Nextel Communications
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Reston, VA 20191

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Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Pursuant to Part 5 of the Rules of the Federal Communications Commission ("Commission"), Nextel Communications of the Mid-Atlantic, Inc., a wholly-owned subsidiary of Nextel Communications, Inc. (collectively "Nextel") respectfully requests an Experimental Radio Station License for use of spectrum from 767 to 769 MHz and 802 to 804 MHz on a secondary, non-interference basis for use in the Reston, Virginia area.

Nextel currently provides wide-area digital Specialized Mobile Radio ("SMR") services throughout much of the United States utilizing spectrum in the 800 MHz frequency band. Nextel's wide-area SMR services make efficient use of the spectrum by employing digital technologies and low power, multiple-tower cellular-like architectures that enable call hand-off and channel re-use throughout a larger geographic area. Nextel's wide-area SMR services, moreover, provide the user a combination of telecommunications services in a single handset, including digital push-to-talk services, cellular telephone, paging, and data services.

The requested spectrum is in the 700 MHz band and is commonly referred to as TV Channels 60-69 (746-806 MHz). Frequencies between 767 and 769 MHz are within the 6 MHz of spectrum that comprise Channel 63, while 802 to 804 MHz are within the 6 MHz of spectrum that comprise Channel 69. The spectrum is currently licensed for television broadcast stations nationwide and has been reallocated for public safety operations. As the Commission is aware, this spectrum has been the subject of much discussion and analysis over the past few years and the Commission has adopted rules providing for the future licensing of the spectrum, once the television broadcasters vacate the spectrum. In addition, the Commission has already auctioned off 6 MHz of "Guard Band" spectrum, of which Nextel is now a Commission authorized licensee.

Nextel requests this authorization to test use of Flarion Technologies Flash-OFDM solution, a wireless mobile data application that will enable cost effective access to the internet and Intranets at speeds greater than present dial up rates and approaching that of DSL and cable access technologies. The

objective is to validate the commercial viability and technical performance of the flash-OFDM™ system in a realistic environment beyond that which can be tested in a laboratory setting. These include environment, propagation, frequency reuse, mobility user behavior, traffic mix and system loading.

The trial will be deployed in the Reston, Virginia area in close proximity to Nextel's corporate headquarters.[1]

To ensure that testing the Flarion solution does not cause interference to existing operations, an interference analysis was performed in the area of each location for which an experimental license is being requested. The locations of broadcast stations (Channel 63 and 69) in the Washington, DC area was first investigated, using the information available in the FCC databases, to determine if the proposed test locations are in the service areas for these stations. According to the FCC database, the closest granted license for Channel 63 is in Newton, New Jersey, approximately 217 miles away from the test areas. The closest granted license for Channel 69 is in Allentown, Pennsylvania, approximately 133 miles away from the test areas. Thus, both stations should not be subject to interference given the distance and limited transmit power of the test system.

Additionally, and as a further step to avoid the potential for interference, measurements of signal strength were taken for each TV channel in the auction band (channels 60 through 69) using an external antenna connected to an Agilent Spectrum Analyzer. The measurements were undertaken to confirm that channels 63 and 69 could be used for the prototype and subsequent system testing. It is Nextel's understanding that a signal strength of greater than –80 dBm is needed for reliable reception of a NTSC signal. No signals greater than –118 dBm in any 100 kHz bandwidth (equivalent to –100 dBm in the 6 MHz bandwidth of a UHF television station) were measured for the requested channels in the test areas.[2]

In regards to public safety operations, to Nextel's knowledge, no public safety operations exist on the subject spectrum in the Washington, DC area.

Because of its extensive licensing authority, Nextel is extremely familiar with Commission licensing rules and requirements and will take necessary measures to ensure that these tests cause no harmful interference to any primary licensee.

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[1] While Nextel is the licensee of 700 MHz Guard Band spectrum in the Washington, DC area, none of that spectrum is presently available for use or even testing due to the existence of incumbent television broadcasters. Therefore, Nextel has identified alternative available 700 MHz spectrum to conduct these tests.

[2] Note that the spectrum analyzer used had a noise figure of 6 dB.

Should the Commission have any questions regarding this matter, please contact the undersigned at (703) 433-4212.

Respectfully submitted,

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