile operation around each site
- 10+10 MHz: 758-768/788-798 with broadband emissions

The overwhelming use of the experimental authorizations MSI seeks is for testing of system and subscriber solutions for the public safety broadband network. Occasionally, MSI will also demonstrate these broadband capabilities when public safety agencies or related officials visit our Schaumburg or Plantation facilities. The requested experimental license will not be used in conjunction with the provision of mission-critical communications.

MSI has conducted a search of the FCC license database and determined that the proposed operations would not interfere with any regularly licensed system currently in operation on these frequencies.

- With respect to testing on and near our Schaumburg headquarters, the State of Illinois is authorized to operate narrowband on some frequencies that overlap the spectrum requested for testing. However, previous coordination with Illinois indicates those frequencies are used for vehicular repeaters required in other parts of the state, not in the vicinity of our proposed testing. We have co-existed with the State's operation with no reports of interference for two years under our current experimental license. We are in the process of obtaining an updated letter of consent from the State of Illinois for the operation proposed under this new experimental license application.
- A search of the FCC data base shows no regularly licensed facilities in operation on the 758-768/788-798 spectrum that would be within interference range of the proposed testing in Plantation, Florida.

Given consent from FirstNet is required for the Commission to grant the requested experimental license, MSI has previously contacted Regina Harrison at NTIA, as instructed by FCC staff, to discuss the experimental authorization being requested. In addition to referencing the justifications and information above, MSI understands and concurs with the following conditions that could be placed on the requested experimental license grant.

- The experimental license being requested would not be used in mission-critical operations or in the delivery of live transmissions in duties to protect life, property, or safety.
- As with all experimental authorizations, operation under the requested experimental license for testing and periodic demonstration would be on secondary, non-interference basis to any operations licensed on a primary basis.
- Although FirstNet has not yet deployed in the geographic area covered by the application, if, during the term of this experimental license, FirstNet or its assignees or lessees, plans to deploy in this area, MSI may have to reduce the coverage or power levels of its experimental transmissions or cease transmitting entirely to prevent interference to those operations.
- The experimental license would only permit shared use of the subject radio frequencies and MSI may have to coordinate with other entities licensed for experimental purposes.
- MSI has designated an overall "stop-buzzer" contact for these experiments, identified in the attachment to this letter.
- MSI recognizes that a separate concurrence from FirstNet will be required for renewal of this license.

Motorola Solutions, Inc. appreciates the Commission's expeditious consideration of this application for experimental license to support engineering and testing of broadband solutions applicable to the public safety network.

For questions about this application, please contact me or our FCC counsel, Kurt DeSoto, of Wiley Rein LLP, at 1776 K Street, N.W., Washington, DC 20006, Telephone (202) 719-7235, Facsimile: (202) 719-7207, Email kdesoto@wileyrein.com

Respectfully submitted,

/s/
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cc: Regina Harrison, NTIA

ATTACHMENT

The contact information for the designated project manager and “stop-buzzer” contact for the operations to be conducted as proposed under the experimental license pending under File No. 0199-EX-PL-2103 is:

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