

**T-Mobile USA, Inc.**  
**Request for Part 5 Experimental STA**  
**ELS File No. 0497-EX-ST-2017**

**NARRATIVE STATEMENT**

Pursuant to Section 5.203 of the Commission's rules, 47 C.F.R. §§ 5.203 (2016), T-Mobile USA, Inc. ("T-Mobile") hereby respectfully requests experimental special temporary authority from April 11, 2018 to October 11, 2018, to continue to evaluate the technical performance of pre-commercial equipment in the 3550-3700 MHz band. T-Mobile wishes to continue operating in the 3550-3700 MHz band to understand the propagation characteristics and gain a better understanding of new innovative services this band can offer.

**A. Purpose of Operation and Need for Experimental License:**

T-Mobile is working with equipment vendors to conduct product testing of new 3550-3700 MHz equipment. The trials at the locations listed below will allow T-Mobile to test 4 different units of prototype equipment in outdoor and indoor setting prior to equipment certification.

**B. Location of Proposed Operation:**

T-Mobile intends to continue to conduct testing of mobile operations within 1-5 kilometers of the 2 locations below:

Address	Latitude	Longitude	Radius
Las Vegas, NV	36° 8' 16"	115° 9' 53"	5 kilometers
Las Vegas, NV	36° 8' 23"	115° 7' 7"	4 kilometers

**C. Technical Specifications:**

**1. Frequencies Desired**

T-Mobile will be using the 3550-3700 MHz band for testing. Various bandwidths will be used during the experiments.

**2. Equipment To Be Used**

T-Mobile will be using prototype equipment that has not yet received FCC certification.

**3. Power Levels**

The fixed stations will utilize up to 100 watts EIRP (mean) for outdoor testing.

**4. Type of Emission, Modulation Technique, and Bandwidth Required**

The prototype equipment will utilize 20 megahertz of bandwidth and an emission designator of 20M0W7W. The modulation technique is LTE-TDD, utilizing digital OFDM, QPSK, 16QAM, and 64QAM.

**D. Protection Against Causing Interference:**

T-Mobile will continue to use the 3550-3700 MHz spectrum band if authorized by the Commission. T-Mobile understands that the Federal government is the primary user of the spectrum and T-Mobile understands that it must accept any interference from any users of this band and that all operations by T-Mobile will be on a secondary basis. T-Mobile has established a point of contact identified below with “kill switch” authority should any interference occur to primary licensed services. Should interference occur, T-Mobile will take immediate steps to resolve the interference, including, if necessary, arranging for the discontinuance of operation.

**E. Restrictions on Operation:**

T-Mobile is not seeking authority to perform a market study under the requested experimental STA. Moreover, no fees will be charged to entities using the equipment during this test. Entities will be advised in accordance with Section 2.803 of the Commission’s rules, 47 C.F.R. §2.803, 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:**

T-Mobile submits that issuance of the experimental STA as requested is in the public interest, convenience, and necessity. Grant of an experimental STA will help T-Mobile to develop and test innovative equipment to provide service to consumers.

**G. Contact Information:**

**Technical Contact and “Stop Buzzer/Kill Switch:”**

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