

## State Of Ohio, Long-Term Evolution (LTE), 700 MHz Demonstration Project

### NARRATIVE STATEMENT

Pursuant to Section 5.3(e) and (f) and Section 5.61 of the Commission's rules, 47 C.F.R. §§ 5.3(e), (f), 5.61 (2014), the State of Ohio (FCC Registration Number ("FRN") (0004855151) , hereby respectfully requests special temporary authority ("STA") from **January 1 through June 30, 2016**, to operate in the 758-768/788-798 MHz bands for the purpose of testing and evaluating the functionality and acceptability of prototype broadband Long-Term Evolution ("LTE") equipment at three locations within the State listed below.

#### **A. Purpose of Operation and Need for STA:**

The State of Ohio seeks to test the functionality of prototype devices designed to support the needs of the public safety and homeland security community. Specifically, it proposes to conduct tests and evaluations of prototype equipment at the three sites listed below. To insure that all operations from set-up to tear-down are covered by Commission authorization, the State respectfully requests that the FCC grant the STA for the period January 1 through June 30, 2016.

#### **B. Locations of Proposed Operation:**

The State proposes to conduct its demonstrations at the three locations listed below. Equipment would include three temporary base stations and associated antennas, along with a small number of portable/mobile units that would operate within a kilometer radius of each site. The address and approximate reference coordinates for location of the temporary fixed base station deployments are:

|                                                                                                                                                                          |                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Location No. 1</b><br>Beavercreek Fire Admin Site (next to Station 61)<br>851 Orchard Lane<br>Beavercreek, OH 45434<br>Latitude 39:42:43.2N<br>Longitude 084:01:02.0W | <b>Location No. 2</b><br>Beavercreek Station 64<br>3633 Indian Ripple Road<br>Beavercreek, OH 45440<br>Latitude 39:41:36.8N<br>Longitude 084:04:18.3W |
| <b>Location No. 3</b><br>Soin Medical Center<br>3535 Pentagon Blvd<br>Beavercreek, OH 45431<br>Latitude 39:46:15.4N<br>Longitude 084:03:45.3W                            |                                                                                                                                                       |

**C. Technical Specifications:**

**1. Frequencies Desired**

The State seeks authorization to operate in the bands 758-768/788-798 MHz allocated for a nationwide public safety broadband network yet to be built and licensed to FirstNet on a nationwide basis.

**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.

At each location, up to 150 portable/mobile units will be deployed and configured to operate at a maximum power level of 150 mW effective radiated power ("ERP") and a maximum peak power level of 88mW ERP. One base station will be located at each site and will be configured to transmit at 40 Watts, with a maximum ERP of 1556 watts. The State will reduce the actual powers to the minimum power needed for successful operation, based on set-up and testing at the demonstration site.

**3. Modulation and Emissions**

The State proposes to operate using OFDM modulation. The primary emission designators are 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 stations will be located at a height no greater than 20 feet above ground or, if mounted on a building or tower structure, not higher than 20 feet above those structures. The portable/mobile unit antennas in and around the test site will be located as required for a successful evaluation.

**5. Equipment To Be Used**

The State expects to conduct its demonstration with three fixed sites with one base unit each and a total of 150 mobile/portable units. Moreover, it 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, the State has requested authority to operate in the 758-768/788-798 MHz bands allocated for a nationwide public safety broadband network and licensed to FirstNet on a nationwide basis.

Under Commission rules, Low Power TV stations and auxiliary stations were previously required to vacate the 700 MHz band, so no interference should occur to broadcast facilities.

Furthermore, as noted above, the length of the demonstration period is short, extending only from January 1 through June 30, 2016.

**E. Restrictions on Operation:**

The State 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, it will disassemble the demonstration facilities.

The State also recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities. In the unlikely event interference occurs, the State will take immediate steps to resolve the interference, including discontinuance of operation if necessary.

Entities will be advised in accordance with Section 2.803 of the Commission's rules, 47 C.F.R. §2.803 (2014), 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:**

The State of Ohio submits that issuance of an STA as requested is in the public interest, convenience, and necessity. Grant of an STA will help the State evaluate 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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