

**Motorola Solutions, Inc.**  
**Request for Part 5 Experimental**  
**Special Temporary Authority**  
**OET File No. 0432-EX-ST-2011**

**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 4 through August 11, 2011**, to operate in the 758-768/788-798 MHz band for the purpose of demonstrating prototype broadband Long-Term Evolution ("LTE") devices to public safety agencies at the annual APCO International Conference to be held in Philadelphia.

Motorola Solutions has obtained a letter of consent 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 77th Annual APCO International Conference and Exposition, scheduled from August 7 through August 10, 2011. To accommodate set-up requirements as well as to ensure all operations up to demonstration tear-down are covered by Commission authorization, Motorola Solutions respectfully requests that the FCC grant the STA for the period August 4, 2011 through August 11, 2011.

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 Pennsylvania Convention Center. Equipment would include two temporary base stations and associated antennas, along-with a small number of portable units, all operating at no more than approximately 1 mile (1.6 km) from the convention center site. The address and approximate reference coordinates (NAD83) of the center are:

1101 Arch Street, Philadelphia, PA 19107  
39° 57' 17" North Latitude; 75° 09' 40" West Longitude

## **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**

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 average power level of 50mW effective radiated power ("ERP") and a peak power level of 100mW ERP. One base station will be located inside the convention center and will be configured to operate at a average power level of 630mW ERP and a peak power level of 1W ERP. The second base station, to be located at a site within one mile of the convention center, will be configured to operate with a average power level of 40W ERP and a peak power level of 400W ERP to help ensure adequate coverage on the street in a dense urban environment and to allow for better building penetration. 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 (2009), 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 located inside the Philadelphia Convention Center will be installed at a height of 20 feet or less above the floor. The antenna for the temporary fixed base located outside the convention center will be installed at a height of 60 feet or less above the ground. 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 two base station units 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 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"). A letter of consent from the PSST for operation on its portion of the spectrum is included with this application. No concurrence is necessary or possible on the D block portion because there is no regular licensee of that spectrum.

Motorola Solutions searched the Commission's TV database to determine what if any licensed Low Power TV stations are in the area. No co-channel LPTV stations that are within 75 miles of the demonstration site appear in the database. WPHA-CD is licensed on adjacent channel 63 spectrum, however, according to the database information they went silent on that channel in 2009 and are constructing a digital LPTV facility on channel 38, far removed in frequency from the proposed demo operations.

Motorola Solutions also conducted a search of the Commission's Universal Licensing System ("ULS") database and held discussions with the APCO frequency coordinator, and found no active public safety operations within 75 miles of the Philadelphia area on frequencies which are co-channel to those proposed in this request.

Furthermore, as noted above, the length of the demonstration period is short, extending only from August 4, 2011 through August 11, 2011.

### **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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June 22, 2011

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Room TWA325  
Washington, DC 20554

**Re: Application of Motorola for Temporary Spectrum Use**

Dear Ms. Dortch:

The Public Safety Spectrum Trust ("PSST") hereby provides its consent to the application of Motorola Solutions, Inc. for experimental special temporary authority ("Experimental STA") regarding its proposed temporary operation in the PSST's 700 MHz band spectrum to demonstrate Long Term Evolution ("LTE") equipment at the 2011 APCO International Annual Conference in Philadelphia, Pennsylvania, between August 4, 2011, and August 11, 2011, as described in more detail below. The PSST understands that the demo operation planned would conform to the following parameters:

- 1) Operation will be confined to the immediate vicinity of the Pennsylvania Convention Center, 1101 Arch Street, in Philadelphia, PA. Equipment would include two temporary base stations and associated antennas along with a small number of portable units all operating at no more than approximately 1 mile (1.6 km) from the convention center site.
- 2) Motorola Solutions will request authority from the FCC to operate over the 758-768/788-798 MHz band. This encompasses both the 763-768/793-798 MHz bands, which are currently licensed on a nationwide basis to the PSST as part of the 700 MHz Public Safety Broadband License, and the 758-763/788-793 MHz bands known as the Upper 700 MHz D Block, which has not yet been licensed for regular operation.
- 3) Operation will occur between August 4, 2011, and August 11, 2011, allowing time during that period for setup and testing, demonstrations, and teardown.

We understand that Motorola Solutions has analyzed information from the FCC's license databases and has determined that the proposed operation would not

interfere or create a significant potential for interference with any public safety operations in the 700 MHz band. Motorola Solutions has also told us they found no active public safety licenses authorizing to operate in the Philadelphia area on frequencies which are co-channel to those proposed in the STA request.

Given the above information, the PSST concurs with the proposed operation by Motorola Solutions on certain frequencies currently licensed to the PSST as part of the 700 MHz Public Safety Broadband License for purposes of demonstrating LTE equipment at the APCO Conference. As you are aware, decisions on the permanent use of the adjacent Upper 700 MHz D Block spectrum are still pending at the FCC. The PSST takes no position as to the Motorola Solutions request regarding use of the D Block spectrum. This consent is subject to the PSST's ongoing ability to monitor any operations and use of the PSST's licensed spectrum.

Respectfully submitted,



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