

**Motorola Solutions, Inc.**  
**Request for Part 5 Experimental**  
**Special Temporary Authority**  
**OET File No. 0512-EX-ST-2012**

**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 (2010), Motorola Solutions, Inc., hereby respectfully requests special temporary authority ("STA") from **August 15, 2012 through August 23, 2012**, to operate in the 758-768/788-798 MHz band for the purpose of demonstrating prototype broadband Long-Term Evolution ("LTE") equipment to public safety agencies at the annual APCO International Conference in Minneapolis, Minnesota.

Motorola Solutions has obtained a letter of consent (attached) from the Public Safety Spectrum Trust ("PSST") for the proposed operation on its portion of the spectrum.

**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 functionality of prototype devices designed to support the needs of the public safety and homeland security community.

Specifically, Motorola Solutions proposes to conduct demonstrations of prototype equipment at the APCO International annual conference in Minneapolis, MN. To accommodate set-up requirements as well as to ensure all operations up to demo tear-down are covered by Commission authorization, Motorola Solutions respectfully requests that the FCC grant the STA for the period August 15, 2012 through August 23, 2012.

Grant of an STA will allow Motorola Solutions to demonstrate prototype equipment and obtain additional feedback 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 demonstrations in the vicinity of the Minneapolis Convention Center. Equipment would include a temporary base station and associated antenna, along with a limited number of portable units, all operating at in the vicinity of the convention center site. The address and approximate reference coordinates for location of the temporary fixed base station deployment are:

Minneapolis Convention Center  
1301 2nd Avenue  
Minneapolis, MN 55403

44° 58' 07" North Latitude  
93° 16' 25" 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 been reallocated for a nationwide public safety broadband network yet to be built, and the 763-768/793-798 MHz public safety block currently licensed on a nationwide basis to the Public Safety Spectrum Trust ("PSST").

**2. Effective Radiated Power**

All power levels will comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiation.

Up to 10 portable units will be deployed and configured to operate at a maximum average power level of 250 mW effective radiated power ("ERP") and a maximum peak power level of 2.5 Watts ERP. One base station will be located at the convention center and will be configured to operate at a maximum average power level of 5W ERP and a maximum peak power level of 50 Watts ERP. Motorola Solutions will reduce the actual powers to the minimum power needed for successful operation, based on set-up and testing at the demonstration site.

In addition, Motorola Solutions will evaluate environmental considerations to ensure compliance with Section 1.1306 of the FCC's rules, 47 C.F.R. § 1.1306 (2010), and, in particular, the human exposure requirements set forth in FCC OET Bulletin No. 65.

### **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 antenna for the temporary fixed base station will be located at the Minneapolis Convention Center at a height no greater than 20 feet above the floor. The portable unit antennas in and around the demonstration site will be located as required for a successful demonstration. No antennas will be mounted in a fashion that will require approval under FAA and FCC rules and regulations.

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

Motorola Solutions expects to conduct its demonstration with one base unit and up to ten mobile/portable units. Moreover, Motorola Solutions will limit the power, area of operation, and transmitting times to the minimum necessary to provide an effective demonstration.

### **D. Protection Against Causing Interference:**

As noted above, Motorola Solutions has requested authority to operate in the 758-768/788-798 MHz band. This band encompasses both the 758-763/788-793 MHz band known as the upper 700 MHz D block, which has been reallocated for a nationwide public safety broadband network yet to be built and the 763-768/793-798 MHz public safety block currently licensed on a nationwide basis to the Public Safety Spectrum Trust ("PSST"). A letter of consent from the PSST for operation on its portion of the spectrum is included with this application.

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.

Motorola Solutions also conducted a search of the Commission's Universal Licensing System ("ULS") database. Hennepin County, Minnesota holds a license for narrowband operation on some channels that fall within the PSST 700 MHz spectrum. Motorola Solutions is coordinating with Hennepin County to ensure that the demonstration at the APCO conference does not impact its narrowband operation in that spectrum.

Furthermore, as noted above, the length of the demonstration period is short, extending only from August 15, 2012 through August 23, 2012.

**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.

Motorola Solutions also recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities. Should interference occur, Motorola Solutions will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation.

Entities will be advised in accordance with Section 2.803 of the Commission's rules, 47 C.F.R. §2.803 (2010), that any unapproved devices which have not been authorized as required by the FCC 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 help Motorola Solutions to develop innovative equipment that will accommodate the communications needs of the public safety community.

**G. Contact Information:**

For questions about this application, please contact:

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In the unlikely event interference concerns should arise during the period of authorization for this STA, please contact:

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