NARRATIVE STATEMENT

Pursuant to Section 5.3(d) and (f) and Section 5.61 of the Commission's rules, 47 C.F.R. §§ 5.3(d), (f), 5.53 (2010), Nokia Siemens Networks US LLC ("NSN") hereby respectfully requests a special temporary authority ("STA"), beginning **January 18, 2012**, to operate in the 758-768/788-798 MHz band for the purpose of conducting tests in connection with the development of Long Term Evolution ("LTE") equipment. The tests will be conducted from sites at and near the offices of NSN in Arlington Heights, Illinois, as identified below.

Please note that this request is identical to, and serves to extend the STA granted under call sign WF9XAW, issued under File No. 0420-EX-ST-2011. Letters from both the Public Safety Spectrum Trust ("PSST") and the State of Illinois in support of this request are attached.

The following information is provided in support of this application:

A. <u>Purpose of Operation and Need for STA</u>:

NSN is a leading manufacturer of mobile broadband radio equipment, and the grant of the application will allow NSN to test and demonstrate prototype equipment to enhance the company's efforts to design and develop its equipment to meet the communications needs of potential users.

B. <u>Location of Proposed Operation</u>:

NSN proposes to conduct the proposed tests using fixed base station transmitters and antennas located in and around its offices in Arlington Heights, Illinois, a limited number of lower height pico sites and associated mobiles and portables. The addresses and approximate coordinates (in NAD83 Datum) of the base station sites are:

| Offices of NSN | Boeger Tower |
|--|--|
| 1441 W Shure Drive | 129 Boeger Road |
| Arlington Heights, IL 60004 | Arlington Heights, IL 60004 |
| 42° 08' 08" North Latitude 87° 59' 56" West Longitude | 42° 08' 14" North Latitude 87° 58' 57" West Longitude |
| Syverson Tower | Downtown Arlington Heights |
| 2301 Rand Road | 105 Northwest Highway |
| Palatine, IL 60038 | Arlington Heights, IL 60014 |
| 42° 09' 12" North Latitude | 42° 05' 04" North Latitude |

C. <u>Technical Specifications:</u>

1. Frequencies Desired

NSN requests authorization to operate in the band 758-768/788-798 MHz. This band encompasses both the 758-763/788-793 MHz band known as the upper 700 MHz D block, which has not yet been licensed for regular operation, and the 763-768/793-798 MHz public safety block licensed on a nationwide basis to the PSST. Attached is a letter of concurrence from the Public Safety Spectrum Trust ("PSST") for the proposed operation on its portion of the spectrum. Also attached is a letter of concurrence from the Illinois State Police STARCOM21 System Administrator for the proposed operation on its portion of the spectrum. NSN plans to advise the PSST and the Illinois State Police when it commences operations and will request additional concurrences as needed to operate under the STA as requested in this application.

2. Effective Radiated Power

All power levels will comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiation.

The mobile/portable units to be deployed are configured to operate at an average power level of 250 mW effective radiated power ("ERP") and a peak power level of 2.5 Watts ERP. The base station will be configured to operate at a peak power level of less than 125 Watts ERP. The pico sites will operate at a power level between 2 and 5 Watts ERP. NSN will vary the actual powers within the maximums noted above to test coverage results.

In addition, NSN will evaluate environmental considerations to ensure compliance with Section 1.1306 of the FCC's rules, 47 C.F.R. § 1.1306 (2010), and, in particular, the human exposure requirements set forth in FCC OET Bulletin No. 65.

3. Modulation and Emissions

NSN proposes to operate using OFDM modulation. The primary emission designators are 5M0G7D, 5M0W7W, 5M0G2D, 5M0D7D, 10M0G7D, 10M0W7W, 10M0G2D, and 10M0D7D. Other emission modes may be utilized, but in no event will the emissions extend beyond the frequency bands requested.

4. Antenna Information

The fixed base station transmitter antenna will be located outdoors at the sites specified above. The antenna elevation above ground level will not exceed 45 meter. The antennas for pico sites will be installed at a height not greater than 7 meters above ground when used outdoors. The mobile and portable units for most part will be hand held. In case of rack

mounting, subscriber units will be not be installed at heights over 3 meters. No antennas will be mounted in a fashion that will require approval under FAA and FCC rules and regulations.

5. Equipment To Be Used

NSN will conduct its demonstrations at each of sites listed above with a single base station, up to twelve pico sites within one kilometer of each site, and up to twenty mobile/portable units within ten kilometer radius of each site. Moreover, NSN will limit the power, area of operation, and transmitting times to the <u>minimum</u> necessary to evaluate the equipment.

D. <u>Protection Against Interference:</u>

As noted above, NSN has requested authority to operate in the 758-768/788-798 MHz band. NSN will coordinate with any licensees, as required by FCC rules, before commencing operations.

NSN has analyzed information from the FCC's license databases and has determined that the proposed operation would not interfere with, or create a significant potential for interference with, any public safety operations in the 700 MHz band. The State of Illinois STARCOM21 system utilizes a portion of the PSST spectrum block for operation of vehicular repeaters, pursuant to a waiver that allows it to continue to operate under the former 700 MHz band plan. Based on discussions with the State, however, the operations proposed under this STA request are not expected to cause interference to the State's system because vehicular repeaters are seldom needed for coverage in the areas where testing will be conducted. Attached is a letter of concurrence from the Illinois State Police STARCOM21 System Administrator for the proposed operation on its portion of the spectrum.

NSN also searched the Commission TV database and determined that the proposed operation would not interference with any authorized Low Power TV stations in the area.

Moreover, NSN recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities, including the facilities of other experimental licensees in this band. Should interference occur, NSN will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation.

E. <u>Restrictions on Operation</u>:

NSN is not seeking authority to perform a market study under this experimental license. Moreover, no fees will be charged to entities using the equipment during this test. After the test is completed, NSN will recall and recover all devices that do not comply with FCC regulations.

In addition, NSN will advise entities using the equipment that permission to operate has been granted under experimental authority issued to Nokia Siemens Networks USA LLC, that such operation is strictly temporary, and that the equipment may not cause harmful interference. Entities will also be advised in accordance with Section 2.803 of the Commission's rules, 47 C.F.R. §2.803 (2010), that any unapproved devices have not been authorized as required by the rules of the FCC and are not being offered for sale or lease, or sold or leased, until authorization is obtained.

F. <u>Public Interest Statement</u>:

NSN submits that issuance of an experimental license as requested is in the public interest, convenience, and necessity. Grant of the license will permit NSN to develop innovative equipment that will accommodate the communications needs of users

G. <u>Contact Information</u>:

For questions about this application, or in the unlikely event interference concerns should arise during the period of authorization, please contact:

Prempal Singh Operations Manager New Product Introduction Nokia Siemens Networks US LLC 1501 W Shure Drive Arlighton Heights, IL 60004 Telephone: (847) 722-7683 Prempal.singh@nsn.com

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September 19, 2011

Marlene H. Dortch Secretary Federal Communications Commission 445 12th Street, SW Room TWA325 Washington, DC 20554

Re: Application of Nokia Siemens Networks for Temporary Spectrum Use

Dear Ms. Dortch:

The Public Safety Spectrum Trust ("PSST") hereby provides its consent to the application of Nokia Siemens Networks (NSN) for experimental special temporary authority ("Experimental STA") to authorize testing of Long Term Evolution ("LTE") equipment in the PSST's 700 MHz band spectrum in the vicinity of the NSN facilities at Arlington Heights Illinois as described in more detail below. The PSST understands that the test operation planned would conform to the following parameters:

1) LTE base stations will be located on the NSN campus at 1441 West Shure Drive, Arlington Heights, IL, at 11 South Dunton Avenue, Arlington Heights, IL, and at communications towers located at 129 Boeger Road, Arlington Heights, IL and 2301 Rand Road, Palatine, IL. In addition, up to nine LTE low power "pico-sites" would be located in the downtown Arlington Heights area. Mobile or portable LTE units would operate around these base sites and pico-sites. The actual area of coverage is one of the parameters that will be determined by the proposed testing.

2) NSN will request authority from the FCC to operate over the 758-768/788-798 MHz bands. This encompasses both the 763-768/793-798 MHz bands, which are currently licensed on a nationwide basis to the PSST as part of the 700 MHz Public Safety Broadband License, and the 758-763/788-793 MHz bands known as the Upper 700 MHz D Block, which has not yet been licensed for regular operation.

3) Operation will be an extension of a current STA and will continue until March 31, 2012, the expiration of the current concurrence from the Illinois State Police. All operations would be on a secondary, non-interference basis, and NSN has indicated that it would adjust or discontinue testing as needed.

4) We understand that NSN has analyzed information from the FCC's license databases and has determined that the proposed operation would not interfere or create a significant potential for interference with any public safety operations in the 700 MHz band. NSN has also told us the State of Illinois STARCOM21 system utilizes a portion of the PSST spectrum block for operation of vehicular repeaters, pursuant to a waiver that allows continued operation under the former 700 MHz bandplan. However, NSN has explained that discussions with the State indicate the proposed experimental testing is not expected to cause interference to the system because vehicular repeaters are seldom needed for coverage in this area where testing will be conducted. NSN also provided the PSST with a copy of a letter of concurrence dated September 2, 2011, from the Illinois State Police STARCOM21 System Administrator.

Given the above information, the PSST concurs with NSN's proposed operation on certain frequencies currently licensed to the PSST as part of the 700 MHz Public Safety Broadband License for purposes of testing LTE equipment in and around the NSN facilities in Arlington Heights, Illinois. As you are aware, decisions on the permanent use of the adjacent Upper 700 MHz D Block spectrum are still pending at the FCC. The PSST takes no position as to NSN's request regarding use of the D Block spectrum.

This consent is subject to the PSST's ongoing ability to monitor any operations and use of the PSST's licensed spectrum. In addition, this consent only applies to the period discussed in paragraph 3. NSN will need to seek another consent letter from the PSST if NSN requests an extension of the Experimental STA.

Respectfully submitted,

Harlin R. MEner

Chief Harlin R. McEwen Chairman Public Safety Spectrum Trust Corporation (607) 227-1664 chiefhrm@pubsaf.com



ILLINOIS STATE POLICE Division of Operations

Pat Quinn *Governor* Hiram Grai. Director

September 2, 2011

Mr. Jim Krammen Governmental Affairs Network Systems and Product Management Nokia Siemens Networks 1501 West Shure Drive Arlington Heights, Illinois 60004

Dear Mr. Krammen:

I am in receipt of your correspondence of August 22 in which you requested an extension of the authority provided to Nokia-Siemens to perform LTE testing in the Arlington Heights and Palatine area of northeastern Illinois.

In response to your request, the State of Illinois hereby provides this letter of concurrence in support of Nokia-Siemens' application for extension of the experimental STA to operate in the 700MHz band spectrum for testing of LTE broadband equipment in the aforementioned area. This concurrence is granted with the understanding that Nokia-Siemens continue to perform the testing in accordance with the parameters identified in the state's original correspondence of June 2, 2011.

This concurrence will expire on March 31, 2012. An additional extension, if needed, may be requested in writing prior to that date.

Respectfully,

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Daniel C. Meseke STARCOM21 System Administrator Illinois State Police Communications Services Bureau

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