

Request for Experimental Station Authorization under Part 5 of the FCC's Rules

NextWave Wireless Inc. ("Applicant") hereby seeks Federal Communications Commission ("FCC" or "Commission") authorization for a period of two years in San Diego, California to test Applicant's WiMAX equipment in the 3410 – 3450 MHz band before exporting and utilizing such equipment in Europe. This supplementary statement is submitted pursuant to Sections 5.63 and 5.71 of the FCC's rules.¹ Applicant hereby provides details of its proposed experimental testing, describes the specific objectives it seeks to accomplish, and explains how the experimental testing has a reasonable promise of contribution to the development and utilization of radio frequency. Applicant also seeks an exemption from the FCC's station identification rule.²

Applicant is an FCC wireless licensee and a technology, equipment and products developer of WiMAX-compliant (IEEE 802.16) chipsets, network components, and terminal devices designed to improve the performance of WiMAX networks. In addition, Applicant is a licensee of the 3.5 GHz spectrum in several European countries, among others Germany, Austria, and Croatia. Applicant is currently designing and deploying end-to-end mobile WiMAX network solutions for service provider partners interested in offering advanced mobile broadband services in North America, South America, Africa, Asia, India, Europe, and the Middle East. As part of its efforts to develop and deploy WiFi and WiMAX technology, Applicant is actively involved in various standards activities.³ Applicant's objective for the experimentation proposed in this application is to test and develop WiMAX-compliant (IEEE 802.16) chipsets, network components, and terminal devices for use in Europe's 3.5 GHz WiMAX band. WiMAX networks in Europe are being deployed in most countries using spectrum at 3.5 GHz. However these developments are mostly confined to fixed wireless services. Applicant hopes to test and develop mobile WiMAX equipment to expand the European 3G/4G market and cultivate technology-neutral broadband. Applicant's proposed tests will contribute to the development, extension, expansion and utilization of WiMAX-compatible spectrum and technology worldwide.

In Applicant's proposed test, it will utilize 12 megahertz of spectrum within the 3410 – 3450 MHz band to test WiMAX base stations and mobile devices at three separate sites.⁴ At each site, Applicant will install one, three sector base station with up to 10 Watts per sector (5 Watts x 2 antennas) covering approximately a two kilometer radius. Applicant will use time division duplex ("TDD") technology that will both

¹ 47 C.F.R. §§ 5.63, 5.71.

² 47 C.F.R. § 5.115.

³ Applicant is an active participant in IEEE 802.16, 3GPP (through its wholly-owned subsidiary, IPWireless), and the WiMAX Forum.

⁴ 47 C.F.R. § 5.3(g).

transmit and receive on a 10 megahertz wide channel. Applicant proposes to operate a maximum of four mobile devices at a time, at less than 1 Watt each. The FCC's rules allow experimental testing, such as the tests Applicant proposes, and equipment demonstrations prior to obtaining equipment authorization, utilizing radio spectrum to obtain data about the technical operation of the spectrum and technology in a manner that is not currently authorized by the FCC's rules.⁵ The FCC's rules allow testing for a period of either two or five years.⁶ Applicant believes it can achieve the necessary test results within a two-year period.

As a part of its request for experimental authorization, Applicant also requests an exemption from the FCC's station identification rule.⁷ Section 5.115 of the FCC's rules requires that an experimental station transmit its assigned call sign at the end of the each complete transmission in clear voice or Morse code. Similar to all other digital cellular technology, Applicant's proposed digital cellular equipment is incapable of station identification in accordance with Section 5.115. Therefore, Applicant requests that the terms of its experimental authorization provide an exemption from the FCC's station identification rule.

Applicant is aware that the spectrum in which it proposes to conduct its experimental testing is allocated for other users. In order to identify spectrum that poses the least amount of interference concerns, Applicant conducted a spectral analysis survey of the 3400 – 3600 MHz band in San Diego, California.⁸ The survey revealed that there is 60 megahertz of spectrum within the 3400 – 3600 MHz band that is currently free of other significant use. However, to further mitigate any concerns about potential interference to allocated users, Applicant proposes to limit its testing to the 3410 – 3450 MHz band. Due to the limited amount of spectrum and the location of the testing, Applicant believes it can successfully conduct experimental testing without causing harmful interference in the 3410 – 3450 MHz band. Of course, if any interference resulted from Applicant's tests, it would take whatever remedial actions the FCC requires.

⁵ 47 C.F.R. § 5.51.

⁶ 47 C.F.R. § 5.71.

⁷ 47 C.F.R. § 5.115.

⁸ Attached hereto is Applicant's spectral analysis survey of the 3400 – 3600 MHz band in San Diego, California.