

(P) Parallel Wireless

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November 18, 2013

Julius Knapp
Chief, Office of Engineering and Technology
Federal Communications Commission
Washington, DC 20510

**Re: Experimental License Service Application
File No. 0600-EX-PL-2013**

Dear Chief Knapp:

In order to continue testing our next generation wireless base station, Parallel Wireless, Inc. seeks the grant of an experimental license for among other frequencies, the 758-768 MHz and the 788-798 MHz spectrum, which is licensed to the First Responder Network Authority ("FirstNet"). Our application is enclosed herewith.

By way of background regarding our company and the product we have designed, Parallel Wireless has designed an intelligent base station that operates over a variety of frequencies and protocols. Our base stations, which work together in a network, have been equipped with proprietary software that makes them "intelligent" nodes. These base stations are designed for public safety use as well as commercial use. Our customers will be federal, state and local governments, as well as network providers.

Parallel Wireless is a start-up company headquartered in Nashua New Hampshire, which is the location for which we seek to obtain a two-year experimental license. At our corporate headquarters, we perform research, development and testing of our base station solution. Our goal is to be a United States-based equipment manufacturer of base stations. The table below shows the maximum values of parameters of interest at any given time during an experiment. For purposes of testing, we will limit our transmission to 0.5W during any experimental testing at our facility. In terms of UEs that would be used in an experimental network, we would use smart phones, land mobile radios, tablets, or laptops.

In our license application, we sought a license for 50 total base stations. To clarify, this number indicates our prediction of the number of test versions that we may develop over the course of the two year experimental license period. It is not an indication that we would seek to test 50 different base stations at one time. Rather, Table 1 indicates our maximum transmission data for any given experiment.

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Description	Indoor Max	Outdoor Max
Number of transmitting base stations	1	4
Transmission range for each base station	1 km	1 km
Total transmission radius of network	1 km	4 km
Power output of each base station	0.5 W	0.5 W
Maximum number of UEs for network	3	12

Table 1. Equipment Statistics for Experimental Set-Up

Our product, and the attendant experimental testing, are relevant to the continued expansion of mobile broadband networks, including methods of increasing network capacity, network speed, equipment density, and most importantly, ease of operation. We have designed our base stations to be LTE compliant, which is timely in light of the current deployment of fourth generation, commercial LTE networks.

Our solution, however, is equally relevant for public safety and other first responders. FirstNet's ultimate network structure is likely to include a mix of macro and micro cell site infrastructure. The experimentation at issue in this application can be leveraged to understand the performance of an LTE network in situations of importance to FirstNet deployments, including extending coverage in difficult-to-reach areas such as in-building and urban canyons, adding capacity in "hot zone" areas, managing shifting traffic patterns, and most importantly, providing public safety personnel with a network solution that is easy to configure and intuitive to use.

Our solution provides broadband network coverage to emergency response personnel. We employ self-healing and self-optimization techniques, which means our nodes are "intelligent" and easy to use, a feature that is particularly important for first responders who have to focus their energy on responding to emergencies, rather than dithering with network configuration. We intend to provide public safety with a "plug and play" base station that brings network coverage to first responder's locations of interest. Accordingly, we believe that affording Parallel Wireless the opportunity to conduct experiments to further refine our base stations is squarely in the public interest.

Parallel Wireless intends to include this letter as part of the above-referenced application to affirm our complete understanding of the primary status of FirstNet as the licensee and our commitment to conducting operations under this license accordingly. Specifically, Parallel Wireless confirms that it:


- Will not utilize the license in conjunction with the provision of mission-critical communications.
- Has designated an overall project manager and a "stop buzzer" contact for these experiments, identified in the attachment to this letter.
- Understands that the experimental license would only permit shared use of the subject radio frequencies and that it may have to coordinate with other entities licensed for experimental purposes.
- Recognizes that a separate concurrence from FirstNet will be required for renewal of this license.

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- Affirms that all of its experimental operations will be secondary, such that they must not cause interference to narrowband or broadband operations authorized on a primary basis, including in the spectrum licensed to FirstNet; and narrowband or broadband operators authorized on a primary basis, including in the spectrum licensed to FirstNet, have no obligation to mitigate any interference that such primary operation may present to the Parallel Wireless experimental operations.
- Has analyzed information from the FCC's licenses database and determined that there are no incumbent users in Nashua, New Hampshire in the 758-768 MHz and the 788-798 MHz spectrum.
- Acknowledges that, although FirstNet has not yet deployed in the geographic area covered by the application, if, during the term of this license, FirstNet or its assignees or lessees, plan to deploy in this area, Parallel Wireless may have to reduce the coverage or power levels of its experimental transmission or cease them entirely to prevent interference to those operations.
- Recognizes that First Net intends to begin deployments in 2015. Although Parallel Wireless seeks a grant of two years for its license, it believes that a two year grant is warranted for two reasons. First, the FirstNet deployments will provide valuable information about system performance that will ultimately benefit the FirstNet community. Second, Parallel Wireless concedes that it is secondary to the needs of FirstNet and any primary authorized users of the FirstNet spectrum. These primary authorized users would have no obligation to mitigate interference with respect to any Parallel Wireless testing.

Parallel Wireless appreciates your attention to this matter. If and when FirstNet grants its concurrence to our pending application, we trust that the licensing branch will be able to move as expeditiously as feasible to grant us an experimental license as described herein. Please let me know if you have any questions or need additional information.

Very truly yours,



Rajesh Kumar Mishra
CEO – Parallel Wireless, Inc.

Enclosures
Form 442 Application
Exhibit 1 – Redacted

ATTACHMENT

The designated project manager and “stop buzzer” contact for the experimental operations to be conducted as proposed under the Experimental License Service Application filed by Parallel Wireless Inc. and pending under File No. 0600-EX-PL-2013, as amended by this letter is:

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Ms. Dinius’s contact information may be included on the face of any authorization issued by the Commission.