

NARRATIVE STATEMENT

Pursuant to Section 5.3(e) and (g) and Section 5.61 of the Federal Communications Commission ("FCC") rules, 47 C.F.R. §§ 5.3(e), (g), 5.61 (2017), Motorola Solutions, Inc. ("MSI"), respectfully seeks special temporary authority ("STA") beginning **January 15, 2019**, to operate on two Citizens Band Radio Service ("CBRS") channels in the 3550-3700 MHz band to meet specific customer requests to conduct proof-of-concept testing of prototype equipment operating in the CBRS 3550-3700 MHz band at their locations in Illinois and Indiana that are outside the NTIA exclusion zones.

In addition, MSI respectfully requests expedited treatment of this request so that it may commence tests on January 15, 2019. Justification for such action is attached separately in the "Request for Expedited Treatment" accompanying this application for STA.

A. Purpose of Operation and Need for STA:

MSI is a leading manufacturer of mobile radio equipment for the critical infrastructure and public safety community and is continually engaged in the design and development of new and innovative communications systems. The experimental authority requested herein will allow the company to support the initial proof-of-concept testing of the functionality and reliability of base station and client systems under development for customer trials that will collect coverage, throughput, and other data to allow MSI to evaluate the specific requirements and trial equipment needed to support future tests to meet the needs of potential users within the CBRS allocations.

Specifically, MSI proposes to demonstrate prototype equipment to partner customers in Andersonville, Indiana and Woodstock, Illinois. To accommodate set-up requirements as well as to ensure all operations up to demonstration and tear-down are covered by FCC authorization, MSI respectfully requests that the FCC grant the STA for the period January 15th through July 15, 2019.

Grant of an STA will allow MSI to demonstrate the prototype systems to the partner customers at their respective facilities thereby obtaining critical technical data and feedback so that it may enhance the efforts to design, develop and improve its equipment to meet the communications needs of potential users operating in the CBRS band.

B. Locations of Proposed Operation:

A limited number of temporary fixed and portable would be operated within a radius of 5.0 kilometers of the test sites located at 4301 W. 73rd St., Andersonville, IN 46011 (coordinates 40.038247 N; Latitude; 085.743082 W Longitude (in Datum: NAD83)) and 121 W Van Buren St, Woodstock, IL 60098 (coordinates 42.314248 N; 088.447731 W (in Datum: NAD83) as specified in the accompanying application.

C. Technical Specifications:

1. Frequencies Desired

MSI requests authorization to operate within the CBRS allocation of 3550-3700 MHz utilizing 5, 10, and 20 MHz TDD channels with 5, 10, and 20 MHz of bandwidth in an LTE waveform, as specified in the accompanying application.

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 radio units will operate at +25 dBm TPO units utilizing antennas, during various phases of testing, exhibiting +7 dBd omni-directional radiation pattern and +15 dBd utilizing a 60 degree sectorized antenna. The systems will, therefore, be deployed and configured to operate with a mean effective radiated power ("ERP") of not more than 10 Watts (+40dBm). The subscriber units will operate at power levels not to exceed 250 mW ERP (+23dB) mean. MSI will reduce the actual powers to the minimum power needed for successful operation, based on set-up and testing at the site of the exercise.

3. Modulation and Emissions

MSI proposes to operate using TDD OFDMA LTE modulation on the downlink and TDMA/TDD LTE modulation of the uplink. Uplink and downlink will operate on the same channel utilizing bandwidths of 5 MHz, 10 MHz, and 20 MHz. The representative emission designators are 5M00W7W, 10M0W7W, and 20M0W7W for the downlink period of operation upon the channel and 5M00WXW, 10M0WXW, and 20M0WXW for operation during the uplink period of the TDD LTE channel in use. Other emission modes may be utilized, but in no event will the emissions extend beyond the frequency bands requested.

Prior to operation, MSI will determine the exact center frequency of operation utilizing spectrum scans at each location, use of the FCC database to determine the existence of prior licensed services, and the FCC database to determine if any licensed Earth stations reside within the test area requested. Additional channel quality methods will also be utilized during each test activation.

4. Antenna Information

No antennas will be installed in a fashion that will require approval under FAA and FCC rules and regulations.

5. Equipment To Be Used

MSI expects to conduct the demonstration by deploying up five base station units per channel outdoors and up to 20 base station units indoors at the Andersonville, Indiana location and up to 2 base stations at the Woodstock, Illinois location. MSI will also utilize up to 20 subscriber units per specified location. Moreover, MSI Solutions will limit the power, area of operation, and transmitting times to the minimum necessary to support an effective demonstration and collection of data.

D. Protection Against Interference:

MSI understands that it must accept interference from any other users of these bands and that all operations by MSI will be on a secondary basis and must not cause interference to operations approved to operate in the band. MSI will also coordinate with and obtain required consent from existing licensees authorized in the band.

In addition, MSI recognizes that multiple STAs might have been requested and granted for operation in the same area to other entities, that these entities must effectively coordinate their operations, and that failure to do so may result in immediate suspension of STA. MSI has established a point of contact ("POC") identified below with "kill switch" authority, and it agrees to cease operations immediately upon receipt of request to the kill switch POC.

MSI does not expect the proposed operation to cause interference with any licensed operation. Should interference occur, however, MSI will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation.

E. Restrictions on Operation:

MSI is not seeking authority to perform a market study of unapproved devices under the requested STA. Moreover, the operation will not involve live-duty operations by first responders or others to protect life, property, or safety. In addition, no fees will be charged to entities using the equipment during this test. After the test is completed, MSI will disassemble the test facilities.

Entities will be advised in accordance with Section 2.803 of the Commission's rules, 47 C.F.R. §2.803 (2017), 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 Statement:

MSI submits that issuance of an STA as requested is in the public interest, convenience, and necessity. Grant of an STA will help MSI to support the development of innovative equipment that will accommodate the communications needs of potential users.

G. Contact Information:

Technical Point of Contact ("POC") and "Stop Buzzer/Kill Switch:"

Gregory Buchwald
DMTS Engineer
Motorola Solutions, Inc.
Telephone: (815) 351-4020
Email: greg.buchwald@motorolasolutions.com

Motorola Solutions FCC Contact:

Frank Korinek
Director, Spectrum & Regulatory Government Affairs
Motorola Solutions, Inc.
1455 Pennsylvania Ave., #900
Washington DC 20004
Telephone: (847) 877-7179
Email: Frank.Korinek@motorolasolutions.com

Motorola Solutions FCC Legal Counsel:

Kurt DeSoto
Wiley Rein LLP
1776 K Street, N.W.
Washington, DC 20006
Telephone: (202) 719-7235
Facsimile: (202) 719-7049
Email: kdesoto@wileyrein.com