Motorola Solutions, Inc.
Application on FCC Form 442
for an Experimental License
OET File No. 0443-EX-PL-2012

NARRATIVE STATEMENT

Pursuant to Sections 5.51 and 5.53 of the Commission's rules, 47 C.F.R. §§ 5.51, 5.53 (2010), Motorola Solutions, Inc., hereby respectfully requests an experimental license for a period of six months beginning October 1, 2012, to operate in the 758-768/788-798 MHz band for the purpose of conducting tests in connection with the development of Long Term Evolution (LTE) broadband equipment for the 700 MHz band. The testing will be conducted from up to four sites in downtown Chicago, Illinois.

The submission of this application also serves to replace and extend Motorola Solutions' existing special temporary authority ("STA") for this experimentation, granted under File No. 0188-EX-ST-2012 and issued under call sign WF9XOK, which is currently scheduled to expire on October 1, 2012. The technical parameters and facilities requested herein are unchanged from those previously authorized under that STA.

MSI requires an experimental license to extend its authority so that it may continue to test, evaluate and demonstrate prototype equipment that will accommodate the communications needs of users. Accordingly, as provided under Section 5.61(b) of the Commission's rules, 47 C.F.R. § 1.62 (2010), this application is therefore also intended to serve as a continuance of MSI's authority to operate as permitted under its STA, pending action on the instant application.

MSI also notes that in a recent decision regarding the 700 MHz public safety broadband spectrum, the Commission specifically noted that the approach adopted in that Order does not displace Part 5 authorizations under the standards set forth in those rules and that applications for experimental Part 5 applications will continue to be entertained.[1]

[1] *See Implementing Public Safety Broadband Provisions of the Middle Class Tax Relief Act and Job Creation Act of 2012*, PS Docket No. 12-94, *Order*, FCC 12-85 (rel. July 31, 2012), at n. 3.

A. Purpose of Operation and Need for Experimental License:

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 demonstrations of prototype equipment to public safety personnel in the Chicago, Illinois area. To accommodate set-up and demonstration requirements, Motorola Solutions respectfully requests that the FCC grant the experimental license for the period October 1, 2012 through March 30, 2013.

Grant of an experimental license 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. Locations of Proposed Operation:

Motorola Solutions proposes to conduct its demonstrations using up to four fixed base station transmitter antennas located in Chicago with mobile/portable units operating within a radius of 2 miles from the fixed base station. The address and approximate coordinates of the demonstration sites:

2147 S. Lumber Street
Chicago, Illinois
41º 51' 13" North Latitude
87º 37' 29" West Longitude
Datum: NAD83

800 S. Michigan Avenue
Chicago, Illinois
41º 52' 18" North Latitude
87º 37' 28" West Longitude
Datum: NAD83

1521 S. Lynn White Drive
Chicago, Illinois
41º 51' 38" North Latitude
87º 36' 36" West Longitude
Datum: NAD83

250 N. Breakwater Access
Chicago, Illinois
41º 53' 15" North Latitude
87º 36' 36" 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 allocated for public safety broadband use, and the 763-768/793-798 MHz public safety block licensed on a nationwide basis currently 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 mobile/portable units to be deployed are configured to operate at a power level of no more than 2 Watts effective radiated power ("ERP"). The base stations will be configured to operate at a peak power level of 525 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 fixed base station transmitter antennas at all four sites specified above will be located at a height of no more than 190 feet above ground level. The mobile/portable antennas will be installed at a height not greater than 6 meters above ground when used outdoors or at various locations as needed for testing when used indoors. 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 up to four base units and up to 125 mobile/portable units in aggregate across all base stations. The base station is a prototype unit from Ericsson and the mobile/portable units are prototype Motorola Solutions equipment. 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, allocated for a nationwide public safety broadband network which has not yet been deployed, and the 763-768/793-798 MHz public safety block currently licensed on a nationwide basis to the Public Safety Spectrum Trust ("PSST"). Legislation recently passed reallocated the D block to public safety use for the nationwide broadband network but under the provisions of that decision, a number of months of work will need to be conducted before the nationwide broadband network begins to be deployed. Therefore, the proposed demonstration operation is not expected to impact any regular operation on the 700 MHz band public safety spectrum.

Under the Commission's rules, LPTV and translator stations were required to vacate the 700 MHz band by 12/31/2011, so there should be no interference to those operations from the proposed operation.

Motorola Solutions also conducted a search of the Commission's Universal Licensing System ("ULS") database and found no stations with which the proposed short-term demonstration would conflict. The State of Illinois operates vehicular repeaters in some parts of the state on portions of the 700 MHz band licensed to the PSST. However, Motorola Solutions understands those vehicular repeaters are not used in the Chicago area.

In summary, Motorola Solutions' analysis indicates the proposed operation should not interference with any licensed operation.

E. Restrictions on Operation:

Motorola Solutions is not seeking authority to perform a market study under this Experimental License. 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.

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 (2010), 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 Experimental License as requested is in the public interest, convenience, and necessity. Grant of an experimental license 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:

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

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