

T-Mobile USA, Inc.
Request for Part 5 Experimental STA
ELS File No. 1996-EX-ST-2018

NARRATIVE STATEMENT

T-Mobile USA, Inc. hereby respectfully requests special temporary authority (“STA”) beginning Dec 15, 2018 to June 15, 2019, to evaluate the technical performance of pre-production License Assisted Access (“LAA”). The experiments will operate in AWS-1 spectrum licensed to T-Mobile as well as in unlicensed 5 GHz spectrum (U-NII-2) for down-link only mode. The testing will be in a highly controlled field environment that will help T-Mobile to allow pre-commercial testing of new products outside of a lab environment but in a controlled and managed manner.

A. Purpose of operations and need for experimental license:

The purpose of our testing is to conduct product testing of new LAA equipment. The trials at various locations listed below will allow T-Mobile to test pre-production equipment in outdoor and indoor testing setting prior to the devices completing the equipment authorization process.

B. Need for an STA:

An STA is needed to get access to unlicensed 5 GHz (U-NII-2) spectrum for testing purposes in Houston and LA. The mobile units will be receive-only in the unlicensed 5 GHz but will also include an LTE transmitter that will operate in the AWS-1 spectrum pursuant to Section 2.805(e)(1)(i) of the FCC’s rules on frequencies already licensed to T-Mobile. T-Mobile anticipates using as many as 10 mobiles units at each location.

C. Dates of Operation:

12/15/2018 through 5/31/2019 or as soon as possible.

D. Location(s) of Proposed Operations:

Houston, TX

A.) NL 29-48'-25'' WL 95-24'-4''

B.) NL 29-49'-2'' WL 95-25'-40''

Radius of Operation: 10 km (for each location)

Station Class: FX MO

Los Angeles, CA

A.) NL 33-57'-4'' WL 118-16'-2''

B.) NL 33-56'-53'' WL 118-16'-2''

Radius of Operation: 10 km (for each location)

Station Class: FX MO

E. Technical Specifications:

1. Equipment to be used:

Various experimental prototypes, 10 units

2. Frequencies Desired:

U-NII-2A: 5.250- 5.350 GHz

U-NII-2C: 5.470- 5.725 GHz

3. Power Levels:

Station Class FX

ERP (W)/(dbm): 2.4 W/ 33.83 dbm

Technology: LAA

Station Class MO (Transmitting on AWS-1 frequencies pursuant to Section 2.805)

ERP (W)/(dbm): 0.3 W/ 24.83 dbm

Technology: LAA

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

60M0W7D

F. Overall Height of Antenna(s) Above Ground/Orientation:

Omni Antennas will be mounted on existing structures. The equipment will not extend more than 6 meters above the structures.

Overall height on existing structures will be:

Los Angeles:

A.) 8 meters

B.) 8 meters

Houston:

A.) 9 meters

B.) 9 meters

G. Contact Information:

Technical Contact:

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