Robert Bosch LLC
Request for Grant of Special Temporary Authority
File No. 0727- EX-ST-2019
Narrative Exhibit Describing Operation

Please note that this application for STA is similar, other than the specified locations of operation, to prior applications for Special Temporary Authority (See File No. 1893-EX-ST-2018 that was granted (Call Sign WN9XPI) by the Commission for a single location in Novi, Michigan; 2050-EX-ST-2018 for testing and development of identical equipment at Columbus, Indiana (Call Sign WN9XUD); 2061-EX-ST-2018 for testing and development of identical equipment at Novi, Michigan and Columbus, Indiana (Call Sign WN9XUE) and 0250-EX-ST-2019 for a single location in Oregon (Call Sign WO9XBP).

This application, filed by Robert Bosch LLC, an international manufacturer of tools, automotive equipment, and industrial and consumer products, requests special temporary authority during a six-month period beginning as soon as possible and ending six months later, to permit development and testing at three locations in Michigan, of a vehicle communications device. connectivity using commercial mobile networks in the area.

The product is a vehicle communication device which supports all types of relevant wireless communication. It includes several new and emerging technologies including 3GPP Rel-14 PC5 sidelink communication, Cat-16 LTE and DSRC as defined in the 802.11p standard. It also has a Dual-band GNSS receiver and Wi-Fi/Bluetooth. The testing will be used to evaluate vehicle safety applications including Emergency Electronic Brake Lights, Intersection Movement Assist, and Left-Turn Assist as defined in the SAE J2945 specification. It may also be use peripherally to evaluate standard vehicle connectivity use cases such as fleet management and vehicle tracking, remote diagnostics, theft protection, and remote software updates. Communication with mobile network operators will use standard SIMs on frequencies determined by the mobile network operator (e.g. AT&T).

The product is intended to address the challenges of connectivity associated with current transportation and management of vehicles (including commercial vehicles, agricultural and industrial vehicles, passenger cars and other mobility applications). The applications of this product will include vehicle management, geofencing, fleet management, remote diagnostics, theft protection, alerts and preventive maintenance. Communications will be commercially provided through AT&T or another commercial service provider for this series of experiments using SIM cards from the local commercial mobile service provider. ***Bosch will not be using spectrum in the cellular bands that is allocated to any commercial service provider other than through a commercial service provider (AT&T), so no interference on those allocations can arise from the use of this device.*** Specific frequencies will be determined by the network operator only. There will be no RF signals transmitted without the SIM card from the commercial service provider. The product uses network data services provided by the commercial service provider to transfer information to the server.

Wi-Fi and Bluetooth capabilities are incorporated in the product, but those will be used only for in-vehicle applications where the product acts as a local hotspot. Only Part 15 bands are specified for these components of the product.

The purpose of this STA is to develop applications for this telematics device by incorporating it in various vehicles. Test opportunities have arisen at the locations of three vehicle manufacturers to incorporate the telematics device in the vehicles at a given location. The test opportunities are short term. Bosch has, as is seen from the above list of specific location STAs, been very active in the development and testing of this product by incorporating it in particular vehicles, and this testing will continue for the next six months during this period. There has been no reported interference at any of the prior tests conducted pursuant to the above-referenced STAs. All of the experimental devices will be retrieved by Robert Bosch LLC from the three locations upon completion of the operation.

The bands sought herein are as follows:
3G Band 2: 1850 to 1910 MHz
3G Band 5: 824 to 849 MHz& 869 to 894 MHz
LTE Band 2: 1850 to 1910 MHz& 1930 to 1990 MHz
LTE Band 4: 1710 to 1755 MHz & 2110 to 2155 MHz
LTE Band 5 : 824 to 849MHz
LTE Band 7: 2500 to 2570 MHz & 2620 to 2690 MHz
LTE Band 12: 699 to 716
LTE Band 17: 704 to 716
WiFi 2GHz: 2400 – 2483.5 MHz
WiFi 5GHz: 5180 – 5320 MHz & 5500 - 5825 MHz & 5855-5925 MHz
BLE: 2402 – 2483.5 MHz

There will also be a GPS receiver included in the product.

Neither the composite product nor its components is certified in the United States as of yet. Hence the need for the STA for this pre-production testing and development of various vehicular applications for the device.

The Stop Buzzer contact in the United States for Bosch for this test series at all locations will be Mr. Elliot Morrison-Reed of Bosch, whose mobile phone number is (248) 302-2413 and whose e-mail is Elliot.Morrison-Reed @us.bosch.com.

Should any interference arise or be complained of by any entity during the event, all operation will cease until the interference complaint is resolved to the satisfaction of the complainant.

Should any question arise concerning this application, kindly notify undersigned counsel.

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