

June 9, 2016

The Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Form 422 Conf. No.: EL458615
Form 442 File No: 0427-EX-PL-2016

Submitted Electronically via ELS

To Whom It May Concern:

Parallel Wireless, Inc., an innovative company developing next-generation 3G, 4G, and 5G radio access networks, hereby respectfully submits a request for an experimental license under 47 C.F.R. Part 5 (Experimental Radio Service). This letter is attached to the above-identified application according to FCC Form 422.

Parallel Wireless seeks the grant of an experimental license for the frequencies, 791-821 MHz and the 832-862 MHz spectrum ("LTE Band 20"), to operate fixed and mobile devices, in and around its laboratories in Nashua, NH. The proposed term is July 1, 2016 to June 30, 2017.

Parallel Wireless has previously submitted, and received, a Special Temporary Authority (STA) license, with file number 1297-EX-ST-2015, for the same frequencies and sites now requested. The experimental license has one additional piece of prototype hardware, the CWS-1000/2000/3000. As the experimental parameters have broadened, we now submit a new application with a 1-year term.

Grant of this experimental license application will enable Parallel Wireless to undertake product development, research and testing that supports its goal to facilitate deployment of mobile broadband networks. The product, and the attendant experimental testing, is relevant to the continued expansion of mobile broadband networks, including methods for increasing capacity, network speed, equipment density, and ease of operation.

The following information is provided to satisfy FCC Form 422, Question 7, a–c.

a. The complete program of research and experimentation proposed including description of equipment and theory of operation

The fixed equipment to be experimentally tested consists of the Parallel Wireless CWS-111 and CWS-1000/2000/3000 base stations. The mobile equipment to be tested consists of the Parallel Wireless CWS-210 base station. Data sheets for each of the base stations are submitted herewith.

The Parallel Wireless equipment constitutes LTE eNodeB base stations. The base stations connect to an operator network and provide cellular service. In some cases, service is provided to mobile devices using Wi-Fi. Backhaul connections for the LTE eNodeB base stations are provided wirelessly using Wi-Fi or using a conventional LTE modem functionality. Testing of the base stations will entail conventional LTE handsets connecting to the base stations in their typical operating environment.

b. The specific objectives sought to be accomplished

The objective to be accomplished is continued testing of both Parallel Wireless software and hardware. This includes the testing of hardware revisions and new software releases, required to meet the requirements of and fix bugs for Parallel Wireless's customer, EE Limited, the U.K. network operator. EE Limited uses LTE bands 1, 3, and 20 in its commercial wireless network. Furthermore, Parallel Wireless hopes to assess performance in real-world RF environments and performance of various UEs (user equipments) with the 4G radios.

c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion, or utilization of radio art, or is along lines not already investigated.

In testing the Parallel Wireless hardware and software, Parallel Wireless hopes to additionally further understanding of 4G radios and algorithms, research meshing capabilities relevant to 4G radios, and study integration of multiple radio access technologies with antennas in over-the-air testing.

Parallel Wireless includes this letter as part of the above-referenced application to affirm its understanding of its obligation to conduct operations under this license. Parallel Wireless accordingly agrees 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 an attachment to this letter.
- Understands that the experimental license will only permit shared use of the subject radio frequencies and that Parallel Wireless may have to coordinate with other entities licensed for experimental purposes.
- 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; and that narrowband and broadband operators authorized on a primary basis have no obligation to mitigate any interference that such primary operation may present to the Parallel Wireless experimental operations.

We welcome any comments or questions from the Commission, either to Michael Saji, Director, Director, I.P., and Corporate Counsel at the contact information below, or to Randy Rutherford, Director, Engineering, at rrutherford@parallelwireless.com.

Best Regards,

/s/ Michael Saji

Director, Intellectual Property and Corporate Counsel
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ATTACHMENT

The designated project management 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. 0427-EX-PL-2016 is:

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