EXPERIMENTAL STA REQUEST OF T-MOBILE LICENSE LLC

T-Mobile License LLC
Exhibit I

NARRATIVE STATEMENT

Pursuant to Section 5.3 and Section 5.61 of the Commission's rules, 47 C.F.R. §§ 5.3, 5.61 (2006), T-Mobile License LLC ("T-Mobile") hereby respectfully requests special temporary authority ("STA") beginning June 1, 2012 for the purpose of determining the suitability of spectrum in the 1755-1780 MHz and 2155-2180 MHz bands for commercial mobile broadband services, and to examine technical co-existence with a limited number of incumbent Federal operations, in a defined number of geographic locations, that may remain in the band on a transitional basis.

In support of this request, the following is shown:

1) Applicant's Name, Address, and FCC Registration Number ("FRN"):

T-Mobile License LLC
12920 SE 38th Street
Bellevue, WA 98006
FRN: 0001565449

2) Description of Operation and Purpose of Test:

T-Mobile is a wireless provider, providing service nationally in the PCS and AWS-1 spectrum bands. T-Mobile operates both an HSPA+ 4G network as well as a GSM network and has announced that it is deploying LTE in the AWS-1 band. The experimental authority requested herein will enable T-Mobile to undertake testing of the 1755-1780 MHz and 2155-2180 MHz bands to determine its suitability for commercial mobile broadband services, in particular the effect of existing Federal government operations on the use of this spectrum for mobile Long Term Evolution ("LTE") service. The wireless industry, the FCC, and NTIA all have a great interest in evaluating this band and determining the feasibility of reallocating it from Federal to commercial wireless use. Testing will focus on the ability of Federal and commercial uses to share the spectrum during an interval where Federal use for certain systems may continue. In addition, data will be collected on the effects on commercial operations from the existing Federal uses in this band.

T-Mobile, CTIA and the wireless industry have been working closely with the FCC and NTIA to obtain authority for testing of devices in the 1755-

1780 MHz and 2155-2180 MHz bands. To effectuate this, industry needs to obtain operating authority from the FCC that is fully coordinated with NTIA. T-Mobile has offered to be the applicant on behalf of industry for this testing. T-Mobile took the lead in a similar fashion when testing interference between AWS-3 spectrum proponents and existing AWS-1 licensees. T-Mobile expects that, similar to the AWS-1 process, interested parties will be able to participate in the process even though they are not the licensee. As part of this process, interested parties will participate in the formation of testing plans, work with NTIA in selecting test locations and participate in any and all tests that are conducted. T-Mobile would expect that the output of testing will be data that all interested parties will be free to analyze for effects on their current or future technology plans for use of the 1755/2155 MHz spectrum.

T-Mobile intends to conduct these tests in designated areas near satellite uplink facilities, near Federal aeronautical facilities, and in selected major cities. T-Mobile hereby requests that it be granted authority to operate throughout the continental United States, and T-Mobile plans to consult and coordinate with NTIA and Federal agencies on the specific geographic areas prior to any testing locations are utilized.

Grant of an STA will enable T-Mobile to collect valuable data that will inform the ongoing efforts by the Commission, NTIA, and the wireless industry to bring additional spectrum to market for mobile broadband services. This STA will serve the public interest by providing the wireless industry, Commission, and NTIA with necessary information that will enable these groups to proceed with the reallocation of this spectrum.

3) Need for an STA and Expedited Treatment**:**

Grant of special temporary authority, together with expedited treatment of this request, is necessary for T-Mobile to commence testing as soon as possible and to help meet the Commission's and Administration aggressive benchmarks for broadband spectrum reallocation. The National Broadband Plan ("NBP") called for the Commission to make 500 megahertz newly available for broadband use by 2020, of which 300 megahertz between 225 and 3.7 GHz should be made newly available for mobile use within five years.[1] More specifically, the Commission directed NTIA to conduct an analysis of the possibility of reallocating a portion of the 1755-1850 MHz band for pairing with the AWS-3 band[2] and asked that the Commission and NTIA jointly identify additional candidate federal spectrum for mobile broadband. On March 27, 2012, NTIA released a report finding that the 1755-1850 MHz spectrum can be repurposed for broadband use, subject to several challenges.

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[1] Federal Communications Commission, *Connecting America: The National Broadband Plan* at 84 (2010) ("*National Broadband Plan*").

[2] *Id.* at 86-87.

For the Commission and NTIA to achieve the NBP's spectrum goals, rapid action will be needed to evaluate the obstacles to broadband deployment in the 1755-1780 MHz and 2155-2180 MHz bands. Grant of the requested STA in an expedited manner will enable T-Mobile to begin testing as soon as possible.

4) Dates of Operation:
06/01/12 through 12/01/12

5) Class(es) of Station(s):

During this testing, T-Mobile will deploy both fixed base stations operating in the 2155-2180 MHz spectrum as well as mobile stations in the 1755-1780 MHz band. Base station locations (and corresponding radii of operation for mobile units) will be fully coordinated with NTIA and Federal incumbents (in the 1755-1780 MHz band), as well as fixed microwave incumbents (in the 2155-2180 MHz band) prior to any testing or specific location being made operational.

6) Location(s) of Proposed Operations:

T-Mobile requests full continental United States authority for this experimental STA. As noted above, any locations of testing will be fully coordinated with NTIA and the Federal government prior to operations and will focus on areas and systems where Federal incumbents are operating that may continue to operate for an extended period in the 1755-1780 MHz spectrum after reallocation of this spectrum to commercial mobile broadband services.

7) Equipment To Be Used:

T-Mobile will work with its existing infrastructure and handset vendors to select representative LTE base station and handset equipment for testing. As part of the coordination process with NTIA and Federal government, T-Mobile will provide technical specifications of all tested equipment prior to any experimental testing.

8) Frequencies Desired:

T-Mobile requests operating authority for the 1755-1780 MHz (for mobile operations) and 2155-2180 MHz (for fixed base station operations) bands. Specific frequencies for testing will be determined in full cooperation with NTIA, Federal incumbents and fixed microwave station licensees for each tested location.

9) Power Levels:

For the 1755-1780 MHz band: 0.32 W (23 dBm +/- 2 dB) peak maximum

	transmitter power output
For the 2155-2180 MHz band:	80 W (for 20 MHz LTE carrier) peak maximum transmitter power output

10) Type of Emission, Modulation Technique, and Bandwidth Required:

Type of Emission	**Modulation**	**Bandwidth**
4M47G7D	QPSK	5 MHz
4M47W7D	16-QAM	5 MHz
8M95G7D	QPSK	10 MHz
8M95W7D	16-QAM	10 MHz
18M00G7D	QPSK	20 MHz
18M00W7D	16-QAM	20 MHz

T-Mobile has created the emission designator and calculated the necessary bandwidth in accordance with Sections 2.201 and 2.202 of the Commission's rules.

11) Overall Height of Antenna(s) Above Ground:

Base station heights will be lower than 200 meters and will likely be placed at existing T-Mobile base station locations to ensure full compliance with FAA requirements. Location and antenna heights will be fully coordinated with NTIA and Federal incumbents prior to any operation.

For purposes of the Antenna Registration portion of the application, T-Mobile has identified a T-Mobile-owned tower, Antenna Registration Number 1046206, in Seattle, WA. This tower is representative of a tower that would be used by T-Mobile in the course of conducting this testing, and has received clearance by the FAA.

12) Contact Information:

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