

**Motorola Solutions, Inc.**  
**Request for Special Temporary Authority**  
**OET File No. 0043-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 **February 18 through February 26, 2012**, to operate in the 758-768/788-798 MHz band for the purpose of demonstrating prototype broadband Long-Term Evolution ("LTE") equipment and devices at the International Wireless Communications Expo ("IWCE") and the Motorola Solutions Channel Partner Expo to be held in Las Vegas, Nevada.

Attached for the staff's reference is 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 equipment and devices designed to support the needs of the public safety and homeland security community.

Specifically, Motorola Solutions proposes to conduct demonstrations of prototype equipment and devices at the International Wireless Communications Expo and Motorola Solutions Channel Partner Expo to be held at the Las Vegas Convention Center and the Las Vegas Aria Hotel, respectively. 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 February 18 through March 26, 2012.

Grant of an STA will allow Motorola Solutions to demonstrate prototype equipment and obtain additional feedback during IWCE and the Channel Partner Expo 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 using 3 fixed base station transmitters and associated antennas. Two base transmitters will be located at the Las Vegas Convention Center communicating with portable units operating within a 1.6 kilometer (one mile) radius of the fixed base stations. The third base station and associated antenna will be located at the Las Vegas Aria Hotel also communicating with portable units operating within a 1.6 kilometer (one mile) radius of the fixed base station. The address and approximate coordinates (in NAD83 Datum) of the Convention Center and Aria Hotel sites are:

Las Vegas Convention Center  
3150 Paradise Road  
Las Vegas (Clark County), Nevada  
36° 07' 43" North Latitude  
115° 09' 07" West Longitude

Aria Hotel  
3730 Las Vegas Blvd.  
Las Vegas (Clark County), Nevada  
36° 06' 30" North Latitude  
115° 10' 20" 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.

The base stations will each be configured to operate at a maximum power level of 50 Watts effective radiated power ("ERP"). The mobile/portable units to be deployed are configured to operate at a maximum power level of 2.5 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 Las Vegas Convention Center and Aria Hotel sites.

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 fixed base station transmitter antennas will be located inside the Las Vegas Convention Center at a height no greater than 6 meters (20 feet) above the floor and inside the Aria Hotel at a height no greater than 6 meters (20 feet) above the floor on which the station is operated. The portable antennas will not, under any circumstances, extend more than 6 meters (20 feet) above ground or the floor on which the base station operates, whichever is greater. 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 that it will be able to conduct its demonstration with three base units and up to twenty mobile/portable units. 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 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 is attached for the requested operation on its portion of the spectrum. No concurrence is necessary or possible on the D block portion because there is no regular licensee of that spectrum.

Motorola Solutions also searched the Commission's TV database and found no licensed co-channel or adjacent channel Low Power TV stations within interference range of the proposed operation. Furthermore, the Commission

previously issued a decision requiring all LPTV stations and translators to exit the 700 MHz band as of December 31, 2011.

Motorola Solutions also conducted a search of the Commission's Universal Licensing System ("ULS") database, and it found no current public safety licenses authorizing operation in the Las Vegas area on frequencies which are co-channel to those proposed in this STA request. Although the Las Vegas Police Department holds licenses in the 700 MHz band, it is authorized to operate within the 769-775/799-805 MHz narrowband 700 MHz spectrum block, *i.e.*, outside of the spectrum requested in this STA request. Similarly, the State of Nevada holds a license for the designated state channels within the 769-775/799-805 MHz narrowband 700 MHz spectrum block, but these channels, too, are outside the spectrum Motorola Solutions has requested in this application. Moreover, the State of Nevada is not listed as a licensee operating under the previous bandplan, so its operations must conform to the current 700 MHz bandplan and, therefore, should not be affected by Motorola's proposed operation.

Furthermore, as noted above, the length of the demonstration period is short, extending only from February 18 through February 26, 2012.

Motorola Solutions is aware that Alcatel-Lucent is also requesting an experimental STA to demonstrate 700 MHz LTE equipment at IWCE. As committed to the PSST, Motorola Solutions and Alcatel-Solutions are coordinating with each other to address any potential interference issues.

**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 equipment that does not comply with FCC regulations.

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

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 to facilities authorized under other parts of the Commission's rules. Entities will also be advised in accordance with Section 2.803 of the Commission's rules, 47 C.F.R. §2.803 (2010), that any unapproved equipment and 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 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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January 14, 2012

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

**Re: Application of Motorola Solutions, Inc. for Temporary Spectrum Use  
IWCE & Motorola CPE, Las Vegas, NV – Feb. 18, 2012 through Feb. 26, 2012**

Dear Ms. Dortch:

The Public Safety Spectrum Trust Corporation ("PSST") hereby provides its consent to the application of Motorola Solutions, Inc. ("Motorola Solutions") for an 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 in Las Vegas, Nevada for use at the International Wireless Communications Expo ("IWCE") 2012 Conference and the Motorola Channel Partner Expo between February 18, 2012 and February 26, 2012, as described in more detail below. The PSST understands that the demonstration operation planned would conform to the following parameters:

- 1) Operation will be confined to the immediate vicinity of the Las Vegas Convention Center and the Los Vegas Aria Hotel. The equipment would include a total of three base stations and associated antennae located at the demonstration sites, along-with a small number of portable units operating at no more than 1 mile from the base sites.
- 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 February 18, 2012, and February 26, 2012, allowing time during that period for setup and testing, demonstrations, and teardown.

4) 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 that they found no active public safety licenses authorized to operate in the Nevada area on frequencies which are co-channel to those proposed in the STA request.

Given the above information, the PSST concurs with Motorola Solutions' proposed operation 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 IWCE 2011 Conference and Motorola CPE in Las Vegas, Nevada.

We make note of the fact that Alcatel-Lucent has indicated they intend to ask for an Experimental STA to operate over the 763-768/793-798 MHz band at the IWCE 2012 Conference in Las Vegas from February 19-25, 2012. At their request, we have issued a similar letter of consent to Alcatel-Lucent for their proposed use of the spectrum licensed to the PSST. As discussed, we understand that Motorola Solutions will work with the Alcatel-Lucent engineers and the FCC to address any potential interference issues between Motorola Solutions and Alcatel-Lucent.

This consent is subject to the PSST's ongoing ability to monitor any operations and use of the PSST's licensed spectrum.

Respectfully submitted,



Chief Harlin R. McEwen  
Chairman  
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cc: Michael McMenamin, Alcatel-Lucent  
Stuart Overby, Motorola Solutions, Inc.