

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 (2018), Motorola Solutions, Inc., hereby respectfully requests special temporary authority (“STA”) beginning May 15, 2019 to operate in the 3650-3700 MHz band at a customer location to demonstrate the functionality and performance of prototype equipment and to collect propagation data, customer data, and technical information required to perfect equipment to be offered for sale at a later date in support of Citizens Broadband Radio Service (“CBRS”) technology.

In addition, Motorola Solutions respectfully requests expedited treatment of this request so that it may commence tests on May 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:

Motorola Solutions 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 evaluation of the functionality and reliability of base station and client systems under development with customer trials needed to collect coverage, throughput, and other data that allows Motorola Solutions to further understand specific requirements and trial equipment offering that would support the requirements of potential users within the CBRS allocation.

Specifically, Motorola Solutions proposes to demonstrate prototype equipment to a customer in Orlando, Florida. To accommodate set-up requirements as well as to ensure all operations up to demonstration and tear-down are covered by FCC authorization, Motorola Solutions respectfully requests that the FCC grant the STA for the period May 15 to November 15, 2019.

Grant of an STA will allow Motorola Solutions to demonstrate the prototype system to the customer 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 within the CBRS service.

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 site located at Lake Buena Vista, Orlando, Florida (coordinates 28.391814 North Latitude; -081.532031 West Longitude (in Datum: NAD83)) as specified in the accompanying application.

C. Technical Specifications:

1. Frequencies Desired

Motorola Solutions requests authorization to operate within the 3650-3700 MHz band utilizing 5, 10, and 20 MHz TDD channels and utilizing 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 with a +25 dBm transmitter power output ("TPO") and a mean effective radiated power ("ERP") of not more than 2 Watts (+36 dBm). The subscriber units will operate at power levels not to exceed a mean ERP of 125 mW. Motorola Solutions will reduce the actual powers to the minimum power needed for successful operation, based upon set-up and testing at the site of the exercise.

3. Modulation and Emissions

Motorola Solutions 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 shall be 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 band requested.

Prior to operation, Motorola Solutions 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

The facilities will be configured with antennas exhibiting an omni-directional radiation pattern during various phases of testing. No antennas will be installed in a fashion that will require approval under FAA and FCC rules and regulations.

5. Equipment To Be Used

Motorola Solutions expects to conduct the demonstration by deploying up to two base station units per channel outdoors and up to 25 subscriber units. Moreover, Motorola 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:

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

In addition, Motorola Solutions 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 the STA. Motorola Solutions 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.

Notwithstanding the precautions it has established to prevent interference, Motorola Solutions does not expect the proposed operation to cause interference with any licensed operation. Should interference occur, however, Motorola Solutions will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation.

E. Restrictions on Operation:

Motorola Solutions 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, Motorola Solutions 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 (2018), 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:

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 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:”

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