

**Motorola Solutions, Inc.**  
**Request for Part 5 Experimental**  
**Special Temporary Authority**  
**OET File No. 1215-EX-ST-2015**

**NARRATIVE STATEMENT**

Pursuant to Section 5.3(d) and (f) and Section 5.61 of the Commission's rules, 47 C.F.R. §§ 5.3(d), (f), 5.61 (2014), Motorola Solutions, Inc., hereby respectfully requests a special temporary authority ("STA") from **December 11, 2015 to April 30, 2016**, to conduct tests in the 758-768/788-798 MHz band for the purpose of evaluating and demonstrating prototype broadband Long-Term Evolution ("LTE") devices at a site in Fort Benning, Georgia.

**A. Purpose of Operation and Need for STA:**

Motorola Solutions is a leading manufacturer 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 equipment. The experimental authority requested herein will allow the company to demonstrate the performance and functionality of prototype devices designed to support the needs of the public safety and homeland security community.

Specifically, Motorola Solutions proposes to conduct tests and demonstrations at a location in Fort Benning, Georgia. Operations will occur at discrete times during the term of the requested STA. Motorola Solutions proposes to conduct initial tests in December for a period of a few days or weeks and conduct follow up or additional tests at other times during the remainder of the term of the STA. To accommodate the lapse of time between such tests, Motorola Solutions respectfully requests that the FCC grant the STA for the period December 11, 2015, through April 30, 2016.

Grant of an STA will allow Motorola Solutions to test and demonstrate prototype equipment and obtain additional feedback from potential users so that it may enhance the company's efforts to design, develop and improve its equipment to meet the communications needs of potential users.

**B. Location of Proposed Operation:**

Motorola Solutions proposes to conduct its tests and demonstrations using a single base station transmitter antenna communicating with up to ten mobile/portable units operating within a radius of one kilometer from the base station. The address and coordinates of the center of operations are:

McKenna Urban Complex  
Hourglass Road, Building P8049  
Fort Benning, Georgia 31905  
32° 22' 14.09" North Latitude  
-84° 48' 31.23" West Longitude  
Datum: NAD83

## **C. Technical Specifications:**

### **1. Frequencies Desired**

Motorola Solutions requests authorization to operate in the band 758-768/788-798 MHz. This band encompasses both the 758-763/788-793 MHz band known as the upper 700 MHz D block, which has not yet been licensed for regular operation, and the 763-768/793-798 MHz public safety block licensed on a nationwide basis to the Public Safety Spectrum Trust ("PSST").

### **2. Effective Radiated Power**

The mobile/portable units to be deployed are configured to operate at an average power level of 50 mW effective radiated power ("ERP") and a peak power level of 160 mW ERP. The base station will be configured to operate at an average power level of 250 mW ERP and a peak power level of 2 Watts or less ERP.

Motorola Solutions will reduce the actual powers to the minimum power needed for successful operation. All power levels will comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiation.

### **3. Modulation and Emissions**

Motorola Solutions proposes to operate using OFDM modulation. The primary emission designators are 5M0G7D, 5M0W7W, 5M0G2D, 5M0D7D, 10M0G7D, 10M0W7W, 10M0G2D, and 10M0D7D. Other emission modes may be utilized, but in no event will the emissions extend beyond the frequency bands requested.

### **4. Antenna Information**

The base station transmitter antenna will be located within the McKenna Urban Complex in Fort Benning, Georgia. No antennas will be mounted in a fashion that will require further approval under FAA and FCC rules and regulations.

### **5. Equipment To Be Used**

Motorola Solutions expects that it will be able to conduct its demonstration with a single base unit and up to ten mobile/portable units. The base station is a prototype unit from Ericsson and the mobile/portable units are prototype equipment from Motorola Solutions. Moreover, Motorola Solutions will limit the power, area of operation, and transmitting times to the minimum necessary to evaluate the equipment.

**D. Protection Against Causing Interference:**

As noted above, Motorola Solutions has requested authority to operate in the 758-768/788-798 MHz bands allocated for a nationwide public safety broadband network and licensed to FirstNet on a nationwide basis. Motorola Solutions accepts that it must accept interference from any other users of these bands and that all operations by Motorola Solutions will be on a secondary basis. Moreover, Motorola Solutions has established a point of contact (“POC”) identified below with “kill switch” authority and will send the POC’s contact information to FirstNet upon agency approval of the requested STA.

Motorola Solutions also conducted a search of the Commission’s Universal Licensing System (“ULS”) database and verified that the proposed demonstration at Fort Benning should not interfere with any primary operations in that spectrum. Moreover, under Commission rules, Low Power TV stations and auxiliary stations were previously required to vacate the 700 MHz band, so no interference should occur to broadcast facilities.

Furthermore, as noted above, the length of the tests and demonstrations will be limited, extending for only a few days or weeks during the period December 11, 2015, through April 30, 2016.

In summary, the analysis conducted by Motorola Solutions indicates the proposed operation should not interference with any licensed operation. Should interference occur, Motorola Solutions will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation.

**E. Restrictions on Operation:**

Motorola Solutions is not seeking authority to perform a market study under this STA. Moreover, no fees will be charged to entities using the equipment during this test. After the test is completed, Motorola Solutions will recall and recover all devices that do not comply with FCC regulations.

In addition, Motorola Solutions will advise entities using the equipment that permission to operate has been granted under experimental authority issued to Motorola Solutions, that such operation is strictly temporary, and that the equipment may not cause harmful interference. Entities will also be advised in accordance with Section 2.803 of the Commission’s rules, 47 C.F.R. §2.803 (2014), that any unapproved devices have not been authorized as required by the rules of the FCC and are not being offered for sale or lease, or sold or leased, until authorization is obtained.

**F. Public Interest:**

Motorola Solutions submits that issuance of an STA as requested is in the public interest, convenience, and necessity. Grant of an STA will permit Motorola Solutions to develop innovative equipment that will accommodate the communications needs of the public safety and homeland security community.

**G. Contact Information:**

For questions about this application, please contact:

Technical Contact and "Stop Buzzer/Kill Switch:"

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