

QUALCOMM AWS Experiment Proposal

1 Introduction

QUALCOMM Incorporated (www.qualcomm.com) is a leader in developing and delivering innovative digital wireless communications products and services based on CDMA and other advanced technologies. Headquartered in San Diego, Calif., QUALCOMM is included in the S&P 500 Index and is a 2006 FORTUNE 500® company traded on The Nasdaq Stock Market® under the ticker symbol QCOM.

QUALCOMM will perform developmental testing and demonstration of new technologies using the AWS band frequencies. This experimental license will allow testing of, but not limited to, CDMA2000, CDMA EV-DO, UMB, WCDMA, HSDPA, HSUPA, HSPA+, and LTE in the AWS band. The application includes two specific cities for research and development (R&D) and the Continental United States (CONUS) for demonstration purposes.

Given the rapid development of next generation wireless systems, QUALCOMM requires a flexible experimental license for the AWS band that allows testing of different technologies and the ability to quickly change network configurations as technical requirements change. QUALCOMM also routinely supports demonstrations for government and private entities and requires the ability to support these demonstrations on short notice.

2 Experiment Description

The primary R&D efforts will occur in San Diego and in Bedminster. At these two locations, three to seven fixed sites will be installed and mobiles will operate within the RF coverage area.

Demonstrations will occur at any location within the United States in support of, but not limited to, government agencies, private companies, and tradeshow. These demonstrations are low power setups designed to provide small coverage areas only.

The parameters listed in section 3 represent the full tunable frequency range and maximum desirable transmit power for the proposed testing. The actual network implementation used for R&D testing or demonstrations will be derived from the results of frequency coordination and interference analysis efforts.

QUALCOMM currently has two similar flexible experimental licenses for the cellular band (call sign KM2XJY) and PCS band (call sign KK2XBJ). Since 1992, QUALCOMM has successfully worked closely with the licensed spectrum owners to coordinate usage and allow experimental activities without impacting commercial licensed services. Where necessary, these coordination efforts have included formal interference analysis reports from 3rd parties that result in carefully designed RF networks to prevent interference to commercial services.

3 Frequency and Power Information

Table 1 summarizes the locations, frequencies, and transmit requested in this license application. Table 2 summarizes the occupied bandwidths of some technologies QUALCOMM may support.

The results of interference analysis and frequency coordination efforts will define the actual frequencies and transmit power levels used for each experimental activity.

Table 1 Site, Frequency, Transmit Power Information

Site	Location	Use	Frequency	Transmitter Type	EIRP
1	San Diego, California	Research and Development	1710-1755 MHz	Mobile	5 W EIRP
			2110-2155 MHz	Fixed	1500 W EIRP
2	Bedminster, New Jersey	Research and Development	1710-1755 MHz	Mobile	5 W EIRP
			2110-2155 MHz	Fixed	1500 W EIRP
3	Continental United States (CONUS)	Demonstrations (customer, tradeshow, etc.)	1710-1755 MHz	Mobile	5 W EIRP
			2110-2155 MHz	Fixed	5 W EIRP

Table 2 Technology Bandwidth Examples

Technology	Bandwidth
CDMA2000/EV-DO	1.25 to 20 MHz
WCDMA/HSPA	5 MHz
UMB	5 to 20 MHz
LTE	5 to 20 MHz

4 Frequency Coordination

Prior to transmission, QUALCOMM will coordinate with licensees affected by the proposed networks. If necessary, QUALCOMM will complete internal or external frequency analysis to demonstrate R&D or demonstration activities contribute no interference to licensed services.