T-Mobile USA, Inc.
Request for Part 5 Experimental
Special Temporary Authority
ELS File No. 1056-EX-ST-2017

NARRATIVE STATEMENT

Pursuant to Sections 5.3 (j) and Section 5.61 of the Commission's rules, 47 C.F.R. §§ 5.3(j), 5.61 (2016), T-Mobile USA, Inc. ("T-Mobile") hereby respectfully requests experimental special temporary authority ("STA") from August 4, 2017 to February 4, 2018, to evaluate the technical performance of pre-commercial LAA equipment. The experiments will operate in AWS-1 spectrum licensed to T-Mobile as well as in unlicensed 5 GHz spectrum (in a downlink-only mode). The testing will be in a highly controlled field environment that will help T-Mobile to allow the pre-commercial testing of new products outside of a lab environment but in a controlled and managed manner.

A. Purpose of Operation and Need for STA:

T-Mobile is working with equipment vendors to conduct product testing of new LAA equipment. The trials at the various locations listed below will allow T-Mobile to test prototype equipment in outdoor and indoor setting prior to equipment certification. The trials will consist of up to 10 small cells and access points that will use the transmission parameters detailed below in Section C. Mobile units will operate within the RF coverage area of the small cell stations. The mobiles will be receive-only in the unlicensed 5 GHz band but will also include an LTE transmitter that will operate in the AWS-1 spectrum. T-Mobile anticipates using as many as 20 mobile units at each location.

B. Location of Proposed Operation:

T-Mobile intends to conduct testing in 25 locations with the address and approximate reference coordinates (in Datum: NAD83) of each of the fixed locations:

Latitude	Longitude	Address			
34.02993	-118.26832	220 W 21st St	Los Angeles	CA	90007
34.028754	-118.270949	2301 S Grand Ave	Los Angeles	CA	90007
33.99744	-118.24988	1402 E 50th St	Los Angeles	CA	90011
33.997625	-118.252051	4916 Hooper Ave	Los Angeles	CA	90011
33.78085	-118.16979	1104 Rose Ave	Los Angeles	CA	90813
33.78302	-118.17194	1601 E Anaheim St	Los Angeles	CA	90813
33.77586	-118.1622	720 Stanley Ave	Los Angeles	CA	90813
34.03129	-118.25627	601 E 15th St	Los Angeles	CA	90011
33.9965	-118.2471	1518 E 51st St	Los Angeles	CA	90011
34.0162	-118.2599	3099 Griffith Ave	Los Angeles	CA	90011

Latitude	Longitude	Address
33.20271	-117.367	1901 BUSH ST Oceanside CA 92058
33.20077	-117.365	1701 Mission Ave Oceanside CA 92058
33.23636	-117.335	1720 Dixie St Oceanside CA 92058
33.23137	-117.335	3659 Forest Rd Oceanside CA 92058
33.22799	-117.336	255 Fredricks Ave Oceanside CA 92058
32.58402	-117.094	305 Los Arbolitos Blvd San Diego CA 92058
32.660875	-117.106085	2101 Roosevelt Ave National City CA 91950
32.65511	-117.09438	401 Mile of Cars Way Ste 350 National City CA 91950
32.664652	-117.093585	2626 National City Blvd National City CA 91950
32.66016	-117.10098	3303 National City Blvd National City CA 91950
33.20493	-117.367495	2336 Highland Ave National City CA 91950
32.686581	-117.102069	1039 13TH ST Imperial Beach CA 91932
32.696769	-117.10021	1098 GROVE AVE Imperial Beach CA 91932
32.57667	-117.09483	1910 S 43rd St San Diego CA 92113
32.66445	-117.10266	816 ETA ST National City CA 91950
32.68679	-117.100862	4401 Logan Ave San Diego CA 92113
32.58192	-117.092798	1865 Palm Ave San Diego CA 92154
32.57294	-117.110177	635 Betty St San Diego CA 92154
32.57763	-117.105591	1823 Elm Ave San Diego CA 92154

C. Technical Specifications:

1. Frequencies Desired

T-Mobile will be using AWS-1 spectrum for the testing as well as unlicensed 5 GHz spectrum. Specifically, T-Mobile will be transmitting in accordance with the frequency information in its application, transmitting at 2.4 watts and 300 milliwatts in the frequency bands 5170-5250 MHz and 5725-5850 MHz with an emission designator of 60M0F7D.

2. Equipment To Be Used

T-Mobile will be using prototype equipment that has not yet received FCC certification. This equipment will be provided by a number of vendors.

D. Protection Against Causing Interference:

T-Mobile is requesting use of the unlicensed 5 GHz spectrum bands. T-Mobile will only operate AWS-1 in bands that it has licenses for in the different locations. 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 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 STA as requested is in the public interest, convenience, and necessity. Grant of an 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:"

David Jones
T-Mobile USA, Inc.
david.jones@t-mobile.com

Chris Wieczorek
T-Mobile USA, Inc.
601 Pennsylvania Ave., NW
Washington, DC 20004
202-654-5913
christopher.wieczorek@t-mobile.com

FCC Legal Counsel/Contact:

Tom Dombrowsky
Senior Engineering Advisor
DLA Piper LLP
500 8th Street, NW
Washington, DC 20004
Telephone: 202.799.4039
Thomas.Dombrowsky@dlapiper.com